

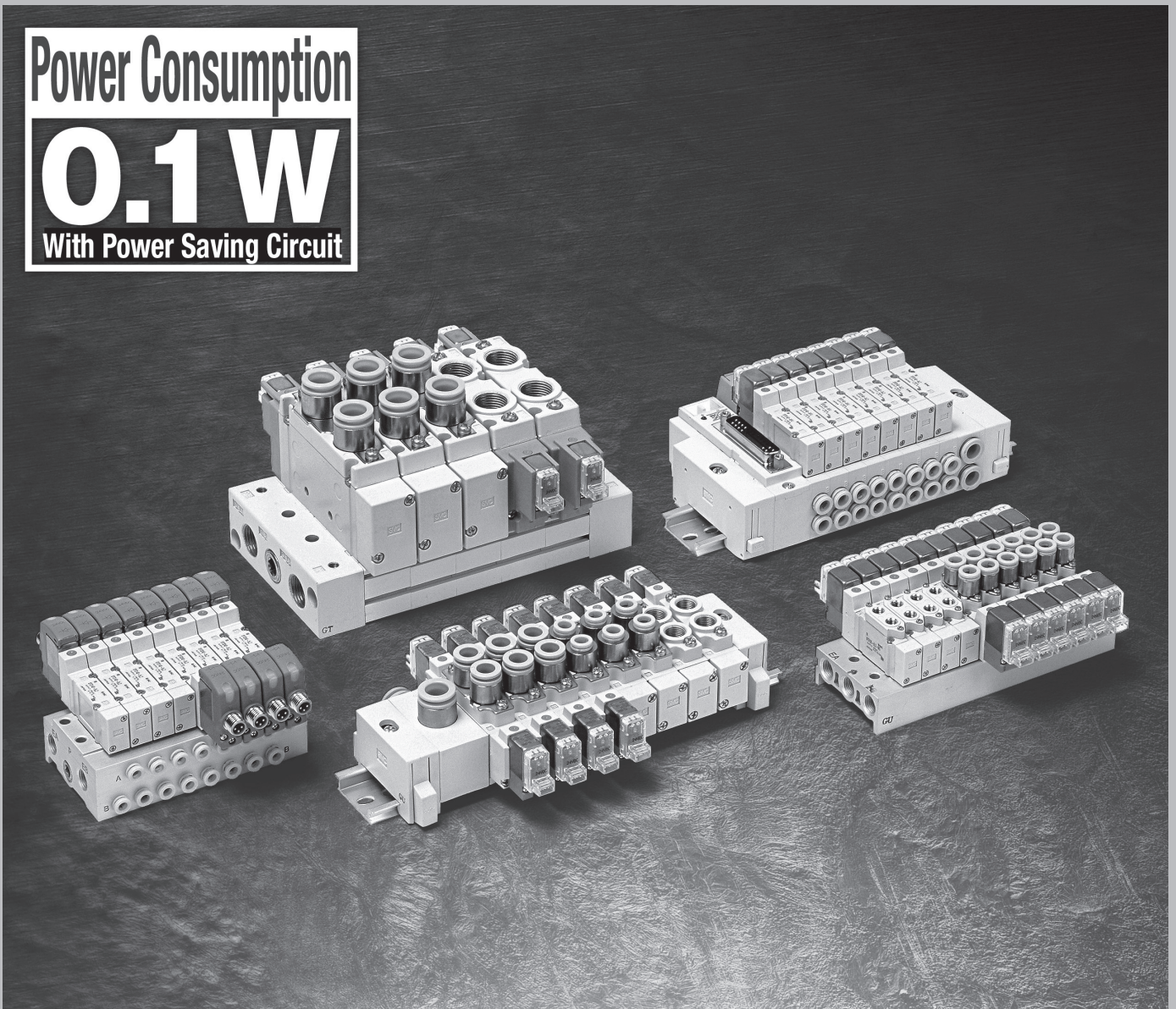
5 Port Solenoid Valve

Series SY3000/5000/7000/9000

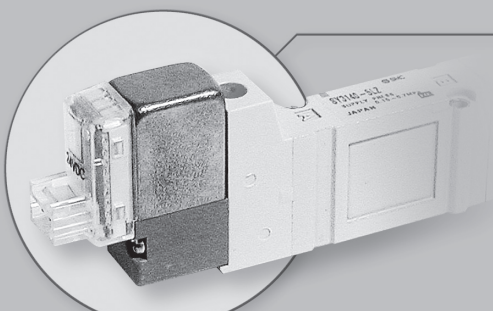
Rubber Seal

CE [Option] (Details → P.332-1 to 332-4) 

Power Consumption
0.1W
With Power Saving Circuit



- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7



Cover (stainless steel)

• **Improved pilot valve**

Pilot valve cover is stronger using stainless steel.
Mounting thread is also reinforced from size M1.7 to M2.

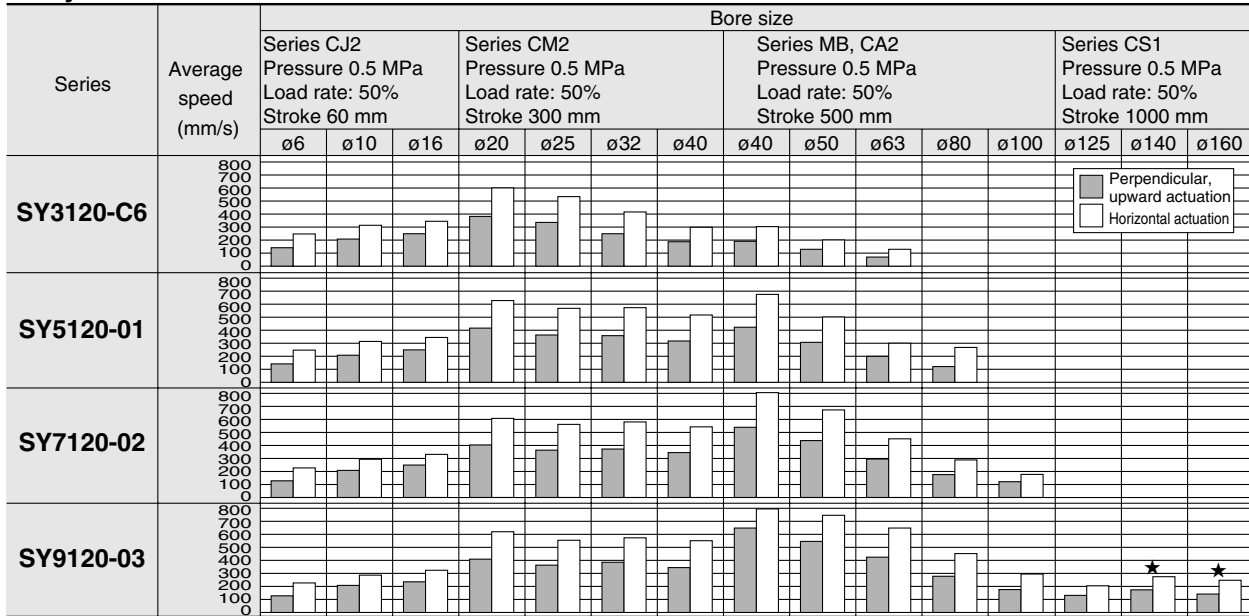
• **Flow Characteristics**

Series	Flow characteristics		
	C [dm ³ /(s·bar)]	b	Cv
SY3000	1.1	0.28	0.29
SY5000	2.8	0.37	0.90
SY7000	4.5	0.28	1.4
SY9000	10	0.29	2.5

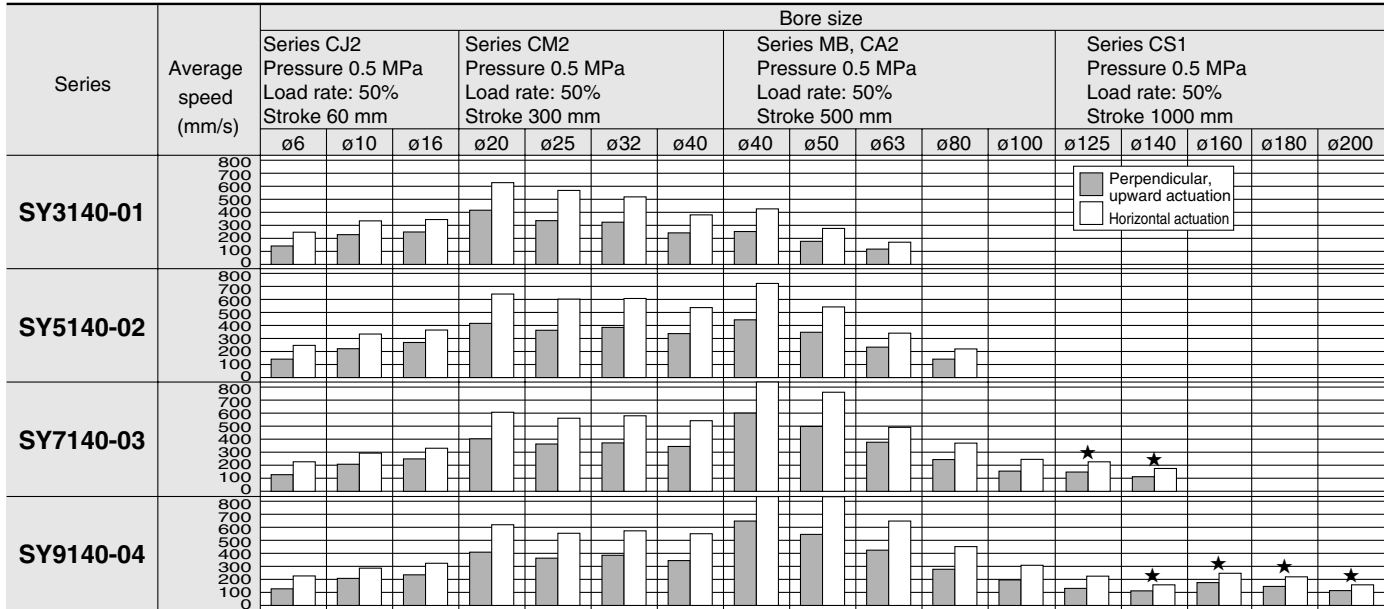
Cylinder Speed Chart

Use as a guide for selection.
Please confirm the actual conditions with SMC Sizing Program.

Body Ported



Base Mounted



- * Cylinder is in extending. Speed controller is meter-out, which is directly connected with cylinder and its needle is fully opened.
- * Average speed of cylinder is obtained by dividing the full stroke time by the stroke.
- * Load factor: (Load weight x 9.8) / Theoretical force) x 100%
- * The histograms with ★ marked are the case when piping is done by using steel.

Conditions

Body ported	Series CJ2	Series CM2	Series MB, CA2	Series CS1
SY3120-C6	Tubing bore x Length	T0604 x 1 m		—
	Speed controller	AS2051F-06		—
	Silencer	AN120-M5		—
SY5120-01	Tubing bore x Length	T0604 x 1 m	T0806 x 1 m	—
	Speed controller	AS3001F-06	AS3001F-08	—
	Silencer	AN101-01		—
SY7120-02	Tubing bore x Length	T0604 x 1 m	T1075 x 1 m	—
	Speed controller	AS3001F-06	AS4001F-10	—
	Silencer	AN110-01		—
SY9120-03	Tubing bore x Length	T0604 x 1 m	T1075 x 1 m	T1209 x 1 m
	Speed controller	AS3001F-06	AS4001F-10	AS4001F-12
	Silencer	AN200-02		AN202-02

Conditions [When using SGP (steel pipe)]

Body ported	Series CS1
SY9120-03	Tubing bore x Length
	SGP10A x 1 m
	Speed controller
	AS420-03
	Silencer
	AN200-02

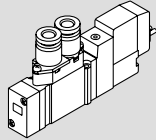
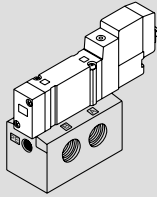
Conditions

Base mounted	Series CJ2	Series CM2	Series MB, CA2	Series CS1
SY3140-01	Tubing bore x Length	T0604 x 1 m		—
	Speed controller	AS3001F-06		—
	Silencer	AN110-01		—
SY5140-02	Tubing bore x Length	T0604 x 1 m	T0806 x 1 m	—
	Speed controller	AS3001F-06	AS3001F-08	—
	Silencer	AN101-01		—
SY7140-03	Tubing bore x Length	T0604 x 1 m	T1075 x 1 m	T1209 x 1 m
	Speed controller	AS3001F-06	AS4001F-10	—
	Silencer	AN200-02		—
SY9140-04	Tubing bore x Length	T0604 x 1 m	T1075 x 1 m	T1209 x 1 m
	Speed controller	AS3001F-06	AS4001F-10	AS4001F-12
	Silencer	AN200-02		—

Conditions [When using SGP (steel pipe)]

Base mounted	Series CS1
SY7140-03	Tubing bore x Length
	SGP10A x 1 m
	Speed controller
	AS420-03
	Silencer
	AN300-03
SY9140-04	Tubing bore x Length
	SGP15A x 1 m
	Speed controller
	AS420-04
	Silencer
	AN400-04

Valve Variations

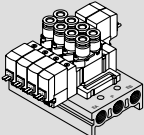
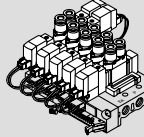
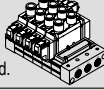
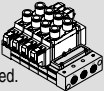
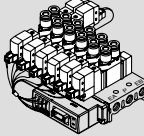
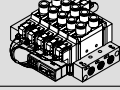
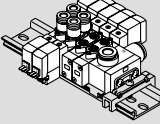
	Series	Sonic conductance C [dm ³ /(s·bar)] { 4/2→5/3 } { (A/B→EA/EB) }	Actuation					Voltage		Electrical entry					Light/surge voltage suppressor
			2 position		3 position			DC	AC	Grommet	L plug connector	M plug connector	DIN terminal	M8 connector	
			Single	Double	Closed center	Exhaust center	Pressure center	24 V	100 V 50/60 Hz						
Body ported	P.108 	0.65	●	●	●	●	●	●	●	●	●	●	●	●	●
		2.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		3.3	●	●	●	●	●	●	●	●	●	●	●	●	●
		8.6	●	●	●	●	●	●	●	●	●	●	●	●	●
Base mounted	P.126 	1.1	●	●	●	●	●	●	●	●	●	●	●	●	●
		2.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		4.5	●	●	●	●	●	●	●	●	●	●	●	●	●
		10	●	●	●	●	●	●	●	●	●	●	●	●	●

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Series	Manual override			P, EA, EB port size					A, B port size											Valve option								
	Non-locking push type	Push-turn locking slotted type	Push-turn locking lever type	Bracket	M5	1/8	1/4	3/8	1/2	M5	1/8	1/4	3/8	1/2	One-touch fitting							Exhaust throttle	Oil resistant, Other than designated turbine oil	Vacuum specifications	Low pressure specifications	Dual pressure	Enclosure IP65	Interface regulator
															C4	C6	C8	C10	C12	N3	N7							
Body ported	●	●	●	●	●	—	—	—	—	●	—	—	—	—	—	●	●	—	—	—	—	●	▲	▲	▲	▲	●	—
	●	●	●	●	—	●	—	—	—	—	●	—	—	—	—	●	●	—	—	—	—	●	▲	▲	▲	▲	●	—
	●	●	●	●	—	●	●	—	—	—	—	●	—	—	—	●	●	—	—	—	—	●	▲	▲	▲	▲	●	—
	●	●	●	—	—	—	●	—	—	—	—	●	—	—	—	●	●	—	—	—	—	●	▲	▲	▲	▲	●	—
Base mounted	●	●	●	—	—	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	●	▲	●	●	●	●	—
	●	●	●	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—	●	▲	●	●	●	●	—
	●	●	●	—	—	—	●	●	—	—	—	●	—	—	—	—	—	—	—	—	—	●	▲	●	●	●	●	—
	●	●	●	—	—	—	●	●	—	—	—	●	●	—	—	—	—	—	—	—	—	●	▲	●	●	●	●	—



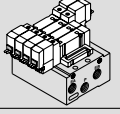
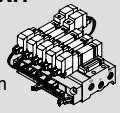
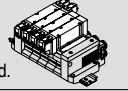
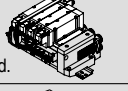
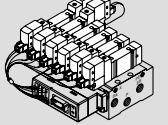
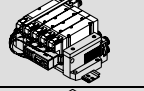
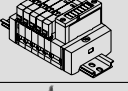

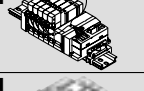

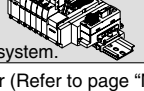
● Standard ● Option ▲ Made to order (Refer to page "Made to Order".)
 Note 1) All AC voltage models have built-in surge voltage suppressor.
 Note 2) Body ported external pilot style (made to order) is not available for DIN terminal.
 Note 3) Only available for DIN terminal and M8 connector.
 Note 4) SY3000 does not have a DIN terminal which can be connected to a manifold.

Manifold Variations

Manifold Variations		Valve Series	Wiring											
			Connection							Common specifications				
			Individual wiring	Flat ribbon cable (26 pins)	Flat ribbon cable (20 pins) connector box	Plug-in type D-sub connector (25 pins)	Plug-in type flat ribbon cable (26, 20, 10 pins)	Plug-in type terminal block (9, 18 pins)	PC wiring	Serial transmission unit	Positive common	Negative common		
Body ported	Bar stock type Individual wiring ■ Direct piping to the main unit of a valve. Combination of different fittings is possible. 	Type 20 P. 144	SY3□20											
			SY5□20	●	—	—	—	—	—	—	—	—	—	—
			SY7□20											
	Bar stock type Flat ribbon cable ■ A 26 pins MIL connector permits One-touch wiring of external cables in a bundle. 	Type 20P P. 154	SY3□20											
			SY5□20	—	●	—	—	—	—	—	—	—	●	
			SY7□20											In common
	Stacking type Individual wiring ■ Manifold stations can be increased or decreased. 	Type 23 P. 150	SY9□20	●	—	—	—	—	—	—	—	—	—	—
		Stacking type Flat ribbon cable ■ Manifold stations can be increased or decreased. 	Type 23P P. 160	SY9□20	—	●	—	—	—	—	—	—	●	
														In common
	Bar stock type EX510 gateway system ■ Can be used with a serial transmission system. 	Type 20SA P. 164	SY3□20											
			SY5□20	—	—	—	—	—	—	—	—	●	—	—
			SY7□20											
Stacking type EX510 gateway system ■ Can be used with a serial transmission system. 	Type 23SA P. 170	SY9□20	—	—	—	—	—	—	—	—	●	—	—	
	Cassette type Individual wiring ■ Size and weight reduced by eliminating the manifold base. 	Type 60 P. 178	SY3□60	●	—	—	—	—	—	—	—	—	—	—
		SY5□60	●	—	—	—	—	—	—	—	—	—	—	
		SY7□60	●	—	—	—	—	—	—	—	—	—	—	

● Standard ● Option ▲ Made to order (Refer to page "Made to Order".)

Manifold Variations

Manifold Variations			Valve Series	Wiring											
				Connection							Common specifications				
				Individual wiring	Flat ribbon cable (26 pins)	Flat ribbon cable (20 pins) connector box	Plug-in type D-sub connector (25 pins)	Plug-in type flat ribbon cable (26, 20, 10 pins)	Plug-in type terminal block (9, 18 pins)	PC wiring	Serial transmission unit	Positive common	Negative common		
Base mounted	Compact bar stock type Individual wiring ■ The base mounting facilitates maintenance after valves are changed.		Type 41 P. 198	SY3□40	●	—	—	—	—	—	—	—	—	—	
				SY5□40	—	●	—	—	—	—	—	—	●	—	
	Compact bar stock type Flat ribbon cable ■ A 26 pins MIL connector permits one-touch wiring of external cables in a bundle.		Type 41P P. 214	SY3□40	—	●	—	—	—	—	—	—	—	●	—
				SY5□40	—	—	—	—	—	—	—	—	—	—	●
	Bar stock type/Common external EXH Individual wiring ■ The base mounting facilitates maintenance after valves are changed. ■ Vacuum/low pressure combination system is possible.		Type 42 P. 198	SY3□40	●	—	—	—	—	—	—	—	—	—	—
				SY5□40	—	—	—	—	—	—	—	—	—	—	—
				SY7□40	—	—	—	—	—	—	—	—	—	—	—
	Bar stock type/Common external EXH Flat ribbon cable ■ A 26 pins MIL connector permits one-touch wiring of external cables in a bundle. ■ Vacuum/low pressure combination system is possible.		Type 42P P. 214	SY3□40	—	●	—	—	—	—	—	—	—	●	—
				SY5□40	—	—	—	—	—	—	—	—	—	—	●
				SY7□40	—	—	—	—	—	—	—	—	—	—	●
	Stacking type Individual wiring ■ Manifold stations can be increased or decreased.		Type 43 P. 208	SY9□40	●	—	—	—	—	—	—	—	—	—	—
	Stacking type Flat ribbon cable ■ Manifold stations can be increased or decreased.		Type 43P P. 222	SY9□40	—	●	—	—	—	—	—	—	—	●	—
	Bar stock type EX510 gateway system ■ Can be used with a serial transmission system.		Type 42SA P. 228	SY3□40	—	—	—	—	—	—	—	●	—	—	—
				SY5□40	—	—	—	—	—	—	—	—	—	—	—
				SY7□40	—	—	—	—	—	—	—	—	—	—	—
Stacking type EX510 gateway system ■ Can be used with a serial transmission system.		Type 43SA P. 233	SY9□40	—	—	—	—	—	—	—	●	—	—	—	
Stacking type/DIN rail mounted Individual wiring ■ Stations can be increased on the DIN rail. Integral mounting of other electric parts is possible, too.		Type 45 P. 244	SY3□40	●	—	—	—	—	—	—	—	—	—	—	
			SY5□40	—	—	—	—	—	—	—	—	—	—	—	
Stacking type/DIN rail mounted Connector box ■ Stations can be increased or decreased on the DIN rail. The provided connector box permits one-touch connection of electric cables.		Type 45^A_{NA} P. 256	SY3□40	—	—	●	—	—	—	●	—	●	●	—	
			SY5□40	—	—	—	—	—	—	—	—	—	—	—	
Stacking type/DIN rail mounted EX510 gateway system ■ Can be used with a serial transmission system.		Type 45S6A P. 264	SY3□40	—	—	—	—	—	—	—	●	—	—	—	
			SY5□40	—	—	—	—	—	—	—	—	—	—	—	
Stacking type/DIN rail mounted Plug-in ■ Stations can be increased or decreased on the DIN rail. ■ A variety of centralized wiring methods are possible.		Type 45 P. 272	SY3□40	—	—	—	●	●	●	●	●	●	●	●	
			SY5□40	—	—	—	—	—	—	—	—	—	—	—	
Stacking type/DIN rail mounted EX510 gateway system ■ Can be used with a serial transmission system.		Type 45S6B P. 312	SY3□40	—	—	—	—	—	—	—	●	—	—	—	
			SY5□40	—	—	—	—	—	—	—	—	—	—	—	

● Standard ● Option ▲ Made to order (Refer to page "Made to Order".)

5/2, 5/3 пневмораспределитель с электропневматическим управлением **SY3000/5000/7000/9000**

M5 ~ G1/2; $\varnothing 4 \sim \varnothing 12$

- Компактная конструкция
- Низкая потребляемая мощность – 0.1 Вт (энергосберегающее исполнение)
- Высокая скорость срабатывания – менее 10 мс (для 5/2 с двусторонним управлением)
- Высокая пропускная способность
- Ресурс не менее 50 млн. циклов

Технические характеристики

Серия		SY3000	SY5000	Sy7000	SY9000
Среда	Очищенный сжатый воздух с содержанием масла или без него				
Тип управления	Электропневматическое управление				
Рабочий диапазон давлений (МПа)	5/2 с одностор. управлением	0.15 ~ 0.7			
	5/2 с двустор. управлением	0.1 ~ 0.7			
	5/3	0.2 ~ 0.7			
Диапазон рабочих температур (°C)	-10 ~ 50				
Время срабатывания (мс)	5/2 одностор. упр.	<12	<19	<33	<35
	5/2 двустор. упр.	<10	<18	<28	<35
	5/3	<16	<32	<50	<62
Частота срабатывания (Гц)	5/2 с одно/двустор. управлением	10	5		
	5/3	3	3		
Вспомогательное ручное управление	Не блокируется				
Монтажное положение	Произвольное				
Электрический разъем	2-х клеммный		2-х клеммный; DIN-разъем		
Напряжение	24 V DC				
	220 V AC				
Допуск по напряжению	+10% от номинального значения				
Потребляемая мощность (Вт)	DC	0.4; 0.45 (для DIN-разъёма с индикатором); 0.1 (энергосберегающее исполнение)			
	AC	2.6			
Степень защиты	IP40		IP40 (IP65 – DIN-разъем)		
Класс изоляции	В				
Искрогашение	Стандартное исполнение				
Индикатор рабочего состояния	Стандартное исполнение (для DIN-разъёма – по запросу, стр. 71)				



SY3000



SY5000



SY7000



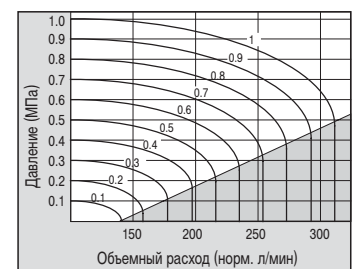
SY9000

Номер для заказа / Характеристики расхода

Номер для заказа SY3000

Конструктивное исполнение	Номер для заказа*	Принцип действия	Условное обозначение	Присоед. размер **	Расход (л/мин)	Вес (г)
Самостоят. монтаж или монтаж на плите пневмораспределителей	SY3120-5LOU-C4-Q	5/2 с односторонним управлением		C4	187	61
	SY3120-5LOU-C6-Q			C6	196	57
	SY3120-5LOU-M5-Q			M5		51
	SY3220-5LOU-C4-Q	5/2 с двусторонним управлением		C4	187	79
	SY3220-5LOU-C6-Q			C6	196	75
	SY3220-5LOU-M5-Q			M5		70
	SY3320-5LOU-C4-Q	5/3 в среднем положении закрыт		C4	187	82
	SY3320-5LOU-C6-Q			C6	196	78
	SY3320-5LOU-M5-Q			M5		72
	SY3420-5LOU-C4-Q	5/3 в среднем положении открыт		C4	187	82
	SY3420-5LOU-C6-Q			C6	206	78
	SY3420-5LOU-M5-Q			M5		72
SY3520-5LOU-C4-Q	5/3 в среднем положении под давлением		C4	196	72	
SY3520-5LOU-C6-Q			C6	215	78	
SY3520-5LOU-M5-Q			M5		72	

SY3000



Ответные части разъемов заказываются отдельно (см. стр. 71)

* С напряжением питания 220 V AC поставляются по запросу.
** "С" – быстроразъемное соединение, например "С4" – $\varnothing 4$ мм.

5/2, 5/3 пневмораспределитель с электропневматическим управлением

SY3000/5000/7000/9000

Номер для заказа / Характеристики расхода

Номер для заказа SY5000

Конструктивное исполнение:

Монтаж в качестве индивидуального пневмораспределителя или на плите пневмораспределителей

Номер для заказа			Принцип действия	Условное обозначение	Присоед. размер * цил. А, В	Расход (норм.) л/мин	Вес (г) разъем с кабелем/ DIN-разъем
24 V DC	220 V AC						
Разъем с кабелем	DIN-разъем	DIN-разъем					
SY5120-5LOU-C6F-Q	SY5120-5YO-C6F-Q	SY5120-4YO-C6F-Q	5/2 с односторонним управлением		C6	491	89/112
SY5120-5LOU-C8F-Q	SY5120-5YO-C8F-Q	SY5120-4YO-C8F-Q			C8	500	80/103
SY5120-5LOU-01F-Q	SY5120-5YO-01F-Q	SY5120-4YO-01F-Q			G1/8		70/93
SY5220-5LOU-C6F-Q	SY5220-5YO-C6F-Q	SY5220-4YO-C6F-Q	5/2 с двусторонним управлением		C6	491	99/145
SY5220-5LOU-C8F-Q	SY5220-5YO-C8F-Q	SY5220-4YO-C8F-Q			C8	500	99/145
SY5220-5LOU-01F-Q	SY5220-5YO-01F-Q	SY5220-4YO-01F-Q			G1/8		89/135
SY5320-5LOU-C6F-Q	SY5320-5YO-C6F-Q	SY5320-4YO-C6F-Q	5/3 в среднем положении закрыт		C6	393	112/158
SY5320-5LOU-C8F-Q	SY5320-5YO-C8F-Q	SY5320-4YO-C8F-Q			C8	402	104/150
SY5320-5LOU-01F-Q	SY5320-5YO-01F-Q	SY5320-4YO-01F-Q			G1/8		94/140
SY5420-5LOU-C6F-Q	SY5420-5YO-C6F-Q	SY5420-4YO-C6F-Q	5/3 в среднем положении открыт		C6	402	112/158
SY5420-5LOU-C8F-Q	SY5420-5YO-C8F-Q	SY5420-4YO-C8F-Q			C8		104/150
SY5420-5LOU-01F-Q	SY5420-5YO-01F-Q	SY5420-4YO-01F-Q			G1/8		94/140
SY5520-5LOU-C6F-Q	SY5520-5YO-C6F-Q	SY5520-4YO-C6F-Q	5/3 в среднем положении под давлением		C6	392	112/158
SY5520-5LOU-C8F-Q	SY5520-5YO-C8F-Q	SY5520-4YO-C8F-Q			C8	579	104/150
SY5520-5LOU-01F-Q	SY5520-5YO-01F-Q	SY5520-4YO-01F-Q			G1/8		94/140

* "С" – быстроразъемное соединение, например "С6" – $\varnothing 6$ мм.

Ответные части разъемов заказываются отдельно (см. стр. 71)

Номер для заказа SY7000

Конструктивное исполнение:

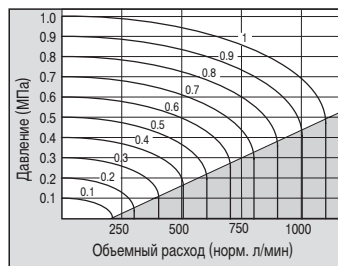
Монтаж в качестве индивидуального пневмораспределителя или на плите пневмораспределителей

Номер для заказа			Принцип действия	Условное обозначение	Присоед. размер * А, В	Расход (норм.) л/мин	Вес (г) разъем с кабелем/ DIN-разъем
24 V DC	220 V AC						
Разъем с кабелем	DIN-разъем	DIN-разъем					
SY7120-5LOU-C8F-Q	SY7120-5YO-C8F-Q	SY7120-4YO-C8F-Q	5/2 с односторонним управлением		C8	756	108/131
SY7120-5LOU-C10F-Q	SY7120-5YO-C10F-Q	SY7120-4YO-C10F-Q			C10	864	103/126
SY7120-5LOU-02F-Q	SY7120-5YO-02F-Q	SY7120-4YO-02F-Q			G1/4	883	102/125
SY7220-5LOU-C8F-Q	SY7220-5YO-C8F-Q	SY7220-4YO-C8F-Q	5/2 с двусторонним управлением		C8	756	128/174
SY7220-5LOU-C10F-Q	SY7220-5YO-C10F-Q	SY7220-4YO-C10F-Q			C10	864	123/169
SY7220-5LOU-02F-Q	SY7220-5YO-02F-Q	SY7220-4YO-02F-Q			G1/4	883	121/167
SY7320-5LOU-C8F-Q	SY7320-5YO-C8F-Q	SY7320-4YO-C8F-Q	5/3 в среднем положении закрыт		C8	628	136/182
SY7320-5LOU-C10F-Q	SY7320-5YO-C10F-Q	SY7320-4YO-C10F-Q			C10	668	131/177
SY7320-5LOU-02F-Q	SY7320-5YO-02F-Q	SY7320-4YO-02F-Q			G1/4	657	129/175
SY7420-5LOU-C8F-Q	SY7420-5YO-C8F-Q	SY7420-4YO-C8F-Q	5/3 в среднем положении открыт		C8	609	136/182
SY7420-5LOU-C10F-Q	SY7420-5YO-C10F-Q	SY7420-4YO-C10F-Q			C10	648	131/177
SY7420-5LOU-02F-Q	SY7420-5YO-02F-Q	SY7420-4YO-02F-Q			G1/4		129/175
SY7520-5LOU-C8F-Q	SY7520-5YO-C8F-Q	SY7520-4YO-C8F-Q	5/3 в среднем положении под давлением		C8	569	136/182
SY7520-5LOU-C10F-Q	SY7520-5YO-C10F-Q	SY7520-4YO-C10F-Q			C10	618	131/177
SY7520-5LOU-02F-Q	SY7520-5YO-02F-Q	SY7520-4YO-02F-Q			G1/4		129/175

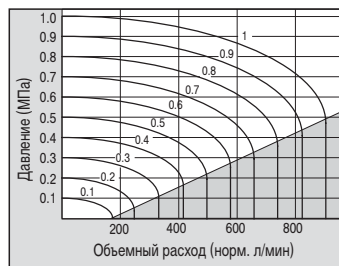
* "С" – быстроразъемное соединение, например "С8" – $\varnothing 8$ мм.

Ответные части разъемов заказываются отдельно (см. стр. 71)

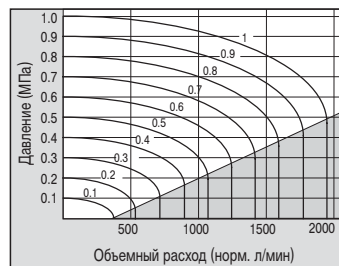
SY5120/SY5220



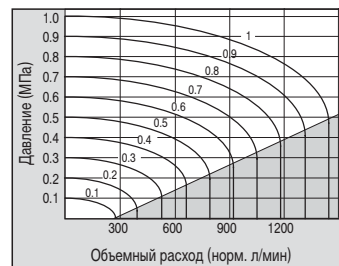
SY5320/SY5420



SY7120/SY7220



SY7320/SY7420



Номер для заказа

Номер для заказа SY9000

Конструктивное исполнение:

Монтаж в качестве индивидуального пневмораспределителя или на плите пневмораспределителей

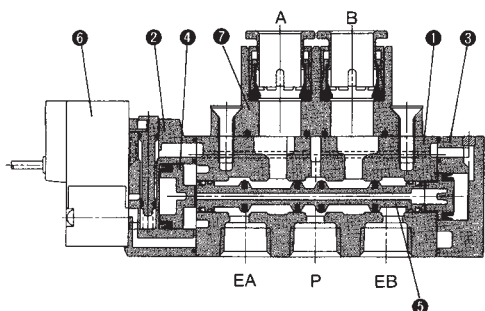
Номер для заказа			Принцип действия	Условное обозначение	Присоед. размер * цил. А, В	Расход (норм. л/мин)	Вес (г) разъем с кабелем/ DIN-разъем
24 V DC	220 V AC						
Разъем с кабелем	DIN-разъем						
SY9120-5LOU-C8F-Q	SY9120-5YO-C8F-Q	SY9120-4YO-C8F-Q	5/2 с односторонним управлением		C8	1669	296/317
SY9120-5LOU-C10F-Q	SY9120-5YO-C10F-Q	SY9120-4YO-C10F-Q			C10	1865	282/303
SY9120-5LOU-C12F-Q	SY9120-5YO-C12F-Q	SY9120-4YO-C12F-Q			C12	2159	268/289
SY9120-5LOU-02F-Q	SY9120-5YO-02F-Q	SY9120-4YO-02F-Q			G1/4	1963	244/265
SY9120-5LOU-03F-Q	SY9120-5YO-03F-Q	SY9120-4YO-03F-Q	G3/8		239/260		
SY9220-5LOU-C8F-Q	SY9220-5YO-C8F-Q	SY9220-4YO-C8F-Q	5/2 с двусторонним управлением		C8	1669	318/360
SY9220-5LOU-C10F-Q	SY9220-5YO-C10F-Q	SY9220-4YO-C10F-Q			C10	1865	304/346
SY9220-5LOU-C12F-Q	SY9220-5YO-C12F-Q	SY9220-4YO-C12F-Q			C12	2159	290/332
SY9220-5LOU-02F-Q	SY9220-5YO-02F-Q	SY9220-4YO-02F-Q			G1/4	1963	266/308
SY9220-5LOU-03F-Q	SY9220-5YO-03F-Q	SY9220-4YO-03F-Q	G3/8		261/303		
SY9320-5LOU-C8F-Q	SY9320-5YO-C8F-Q	SY9320-4YO-C8F-Q	5/3 в среднем положении закрыт		C8	1374	342/384
SY9320-5LOU-C10F-Q	SY9320-5YO-C10F-Q	SY9320-4YO-C10F-Q			C10	1472	328/370
SY9320-5LOU-C12F-Q	SY9320-5YO-C12F-Q	SY9320-4YO-C12F-Q			C12	1669	314/356
SY9320-5LOU-02F-Q	SY9320-5YO-02F-Q	SY9320-4YO-02F-Q			G1/4	1570	290/332
SY9320-5LOU-03F-Q	SY9320-5YO-03F-Q	SY9320-4YO-03F-Q	G3/8		285/327		
SY9420-5LOU-C8F-Q	SY9420-5YO-C8F-Q	SY9420-4YO-C8F-Q	5/3 в среднем положении открыт		C8	1865	342/384
SY9420-5LOU-C10F-Q	SY9420-5YO-C10F-Q	SY9420-4YO-C10F-Q			C10	1963	328/370
SY9420-5LOU-C12F-Q	SY9420-5YO-C12F-Q	SY9420-4YO-C12F-Q			C12	2552	314/356
SY9420-5LOU-02F-Q	SY9420-5YO-02F-Q	SY9420-4YO-02F-Q			G1/4	2159	290/332
SY9420-5LOU-03F-Q	SY9420-5YO-03F-Q	SY9420-4YO-03F-Q	G3/8		285/327		
SY9520-5LOU-C8F-Q	SY9520-5YO-C8F-Q	SY9520-4YO-C8F-Q	5/3 в среднем положении под давлением		C8	520	342/384
SY9520-5LOU-C10F-Q	SY9520-5YO-C10F-Q	SY9520-4YO-C10F-Q			C10	1472	328/370
SY9520-5LOU-C12F-Q	SY9520-5YO-C12F-Q	SY9520-4YO-C12F-Q			C12		314/356
SY9520-5LOU-02F-Q	SY9520-5YO-02F-Q	SY9520-4YO-02F-Q			G1/4	1374	290/332
SY9520-5LOU-03F-Q	SY9520-5YO-03F-Q	SY9520-4YO-03F-Q	G3/8	1472	285/327		

* "С" – быстроразъемное соединение, например "С8" – Ø8 мм.

Ответные части разъемов заказываются отдельно (см. стр. 71)

Конструкция

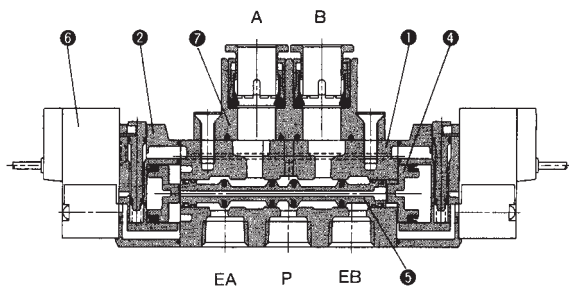
5/2 с односторонним управлением



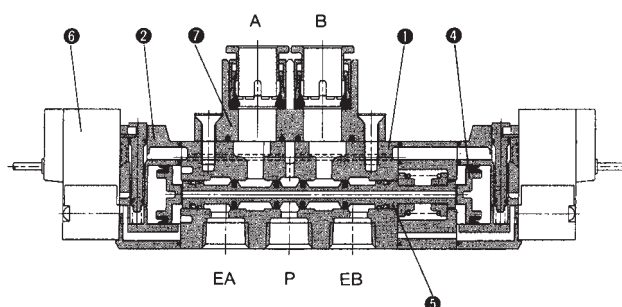
Спецификация

Поз.	Обозначение	Материал
1	Корпус пневмораспределителя	Алюминий
2	Промежуточная деталь	Полиацеталь
3	Концевая пластина	Алюминий
4	Поршень управления	Полиацеталь
5	Золотник	—
6	Катушка	—
7	Комплект фитинга	—

5/2 с двусторонним управлением



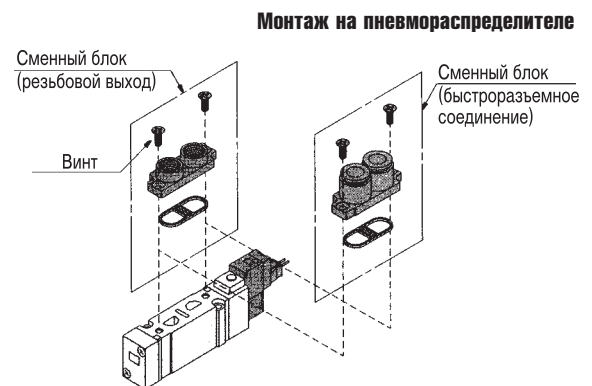
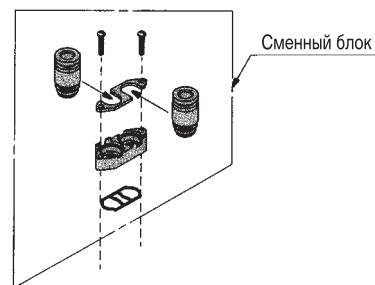
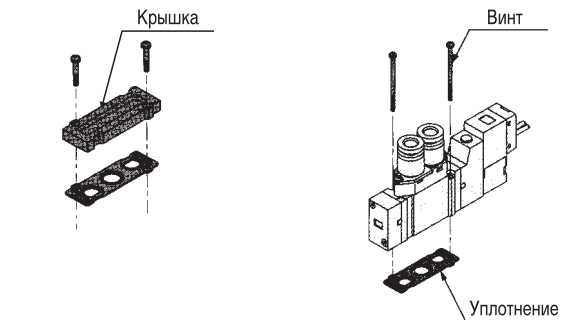
5/3 в среднем положении открыт/закрыт



Запасные части (заказываются отдельно)

Обозначение	Тип	Номер для заказа
Комплект, состоящий из крышки, уплотнения и винтов	SY3000	SY3000-26-19A-Q
	SY5000	SY5000-26-1A-Q
	SY7000	SY7000-26-1A-Q
	SY9000	SY9000-26-1A-Q
Уплотнение	SY3000	SY3000-11-24
	SY5000	SY5000-11-10
	SY7000	SY7000-11-09
	SY9000	SY9000-11-1
Крепежный винт	SY3000	SY3000-23-4
	SY5000	M3x26
	SY7000	M4x31
	SY9000	SY9000-18-2

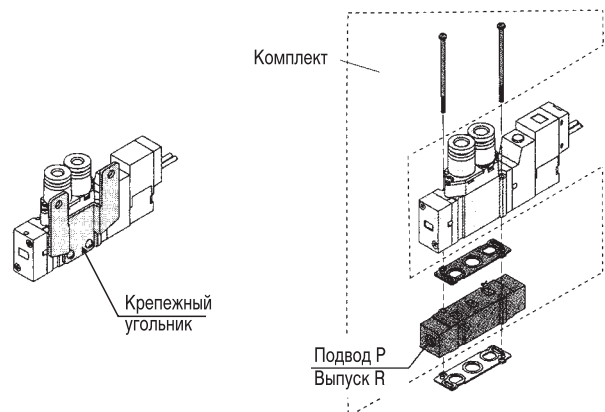
Обозначение	Тип	Присоед.	Номер для заказа
Сменный блок фитингов для выходных отверстий	SY3000	M5	SY3000-6A-M5
		C4	SY3000-6A-C4
		C6	SY3000-6A-C6
	SY5000	C6	SY5000-6A-C6
		C8	SY5000-6A-C8
		1/8	SY5000-6A-01F
	SY7000	C8	SY7000-6A-C8
		C10	SY7000-6A-C10
		1/4	SY7000-6A-02F
	SY9000	C8	SY9000-6A-C8
		C10	SY9000-6A-C10
		C12	SY9000-6A-C12
		1/4	SY9000-6A-02F
		3/8	SY9000-6A-03F



Принадлежности (заказываются отдельно)

Обозначение	Тип	Присоединительная резьба	Номер для заказа
Индивидуальный выпуск воздуха с уплотнением и винтами	SY3000	M5, двусторонний	SY3000-39-1A-Q
	SY5000	1/8, двусторонний	SY5000-39-1FA-Q
	SY7000	1/4, двусторонний	SY7000-39-1FA-Q
	SY9000	1/4, двусторонний	SY9000-39-1FA-Q
Индивидуальный подвод воздуха с уплотнением и винтами	SY3000	M5, односторонний	SY3000-38-1A-Q
	SY5000	1/8, односторонний	SY5000-38-1FA-Q
	SY7000	1/4, односторонний	SY7000-38-1FA-Q
	SY9000	1/4, односторонний	SY9000-38-1FA-Q
Крепежный угольник и винты *	SY3000		SX3000-16-1A
	SY5000		SX5000-16-1A
	SY7000		SX7000-16-1A

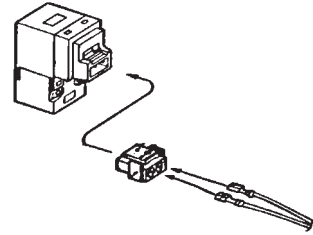
* крепежный угольник для SY9000 не поставляется



Ответные части разъемов (заказываются отдельно)

Ответные части разъемов

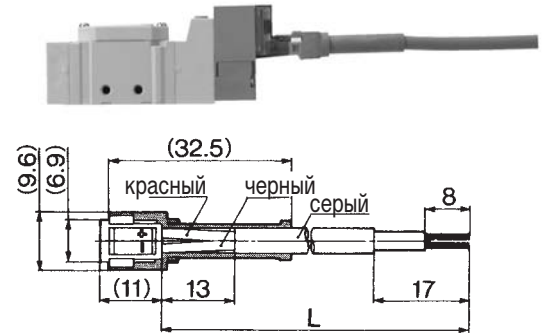
Обозначение	Тип	Длина кабеля	Номер для заказа	
			24 V DC	220 V AC
Кабель без оболочки и предохранительного колпачка	SY3000,	1000	SY100-30-4A-10	SY100-30-3A-10
	SY5000,	2000	SY100-30-4A-20	SY100-30-3A-20
	SY7000,	3000	SY100-30-4A-30	SY100-30-3A-20
Кабель с оболочкой и предохранительным колпачком	SY9000	1000	SY100-68-A-10	–
		2000	SY100-68-A-20	–
		3000	SY100-68-A-30	–



DIN-разъем

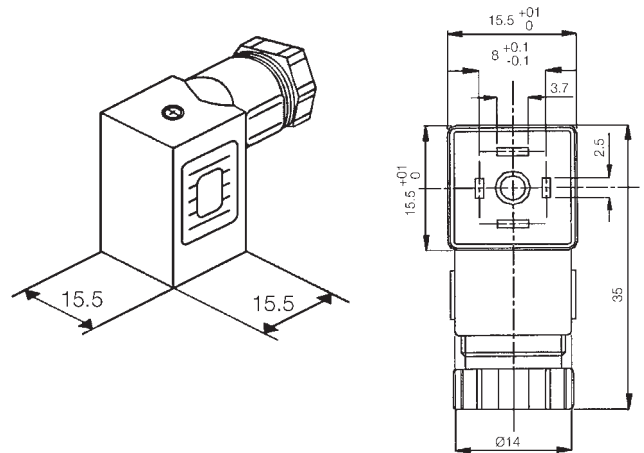
Описание	Тип	Номер для заказа	
		24 V DC	220 V AC
Без индикатора рабочего состояния, без искрогашения	SY5000, SY7000, SY9000	K41	
С индикатором рабочего состояния, с искрогашением	SY9000	K43	K44

Схему подключения см. на стр. 14



Запасной элемент включения

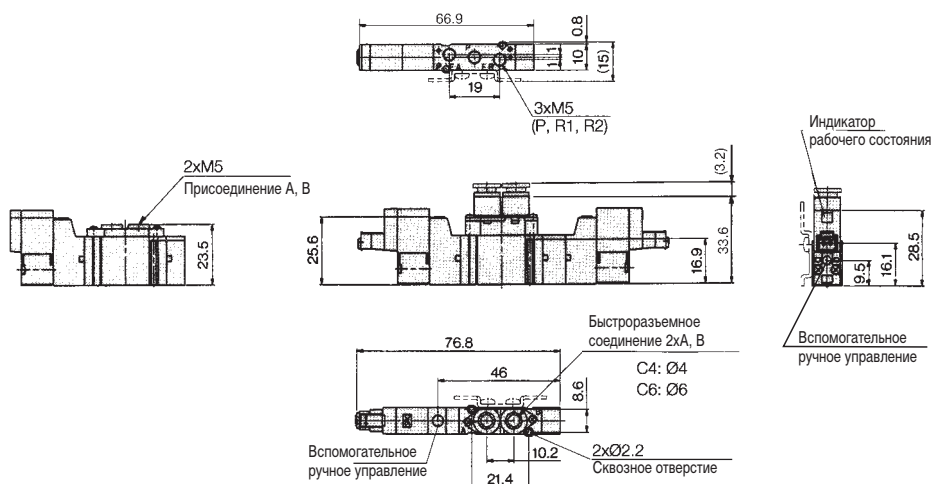
Тип	Напряжение	Номер для заказа	
		Разъем с кабелем	DIN-разъем
SY3000	24 V DC	V111-5LOU-Q	–
SY5000			V115-5Y0-Q
SY7000			
SY9000	220 V AC	–	V115-4Y0-Q
SY5000			
SY7000			
SY9000			



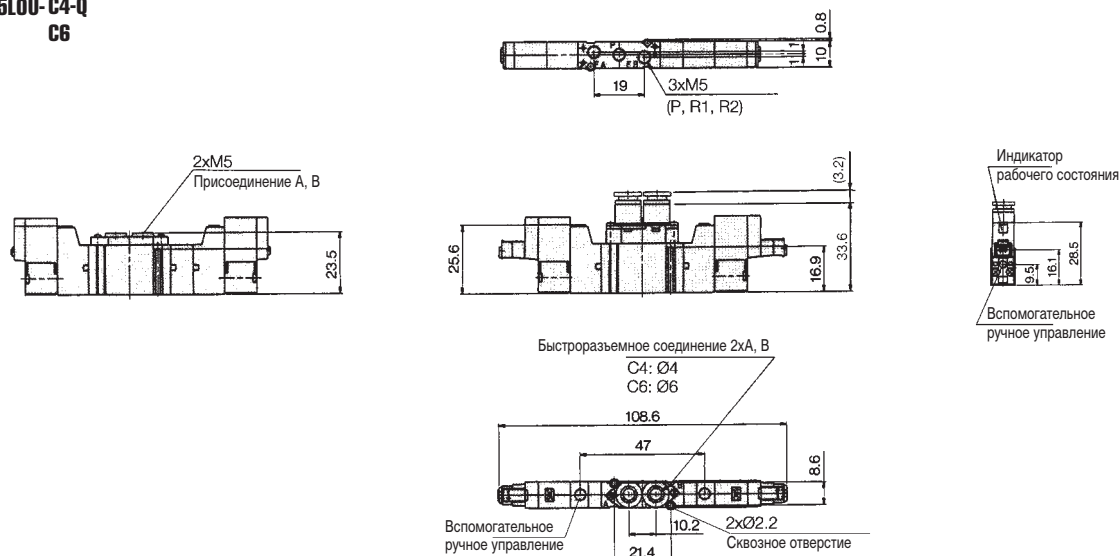
5/2, 5/3 пневмораспределитель с электропневматическим управлением SY3000/5000/7000/9000

Размеры SY3000

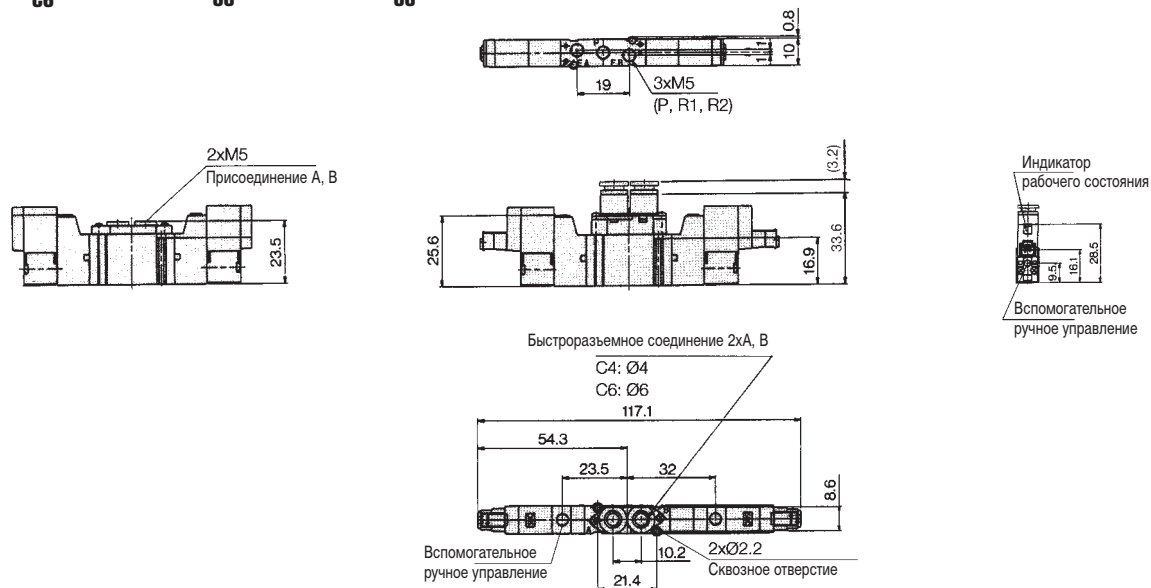
M5
SY3120-5LOU- C4-Q
C6



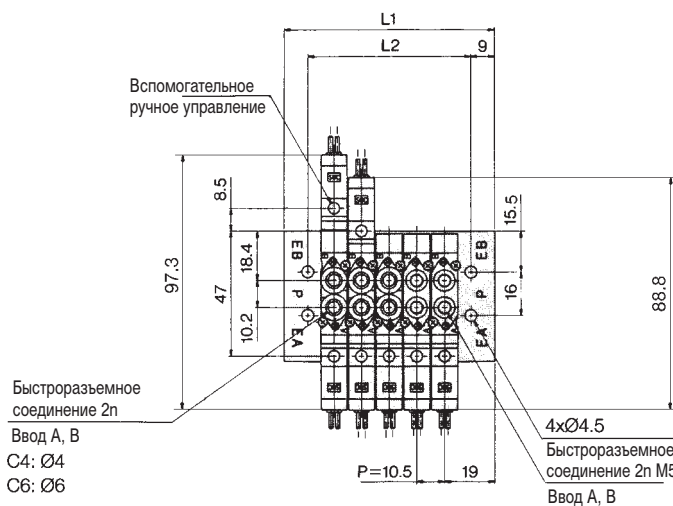
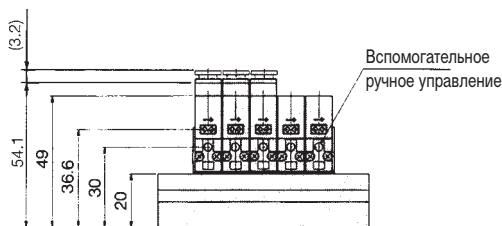
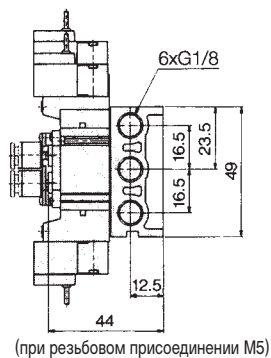
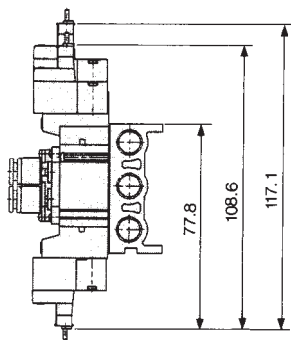
M5
SY3220-5LOU- C4-Q
C6



M5
SY3320-5LOU- C4-Q / SY3420-5LOU- C4-Q / SY3520-5LOU- C4-Q
C6



Размеры многосекционной плиты пневмораспределителей SY3000



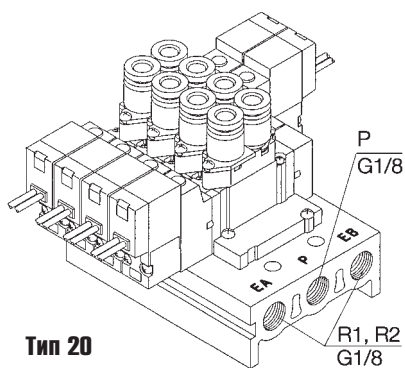
Количество секций	2	3	4	5	6	7	8	10	12
L1	48.5	59	69.5	80	90.5	101	111.5	132.5	153.5
L2	30.5	41	51.5	62	72.5	83	93.5	114.5	135.5
Вес (г)*	61	74	87	100	113	126	139	165	191

* Вес указан без учета пневмораспределителей

Номер для заказа многосекционной плиты пневмораспределителей

Количество секций	Номер для заказа
2	SS5Y3-20-02-00F-Q
3	SS5Y3-20-03-00F-Q
4	SS5Y3-20-04-00F-Q
5	SS5Y3-20-05-00F-Q
6	SS5Y3-20-06-00F-Q
7	SS5Y3-20-07-00F-Q
8	SS5Y3-20-08-00F-Q
9	SS5Y3-20-09-00F-Q
10	SS5Y3-20-10-00F-Q
11	SS5Y3-20-11-00F-Q
12	SS5Y3-20-12-00F-Q

Большее количество секций по запросу (до 20 секций)

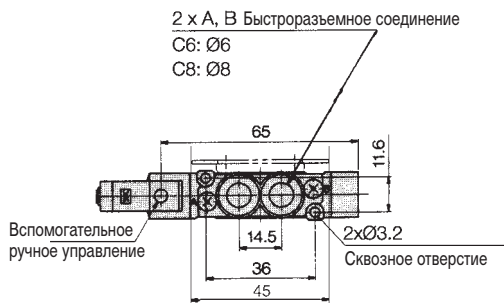
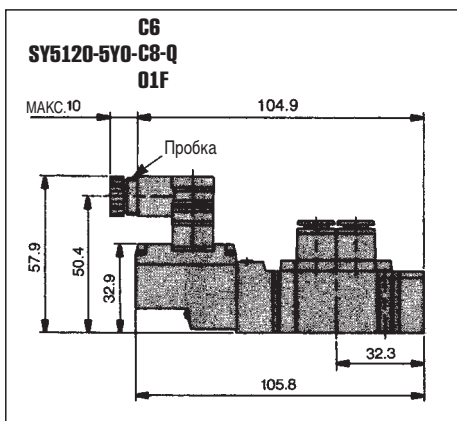
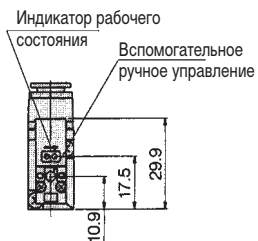
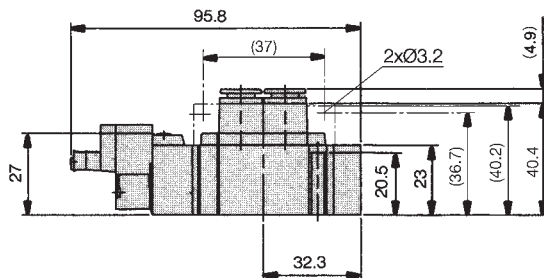
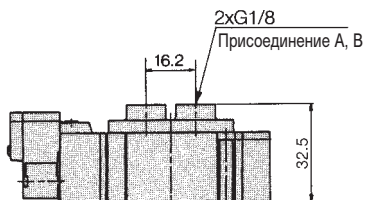
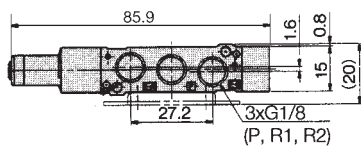


Тип 20

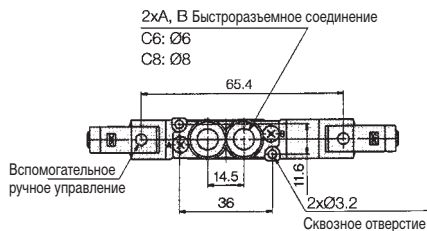
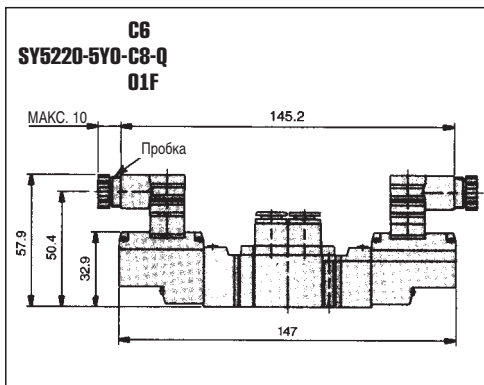
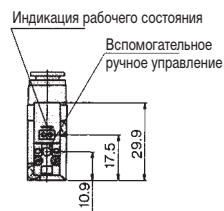
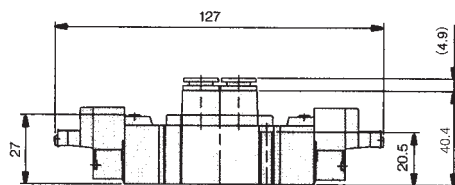
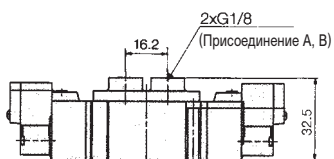
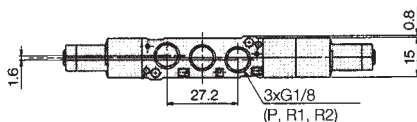
5/2, 5/3 пневмораспределитель с электропневматическим управлением SY3000/5000/7000/9000

Размеры SY5000

C6
SY5120-5LOU-C8-Q
O1F



C6
SY5220-5LOU-C8-Q
O1F

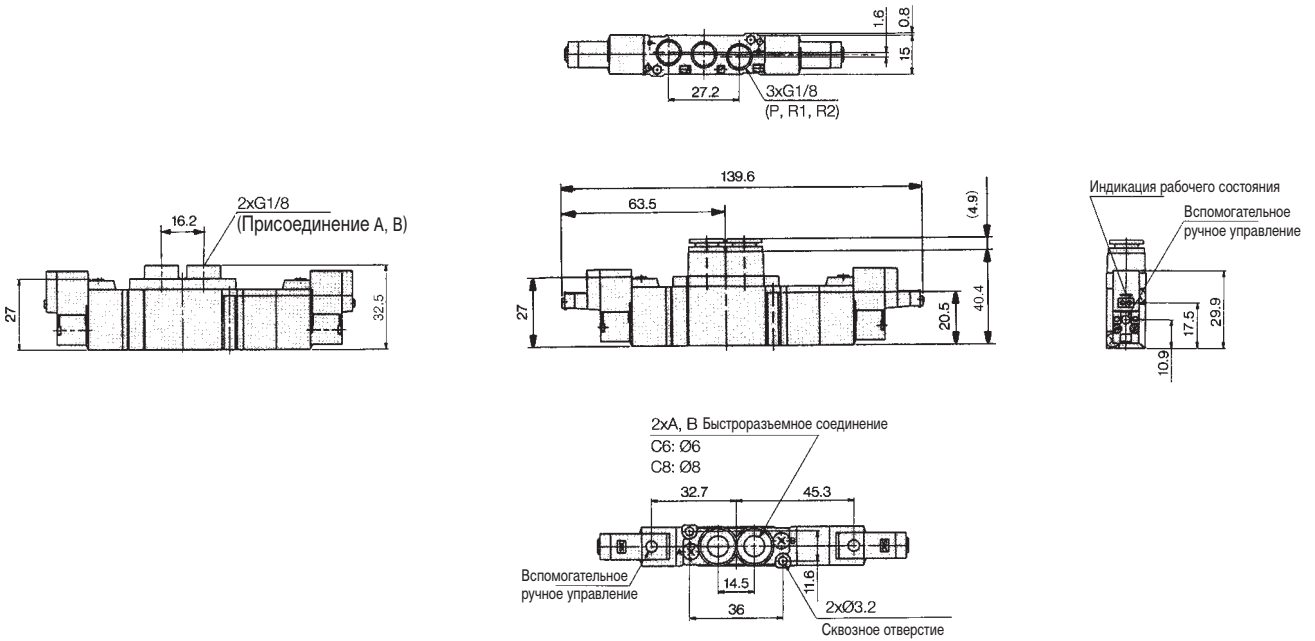


Размеры SY5000

C6
SY5320-5LOU-C8-Q / SY5420-5LOU-C8-Q / SY5520-5LOU-C8-Q
O1F

C6
O1F

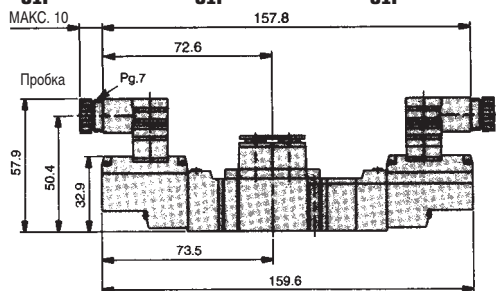
C6
O1F



C6
SY5320-5Y0-C8-Q / SY5420-5Y0-C8-Q / SY5520-5Y0-C8-Q
O1F

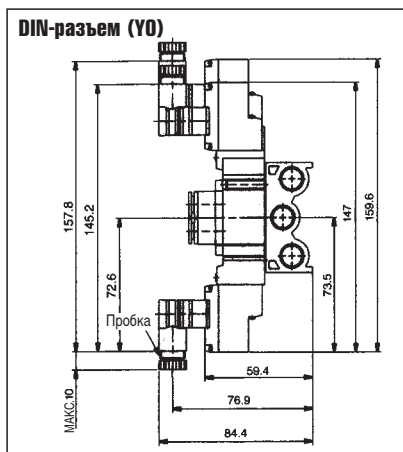
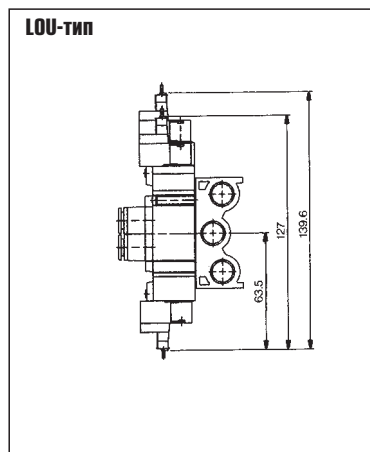
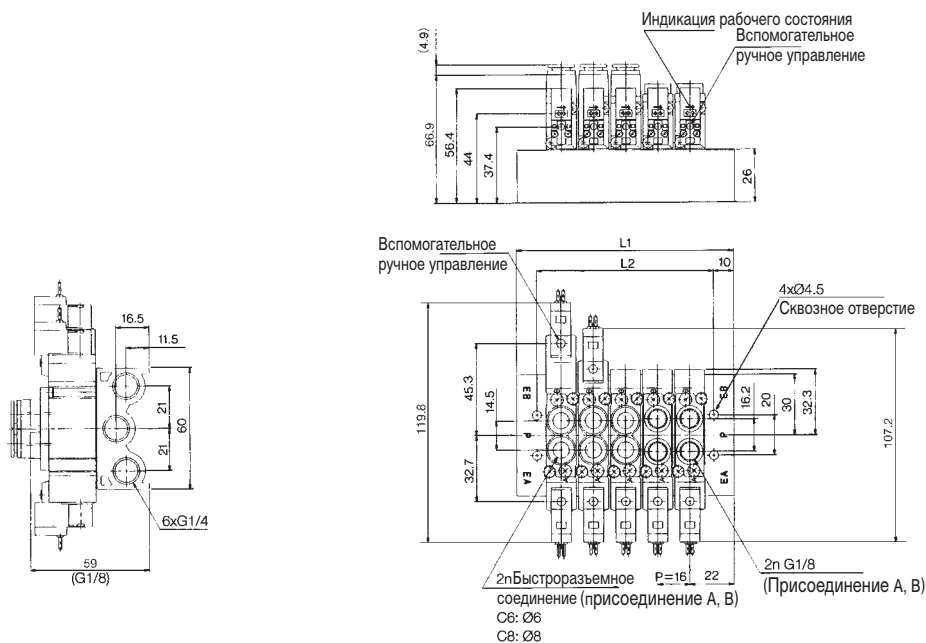
C6
O1F

C6
O1F



5/2, 5/3 пневмораспределитель с электропневматическим управлением SY3000/5000/7000/9000

Размеры многосекционной плиты пневмораспределителей SY5000



Количество секций	2	3	4	5	6	7	8	10	12
L1	60	76	92	108	124	140	156	188	220
L2	40	56	72	88	104	120	136	168	200
Вес (г)*	136	172	208	244	280	316	352	424	496

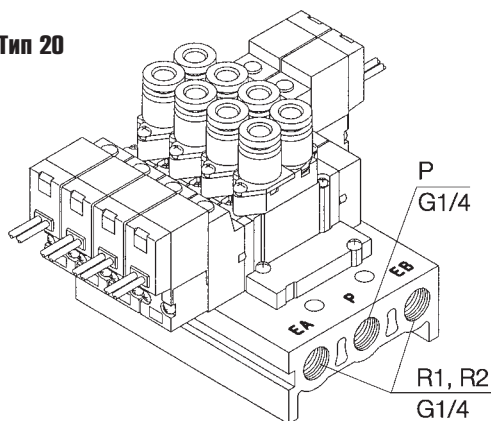
*Вес указан без учета пневмораспределителей

Номер для заказа многосекционной присоединительной плиты

Количество секций	Номер для заказа
2	SS5Y5-20-02-00F-Q
3	SS5Y5-20-03-00F-Q
4	SS5Y5-20-04-00F-Q
5	SS5Y5-20-05-00F-Q
6	SS5Y5-20-06-00F-Q
7	SS5Y5-20-07-00F-Q
8	SS5Y5-20-08-00F-Q
9	SS5Y5-20-09-00F-Q
10	SS5Y5-20-10-00F-Q
11	SS5Y5-20-11-00F-Q
12	SS5Y5-20-12-00F-Q

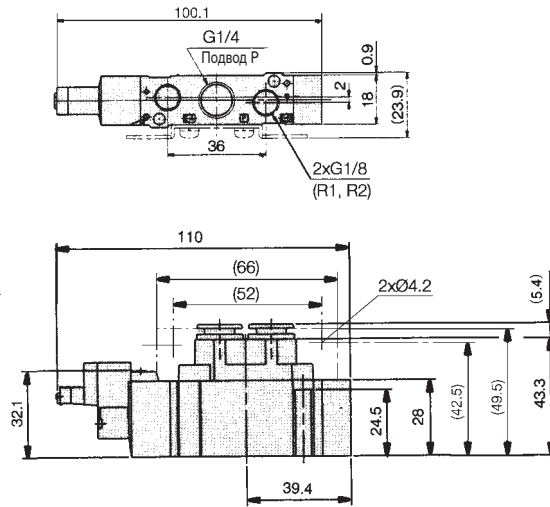
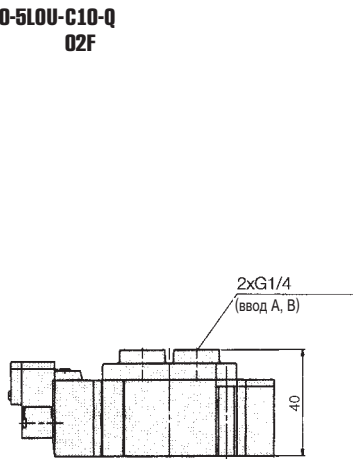
Большее количество секций по запросу (до 20 секций)

Тип 20

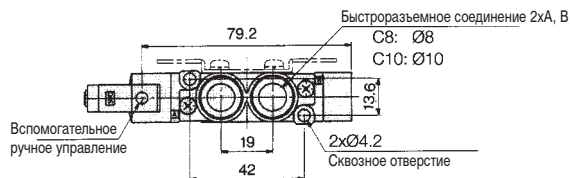
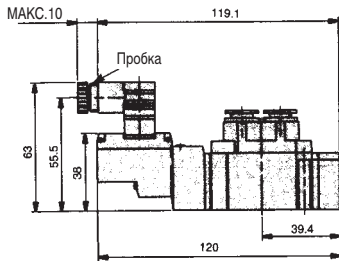


Размеры SY7000

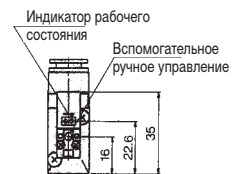
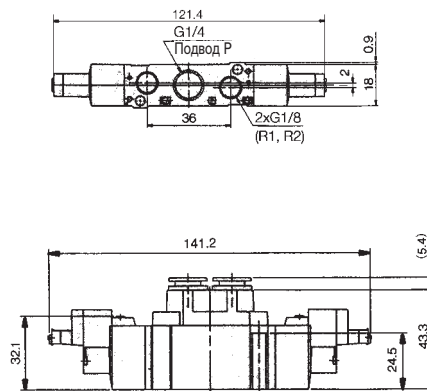
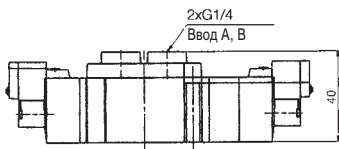
C8
SY7120-5LOU-C10-Q
O2F



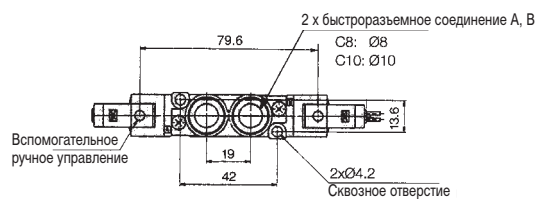
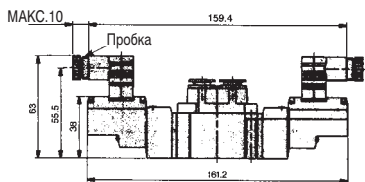
C8
SY7120-5Y0-C10-Q
O2F



C8
SY7220-5LOU-C10-Q
O2F



C8
SY7220-5Y0-C10-Q
O2F

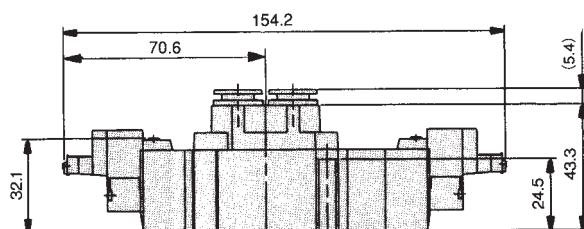
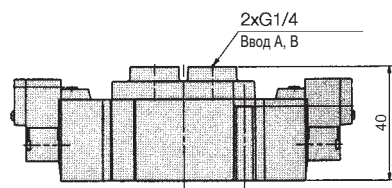
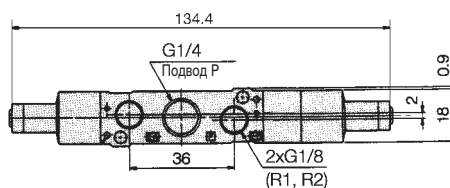


5/2, 5/3 пневмораспределитель с электропневматическим управлением SY3000/5000/7000/9000

Размеры SY7000

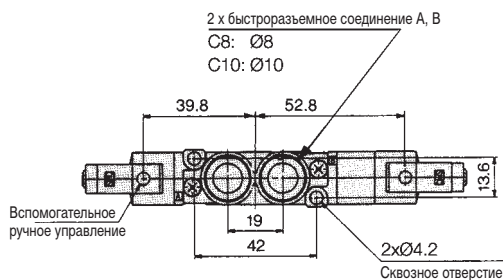
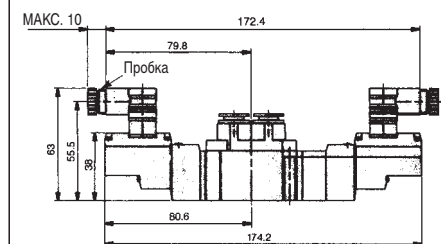
C8 SY7320-510U-C10-Q / SY7420-510U-C10-Q
O2F

C8
O2F

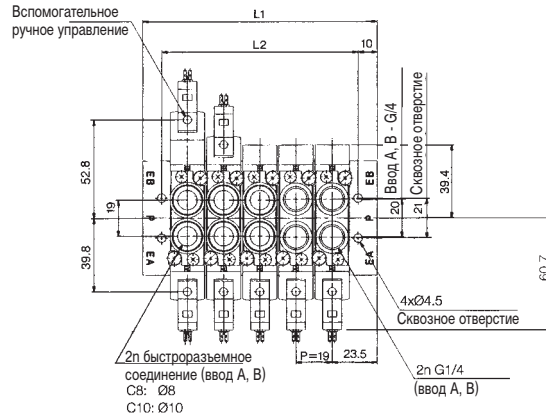
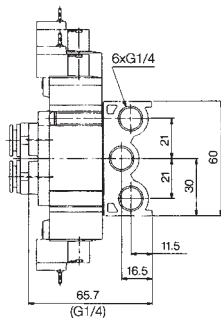
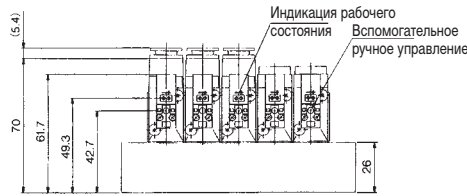


C8 SY7320-5Y0-C10-Q / SY7420-5Y0-C10-Q
O2F

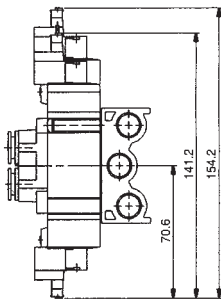
C8
O2F



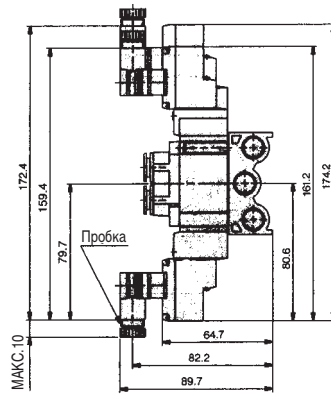
Размеры многосекционной плиты пневмораспределителей SY7000



LOU-тип



DIN-разъем (Y0)

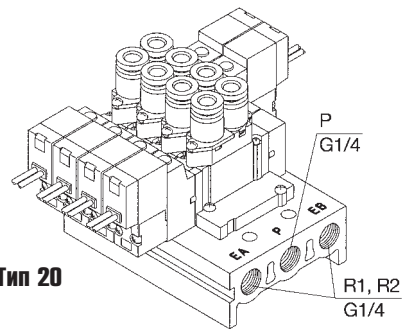


Количество секций	2	3	4	5	6	7	8	10	12
L1	66	85	104	123	142	161	180	218	256
L2	46	65	84	103	122	141	160	198	236
Вес (г)*	150	193	236	279	322	365	408	494	580

* Вес указан без учета пневмораспределителей

Номер для заказа многосекционной присоединительной плиты

Количество секций	Номер для заказа
2	SS5Y7-20-02-00F-Q
3	SS5Y7-20-03-00F-Q
4	SS5Y7-20-04-00F-Q
5	SS5Y7-20-05-00F-Q
6	SS5Y7-20-06-00F-Q
7	SS5Y7-20-07-00F-Q
8	SS5Y7-20-08-00F-Q
9	SS5Y7-20-09-00F-Q
10	SS5Y7-20-10-00F-Q
11	SS5Y7-20-11-00F-Q
12	SS5Y7-20-12-00F-Q



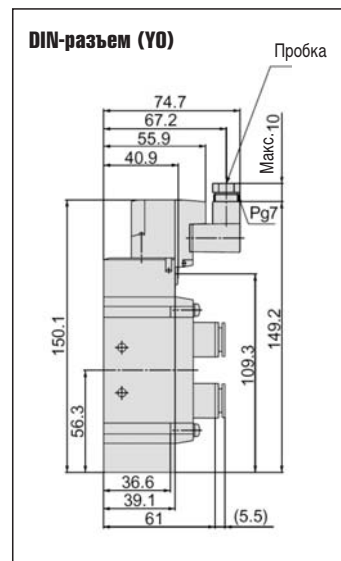
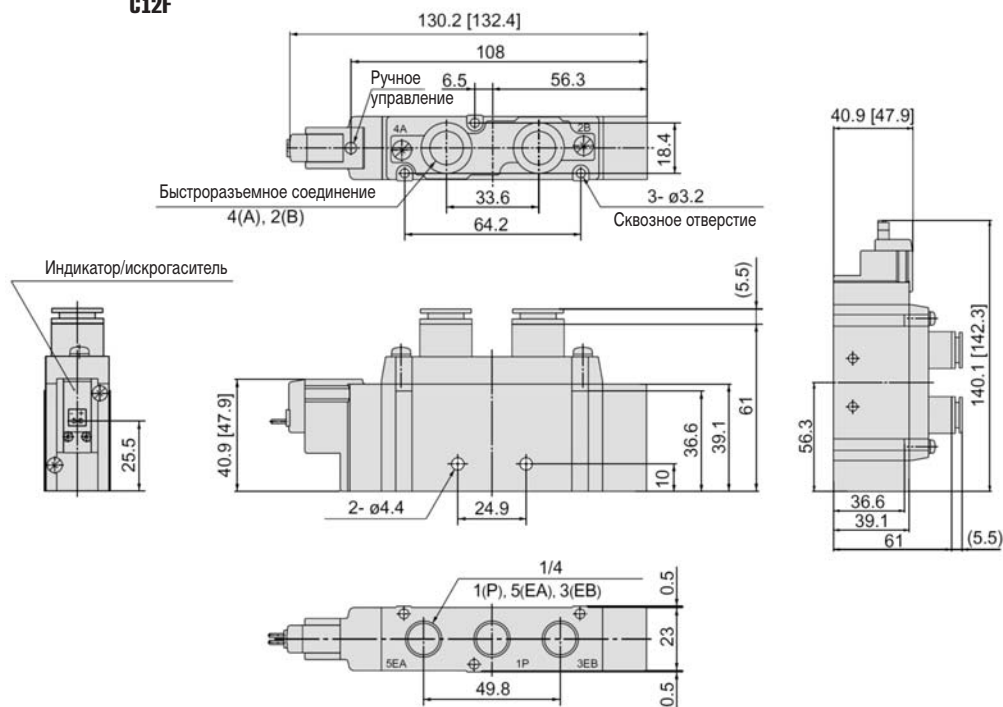
Тип 20

Большее количество секций по запросу (до 20 секций)

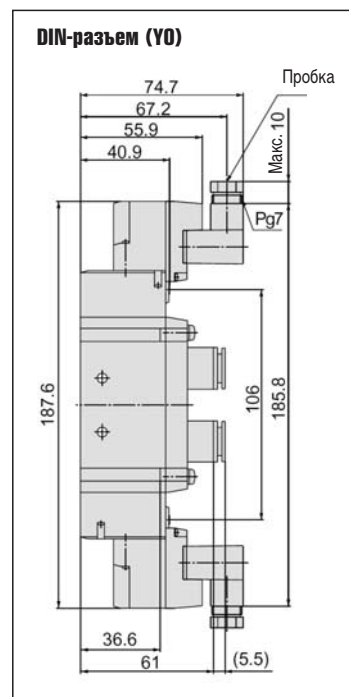
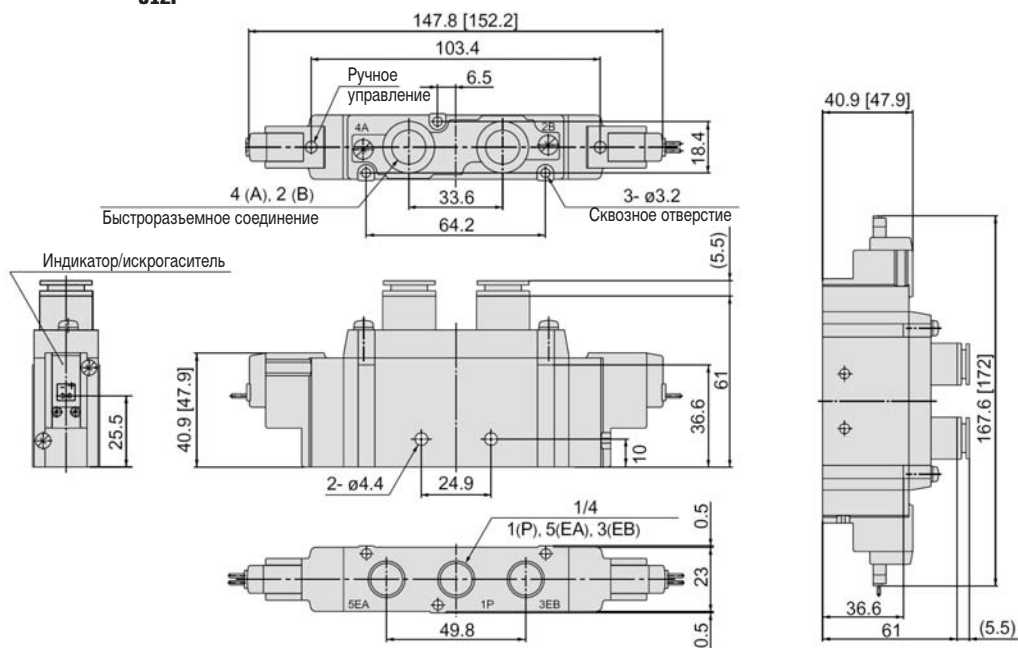
5/2, 5/3 пневмораспределитель с электропневматическим управлением SY3000/5000/7000/9000

Размеры SY9000

C8F
SY9120-5LOU-C10F-Q
C12F



C8F
SY9220-5LOU-C10F-Q
C12F

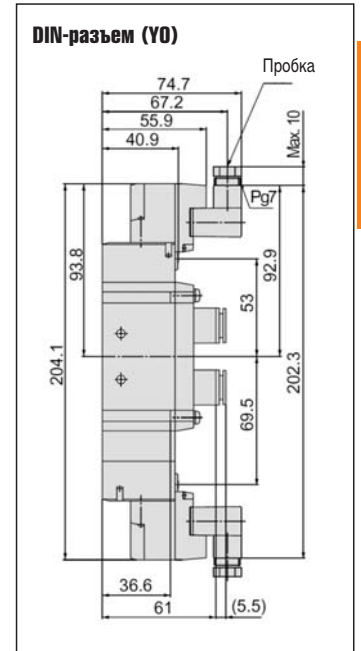
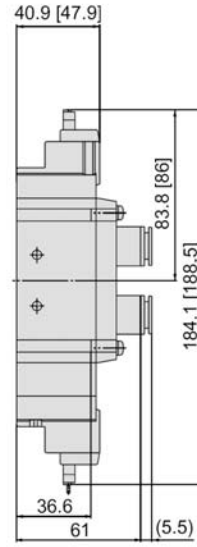
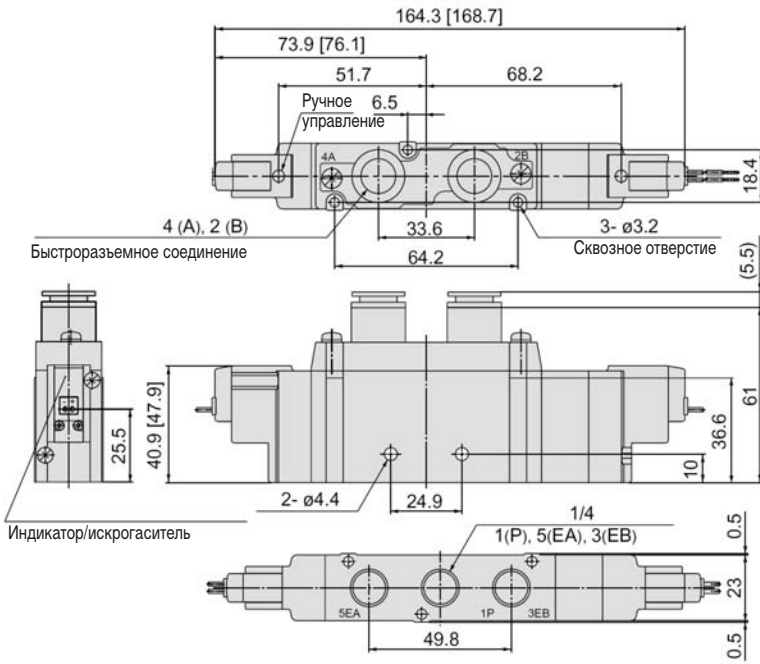


Размеры SY9000

C8F
 SY9320-5LOU-C10F-Q / SY9420-5LOU-C10-Q / SY9520-5LOU-C10-Q
C12F

C8F
 SY9420-5LOU-C10-Q / SY9520-5LOU-C10-Q
C12F

C8F
 SY9520-5LOU-C10-Q
C12F



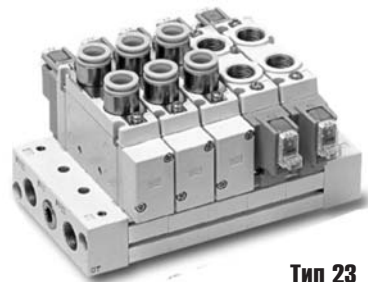
Номер для заказа многосекционной плиты пневмораспределителей SY9000

Номер для заказа многосекционной соединительной плиты

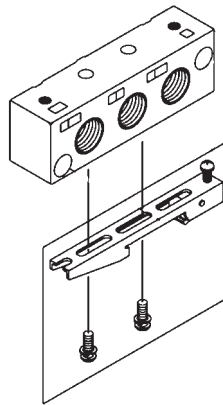
Количество секций	Номер для заказа
2	SS5Y9-23-02-00F-Q
3	SS5Y9-23-03-00F-Q
4	SS5Y9-23-04-00F-Q
5	SS5Y9-23-05-00F-Q
6	SS5Y9-23-06-00F-Q
7	SS5Y9-23-07-00F-Q
8	SS5Y9-23-08-00F-Q
9	SS5Y9-23-09-00F-Q
10	SS5Y9-23-10-00F-Q
11	SS5Y9-23-11-00F-Q
12	SS5Y9-23-12-00F-Q
13	SS5Y9-23-13-00F-Q
14	SS5Y9-23-14-00F-Q
15	SS5Y9-23-15-00F-Q
16	SS5Y9-23-16-00F-Q
17	SS5Y9-23-17-00F-Q
18	SS5Y9-23-18-00F-Q
19	SS5Y9-23-19-00F-Q
20	SS5Y9-23-20-00F-Q

Принадлежности

Обозначение	Номер для заказа
Комплект для монтажа на DIN-шине	SY9000-29-1A



Тип 23



5 Port Solenoid Valve Base Mounted/Single Unit Series SY3000/5000/7000/9000



[Option] (Details → P.332-2)
Note) AC-type models that are CE compliant have DIN terminals only.

How to Order

SY 5 2 40 [] [] - 5 L [] [] - [] [] - [] []

Series

3	SY3000
5	SY5000
7	SY7000
9	SY9000

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot type

Nil	Internal pilot
R	External pilot*

* External pilot specifications for SY3000 DIN terminal are not available.

Coil specifications

Nil	Standard
T	With power saving circuit (24, 12 VDC only)

* Power saving circuit is not available in the case of D, Y, DO, YO or W□ type.

Rated voltage

For DC	
5	24 VDC
6	12 VDC
V	6 VDC
S	6 VDC
R	3 VDC

For AC (50/60Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

* DC specifications of type D, Y, DO and YO is only available with 12 and 24 VDC.
* For type W□, DC voltage is only available.
Note) AC-type models that are CE compliant have DIN terminals only.

Port size

Symbol	Port size	Applicable series
Nil	Without sub-plate	
01	1/8 With sub-plate	SY3000
02	1/4 With sub-plate	SY5000 SY7000
03	3/8 With sub-plate	SY7000 SY9000
04	1/2 With sub-plate	SY9000

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Made to Order

Nil	—
X90	Main valve fluororubber (Refer to page 332.)

Manual override

Nil: Non-locking push type 	D: Push-turn locking slotted type 	E: Push-turn locking lever type
---------------------------------------	--	--

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

Light/surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
* For "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry for D, Y

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

* DOZ and YOZ are not available.
* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

CE compliant	DC	24, 12, 6, 5, 3 VDC / 100, 110, 200, 220 VAC				24, 12 VDC / 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
		Grommet	L plug connector	M plug connector	MN: Without lead wire	D, Y: With connector	M8 connector
		G: Lead wire length 300 mm 	L: With lead wire (Length 300 mm) 	M: With lead wire (Length 300 mm) 	MN: Without lead wire 	D, Y: With connector 	W0: Without connector cable
		H: Lead wire length 600 mm 	LN: Without lead wire 	LO: Without connector 	MO: Without connector 	DO, YO: Without connector 	W□: With connector cable (Note)
	AC	●	●	●	●	●	●

* LN, MN type: with 2 sockets.
* For DIN terminal of SY3000 series, refer to page 337.
* "Y" type is a DIN terminal conforming to EN-175301-803C (former DIN43650C). For details, refer to page 336.
* For connector cable of M8 connector, refer to page 339.
* M8 connector conforming to IEC60947-5-2 standard is also available. Refer to page 331 for details.
* Refer to page 336 for the lead wire length of L and M plug connectors.
* Refer to page 337 for the connector assembly with cover for L and M plug connectors.
Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 340.

Base Mounted Series SY3000/5000/7000/9000

Specifications



Made to Order
(For details, refer to pages 324 to 332.)

Series		SY3000	SY5000	SY7000	SY9000
Fluid		Air			
Internal pilot Operating pressure range (MPa)	2 position single	0.15 to 0.7			
	2 position double	0.1 to 0.7			
	3 position	0.2 to 0.7			
External pilot Operating pressure range (MPa)	Operating pressure range	-100 kPa to 0.7			
	Pilot pressure range	0.25 to 0.7			
	2 position double 3 position	0.25 to 0.7			
Ambient and fluid temperature (°C)		-10 to 50 (No freezing.)			
Max. operating frequency (Hz)	2 position single, double	10	5	5	5
	3 position	3	3	3	3
Manual override (Manual operation)		Non-locking push type, Push-turn locking slotted type, Push-turn locking lever type			
Pilot exhaust method	Internal pilot	Common exhaust type for main and pilot valve			
	External pilot	Pilot valve individual exhaust			
Lubrication		Not required			
Mounting orientation		Unrestricted			
Impact/Vibration resistance (m/s ²) ^{Note)}		150/30			
Enclosure		Dust proof (* DIN terminal and M8 connector: IP65)			



* Based on IEC60529

Note) Impact resistance: No malfunction occurred when it is tested in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

Response Time



Note) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage)

SY3000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	12 or less	15 or less	12 or less
2 position double	10 or less	13 or less	10 or less
3 position	15 or less	20 or less	16 or less

SY5000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	19 or less	26 or less	19 or less
2 position double	18 or less	22 or less	18 or less
3 position	32 or less	38 or less	32 or less

SY7000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	31 or less	38 or less	33 or less
2 position double	27 or less	30 or less	28 or less
3 position	50 or less	56 or less	50 or less

SY9000

Type of actuation	Response time (ms) (at the pressure of 0.5 MPa)		
	Without light/surge voltage suppressor	With light/surge voltage suppressor	
		Type S, Z	Type R, U
2 position single	35 or less	41 or less	35 or less
2 position double	35 or less	41 or less	35 or less
3 position	62 or less	64 or less	62 or less

Solenoid Specifications

Electrical entry	Grommet (G), (H) L plug connector (L) M plug connector (M)		DIN terminal (D), (Y) M8 connector (W)	
	G, H, L, M, W		D, Y	
Coil rated voltage (V)	DC	24, 12, 6, 5, 3		24, 12
	AC 50/60 Hz	100, 110, 200, 220		
Allowable voltage fluctuation	±10% of rated voltage *			
Power consumption (W)	DC	Standard	0.35 (With indicator light: 0.4 DIN terminal with indicator light: 0.45)	
		With power saving circuit	0.1 (With indicator light only)	
Apparent power (VA) *	AC	100 V	0.78 (With indicator light: 0.81)	0.78 (With indicator light: 0.87)
		110 V	0.86 (With indicator light: 0.89)	0.86 (With indicator light: 0.97)
		[115 V]	[0.94 (With indicator light: 0.97)]	[0.94 (With indicator light: 1.07)]
		200 V	1.18 (With indicator light: 1.22)	1.15 (With indicator light: 1.30)
		220 V [230 V]	[1.30 (With indicator light: 1.34)] [1.42 (With indicator light: 1.46)]	[1.27 (With indicator light: 1.46)] [1.39 (With indicator light: 1.60)]
Surge voltage suppressor	Diode (Varistor is for DIN terminal and Non-polar type.)			
Indicator light	LED (AC of DIN connector is neon light.)			



* In common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC.

* For 115 VAC and 230 VAC, the allowable voltage is -15% to +5% of rated voltage.

* S, Z and T type (with power saving circuit) should be used within the following allowable voltage fluctuation range due to a voltage drop caused by the internal circuit.

S and Z type: 24 VDC: -7% to +10%

12 VDC: -4% to +10%

T type: 24 VDC: -8% to +10%

12 VDC: -6% to +10%

Series SY3000/5000/7000/9000

Flow Characteristics/Mass

Series SY3000

Valve model	Type of actuation		Port size	Flow characteristics ^{Note 1)}						Mass (g) ^{Note 2)}		
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	L plug connector, M plug connector	W M8 connector
				C (dm ³ /s·bar)	b	Cv	C (dm ³ /s·bar)	b	Cv			
SY3□40-□-01	2 position	Single	1/8	1.0	0.30	0.24	1.1	0.30	0.26	84 (50)	85 (53)	89 (57)
		Double										
	3 position	Closed center		0.77	0.28	0.18	0.85	0.30	0.19	104 (69)	109 (74)	117 (82)
		Exhaust center		0.73	0.31	0.18	1.1 [0.55]	0.26 [0.52]	0.24 [0.16]			
		Pressure center		1.2 [0.51]	0.24 [0.45]	0.29 [0.14]	0.89	0.47	0.24			

Note 1) [] : denotes the normal position. Note 2) () : denotes without sub-plate.

Series SY5000

Valve model	Type of actuation		Port size	Flow characteristics ^{Note 1)}						Mass (g) ^{Note 2)}			
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	L plug connector, M plug connector	DIN terminal	W M8 connector
				C (dm ³ /s·bar)	b	Cv	C (dm ³ /s·bar)	b	Cv				
SY5□40-□-02	2 position	Single	1/4	2.4	0.41	0.64	2.8	0.29	0.66	121 (58)	123 (61)	154 (92)	127 (65)
		Double											
	3 position	Closed center		1.8	0.47	0.50	1.8	0.40	0.47	144 (82)	150 (87)	192 (129)	158 (95)
		Exhaust center		1.4	0.55	0.44	3.0 [1.2]	0.33 [0.48]	0.72 [0.37]				
		Pressure center		3.3 [0.84]	0.36 [0.60]	0.85 [0.28]	1.8	0.40	0.48				

Note 1) [] : denotes the normal position. Note 2) () : denotes without sub-plate.

Series SY7000

Valve model	Type of actuation		Port size	Flow characteristics ^{Note 1)}						Mass (g) ^{Note 2)}			
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	L plug connector, M plug connector	DIN terminal	W M8 connector
				C (dm ³ /s·bar)	b	Cv	C (dm ³ /s·bar)	b	Cv				
SY7□40-□-02	2 position	Single	1/4	4.1	0.41	1.1	4.1	0.29	1.0	218 (89)	221 (92)	242 (113)	225 (96)
		Double											
	3 position	Closed center		3.0	0.43	0.80	2.6	0.41	0.72	239 (110)	245 (116)	287 (158)	253 (124)
		Exhaust center		2.6	0.42	0.71	4.7 [1.7]	0.35 [0.48]	1.1 [0.49]				
		Pressure center		5.3 [2.3]	0.39 [0.49]	1.3 [0.65]	2.2	0.49	0.63				

Note 1) [] : denotes the normal position. Note 2) () : denotes without sub-plate.

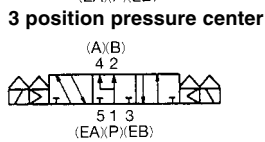
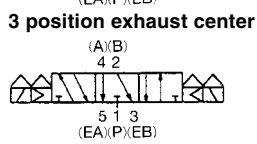
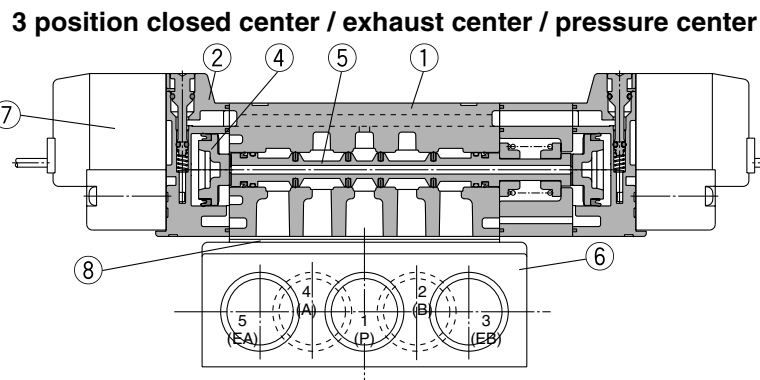
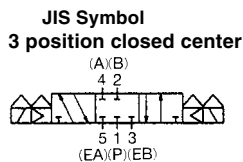
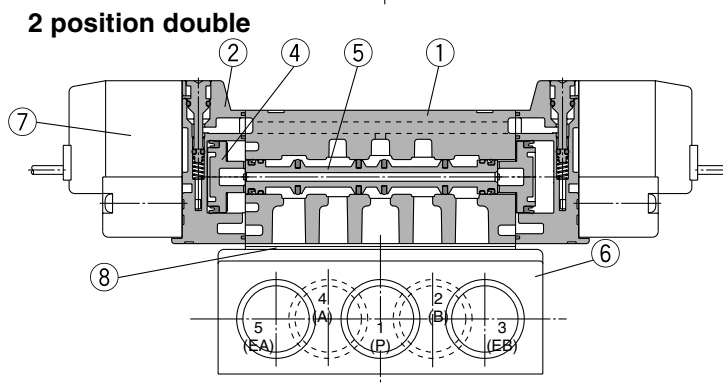
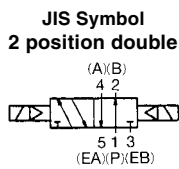
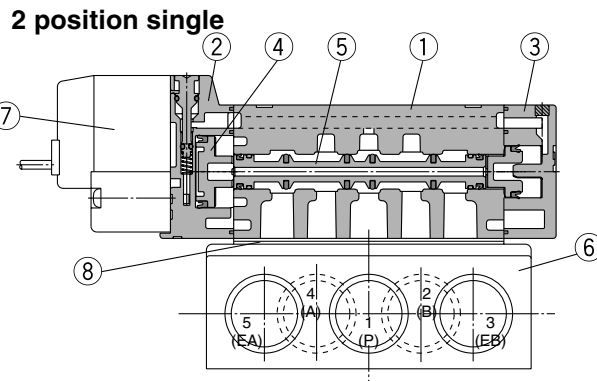
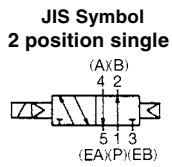
Series SY9000

Valve model	Type of actuation		Port size	Flow characteristics ^{Note 1)}						Mass (g) ^{Note 2)}			
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			Grommet	L plug connector, M plug connector	DIN terminal	W M8 connector
				C (dm ³ /s·bar)	b	Cv	C (dm ³ /s·bar)	b	Cv				
SY9□40-□-03	2 position	Single	3/8	7.9	0.34	2.0	9.6	0.43	2.6	469(172)	472(175)	493(196)	476(179)
		Double											
	3 position	Closed center		7.5	0.33	1.8	7.3	0.30	1.7	512(215)	518(221)	560(263)	526(229)
		Exhaust center		7.2	0.34	1.7	13 [4.0]	0.23 [0.41]	2.8 [0.95]				
		Pressure center		12 [3.3]	0.26 [0.41]	2.8 [0.84]	6.7	0.40	1.9				

Note 1) [] : denotes the normal position. Note 2) () : denotes without sub-plate.

Construction

Series SY



(This figure shows a closed center type.)

Component Parts

No.	Description	Material	Note
1	Body	Aluminum die-casted (SY3000: Zinc die-casted)	White
2	Adapter plate	Resin	White (SY9000: Gray)
3	End plate	Resin	White
4	Piston	Resin	-
5	Spool valve assembly	Aluminum, H-NBR	-

Replacement Parts

No.	Description	Part No.				Note
		SY3□40	SY5□40	SY7□40	SY9□40	
6	Sub-plate ^{Note)}	SY3000-27-1[*](-Q)	SY5000-27-1[*](-Q)	1/4: SY7000-27-1[*](-Q) 3/8: SY7000-27-2[*](-Q)	3/8: SY9000-27-1[*](-Q) 1/2: SY9000-27-2[*](-Q)	Aluminum die-casted
7	Pilot valve assembly	Refer to "How to Order Pilot Valve Assembly" on page 130.				
8	Gasket	SY3000-11-25	SY5000-11-15	SY7000-11-11	SY9000-11-2	H-NBR
-	Round head combination screw	SY3000-23-4 (M2 x 21)	M3 x 26	M4 x 31	SY9000-18-2 (M3 x 42)	For valve mounting (Matt nickel plated)

* Thread type

Note) For CE-compliant, suffix "Q" at the end of part no.

⚠ Caution

Mounting screw tightening torques

M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Series SY3000/5000/7000/9000

How to Order Pilot Valve Assembly

V111 - 5 G

Coil specifications

Nil	Standard
T	With power saving circuit (24 VDC, 12 VDC only)

* Power saving circuit is not available in the case of D, DO or W□ type.

Rated voltage

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC
1	100 VAC ^{50/60} Hz
2	200 VAC ^{50/60} Hz
3	110 VAC ^{50/60} Hz [115 VAC ^{50/60} Hz]
4	220 VAC ^{50/60} Hz [230 VAC ^{50/60} Hz]

* For type W□, DC voltage is only available.
* CE-compliant: For DC only.

Light/surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
* For "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry

G	Grommet, 300 mm lead wire	
H	Grommet, 600 mm lead wire	
L		With lead wire
LN	L plug connector	Without lead wire
LO		Without connector
M		With lead wire
MN	M plug connector	Without lead wire
MO		Without connector
WO	M8	Without connector cable
W□	connector	With connector cable ^{Note 1)}

* For connector cable of M8 connector, refer to page 339.
Note 1) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 340.

■ DIN terminal type

V115 - 5 D

Rated voltage

5	24 VDC
6	12 VDC
1	100 VAC ^{50/60} Hz
2	200 VAC ^{50/60} Hz
3	110 VAC ^{50/60} Hz [115 VAC ^{50/60} Hz]
4	220 VAC ^{50/60} Hz [230 VAC ^{50/60} Hz]

* DC specifications of type D, Y, DO and YO is only available with 12 and 24 VDC.

Light/surge voltage suppressor

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

* DOZ and YOZ are not available.
* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

D	DIN terminal	With connector
DO	(Type D)	Without connector
Y	DIN terminal	With connector
YO	(Type Y)	Without connector

Note) Do not replace V111 (G, H, L, M) to V115 (DIN terminal) and vice versa when replacing pilot valve assembly only.

Note) Since V111 and V115 are CE-compliant as standard, the suffix "-Q" is not necessary.

Base Mounted Series SY3000/5000/7000/9000

How to Order Interface Regulator

Series SY3000

ARBY3000 - **05** - **P** - 2

Pressure gauge connection port

05	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Series SY5000

ARBY5000 - **00** - **P** - 2

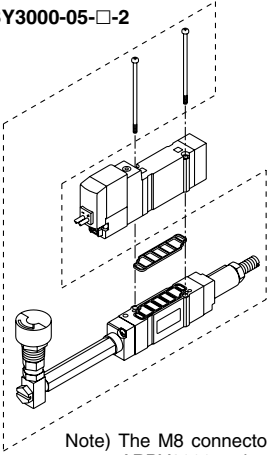
Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

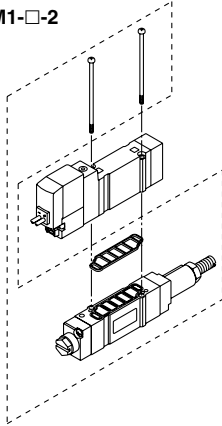
Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

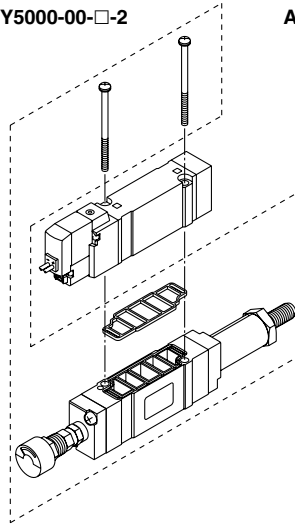
ARBY3000-05-□-2



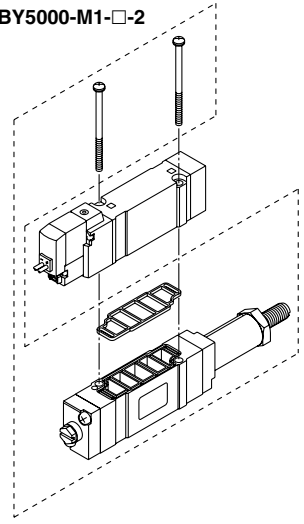
ARBY3000-M1-□-2



ARBY5000-00-□-2



ARBY5000-M1-□-2



Note) The M8 connector for wiring cannot be mounted for the ARBY3000 series.

Series SY7000

ARBY7000 - **00** - **P** - 2

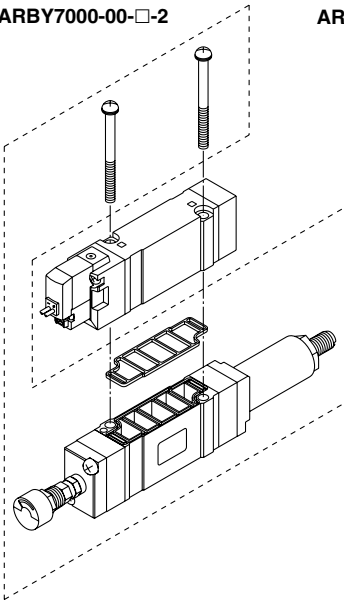
Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

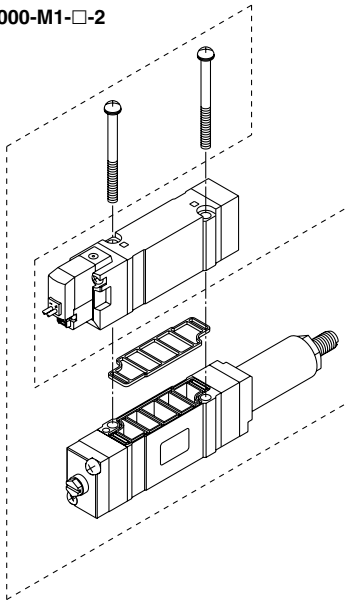
Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

ARBY7000-00-□-2



ARBY7000-M1-□-2



Note) ARBY is not CE compliant.

Accessory

Series	Round head combination screw	Gasket
ARBY3000	SY3000-23-10 (M2 x 36)	SX3000-57-4
ARBY5000	M3 x 48.5, Matt nickel plated	SX5000-57-6
ARBY7000	M4 x 58, Matt nickel plated	SX7000-57-5

⚠ Caution

Mounting screw tightening torques

M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

VFR

VQ7

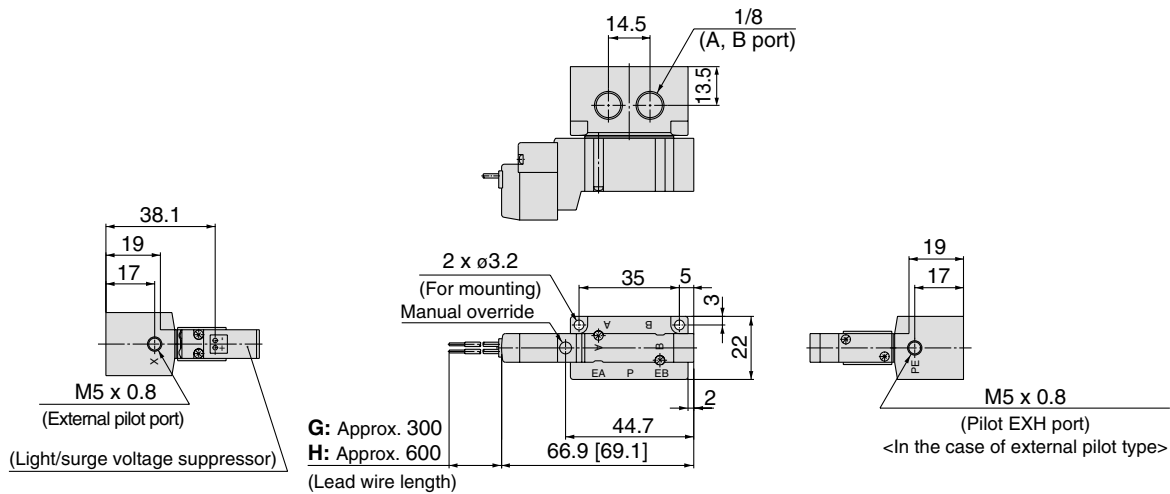
Series SY3000/5000/7000/9000



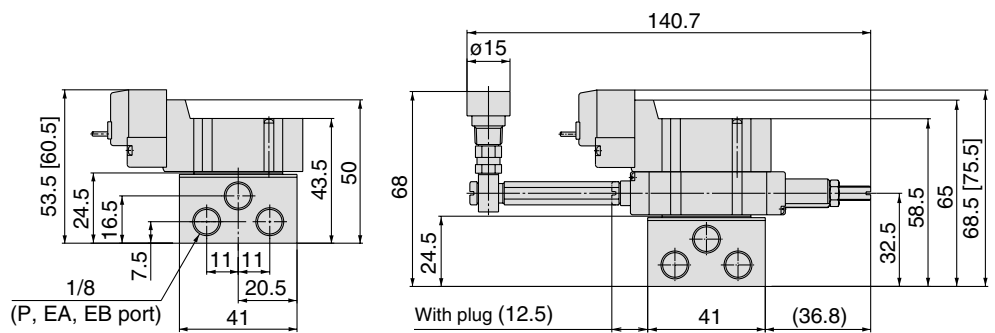
Dimensions: Series SY3000

2 position single

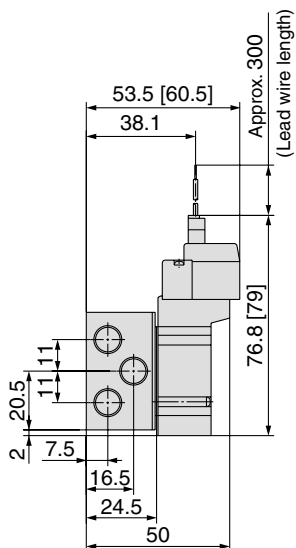
Grommet (G), (H): SY3140(R)-□^G□□-01□



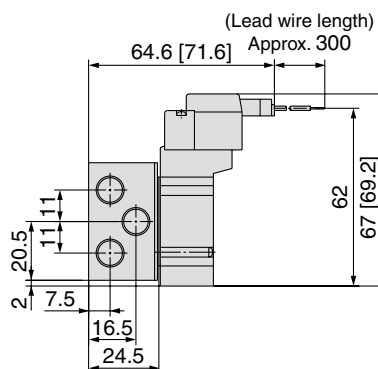
With interface regulator



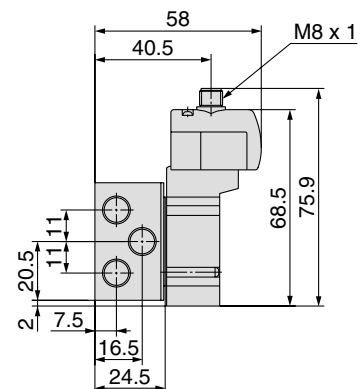
L plug connector (L):
SY3140(R)-□L□□-01□



M plug connector (M):
SY3140(R)-□M□□-01□



M8 connector (WO):
SY3140(R)-□WO□□-01□



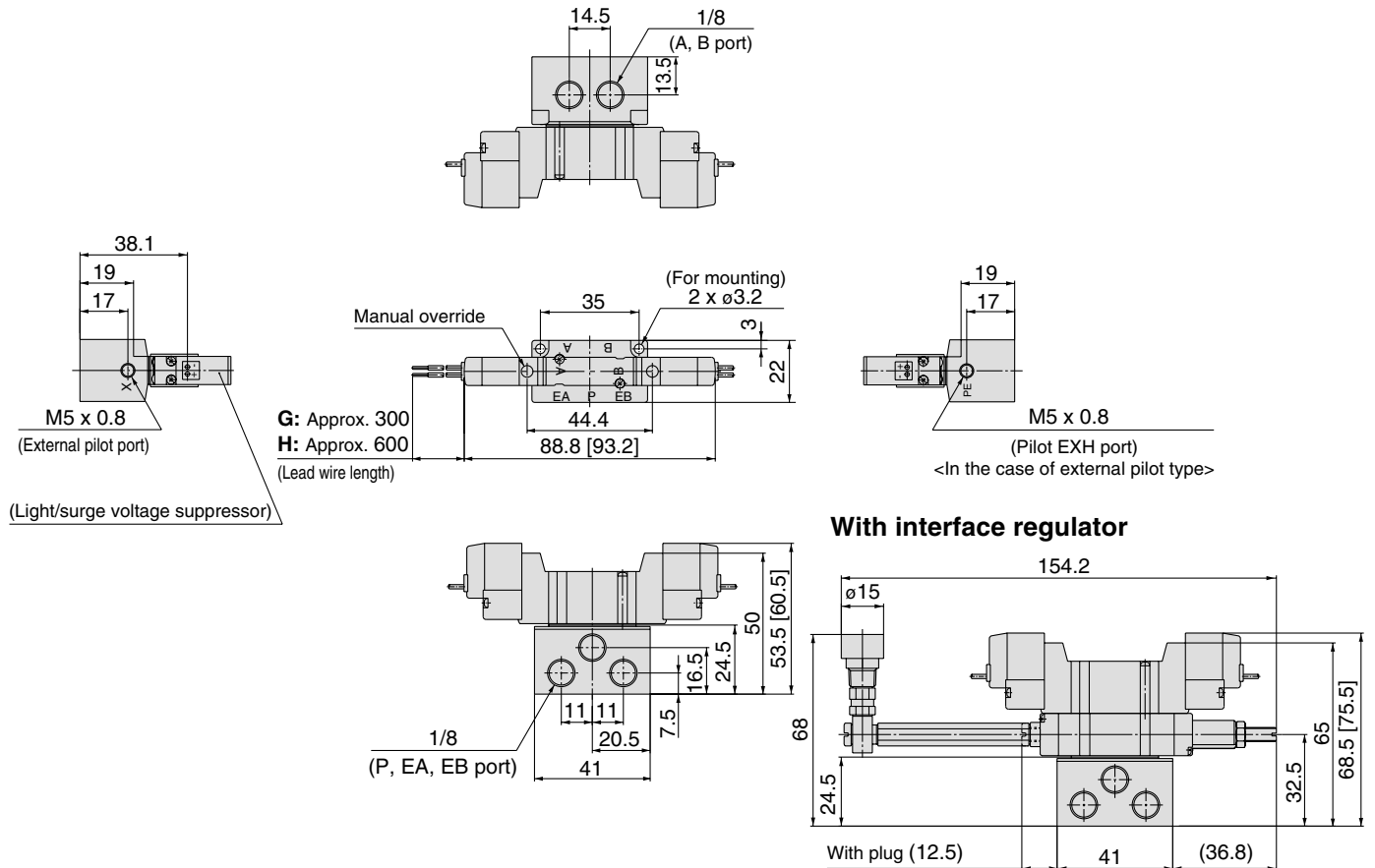
Note) Refer to page 340 for dimensions of connector types.



Dimensions: Series SY3000

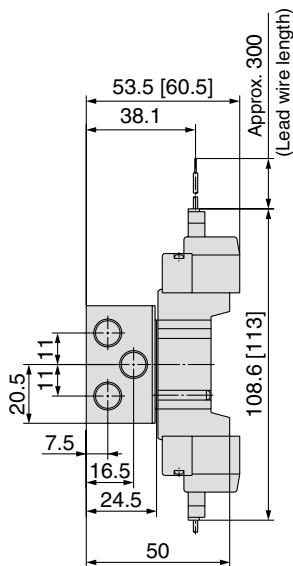
2 position double

Grommet (G), (H): SY3240(R)-□^G_H□□-01□

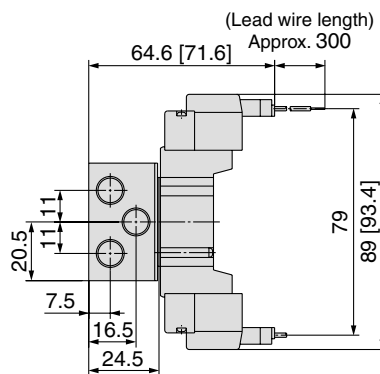


SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

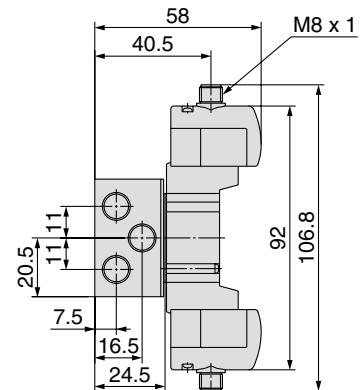
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SY3240(R)-□L□□-01□



M plug connector (M):
SY3240(R)-□M□□-01□



M8 connector (WO):
SY3240(R)-□WO□□-01□



Note) Refer to page 340 for dimensions of connector types.

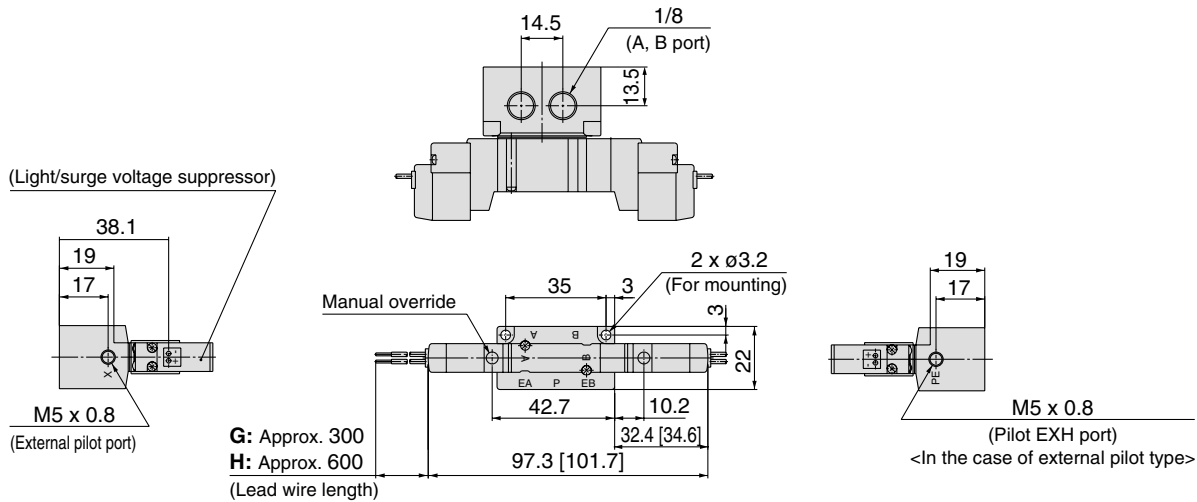
Series SY3000/5000/7000/9000



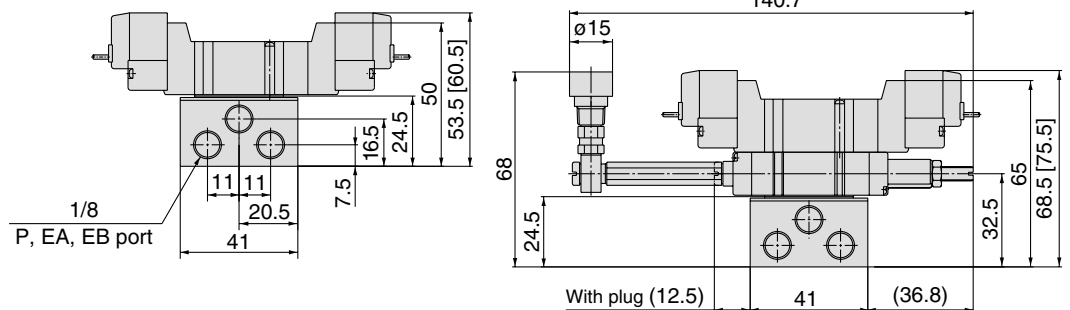
Dimensions: Series SY3000

3 position closed center / exhaust center / pressure center

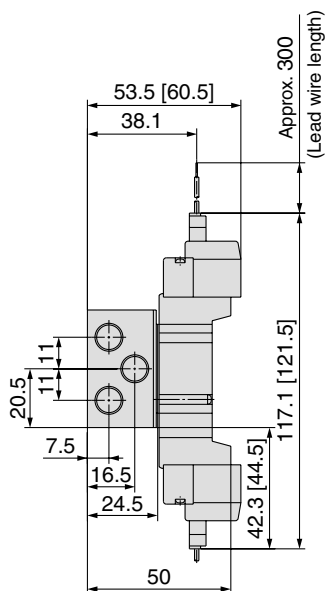
Grommet (G), (H): SY3³/₅40(R)-□^G□□-01□



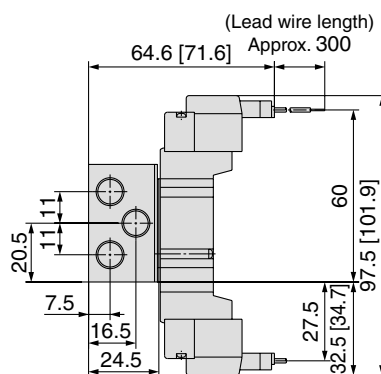
With interface regulator



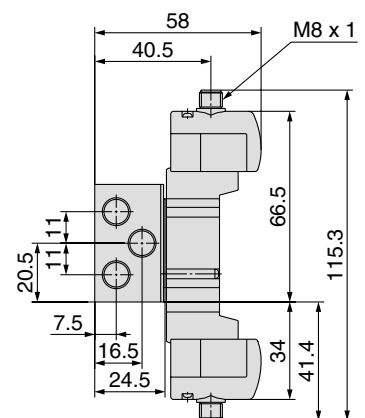
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SY3³/₅40(R)-□L□□-01□



M plug connector (M):
SY3³/₅40(R)-□M□□-01□



M8 connector (WO):
SY3³/₅40(R)-□WO□□-01□



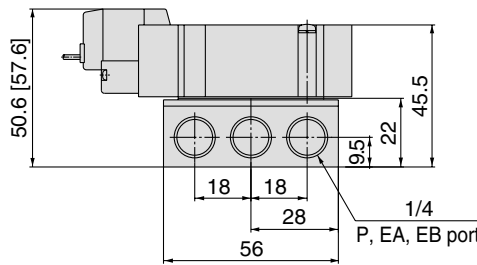
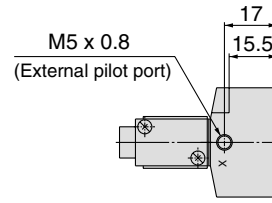
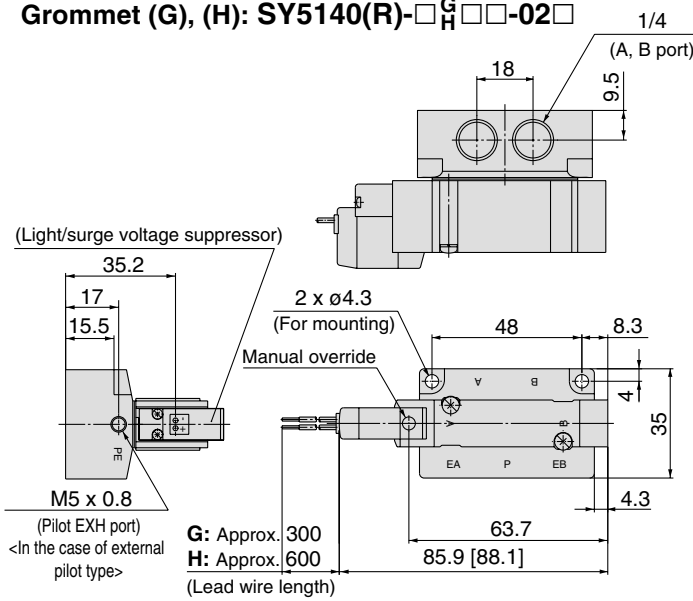
Note) Refer to page 340 for dimensions of connector types.

Dimensions: Series SY5000

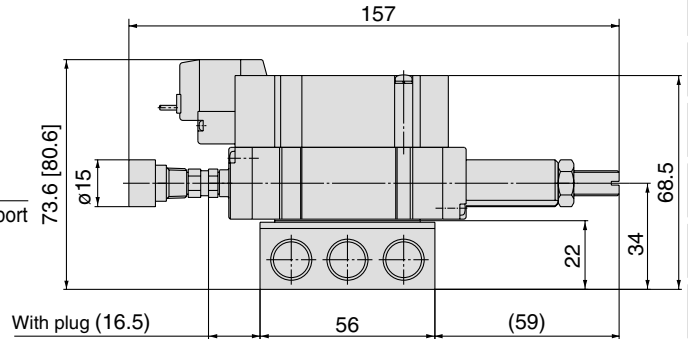


2 position single

Grommet (G), (H): SY5140(R)-□^G□□-02□



With interface regulator

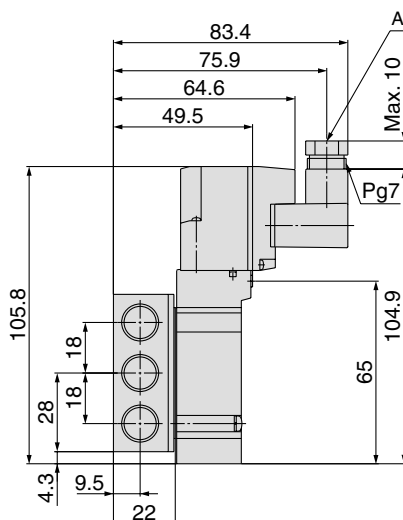
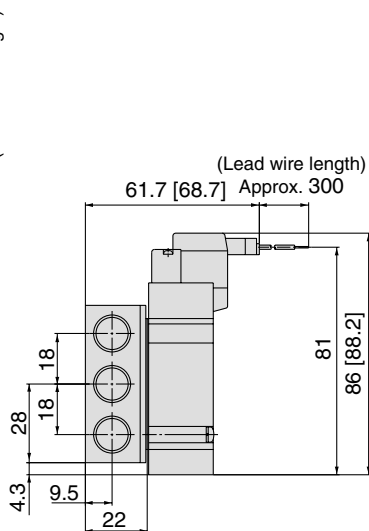
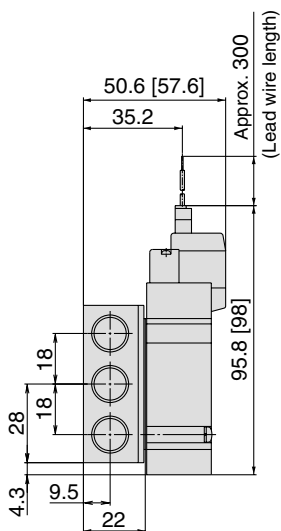


L plug connector (L): SY5140(R)-□L□□-02□

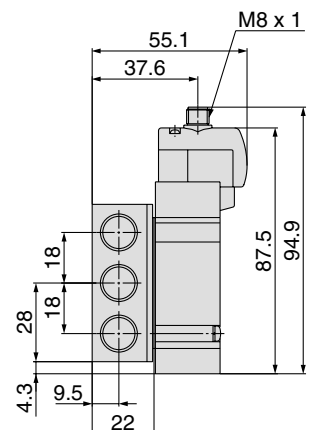
M plug connector (M): SY5140(R)-□M□□-02□

DIN terminal (D, Y): SY5140(R)-□^D□□-02□

M8 connector (WO): SY5140(R)-□WO□□-02□



Applicable cable O.D. ø3.5 to ø7



Note) Refer to page 340 for dimensions of connector types.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

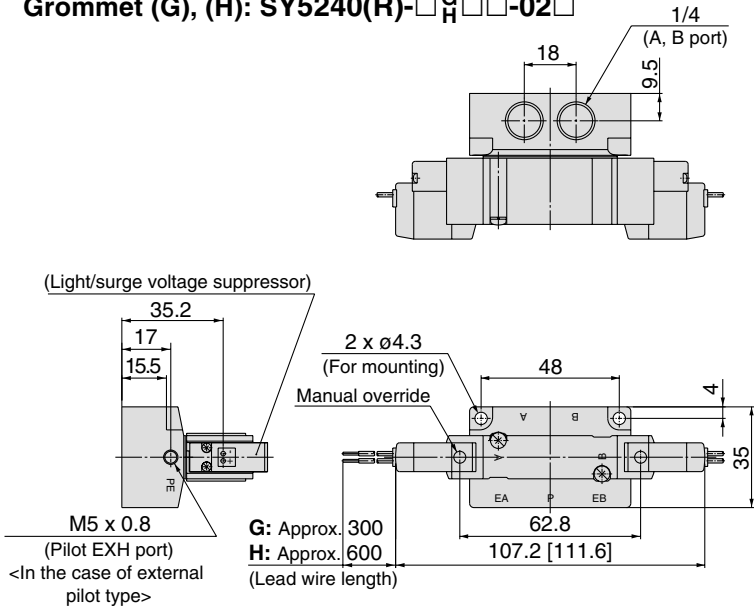
Series SY3000/5000/7000/9000

Dimensions: Series SY5000

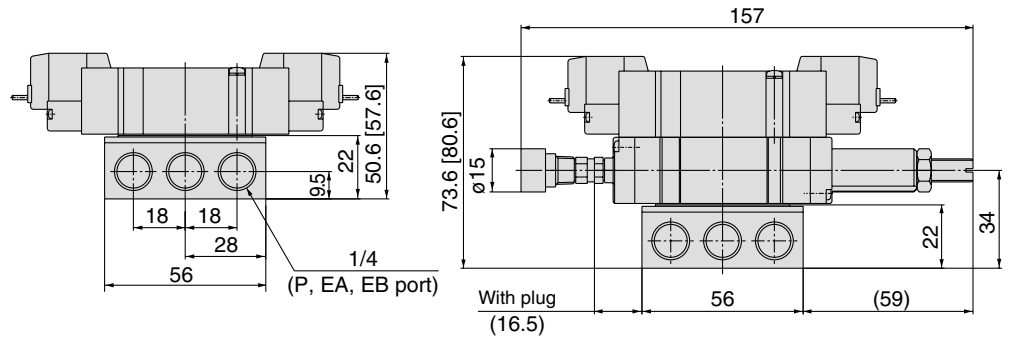


2 position double

Grommet (G), (H): SY5240(R)-□^G□□-02□



With interface regulator

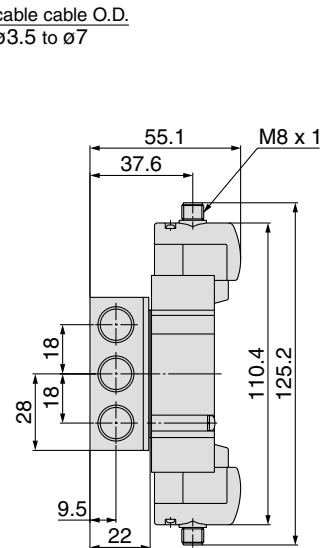
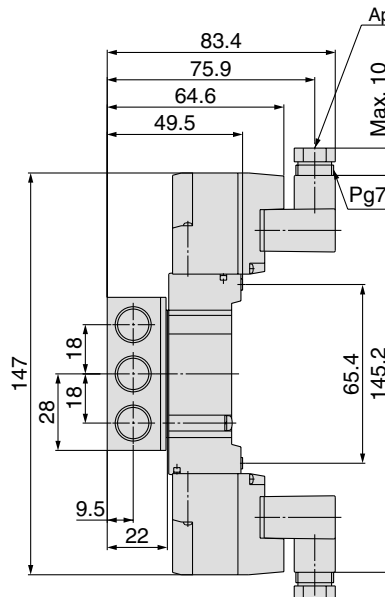
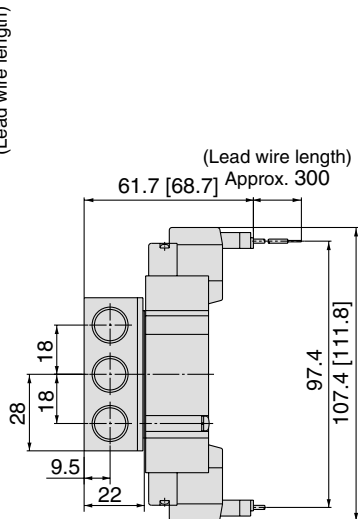
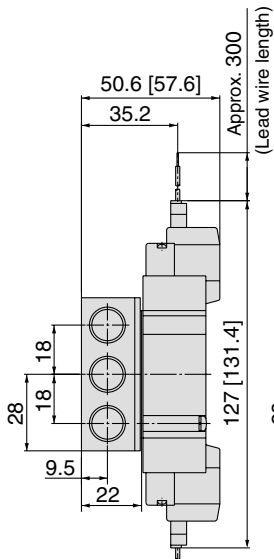


L plug connector (L): SY5240(R)-□L□□-02□

M plug connector (M): SY5240(R)-□M□□-02□

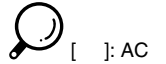
DIN terminal (D, Y): SY5240(R)-□^D□□-02□

M8 connector (WO): SY5240(R)-□WO□□-02□



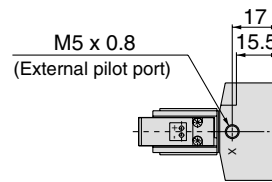
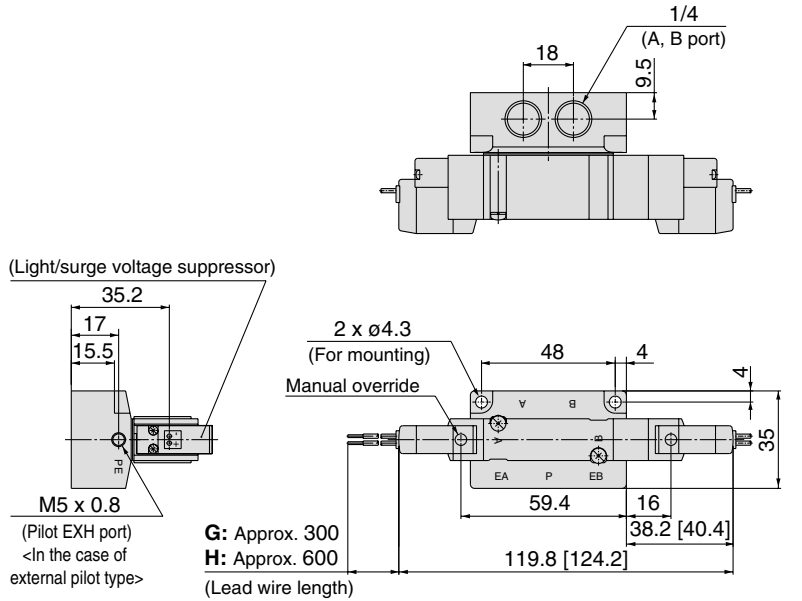
Note) Refer to page 340 for dimensions of connector types.

Dimensions: Series SY5000

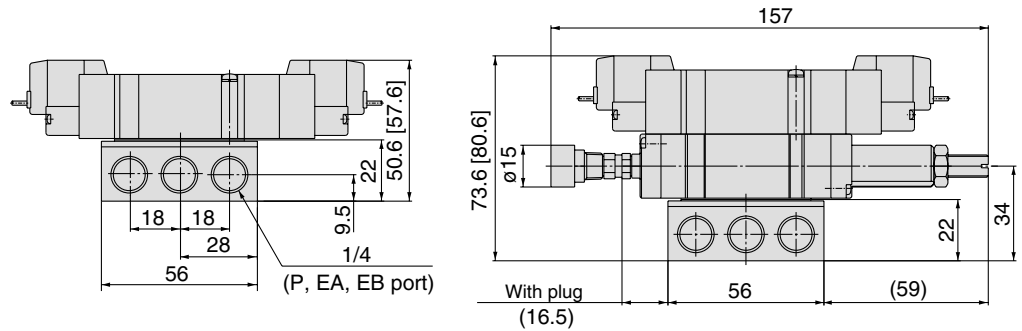


3 position closed center / exhaust center / pressure center

Grommet (G), (H): SY5³/₅40(R)-□^G□□-02□



With interface regulator

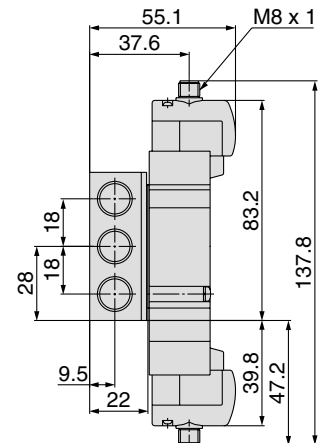
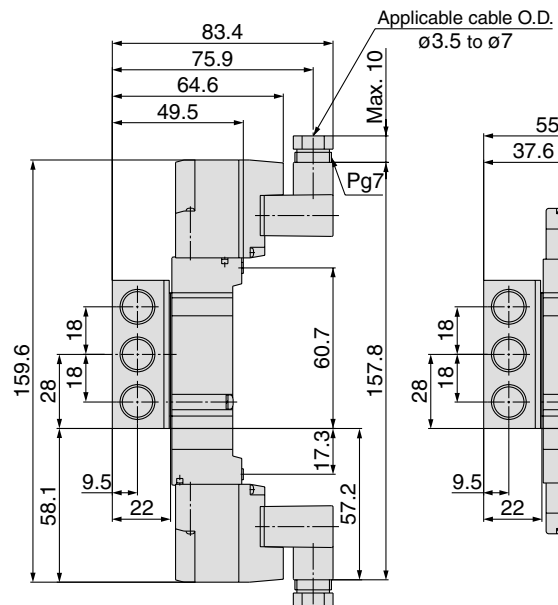
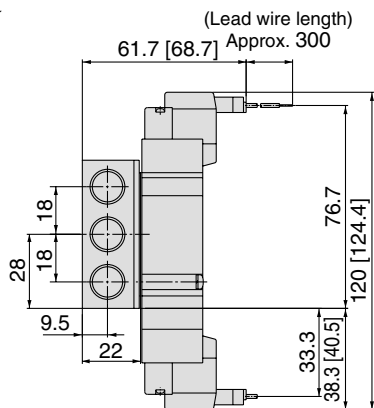
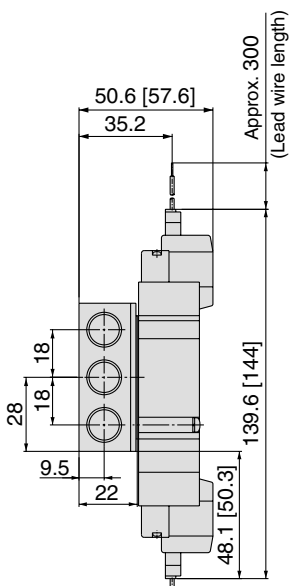


L plug connector (L):
SY5³/₅40(R)-□L□□-02□

M plug connector (M):
SY5³/₅40(R)-□M□□-02□

DIN terminal (D, Y):
SY5³/₅40(R)-□^D□□-02□

M8 connector (WO):
SY5³/₅40(R)-□WO□□-02□



Note) Refer to page 340 for dimensions of connector types.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

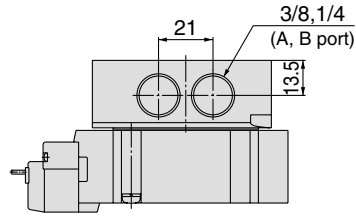
Series SY3000/5000/7000/9000



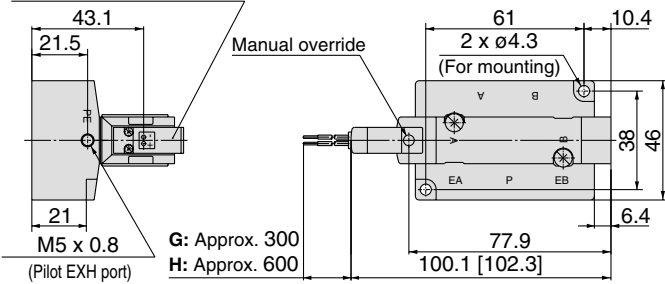
Dimensions: Series SY7000

2 position single

Grommet (G), (H): SY7140(R)-□_G□□-02□
□_H□□-03□



(Light/surge voltage suppressor)

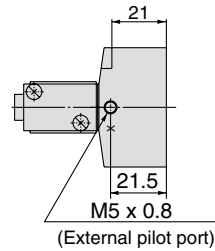


G: Approx. 300

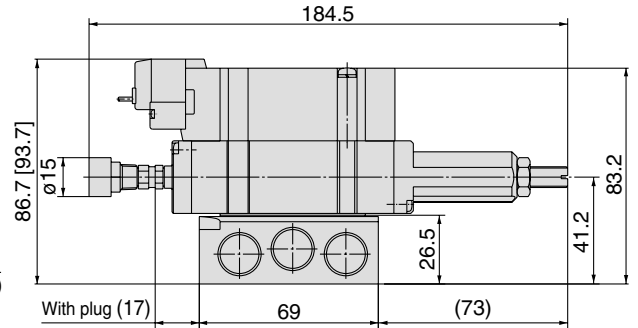
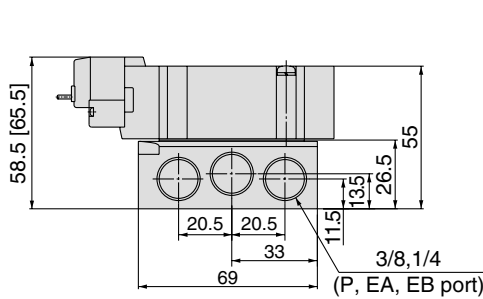
H: Approx. 600

(Lead wire length)

<In the case of external pilot type>



With interface regulator

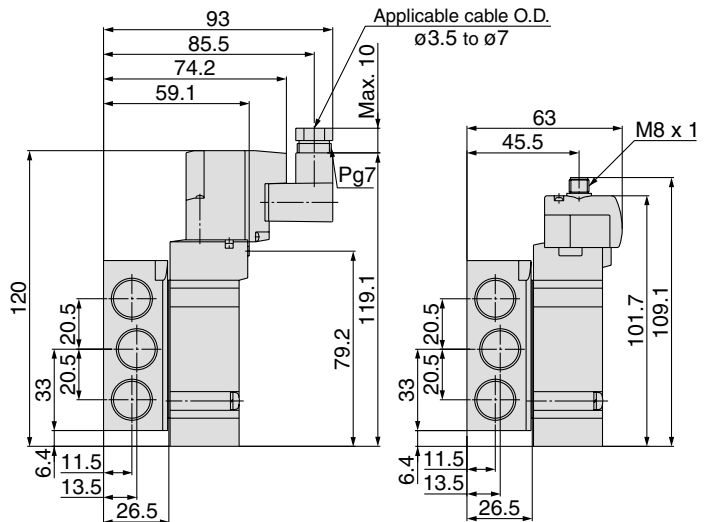
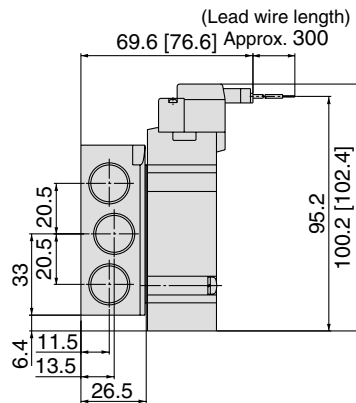
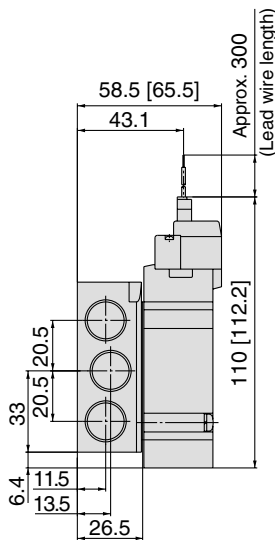


L plug connector (L):
SY7140(R)-□L□□-02□
□

M plug connector (M):
SY7140(R)-□M□□-02□
□

DIN terminal (D, Y):
SY7140(R)-□D□□-02□
□

M8 connector (WO):
SY7140(R)-□WO□□-02□
□



Note) Refer to page 340 for dimensions of connector types.

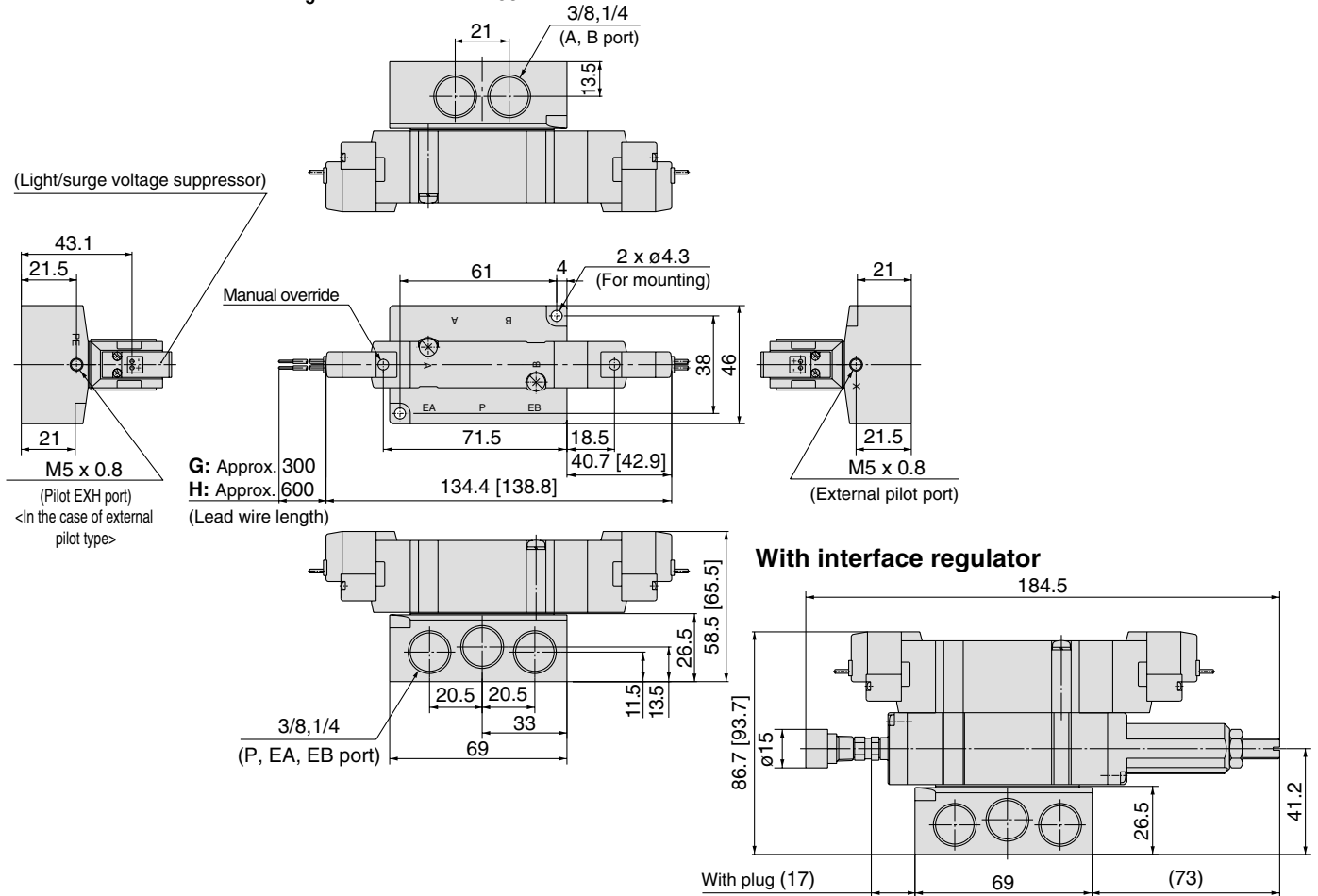
Series SY3000/5000/7000/9000



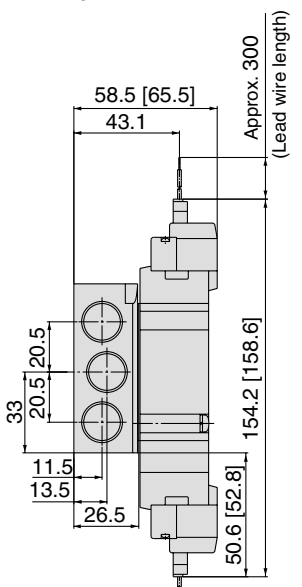
Dimensions: Series SY7000

3 position closed center / exhaust center / pressure center

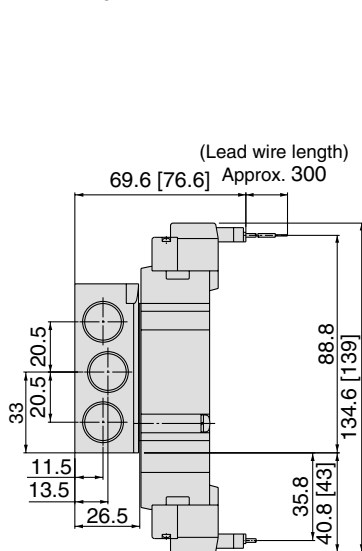
Grommet (G), (H): SY7³/₅40(R)-□^G/_H□□-02/03□



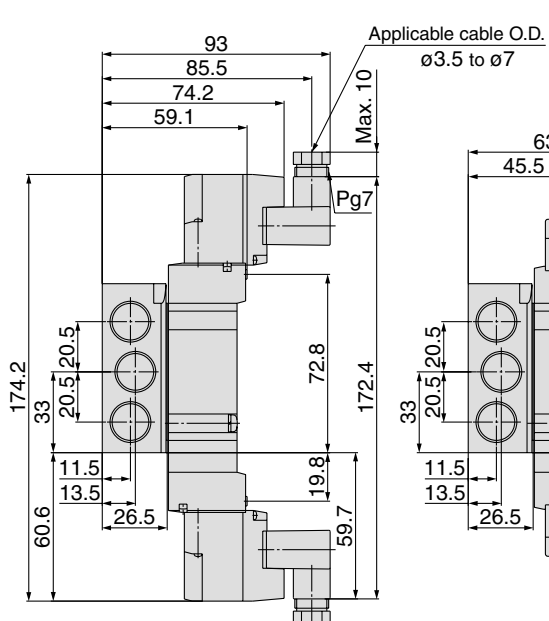
L plug connector (L):
SY7³/₅40(R)-□L□□-02/03□



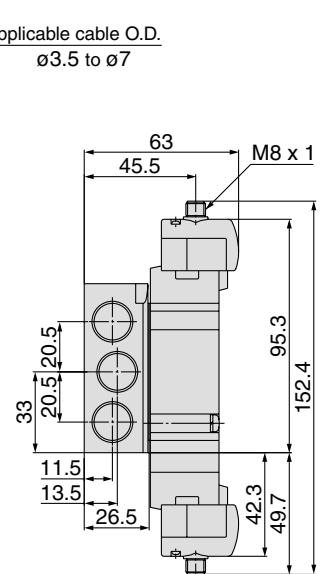
M plug connector (M):
SY7³/₅40(R)-□M□□-02/03□



DIN terminal (D, Y):
SY7³/₅40(R)-□^D/_Y□□-02/03□



M8 connector (WO):
SY7³/₅40(R)-□WO□□-02/03□



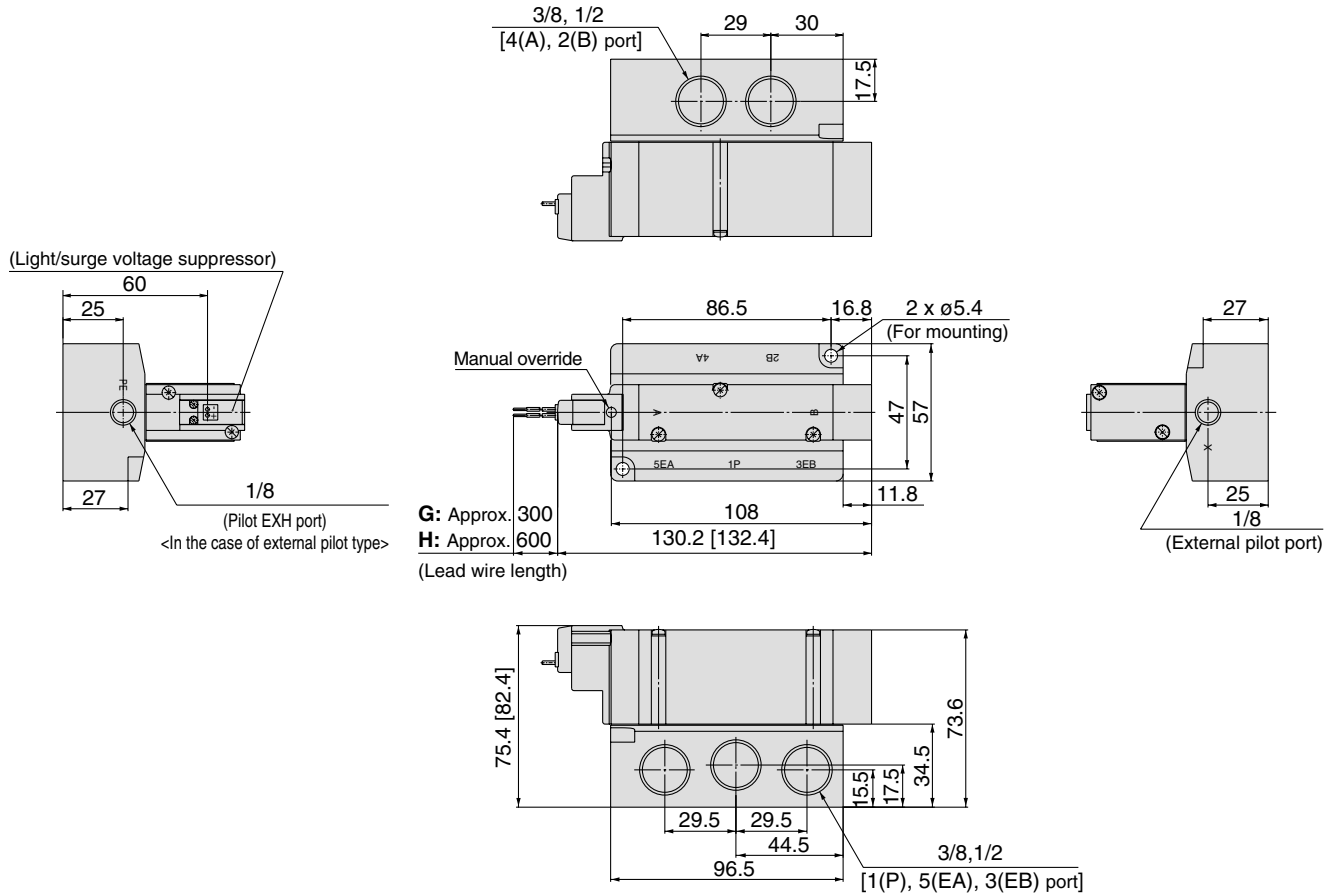
Note) Refer to page 340 for dimensions of connector types.

Dimensions: Series SY9000



2 position single

Grommet (G), (H): SYJ9140-□^G_H□□-03□

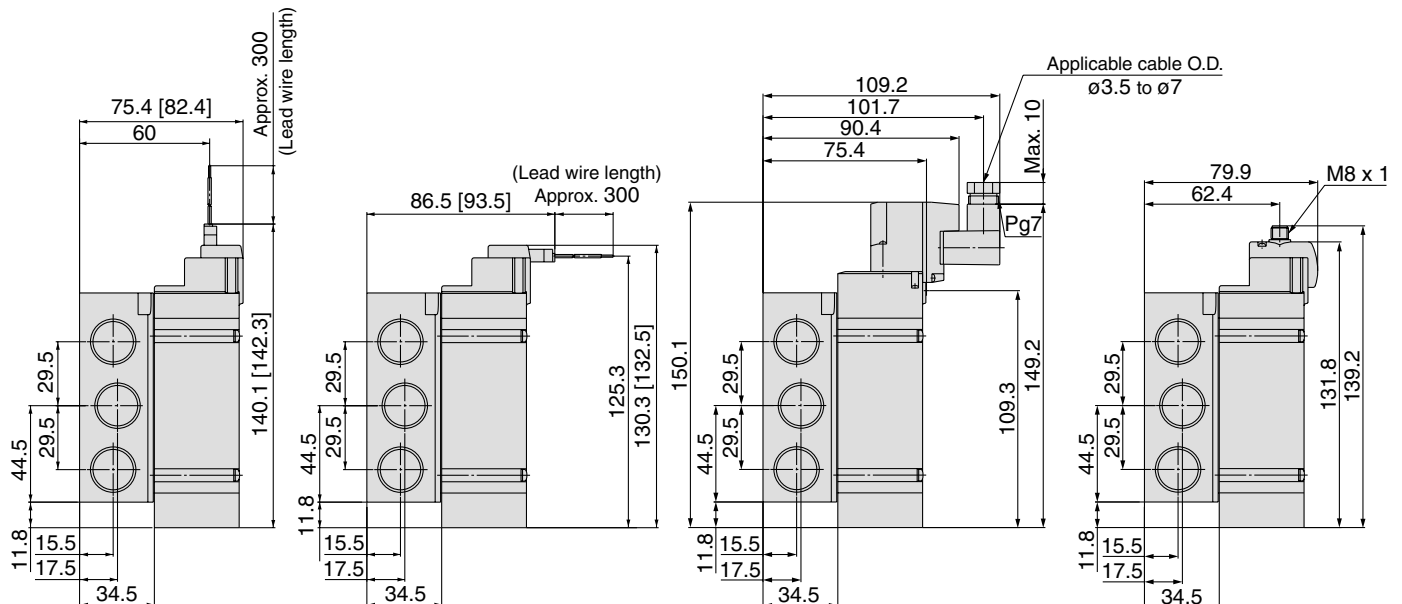


L plug connector (L):
SY9140(R)-□L□□-03□

M plug connector (M):
SY9140(R)-□M□□-03□

DIN terminal (D, Y):
SY9140(R)-□^D_Y□□-03□

M8 connector (WO):
SY9140(R)-□WO□□-03□



Note) Refer to page 340 for dimensions of connector types.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

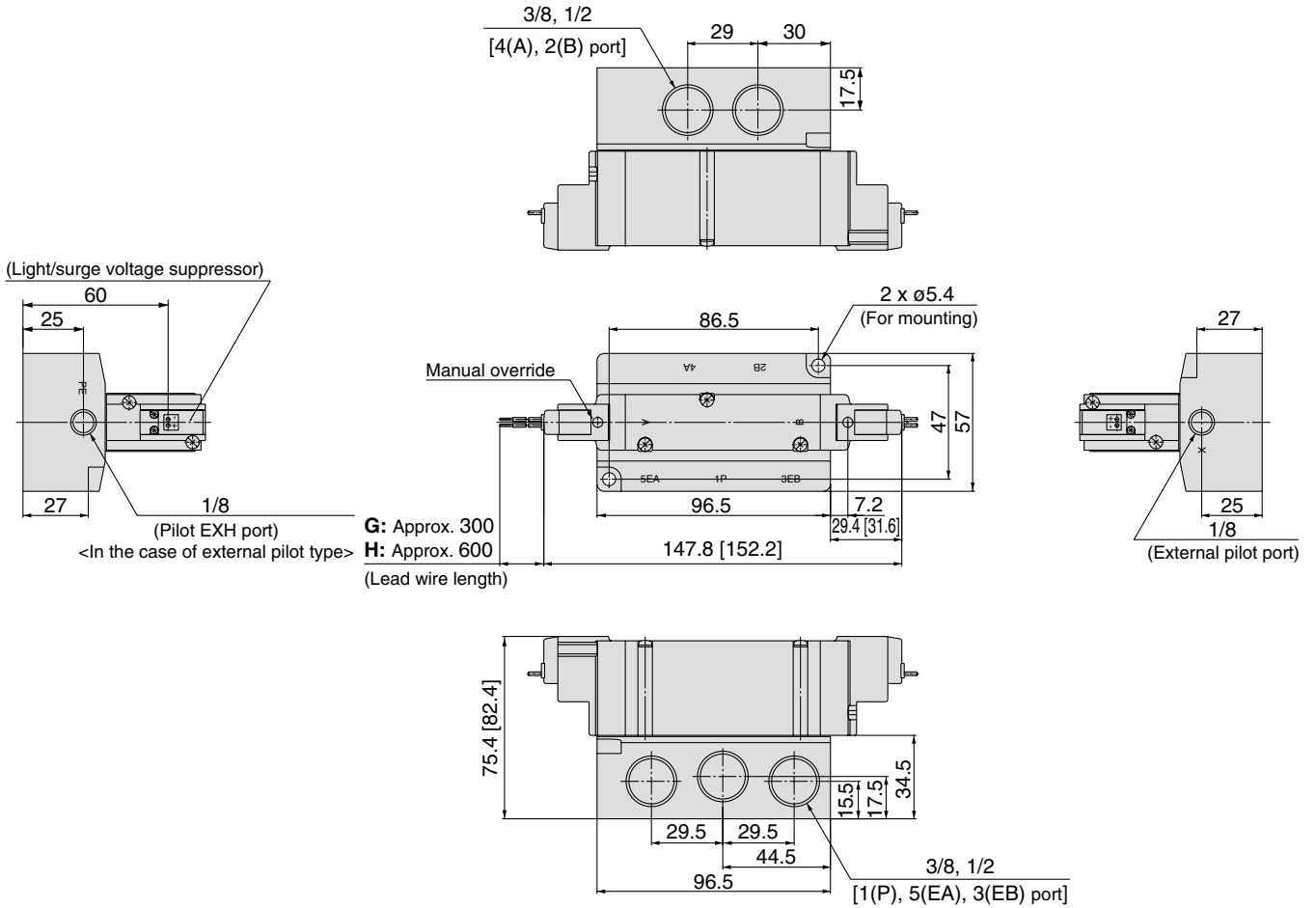
Series SY3000/5000/7000/9000

Dimensions: Series SY9000



2 position double

Grommet (G), (H): SY9240(R)-□G□□□-03□□

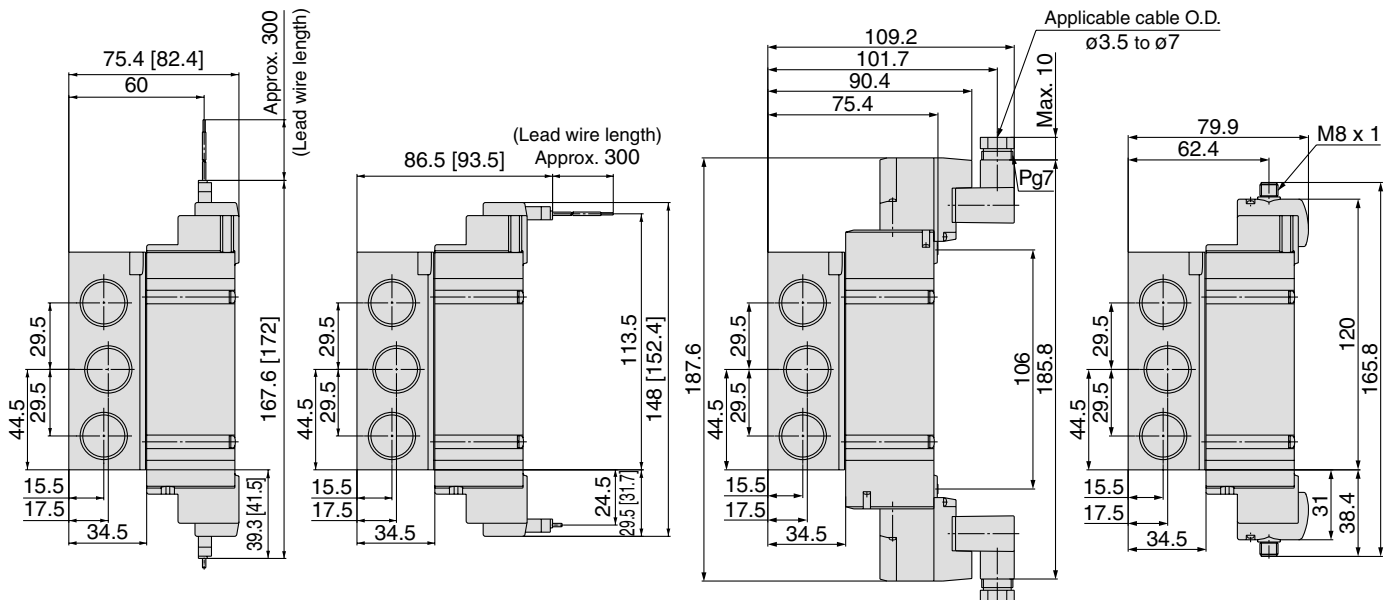


L plug connector (L):
SY9240(R)-□L□□□-03□□

M plug connector (M):
SY9240(R)-□M□□□-03□□

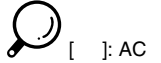
DIN terminal (D, Y):
SY9240(R)-□D□□□-03□□

M8 connector (WO):
SY9240(R)-□WO□□□-03□□



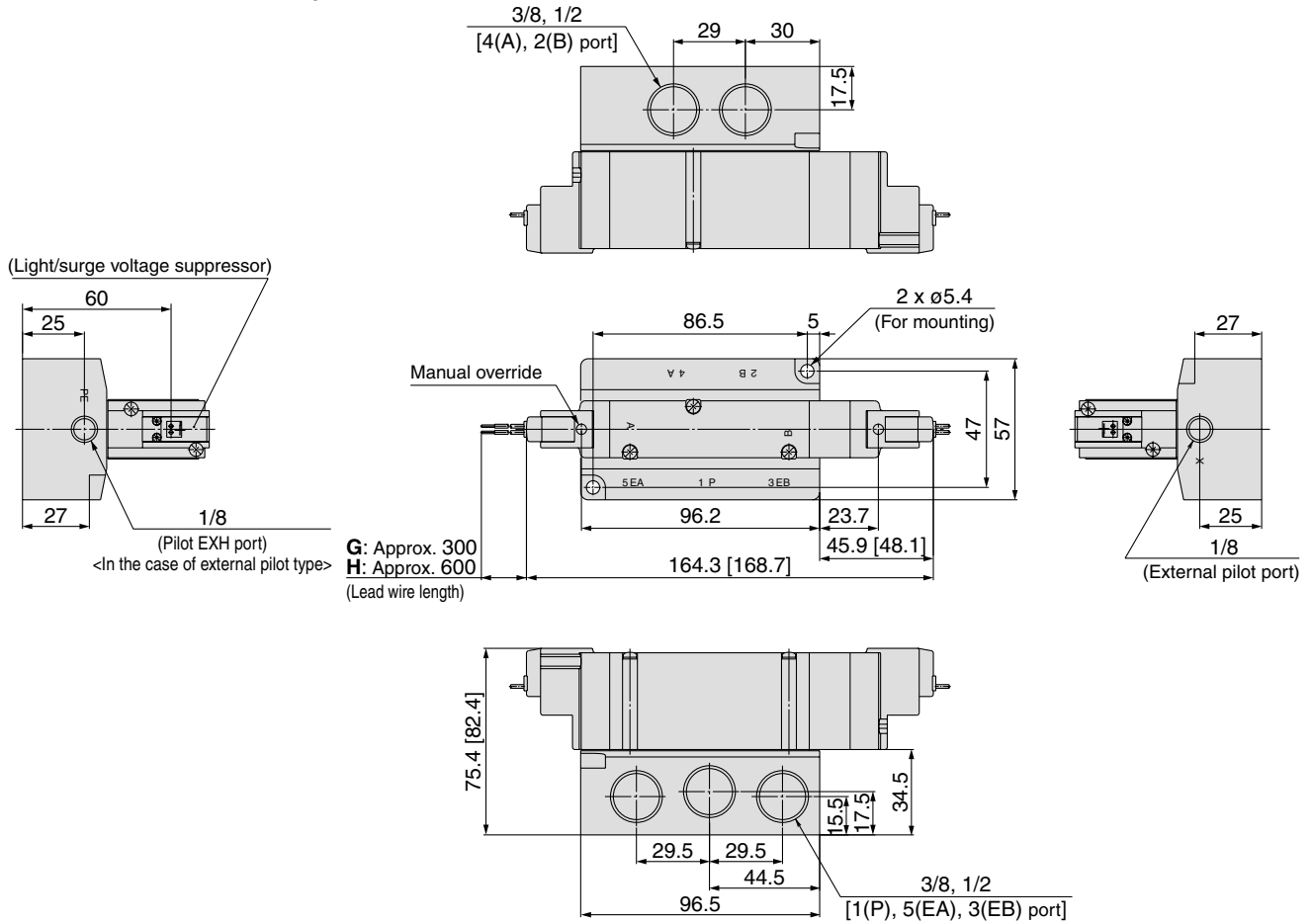
Note) Refer to page 340 for dimensions of connector types.

Dimensions: Series SY9000



3 position closed center / exhaust center / pressure center

Grommet (G), (H): SY9³₅40-□□□□-⁰³₀₄□

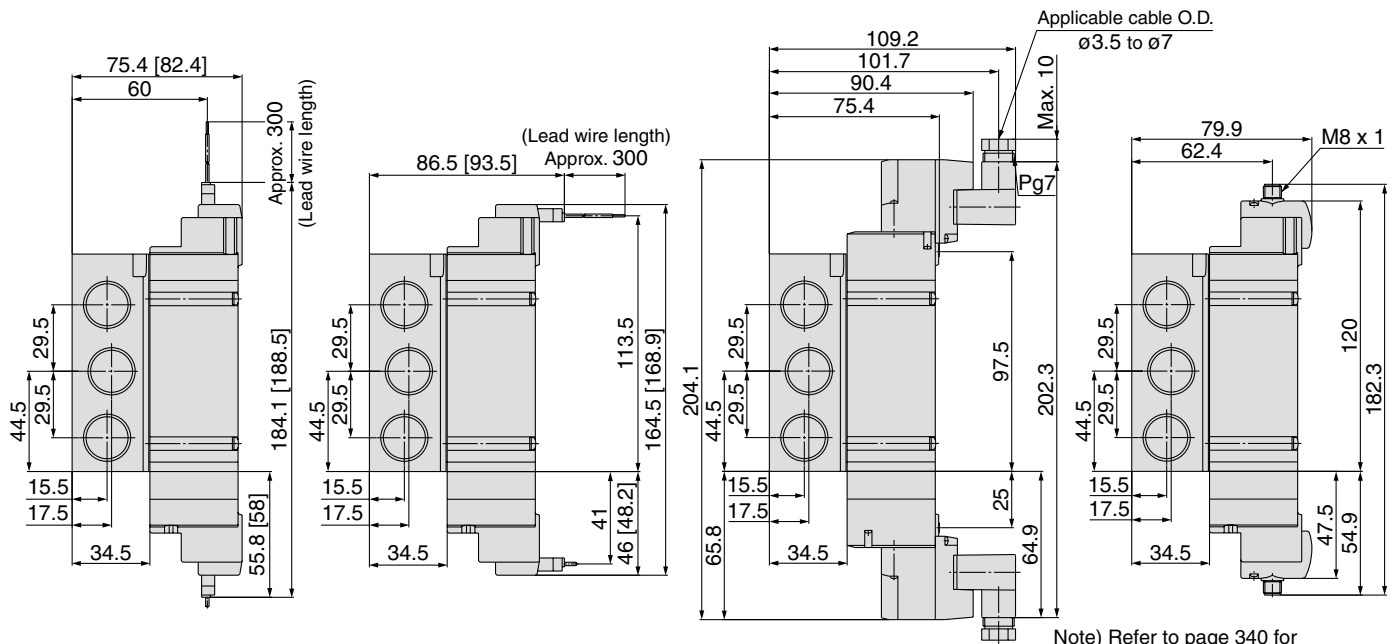


L plug connector (L):
SY9³₅40(R)-□L□□□-⁰³₀₄□

M plug connector (M):
SY9³₅40(R)-□M□□□-⁰³₀₄□

DIN terminal (D, Y):
SY9³₅40(R)-□D□□□-⁰³₀₄□

M8 connector (WO):
SY9³₅40(R)-□WO□□□-⁰³₀₄□



Note) Refer to page 340 for dimensions of connector types.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

5 Port Solenoid Valve Body Ported Manifold Bar Stock Type/Individual Wiring



Type **20**

Series SY3000/5000/7000

How to Order Manifold

SS5Y **5** - 20 - **05** - [] - []

Manifold series

3	SY3000
5	SY5000
7	SY7000

Stations

02	2 stations
⋮	⋮
20	20 stations



* This also includes the number of blanking plate assemblies.

Thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

CE compliant

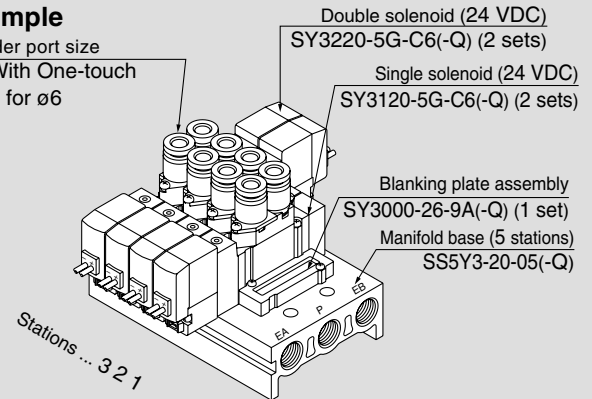
Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

How to Order Manifold Assembly (Example)

Example

Cylinder port size
C6: With One-touch fitting for $\phi 6$



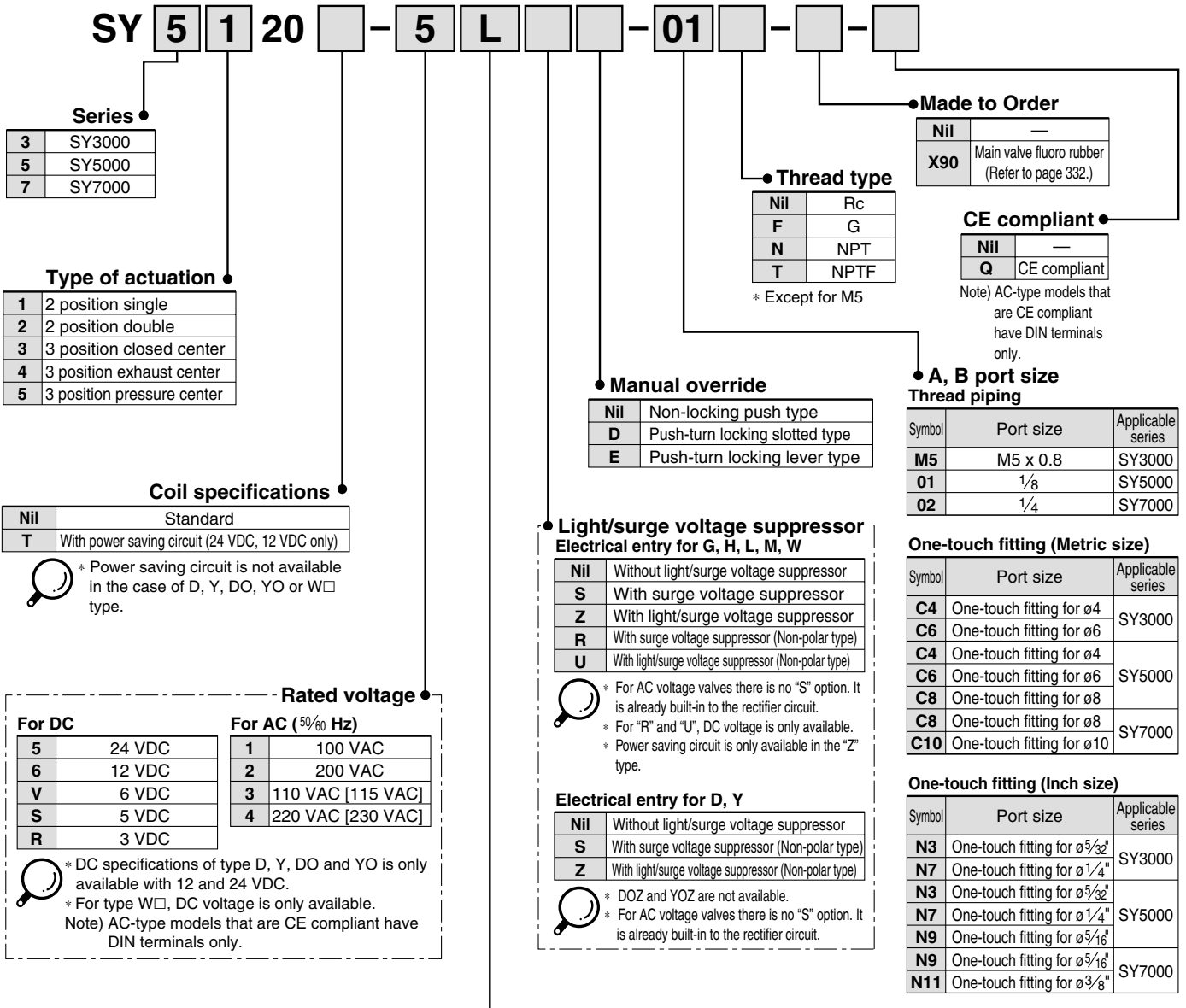
SS5Y3-20-05 (-Q) 1 set (Type 20, 5-station manifold base part no.)
 * SY3000-26-9A (-Q) 1 set (Blanking plate assembly part no.)
 * SY3120-5G-C6 (-Q) ... 2 sets (Single solenoid part no.)
 * SY3220-5G-C6 (-Q) ... 2 sets (Double solenoid part no.)
 ↳ The asterisk denotes the symbol for assembly.
 Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.



How to Order Valve

Note) AC-type models that are CE compliant have DIN terminals only.



Series

3	SY3000
5	SY5000
7	SY7000

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Coil specifications

Nil	Standard
T	With power saving circuit (24 VDC, 12 VDC only)

* Power saving circuit is not available in the case of D, Y, DO, YO or W□ type.

Rated voltage

For DC		For AC (50/60 Hz)	
5	24 VDC	1	100 VAC
6	12 VDC	2	200 VAC
V	6 VDC	3	110 VAC [115 VAC]
S	5 VDC	4	220 VAC [230 VAC]
R	3 VDC		

* DC specifications of type D, Y, DO and YO is only available with 12 and 24 VDC.
 * For type W□, DC voltage is only available.
 Note) AC-type models that are CE compliant have DIN terminals only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

* Except for M5

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/surge voltage suppressor
Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry for D, Y

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

* DOZ and YOZ are not available.
 * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

A, B port size Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SY3000
01	1/8	SY5000
02	1/4	SY7000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	SY7000
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	

One-touch fitting (Inch size)

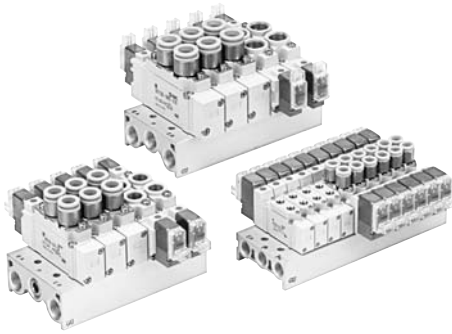
Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	SY7000
N9	One-touch fitting for ø5/16"	
N11	One-touch fitting for ø3/8"	

Electrical entry

CE compliant	DC	24, 12, 6, 5, 3 VDC/ 100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
		Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
		G: Lead wire length 300 mm	L: With lead wire (Length 300 mm)	M: With lead wire (Length 300 mm)	(SY5000/7000 only) D: With connector	WO: Without connector cable
		H: Lead wire length 600 mm	LN: Without lead wire	MN: Without lead wire	DO: Without connector	W□: With connector cable (Note)
			LO: Without connector	MO: Without connector	Y: With connector	
					YO: Without connector	
	AC	—	—	—	●	—


Note) When placing an order for body ported solenoid valve as a single unit, mounting screw for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 173.)

* LN, MN type: with 2 sockets.
 * Refer to page 337 for DIN terminal type of Series SY3000.
 * "Y" type is a DIN terminal conforming to EN-175301-803C (former DIN43650C). For details, refer to page 336.
 * For connector cable of M8 connector, refer to page 339.
 * M8 thread conforming to IEC60947-5-2 standard is also available. Refer to page 331 for details.
 * Refer to page 336 for the lead wire length of L and M plug connectors.
 * Refer to page 337 for the connector assembly with cover for L and M plug connectors.
 Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 340.




Manifold Specifications

Model	SS5Y3-20(-Q)		SS5Y5-20(-Q)		SS5Y7-20(-Q)	
Applicable valve	SY3□20		SY5□20		SY7□20	
Manifold type	Single base/B mount					
P (SUP)/R (EXH)	Common SUP, Common EXH					
Valve stations	2 to 20 stations ^{Note1)}					
A, B port location	Valve					
Port size	P, EA, EB port	1/8		1/4		1/4
	A, B port	M5 x 0.8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)		1/8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)		1/4 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base mass W (g) n: Stations	W = 13n + 24		W = 36n + 64		W = 43n + 35	

-  Note 1) For more than 10 stations (more than 5 stations in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
Note 2) Refer to "Manifold Option" on page 173.

Flow Characteristics

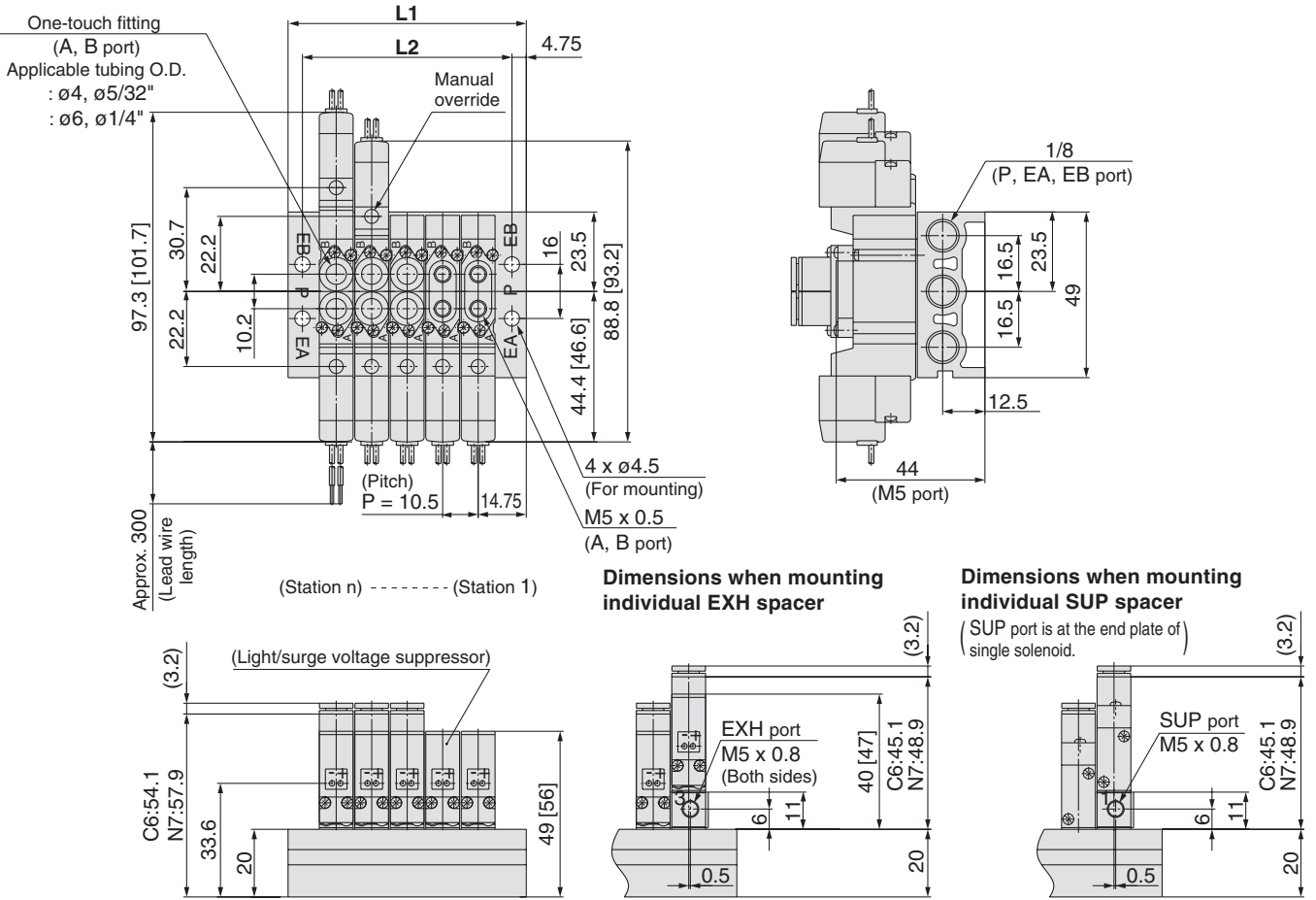
Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y3-20(-Q)	1/8	C6	0.72	0.29	0.18	0.80	0.36	0.21
SS5Y5-20(-Q)	1/4	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5Y7-20(-Q)	1/4	C10	3.6	0.31	0.93	3.6	0.27	0.88

-  Note) The value is for manifold base with 5 stations and individually operated 2 position type.

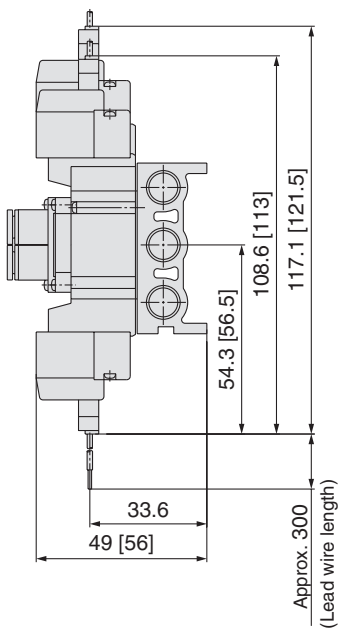
SY3000: SS5Y3-20-Stations -



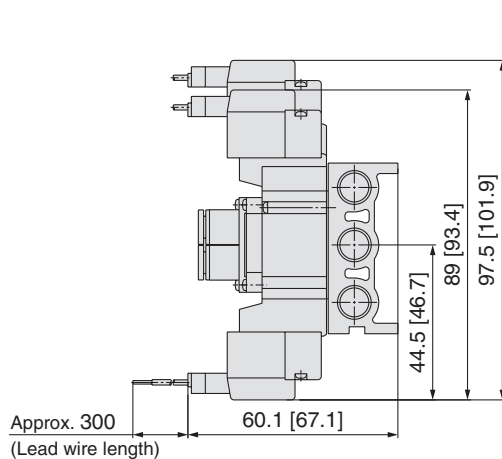
Grommet (G)



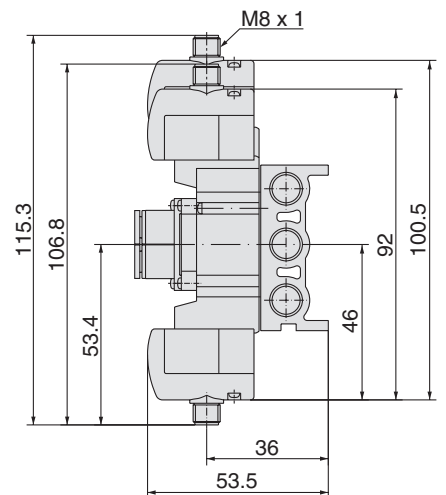
L plug connector (L)



M plug connector (M)



M8 connector (WO)



Note) Refer to page 340 for dimensions of connector types.

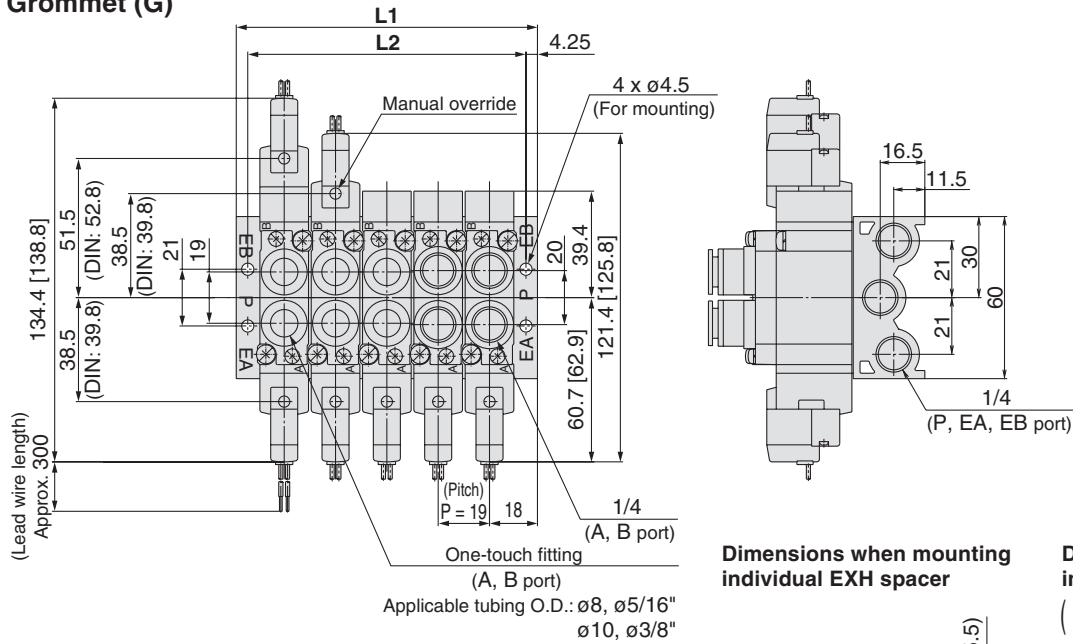
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	40	50.5	61	71.5	82	92.5	103	113.5	124	134.5	145	155.5	166	176.5	187	197.5	208	218.5	229
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY7000: SS5Y7-20-Stations -

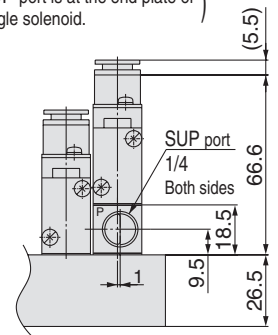
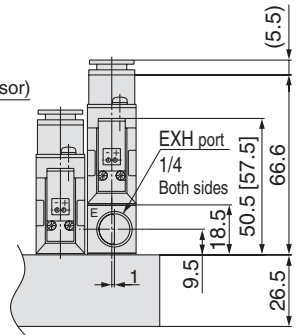
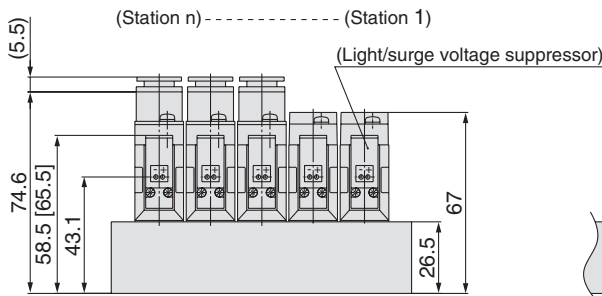


Grommet (G)



Dimensions when mounting individual EXH spacer

Dimensions when mounting individual SUP spacer
(SUP port is at the end plate of)
single solenoid.

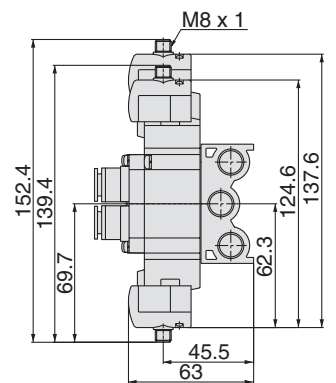
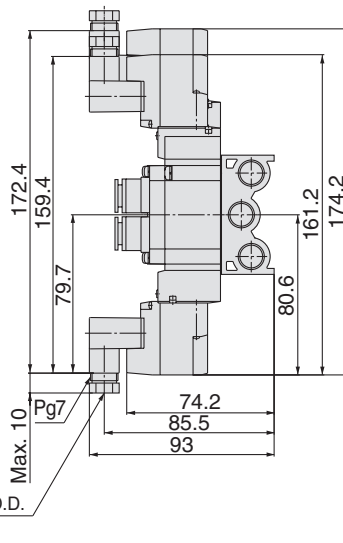
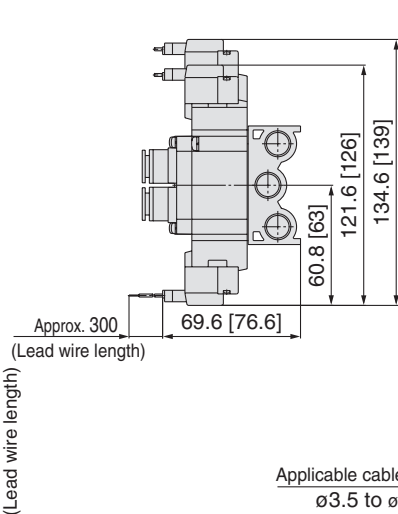
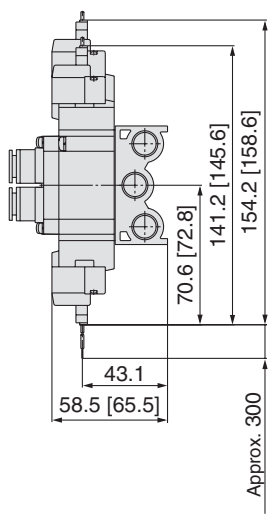


L plug connector (L)

M plug connector (M)

DIN terminal (D, Y)

M8 connector (WO)



Note) Refer to page 340 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	55	74	93	112	131	150	169	188	207	226	245	264	283	302	321	340	359	378	397
L2	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

5 Port Solenoid Valve Body Ported Manifold Stacking Type/Individual Wiring Series **SY9000**

Type **23**



How to Order Manifold

SS5Y 9-23-05 - [] - [] - []

Manifold series
9 SY9000

Thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

Valve stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

Option

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (with DIN rail)
D0	DIN rail mounting (without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.



* This also includes the number of blanking plate assemblies.

* Type 23 manifold of Series SY9000 is concurrently used for the internal and external pilot.

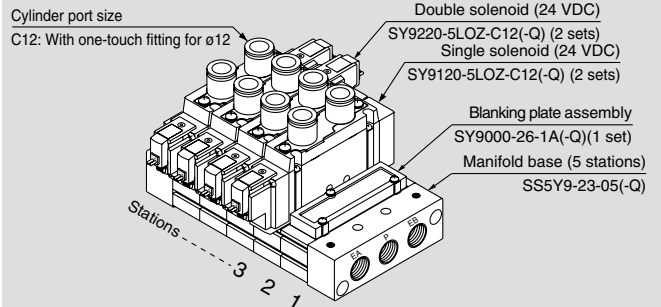
CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

How to Order Manifold Assembly (Example)

Example



SS5Y9-23-05 (-Q) 1 set (Type 23, 5-station manifold base part no.)
 * **SY9000-26-1A (-Q)** 1 set (Blanking plate assembly part no.)
 * **SY9120-5LOZ-C12 (-Q)** ... 2 sets (Single solenoid part no.)
 * **SY9220-5LOZ-C12 (-Q)** ... 2 sets (Double solenoid part no.)

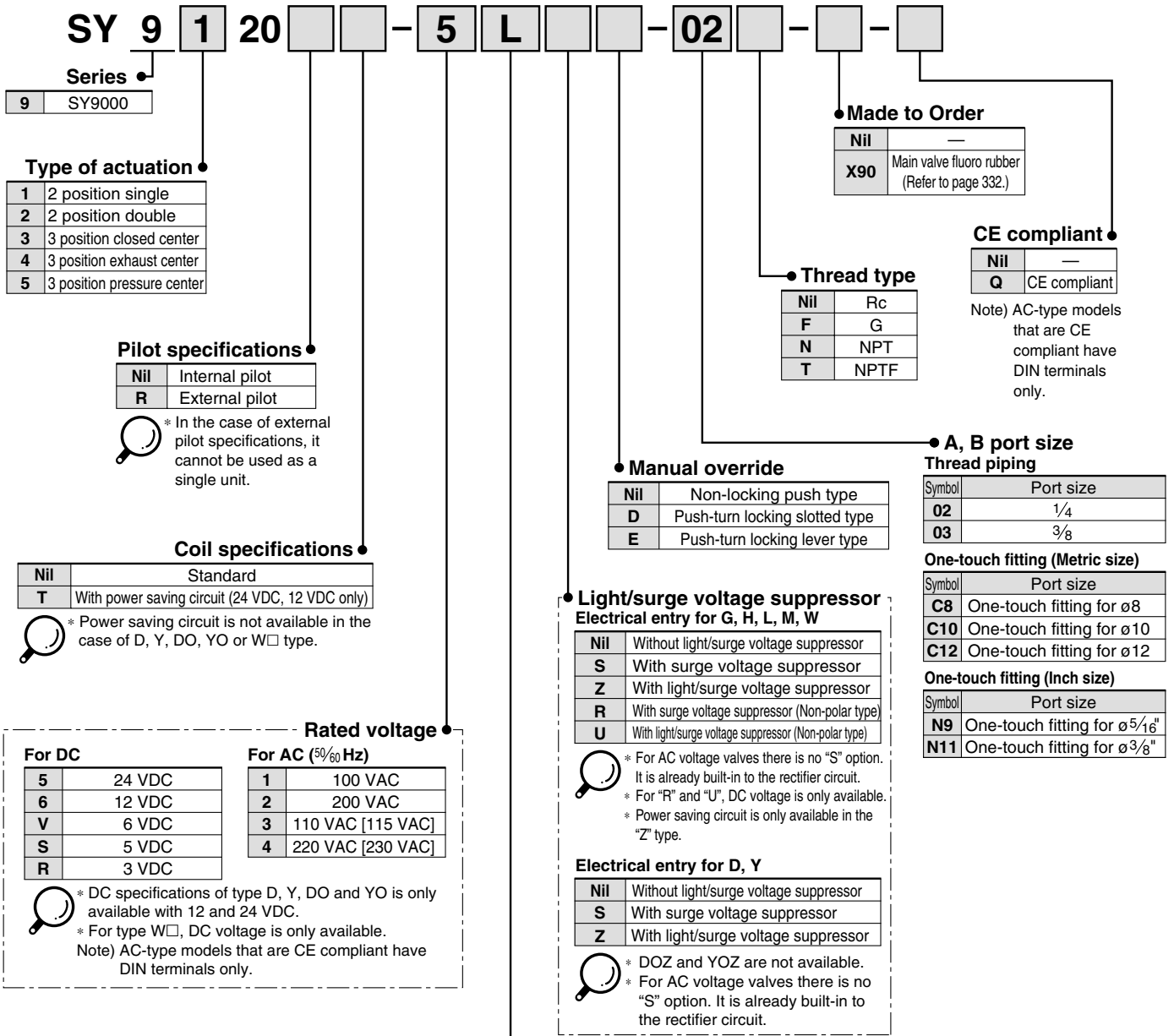
→ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.



How to Order Valve

Note) AC-type models that are CE compliant have DIN terminals only.



Series

9	SY9000
---	--------

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot specifications

Nil	Internal pilot
R	External pilot

* In the case of external pilot specifications, it cannot be used as a single unit.

Coil specifications

Nil	Standard
T	With power saving circuit (24 VDC, 12 VDC only)

* Power saving circuit is not available in the case of D, Y, DO, YO or W□ type.

Rated voltage

For DC		For AC (50/60 Hz)	
5	24 VDC	1	100 VAC
6	12 VDC	2	200 VAC
V	6 VDC	3	110 VAC [115 VAC]
S	5 VDC	4	220 VAC [230 VAC]
R	3 VDC		

* DC specifications of type D, Y, DO and YO is only available with 12 and 24 VDC.
* For type W□, DC voltage is only available.
Note) AC-type models that are CE compliant have DIN terminals only.

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/surge voltage suppressor
Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
* For "R" and "U", DC voltage is only available.
* Power saving circuit is only available in the "Z" type.

Electrical entry for D, Y

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor

* DOZ and YOZ are not available.
* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

A, B port size
Thread piping

Symbol	Port size
02	1/4
03	3/8

One-touch fitting (Metric size)

Symbol	Port size
C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12

One-touch fitting (Inch size)

Symbol	Port size
N9	One-touch fitting for ø ⁵ / ₁₆ "
N11	One-touch fitting for ø ³ / ₈ "

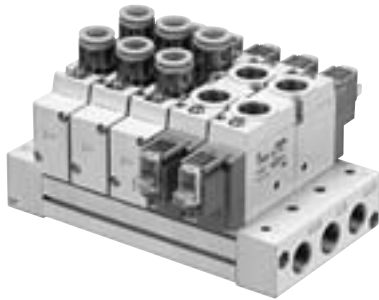
- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Electrical entry

24, 12, 6, 5, 3 VDC/ 100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
G: Lead wire length 300 mm H: Lead wire length 600 mm	L: With lead wire (Length 300 mm) LN: Without lead wire LO: Without connector	M: With lead wire (Length 300 mm) MN: Without lead wire MO: Without connector	D: With connector DO: Without connector Y: With connector YO: Without connector	WO: Without connector cable W□: With connector cable ^{Note)}
CE compliant	DC ●	●	●	●
	AC —	—	●	—

Note) When placing an order for body ported solenoid valve as a single unit, mounting screw for manifold and gasket are not attached. Order them separately, if necessary.
For details, refer to page 173.

- * LN, MN type: with 2 sockets.
- * "Y" type is a DIN terminal conforming to EN-175301-803C (former DIN43650C). For details, refer to page 336.
- * For connector cable of M8 connector, refer to page 339.
- * M8 connector conforming to IEC60947-5-2 standard is also available. Refer to page 331 for details.
- * Refer to page 336 for the lead wire length of L and M plug connectors.
- * Refer to page 337 for the connector assembly with cover for L and M plug connectors.
- Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 340.



Manifold Specifications

Model		SS5Y9-23(-Q)
Applicable valve		SY9□20
Manifold type		Stacking type
P (SUP)/R (EXH)		Common SUP, Common EXH
Valve stations		2 to 20 stations ^{Note1)}
A, B port location		Valve
Port size	P, EA, EB port	3/8
	A, B port	1/4 3/8 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10) C12 (One-touch fitting for ø12)
Manifold base mass W (g) n: Stations		W = 66n + 246



Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA/EB port on both sides.

Note 2) Refer to "Manifold Option" on page 173.

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y9-23(-Q)	3/8	C12	6.3	0.20	1.5	8.2	0.28	1.9



Note) The value is for manifold base with 5 stations and individually operated 2 position type.

5 Port Solenoid Valve Body Ported Manifold Bar Stock Type/Flat Ribbon Cable Series SY3000/5000/7000

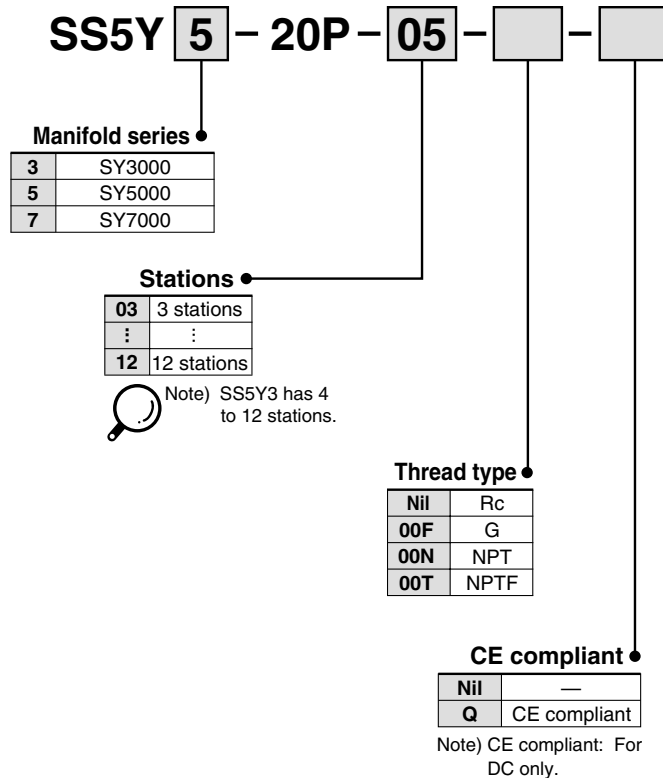
Type **20P**



How to Order Manifold

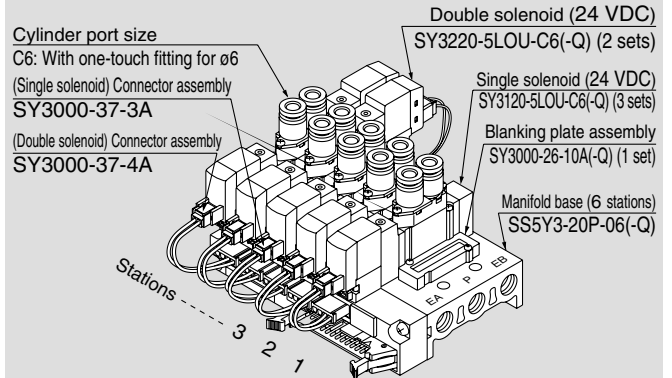
Note) CE compliant:
For DC only.

[Option]



How to Order Manifold Assembly (Example)

Example



SS5Y3-20P-06 (-Q) 1 set (Type 20P, 6-station manifold part no.)
 * SX3000-26-10A (-Q) 1 set (Blanking plate assembly part no.)
 * SY3120-5LOU-C6 (-Q) 3 sets (Single solenoid part no.)
 * SY3220-5LOU-C6 (-Q) 2 sets (Double solenoid part no.)
 * SY3000-37-3A 3 sets (Connector assembly part no.)
 * SY3000-37-4A 2 sets (Connector assembly part no.)

The asterisk denotes the symbol for assembly.
Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number.
In the case of complex arrangement, specify them on the manifold specification sheet.

Note) Please indicate the connector assembly part no. below that connects the valve and the manifold.

Connector Assembly

For 12, 24 VDC

Specifications	For SY3000	For SY5000/7000
For single solenoid	SY3000-37-3A	SY5000-37-3A
Double solenoid, 3 position type	SY3000-37-4A	SY5000-37-4A
Single with spacer assembly	SY5000-37-3A	SY5000-37-5A
Double, 3 position with spacer assembly	SY3000-37-6A	SY5000-37-6A

Note) Spacer assembly indicates Individual SUP/EXH.

For 100 VAC

Specifications	For SY3000	For SY5000/7000
For single solenoid	SY3000-37-32A	SY5000-37-15A
Double solenoid, 3 position type	SY3000-37-33A	SY5000-37-16A
Single with spacer assembly	SY5000-37-15A	SY5000-37-17A
Double, 3 position with spacer assembly	SY3000-37-34A	SY5000-37-18A

For 100 VAC (115 VAC)

Specifications	For SY3000	For SY5000/7000
For single solenoid	SY3000-37-35A	SY5000-37-19A
Double solenoid, 3 position type	SY3000-37-36A	SY5000-37-20A
Single with spacer assembly	SY5000-37-19A	SY5000-37-21A
Double, 3 position with spacer assembly	SY3000-37-37A	SY5000-37-22A

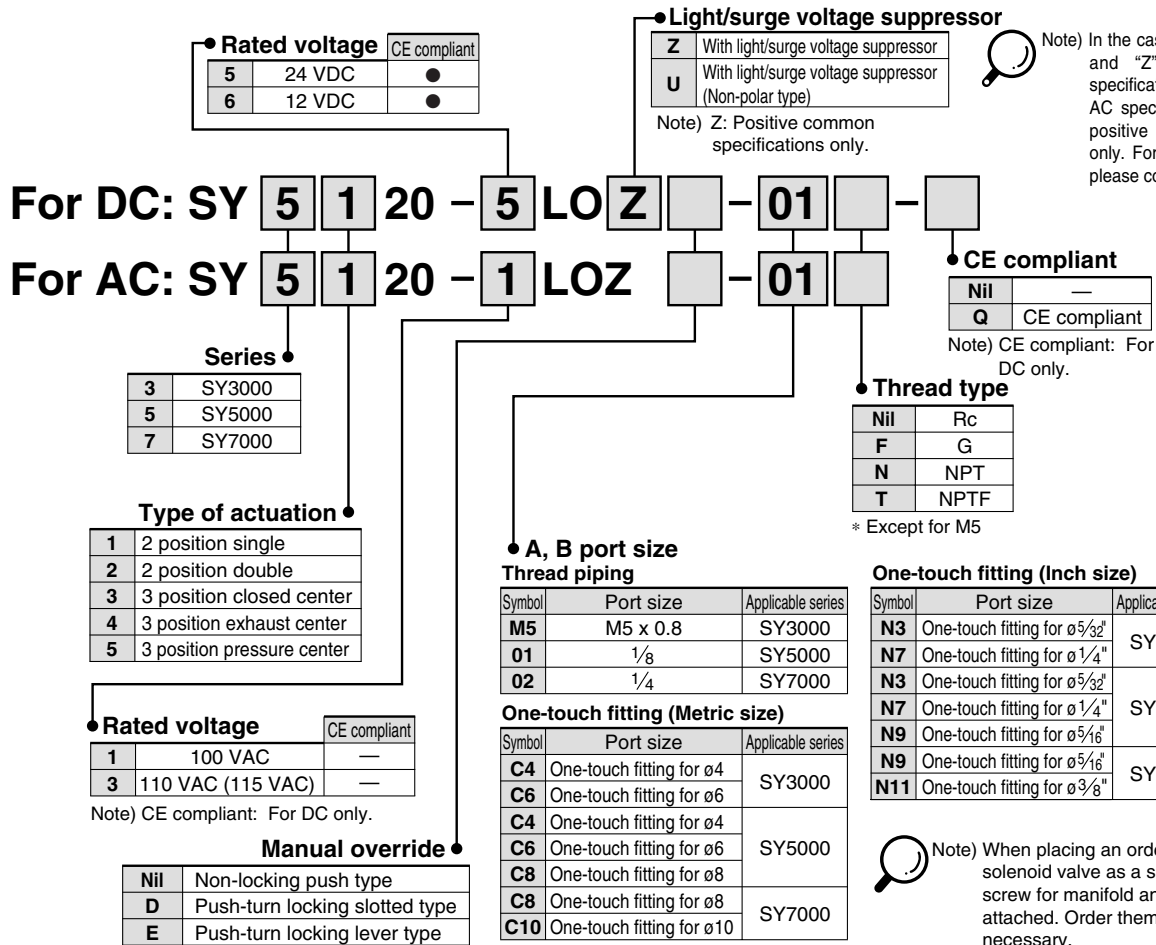
⚠ Caution

- For non-polar (U) valves, the electrical DC connections can be used with either positive and negative COM. For type (Z), only use with positive COM as the valve does not operate correctly when used with negative COM.



How to Order Valve

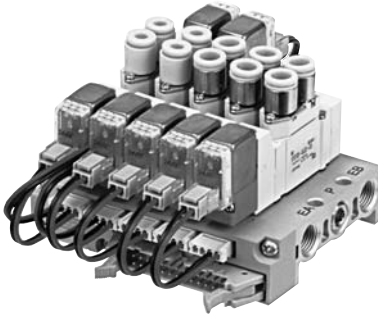
Note) CE compliant:
For DC only. [Option]



- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

- Multiple valve wiring is simplified through the use of the flat cable connector
- Clean appearance

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Manifold Specifications

Model	SS5Y3-20P(-Q)	SS5Y5-20P(-Q)	SS5Y7-20P(-Q)	
Applicable valve	SY3□20	SY5□20	SY7□20	
Manifold type	Single base/B mount			
P (SUP)/R (EXH)	Common SUP, Common EXH			
Valve stations	4 to 12 stations ⁽¹⁾	3 to 12 stations ^(Note 1)		
A, B port location	Valve			
Port size	P, EA, EB port	1/8	1/4	1/4
	A, B port	M5 x 0.8, C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	1/8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	1/4 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base mass W (g) n: Stations	W = 19n + 45	W = 43n + 77	W = 51n + 81	
Applicable flat ribbon cable connector	Flat ribbon cable connector, Socket: 26 pins MIL type with strain relief, Conforming to MIL-C-83503			
Internal wiring	In common between +COM and -COM (Z type: +COM only).			
Rated voltage ^(Note 4)	12, 24 VDC 100, 110 VAC			

Note 1) For more than 10 stations (more than 5 stations in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both sides.

Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.

Note 3) Refer to "Manifold Option" on page 173.

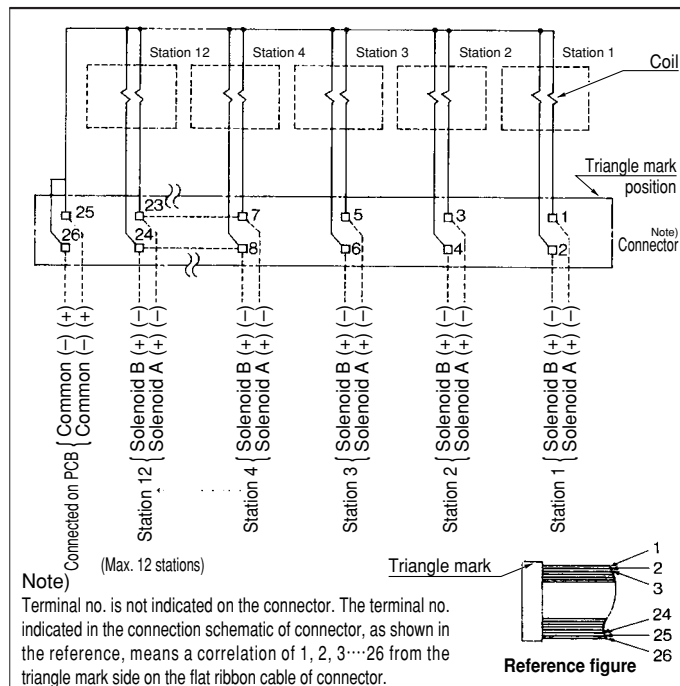
Note 4) CE-compliant: For DC only.

Flow Characteristics

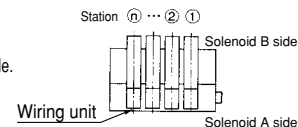
Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv
SS5Y3-20P	1/8	C6	0.72	0.29	0.18	0.80	0.36	0.21
SS5Y5-20P	1/4	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5Y7-20P	1/4	C10	3.6	0.31	0.93	3.6	0.27	0.88

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

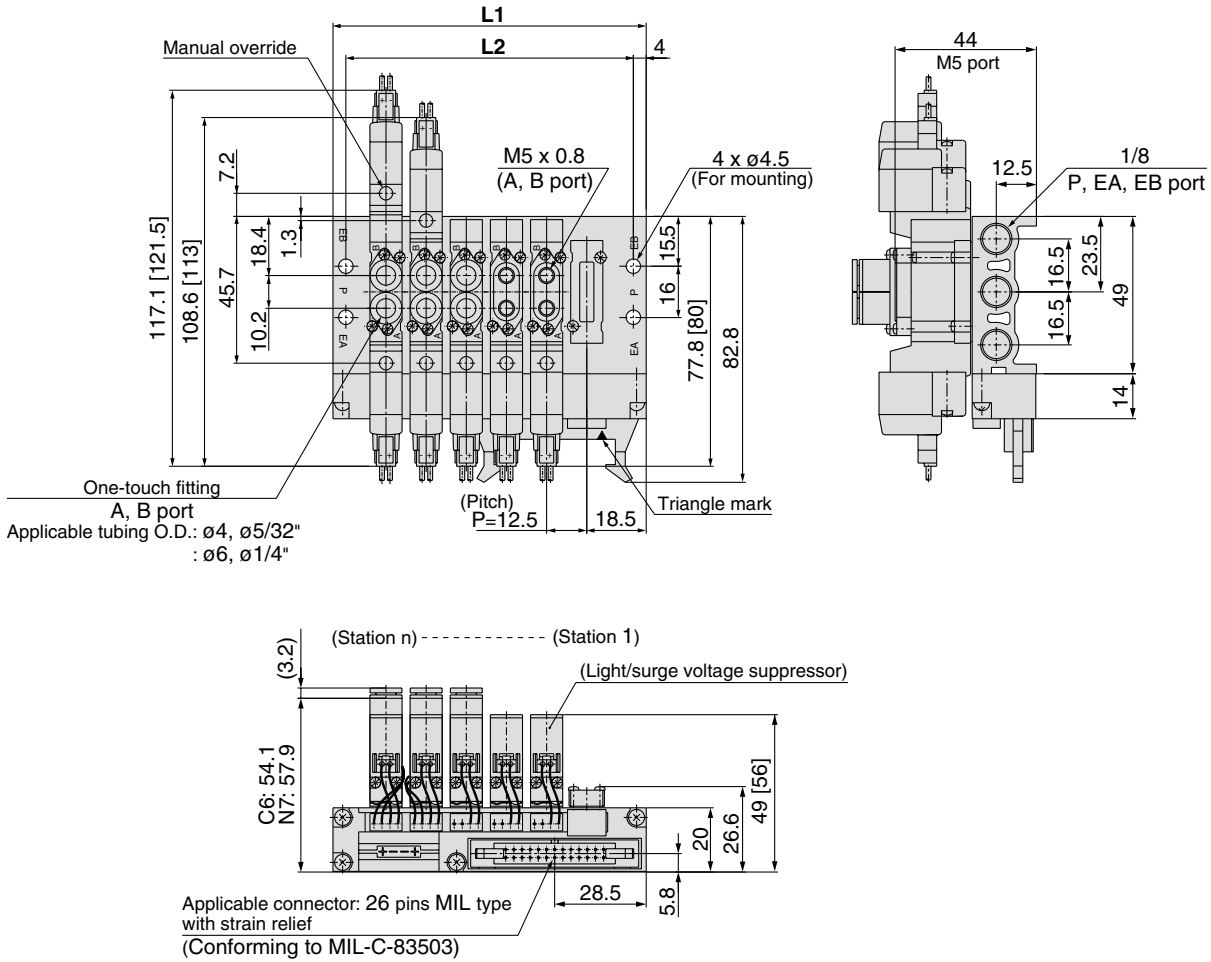
Internal Wiring of Manifold (Non-polar type)



- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations that can be accommodated is 12. For more stations, please contact SMC.

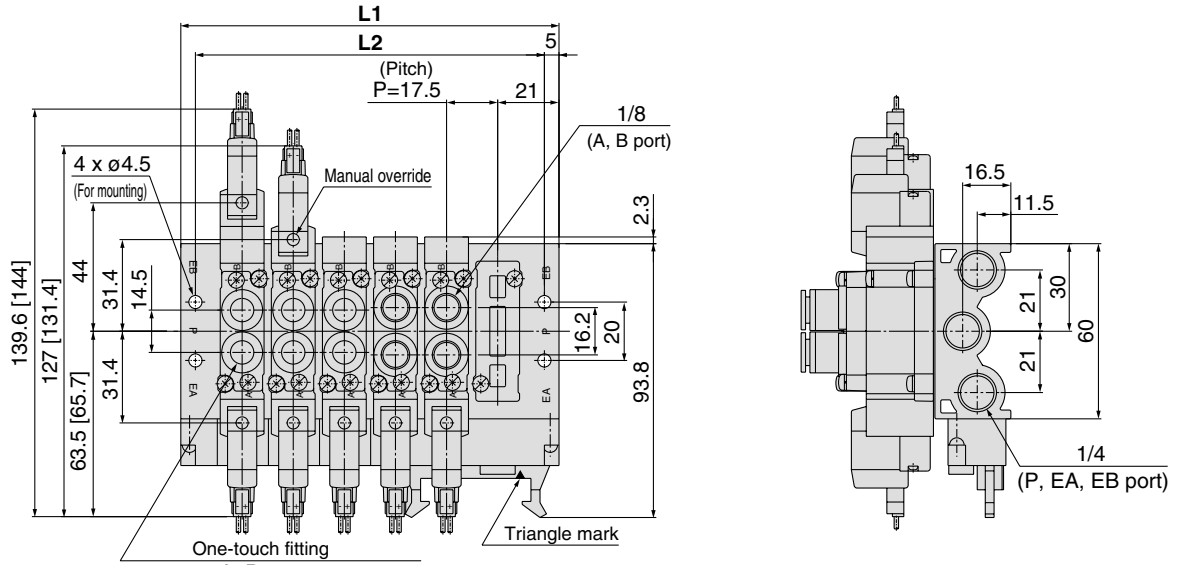


SY3000: SS5Y3-20P- Stations

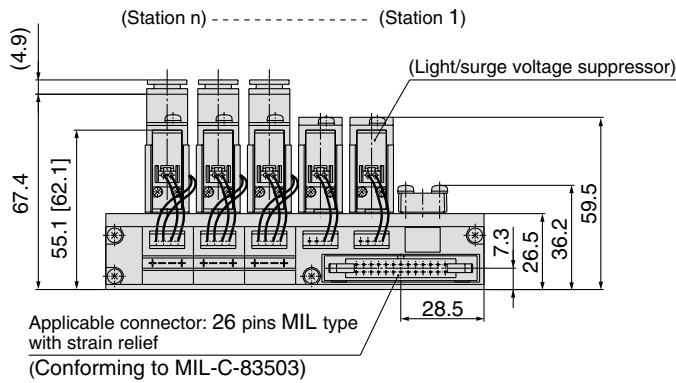


- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Stations n	4	5	6	7	8	9	10	11	12
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5

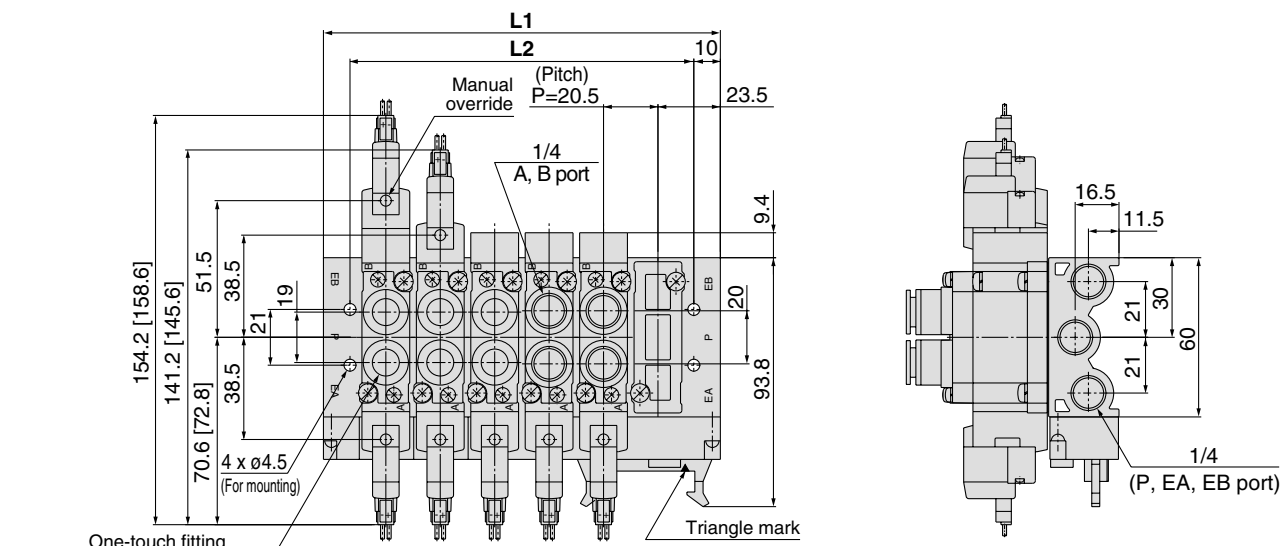


Applicable tubing O.D.: $\varnothing 4$, $\varnothing 5/32''$
 $\varnothing 6$, $\varnothing 1/4''$
 $\varnothing 8$, $\varnothing 5/16''$

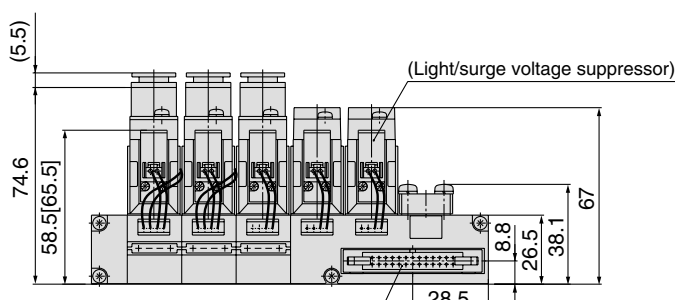


Stations n	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

SY7000: SS5Y7-20P- Stations



A, B port
 Applicable tubing O.D.: ø8, ø5/16"
 ø10, ø3/8" (Station n) ----- (Station 1)



Applicable connector: 26 pins MIL type
 with strain relief
 (Conforming to MIL-C-83503)

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Stations n	3	4	5	6	7	8	9	10	11	12
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L2	68	88.5	109	129.5	150	170.5	191	211.5	232	252.5

5 Port Solenoid Valve Body Ported Manifold Stacking Type/Flat Ribbon Cable Series SY9000

Type **23P**

Note) CE compliant:
For DC only. [Option]

How to Order Manifold

SS5Y 9 - 23P - 05 - [] - [] - []

• **Manifold series**
9 SY9000

• **Thread type**

Nil	Rc
00F	G
00N	NPT
00T	NPTF

• **Option**

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (with DIN rail)
D0	DIN rail mounting (without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.

• **Valve stations**

Symbol	Stations
04	4 stations
12	12 stations

* This also includes the number of blanking plate assemblies.

* Type 23P manifold of Series SY9000 is concurrently used for the internal and external pilot.

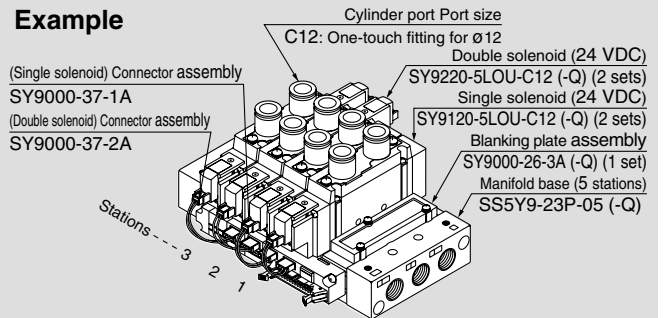
CE compliant

Nil	—
Q	CE compliant

Note) CE compliant: For DC only.

How to Order Manifold Assembly (Example)

Example



SS5Y9-23P-05 (-Q) 1 set (Type 23, 5-station manifold base part no.)
 * **SY9000-26-3A (-Q)** 1 set (Blanking plate assembly part no.)
 * **SY9120-5LOU-C12 (-Q)** ... 2 sets (Single solenoid part no.)
 * **SY9220-5LOU-C12 (-Q)** ... 2 sets (Double solenoid part no.)
 * **SY9000-37-1A** 2 sets (Connector assembly part no.)
 * **SY9000-37-2A** 2 sets (Connector assembly part no.)

The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

Note) Please indicate the connector assembly part no. (page 161) that connects the valve and the manifold.

How to Order Valve

For DC: SY 9 1 20 [] - 5 LOZ [] - 02 [] - []

For AC: SY 9 1 20 [] - 1 LOZ [] - 02 [] - []

• **Rated voltage** CE compliant

5	24 VDC	●
6	12 VDC	●

• **Light/surge voltage suppressor**

Z	With light/surge voltage suppressor
U	With light/surge voltage suppressor (Non-polar type)

Note) Z: Positive common specifications only.

• **CE compliant**

Nil	—
Q	CE compliant

Note) CE compliant: For DC only.

• **Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

• **A, B port size Thread piping**

Symbol	Port size
02	1/4
03	3/8

• **One-touch fitting (Metric size)**

Symbol	Port size
C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12

• **One-touch fitting (Inch size)**

Symbol	Port size
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"

• **Series**
9 SY9000

• **Type of actuation**

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

• **Pilot specifications**

Nil	Internal pilot
R	External pilot

* Type 23P manifolds can be used for both internal and external pilots.

• **Rated voltage** CE compliant

1	100 VAC	—
3	110 VAC (115 VAC)	—

Note) CE compliant: For DC only.

• **Manual override**

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

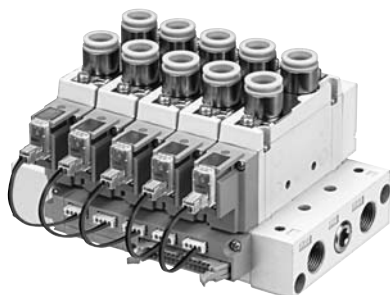
Note) In the case of flat cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specification only. For the other combination, please contact SMC.

Note) When placing an order for body ported solenoid valve as a single unit, mounting screw for manifold and gasket are not attached. Order them separately, if necessary. (For details, refer to page 173.)

- Multiple valve wiring is simplified through the use of the flat cable connector.

• **Clean appearance**

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Connector Assembly

For 12, 24 VDC

Specifications	For SY9000
For single solenoid	SY9000-37-1A
Double solenoid 3 position	SY9000-37-2A
Single with spacer assembly	SY9000-37-3A
Double, 3 position with spacer assembly	SY9000-37-4A

For 100 VAC

Specifications	For SY9000
For single solenoid	SY9000-37-1B
Double solenoid 3 position	SY9000-37-2B
Single with spacer assembly	SY9000-37-3B
Double, 3 position with spacer assembly	SY9000-37-4B

For 110 VAC (115 VAC)

Specifications	For SY9000
For single solenoid	SY9000-37-1C
Double solenoid 3 position	SY9000-37-2C
Single with spacer assembly	SY9000-37-3C
Double, 3 position with spacer assembly	SY9000-37-4C

Manifold Specifications

Model	SS5Y9-23P(-Q)	
Applicable valve	SY9□20	
Manifold type	Stacking type	
P (SUP)/R (EXH)	Common SUP, Common EXH	
Valve stations	4 to 12 stations ^{Note1)}	
A, B port location	Valve	
Port size	P, EA, EB port	3/8
	A, B port	1/4
		3/8
		C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10) C12 (One-touch fitting for ø12)
Manifold base mass W (g) n: Stations	W = 73n + 259	
Applicable flat ribbon cable connector	Flat ribbon cable connector, Socket: 26 pins MIL with strain relief, Conforming to MIL-C-83503	
Internal wiring	In common between +COM and -COM (Z type: +COM only)	
Rated voltage ^{Note4)}	12, 24 VDC, 100, 110 VAC	

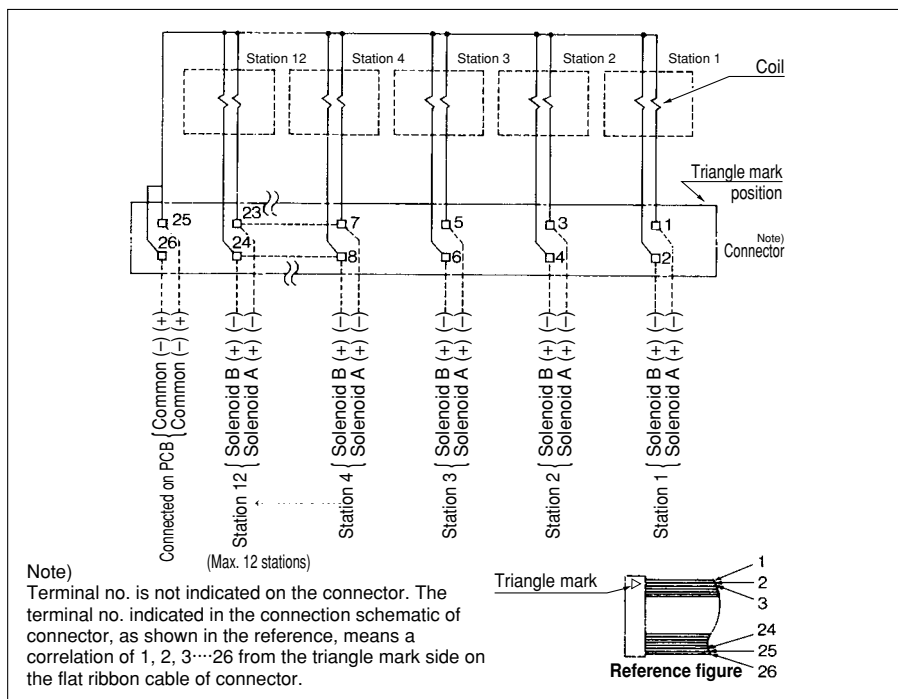
- Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
- Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.
- Note 3) Refer to "Manifold Option" on page 173.
- Note 4) CE-compliant: For DC only.

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y9-23P(-Q)	3/8	C12	6.3	0.20	1.5	8.2	0.28	1.9

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

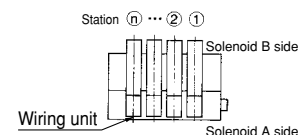
Internal Wiring of Manifold (Non-polar type)



Caution

- For non-polar (U) valves, the electrical DC connections can be used with either positive and negative COM. For type (Z), only use with positive COM as the valve does not operate correctly when used with negative COM.

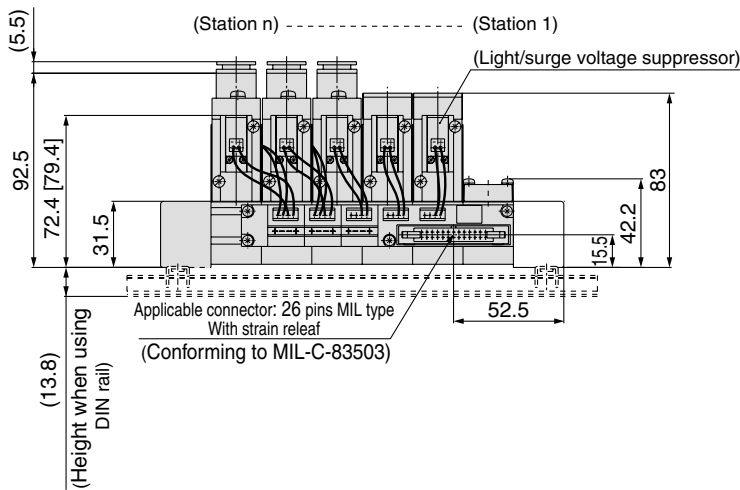
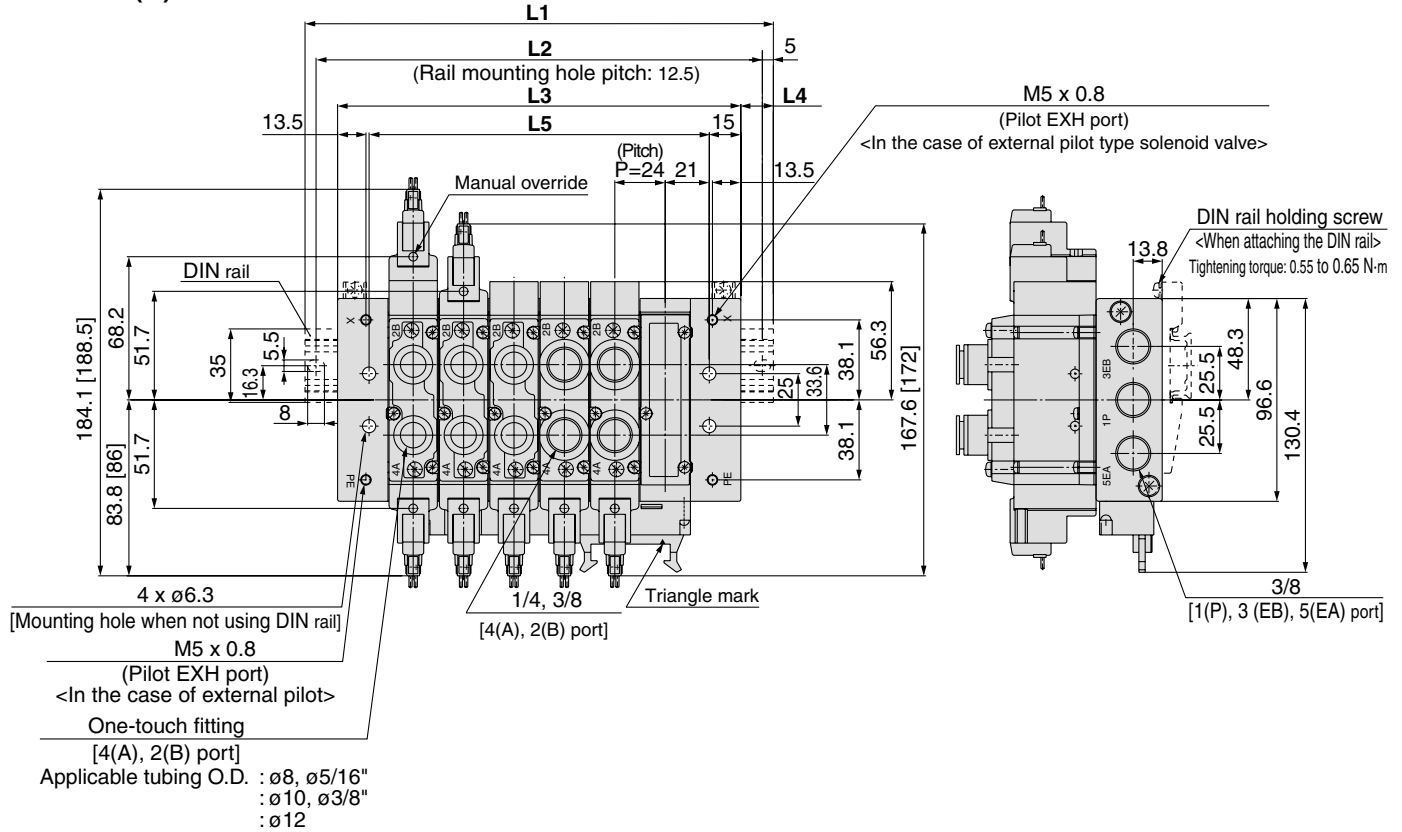
- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations that can be accommodated is 12. For more stations, please contact SMC.



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

SY9000: SS5Y9-23P- Stations -(D)

Grommet (G)



Stations n	4 stations	5	6	7	8	9	10	11	12 stations
L1	173	198	223	248	273	298	323	335.5	360.5
L2	162.5	187.5	212.5	237.5	262.5	287.5	312.5	325	350
L3	144	168	192	216	240	264	288	312	336
L4	14.5	15	15.5	16	16.5	17	17.5	12	12.5
L5	114	138	162	186	210	234	258	282	306

Note) In the case of direct mounting without DIN rail, total width of manifold is L3.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

EX510 Gateway System Serial Transmission System Body Ported Manifold/Integrated Base Series SY3000/5000/7000

Type **20SA**



How to Order Manifold

SS5Y **3** - 20SA - **04** - -

Manifold series

3	SY3000
5	SY5000
7	SY7000

SI unit

Nil	NPN output (+COM.)
N	PNP output (-COM.)

SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S001	P.1715 to 1717
N	PNP output (-COM.)	EX510-S101	

For details of "Gateway System Serial Transmission System, Series EX510", refer to pages 1696 through to 1724.

CE compliant

Nil	—
Q	CE compliant

P, R port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

Valve stations

Symbol	Stations	Note
03	3 stations	Double wiring ^{Note 1)}
:	:	
08	8 stations	Specified layout ^{Note 2)} (Compatible with 16 solenoid valves)
03	3 stations	
:	:	
16	16 stations	

• SS5Y3 can be set from 4 stations.

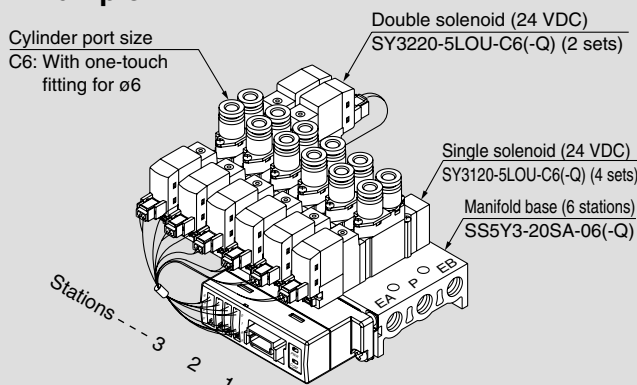
• The number of the blanking plate assembly is also included.

Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

How to Order Manifold Assembly (Example)

Example



SS5Y3-20SA-06 (-Q) 1 set (20SA type 6-station manifold part no.)
 * SY3120-5LOU-C6 (-Q) ... 4 sets (Single solenoid part no.)
 * SY3220-5LOU-C6 (-Q) ... 2 sets (Double solenoid part no.)

↳ The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. When entry of part numbers becomes complicated, indicate by the manifold specification sheet. For a manifold for an EX510, the length of the lead wire for a connector assembly depends on the number of stations. Therefore, the manifold assembly is shipped with the valves (including blanking plates) and connector assembly mounted on it, as the standard specification. Be sure to specify the part nos. of the solenoid valves to be mounted.



How to Order Valves

SY 3 1 20 - 5 LO Z - M5 - -

Series

3	SY3000
5	SY5000
7	SY7000

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Rated voltage: 24 VDC

Light/surge voltage suppressor

Z	With light/surge voltage suppressor
U	Without light/surge voltage suppressor (non-polar type)

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

CE compliant

Nil	—
Q	CE compliant

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size

Thread piping

M5	M5 x 0.8	SY3000
01	1/8	SY5000
02	1/4	SY7000

One-touch fitting (Metric size)

C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	SY7000
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	

One-touch fitting (Inch size)

N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	SY7000
N9	One-touch fitting for ø5/16"	
N11	One-touch fitting for ø3/8"	

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

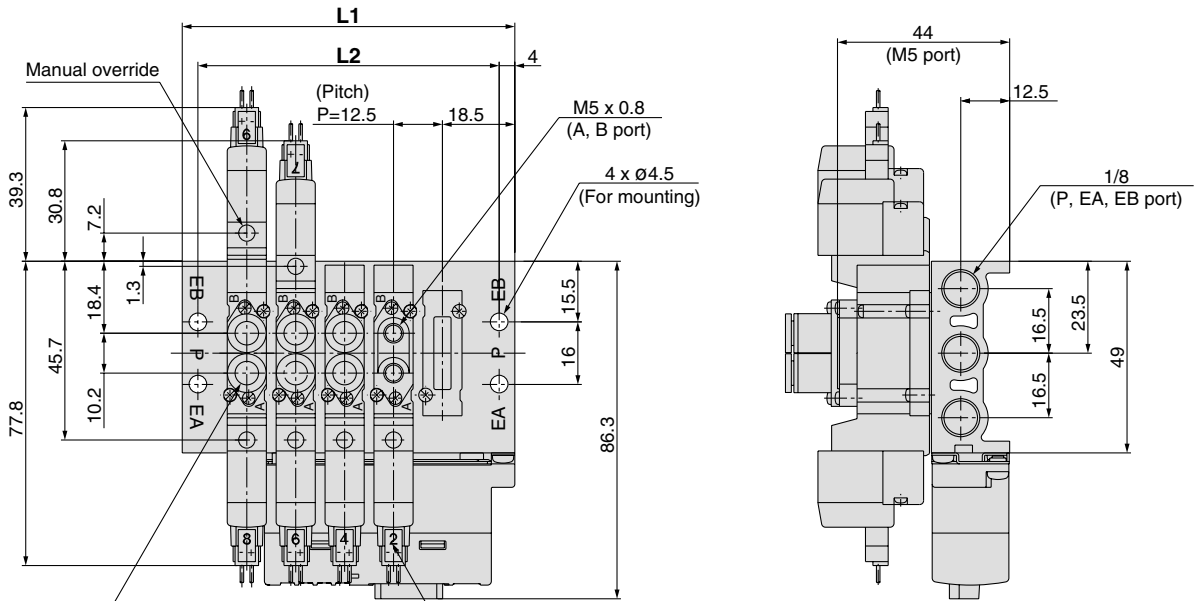
VFS

VFR

VQ7

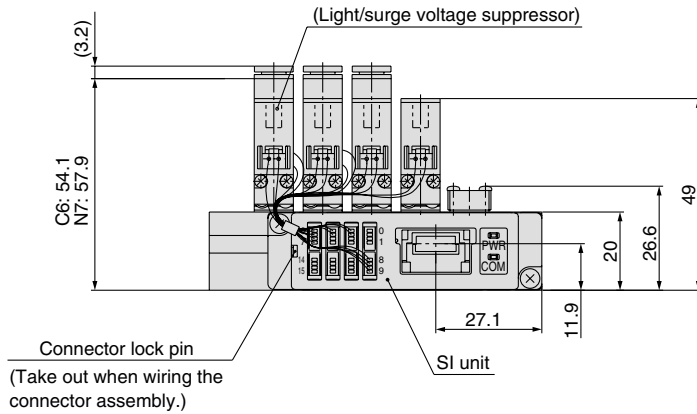
Type **20SA** Series **SY3000/5000/7000**

SY3000: SS5Y3-20SA - Stations -



One-touch fitting
(A, B port)
Applicable tubing O.D.: $\varnothing 4$, $\varnothing 5/32''$
 $\varnothing 6$, $\varnothing 1/4''$

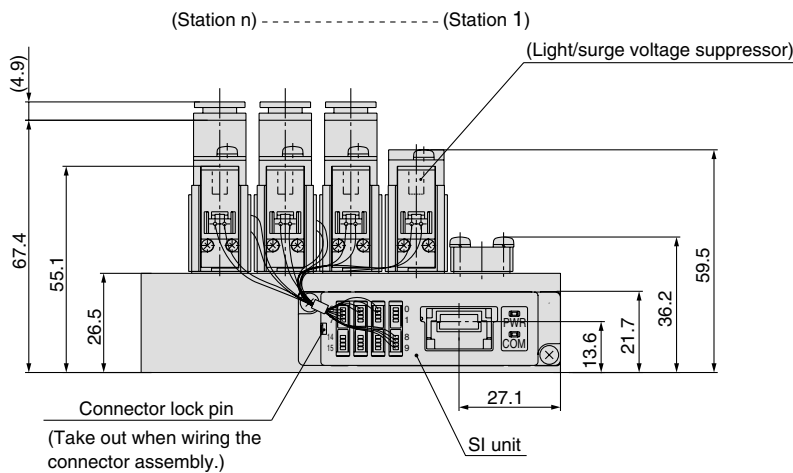
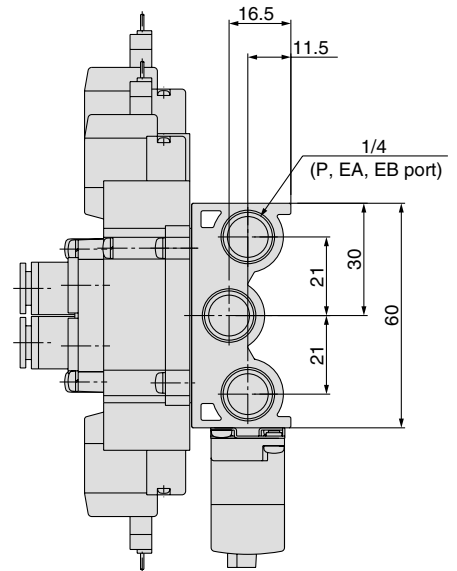
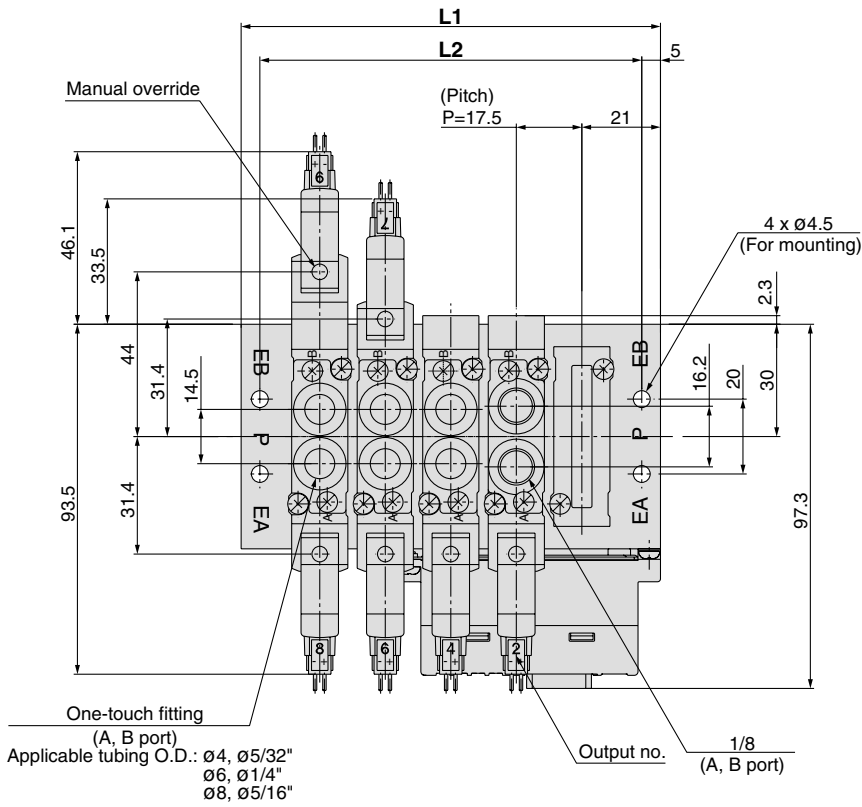
(Station n) ----- (Station 1)



Connector lock pin
(Take out when wiring the
connector assembly.)

Stations n	4 stations	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5

SY5000: SS5Y5-20SA - Stations -



- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- SØ700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Stations n	3 stations	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5	242	259.5	277	294.5

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Type **23SA**

EX510 Gateway System Serial Transmission System Body Ported Manifold/Stacking Type Series **SY9000**



How to Order Manifold

SS5Y9-23SA [] - **03** - [] - [] - []

• **SI unit**

Nil	NPN output (+COM.)
N	PNP output (-COM.)

• **CE compliant**

Nil	—
Q	CE compliant

• **Valve stations**

Symbol	Stations	Note
03	3 stations	Double wiring ^{Note 1)}
⋮	⋮	
08	8 stations	
03	3 stations	Specified layout ^{Note 2)} (Compatible with 16 solenoid valves)
⋮	⋮	
16	16 stations	

- The number of the blanking plate assembly is also included.
- Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

• **Option**

Nil	Direct mounting
D	DIN rail mounting (With DIN rail)
DO	DIN rail mounting (Without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.

• **P, R port thread type**

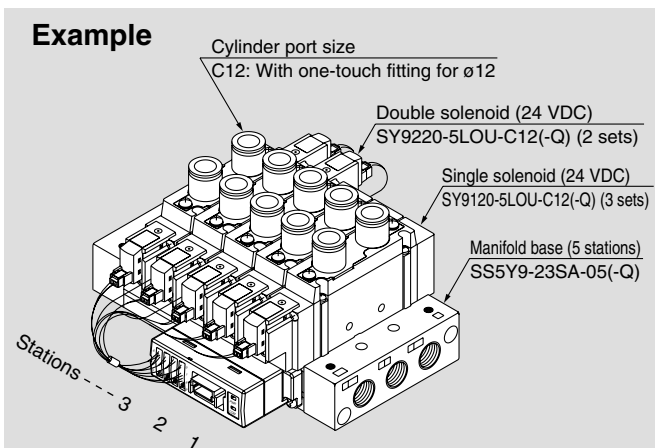
Nil	Rc
00F	G
00N	NPT
00T	NPTF

SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S001	P.1715 to 1717
N	PNP output (-COM.)	EX510-S101	

For details of "Gateway System Serial Transmission System, Series EX510", refer to pages 1696 through to 1724.

How to Order Manifold Assembly (Example)



SS5Y9-23SA-05 (-Q) 1 set (23SA type 5-station manifold part no.)
 * **SY9120-5LOU-C12 (-Q)** ... 3 sets (Single solenoid part no.)
 * **SY9220-5LOU-C12 (-Q)** ... 2 sets (Double solenoid part no.)

↳ The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. When entry of part numbers becomes complicated, indicate by the manifold specification sheet. For a manifold for an EX510, the length of the lead wire for a connector assembly depends on the number of stations. Therefore, the manifold assembly is shipped with the valves (including blanking plates) and connector assembly mounted on it, as the standard specification. Be sure to specify the part nos. of the solenoid valves to be mounted.

How to Order Valves

SY9 **1** **20** **□** - **5** **LO** **Z** **□** - **02** **□** - **□**

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot specifications

Nil	Internal pilot
R	External pilot

Rated voltage: 24 VDC

Light/surge voltage suppressor

Z	With light/surge voltage suppressor
U	Without light/surge voltage suppressor (non-polar type)

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

CE compliant

Nil	—
Q	CE compliant

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size

Thread piping

02	1/4
03	3/8

One-touch fitting (Metric size)

C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12

One-touch fitting (Inch size)

N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

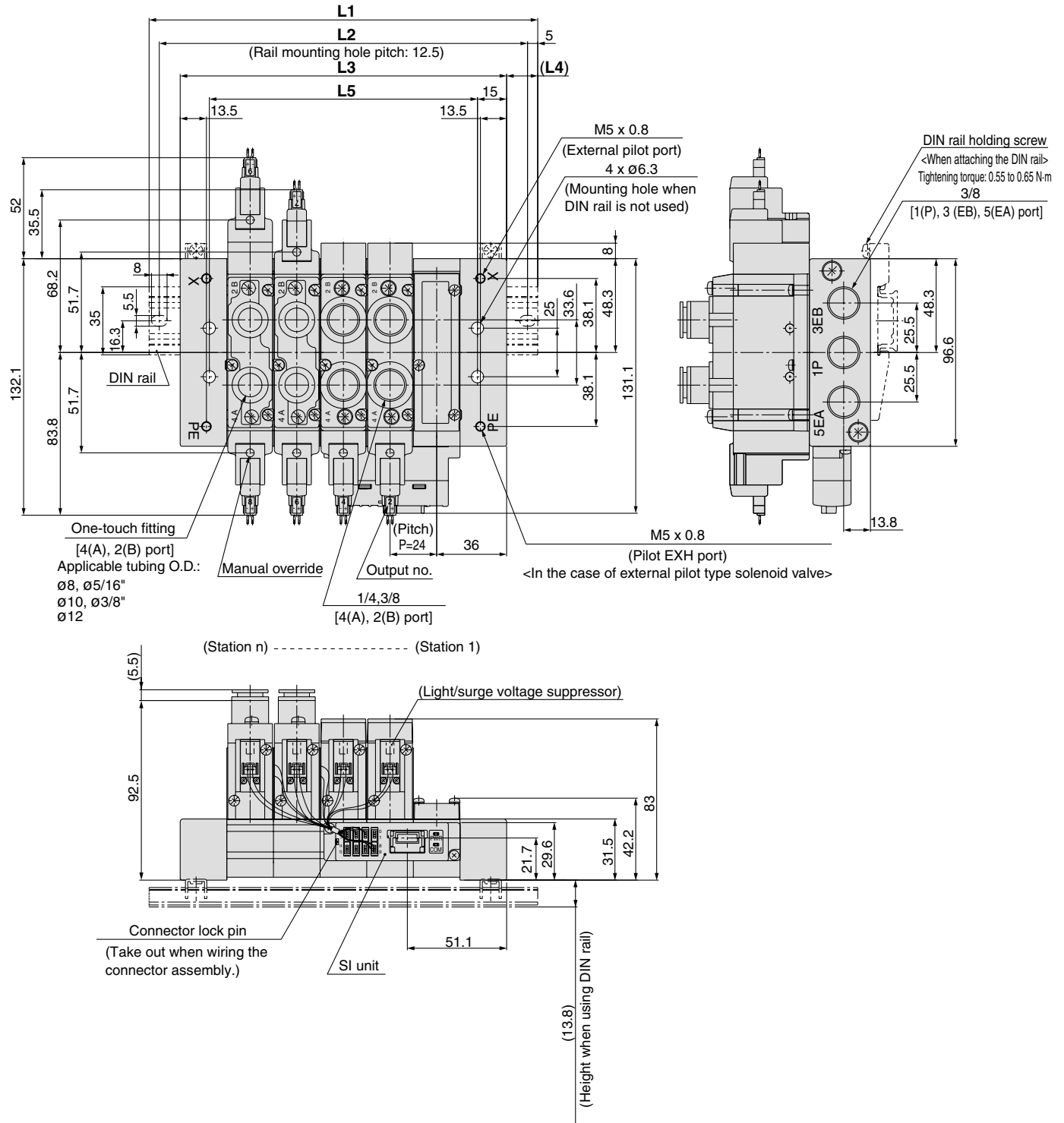
SQ

VFS

VFR

VQ7

SY9000: SS5Y9-23SA - Stations - (-D)



Stations n	3 stations	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	148	173	198	223	248	273	298	323	335.5	360.5	385.5	410.5	435.5	460.5
L2	137.5	162.5	187.5	212.5	237.5	262.5	287.5	312.5	325	350	375	400	425	450
L3	120	144	168	192	216	240	264	288	312	336	360	384	408	432
L4	14	14.5	15	15.5	16	16.5	17	17.5	12	12.5	13	13.5	14	14.5
L5	90	114	138	162	186	210	234	258	282	306	330	354	378	402

Note) In the case of direct mounting without DIN rail, total width of manifold is L3.

Manifold Option

■ Type 20, 23, 20SA, 23SA Blanking plate assembly



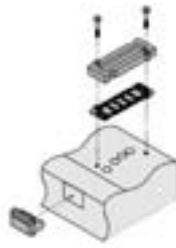
<Standard>

Series	Assembly part no.
SY3000	SY3000-26-9A
SY5000	SY5000-26-20A
SY7000	SY7000-26-22A
SY9000	SY9000-26-1A

<CE-compliant>

Series	Assembly part no.
SY3000	SY3000-26-19A-Q
SY5000	SY5000-26-1A-Q
SY7000	SY7000-26-1A-Q
SY9000	SY9000-26-1A-Q

■ Type 20P, 23P Blanking plate assembly



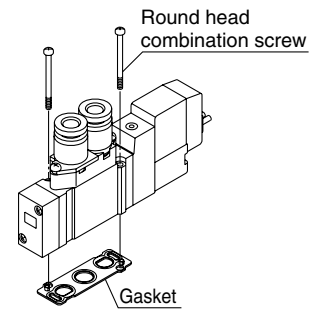
<Standard>

Series	Assembly part no.
SY3000	SY3000-26-10A
SY5000	SY5000-26-21A
SY7000	SY7000-26-23A
SY9000	SY9000-26-3A

<CE-compliant>

Series	Assembly part no.
SY3000	SY3000-26-20A-Q
SY5000	SY5000-26-3A-Q
SY7000	SY7000-26-3A-Q
SY9000	SY9000-26-3A-Q

■ Gasket assembly part no.

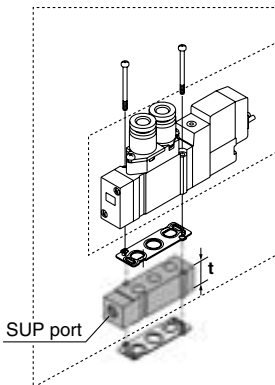


Series	Gasket assembly part no.
SY3000	SY3000-GS-1
SY5000	SY5000-GS-1
SY7000	SY7000-GS-1
SY9000	SY9000-GS-1



Note) The gasket assembly includes 10 sets of mounting screws and a gasket.

■ Individual SUP spacer assembly

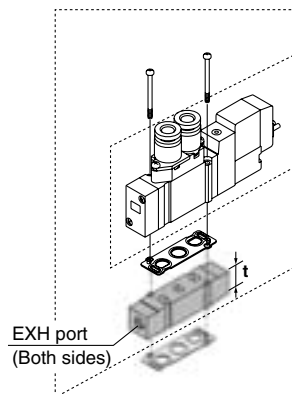


Series	Assembly part no.	Port size	t
SY3000	SY3000-38-20A(-Q)	M5 x 0.8	10.5
SY5000	SY5000-38-1*A(-Q)	1/8	15
SY7000	SY7000-38-1*A(-Q)	1/4	18
SY9000	SY9000-38-1*A(-Q)	1/4	20



Note) • The SUP port of SY3000/5000/7000 may be either on the lead wire side or on the end plate side. (An assembly is shipped under the conditions shown in the figure.)
• The end plate side is only available to SY9000.

■ Individual EXH spacer assembly

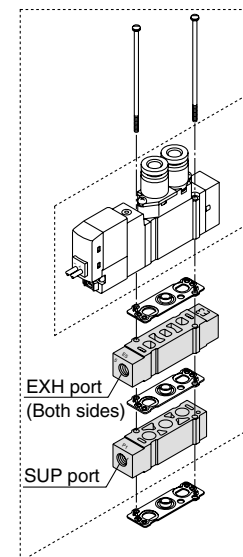


Series	Assembly part no.	Port size	t
SY3000	SY3000-39-20A(-Q)	M5 x 0.8	10.5
SY5000	SY5000-39-1*A(-Q)	1/8	15
SY7000	SY7000-39-1*A(-Q)	1/4	18
SY9000	SY9000-39-1*A(-Q)	1/4	20



Note) In case of 20P and 23P, for protection of the wiring unit section from drainage, piping at the EA port should be arranged so that it will not be directly exposed to exhaust from the valve.

■ Individual SUP spacer assembly + Individual EXH spacer assembly (Double spacer)



⚠ Caution

Mounting screw tightening torques

M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

⚠ Warning

When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions, and then mount it.

* Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

[●: Available x: Not available]

Series	Individual SUP + Individual EXH Assemble part no.	Port size	Applicable manifold types	
			20	20P
SY3000	SY3000-120-1A(-Q)	M5 x 0.8	●	x
SY5000	SY5000-75-2*A(-Q)	1/8	●	x
SY7000	SY7000-73-3*A(-Q)	1/4	●	x



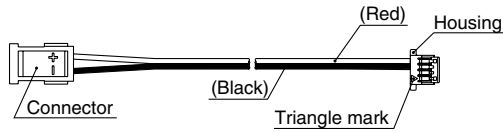
Note) The SUP spacer's port does not have an orientation. As for the EXH ports, adjust the symbol "5" to the pilot valve side. Also, please make sure to connect the individual ports to protect the wiring section of the pilot valve from drainage, etc. The individual SUP spacer and EXH spacer can be mounted either on the upper side or lower side. (The above illustration shows the condition when the product is shipped out from a factory.)

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

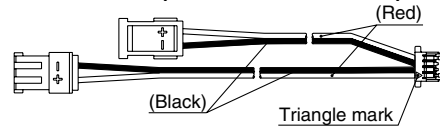
Manifold Option

■ Connector assembly

For single solenoid (SY3000-37-81A-□-N)



For double solenoid (SY3000-37-81A-□-□)



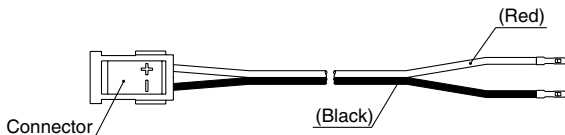
Connector assembly order no. (Can be used for the manifold without a specified layout (8 stations or less))
Integrated type

Model	Part no.	Connector mounting position
SS5Y3-20SA	SY3000-37-81A-3-N	Single : For 1 to 4 stations
	SY3000-37-81A-3-6	Double/3 position: For 1 to 4 stations
	SY3000-37-81A-2-N	Single : For 5 to 8 stations
	SY3000-37-81A-2-4	Double/3 position: For 5 to 8 stations
SS5Y5-20SA	SY3000-37-81A-3-N	Single : For 1 to 8 stations
	SY3000-37-81A-3-6	Double/3 position: For 1 to 8 stations
SS5Y7-20SA	SY3000-37-81A-3-N	Single : For 1 to 4 stations
	SY3000-37-81A-3-6	Double/3 position: For 1 to 4 stations
	SY3000-37-81A-4-N	Single : For 5 to 8 stations
	SY3000-37-81A-4-7	Double/3 position: For 5 to 8 stations

Note) The above is for the station addition or maintenance. When ordering a connector assembly separately, a number would not be printed on the connector.

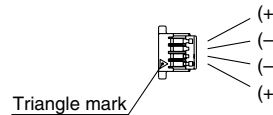
■ Connector assembly

SY3000-37-80A-□



■ Housing (8 pcs./set)

SY3000-44-3A



Connector assembly order no. (Can be used for the manifold with a specified layout)

Model	Part no.	Connector mounting position
SS5Y3-20SA	SY3000-37-80A-3	For A side : For 1 to 8 stations
	SY3000-37-80A-6	For B side
	SY3000-37-80A-4	For A side : For 9 to 16 stations
	SY3000-37-80A-7	For B side
SS5Y5-20SA	SY3000-37-80A-3	For A side : For 1 to 8 stations
	SY3000-37-80A-6	For B side
	SY3000-37-80A-7	For A side : For 9 to 16 stations
	SY3000-37-80A-9	For B side
SS5Y7-20SA	SY3000-37-80A-4	For A side : For 1 to 8 stations
	SY3000-37-80A-7	For B side
	SY3000-37-80A-8	For A side : For 9 to 16 stations
	SY3000-37-80A-11	For B side
SS5Y9-23SA	SY3000-37-80A-6	For A side : For 1 to 8 stations
	SY3000-37-80A-11	For B side
	SY3000-37-80A-9	For A side : For 9 to 12 stations
	SY3000-37-80A-14	For B side
	SY3000-37-80A-13	For A side : For 13 to 16 stations
	SY3000-37-80A-18	For B side

Note 1) The above is for station addition or maintenance. When ordering a connector assembly separately, a number will not be printed on the connector.

Note 2) After inserting the connector assembly into the housing, be sure to confirm that the lead wire will not come off by lightly pulling the wire. Furthermore, do not reuse the lead wire after it has been inserted and removed.

Note 3) Wiring is set longer than the actual wiring distance.

Manifold Option

■ SUP blocking disk (For SY9000)

By installing a SUP blocking disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.



Series	Part no.
SY9000	SY9000-61-2A

■ EXH blocking disk (For SY9000)

By installing an EXH blocking disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two blocking disks are needed to divide both exhausts.)



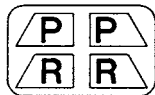
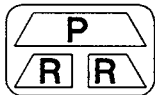
Series	Part no.
SY9000	SY9000-61-2A

■ Label for blocking disk (For SY9000)

The labels shown below are used on manifold stations containing SUP/EXH blocking disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



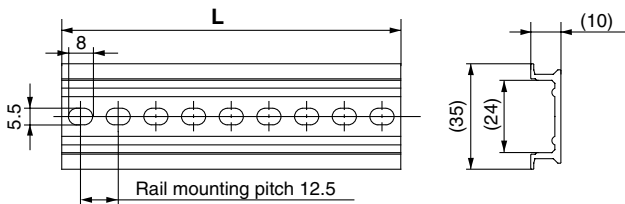
* When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

■ DIN Rail Dimensions/Mass for SY9000

VZ1000-11-4-□

● Refer to L dimensions

* Fill in □ with an appropriate no. listed on the table of DIN rail dimensions shown below.

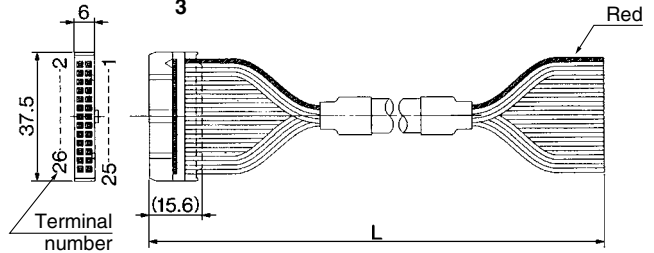


No.	0	1	2	3	4	5	6	7	8	9
L Dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5
Mass (g)	24.8	28	31.1	34.3	37.4	40.6	43.8	46.9	50.1	53.3
No.	10	11	12	13	14	15	16	17	18	19
L Dimension	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5
Mass (g)	56.4	59.6	62.7	65.9	69.1	72.2	75.4	78.6	81.7	84.9
No.	20	21	22	23	24	25	26	27	28	29
L Dimension	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5
Mass (g)	88	91.2	94.4	97.5	100.7	103.9	107	110.2	113.3	116.5

Note) -For DIN rail, refer to page 338.
-Refer to L1 dimension on pages 153, 162 and 172 for lengths that correspond to the number of manifold stations.

■ Cable assembly (For 20P, 23P)

AXT100-FC26-¹/₃



Connector Assembly for Flat Ribbon Cables

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-FC26-1	Cable 26 core x 28 AWG
3 m	AXT100-FC26-2	
5 m	AXT100-FC26-3	

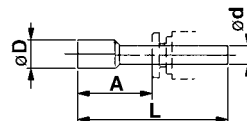
* For other commercial connectors, use a 26 pins with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

- Hirose Electric Company
- Japan Aviation Electronics Industry, Ltd.
- Sumitomo 3M Limited
- J.S.T. Mfg. Co., Ltd.
- Fujitsu Limited

■ Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
12	KQ2P-12	24	44.5	14
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10
3/8"	KQ2P-11	22	43	11.5

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

How to Increase Manifold Bases (Series SY9000 only) Manifold case can be added at any location.

When a type 23 manifold base is added, tension bolts as well as manifold block assembly will be required. Order the tension bolt suitable for the stations after a station was increased (decreased), since the length of a tension bolt differs by the number of stations. (For changing the number of stations for a type 23P manifold, wiring unit for the stations and lead assembly will be required.)


- 1 Loosen the tension bolts ⑤ connecting the manifold base, and pull out both of 2 tension bolts.
(When equipped with a DIN rail, loosen one DIN rail holding screw on either U side or D side.)
- 2 Separate the blocks at the location where station expansion is desired.
- 3 Mount additional manifold block assembly.
- 4 Press block-to-block so that there's no gap. After connection, insert a tension bolt for desired stations and then tighten it.

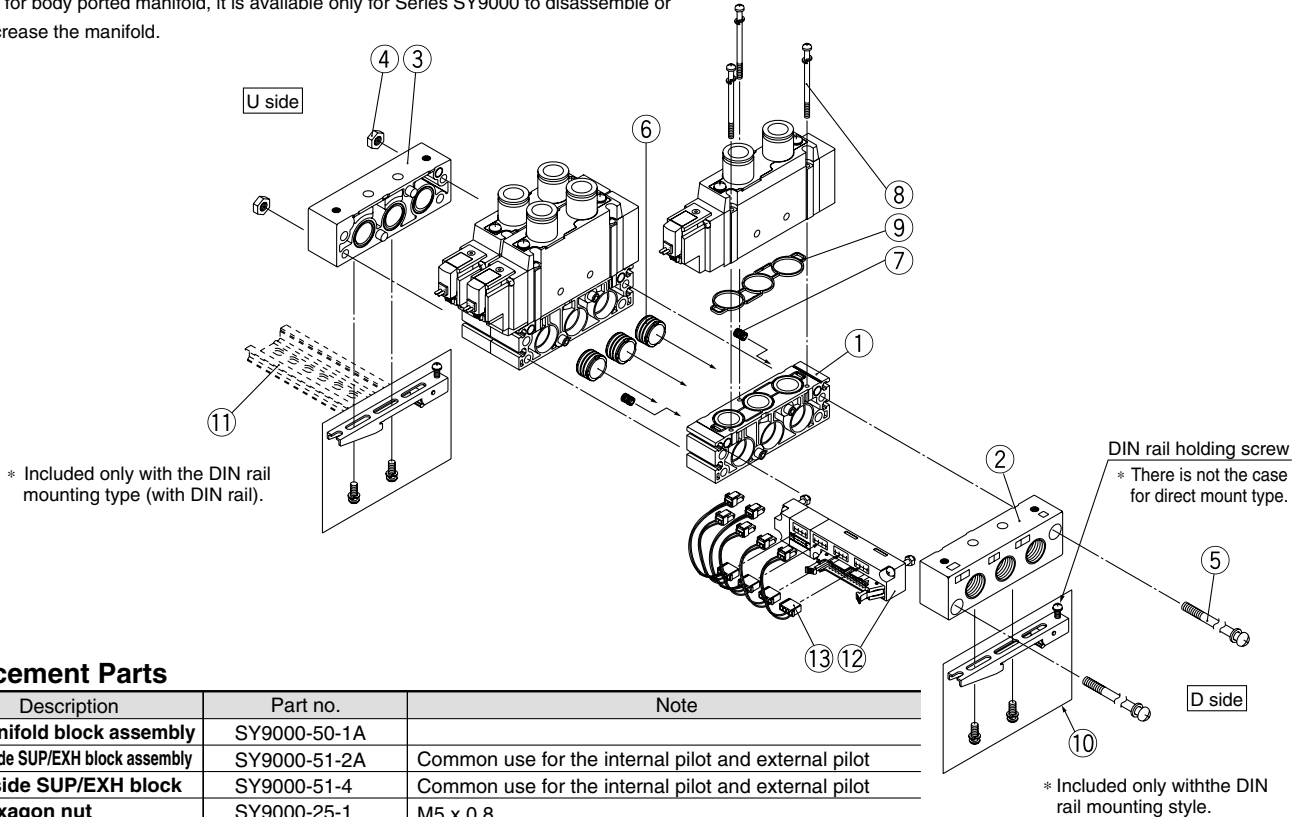
⚠ Caution (Tightening torque: 2.9 N·m)
(When equipped with a DIN rail, be sure to tighten the DIN rail holding screws after tightening the tension bolts. Tightening torque: 1.4 N·m)

⚠ Caution

1. Be sure to shut off the power and air supplies before disassembly. Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate.
3. By adding wiring unit assembly to type 23 manifold, it can be changed to type 23P manifold, too.

Body Ported Manifold Exploded View, 23/23P Common

 As for body ported manifold, it is available only for Series SY9000 to disassemble or increase the manifold.



Replacement Parts

No.	Description	Part no.	Note
1	Manifold block assembly	SY9000-50-1A	
2	D side SUP/EXH block assembly	SY9000-51-2A	Common use for the internal pilot and external pilot
3	U side SUP/EXH block	SY9000-51-4	Common use for the internal pilot and external pilot
4	Hexagon nut	SY9000-25-1	M5 x 0.8
5	Tension bolt	SY9000-23-□	Since □ at the end of part number corresponds with the number of stations, fill in the same number as the number of stations.
6	Bush assembly	SY9000-61-1A	Included in the Manifold block assembly and the D side SUP/EXH block assembly.
7	Bush assembly	SY9000-61-3A	Included in the Manifold block assembly and the D side SUP/EXH block assembly.
8	Round head combination screw	SY9000-18-2	Included in the Manifold block assembly.
9	Manifold gasket	SY9000-11-1	Included in the Manifold block assembly.
10	Clamp sub assembly	SY9000-29-1A	
11	DIN rail	VZ1000-11-4-□	Refer to page 175.
12	Wiring unit assembly	SY9000-36-□A	Since □ in part number corresponds with the number of stations, fill in the number of stations (4 to 12).
13	Connector assembly	SY9000-37-□□	Refer to page 161.

5/2, 5/3 пневмораспределитель с электропневматическим управлением

Кассетный тип

SY3060/5060/7060

Экономичный в использовании

- потребляемая мощность 0.4 Вт (0.1 Вт – энергосберегающее исполнение)
- возможно управление от контроллера
- не требуется использование промежуточных реле

Уникальная технология монтажа

- возможность оперативного изменения конфигурации блока без дополнительных затрат

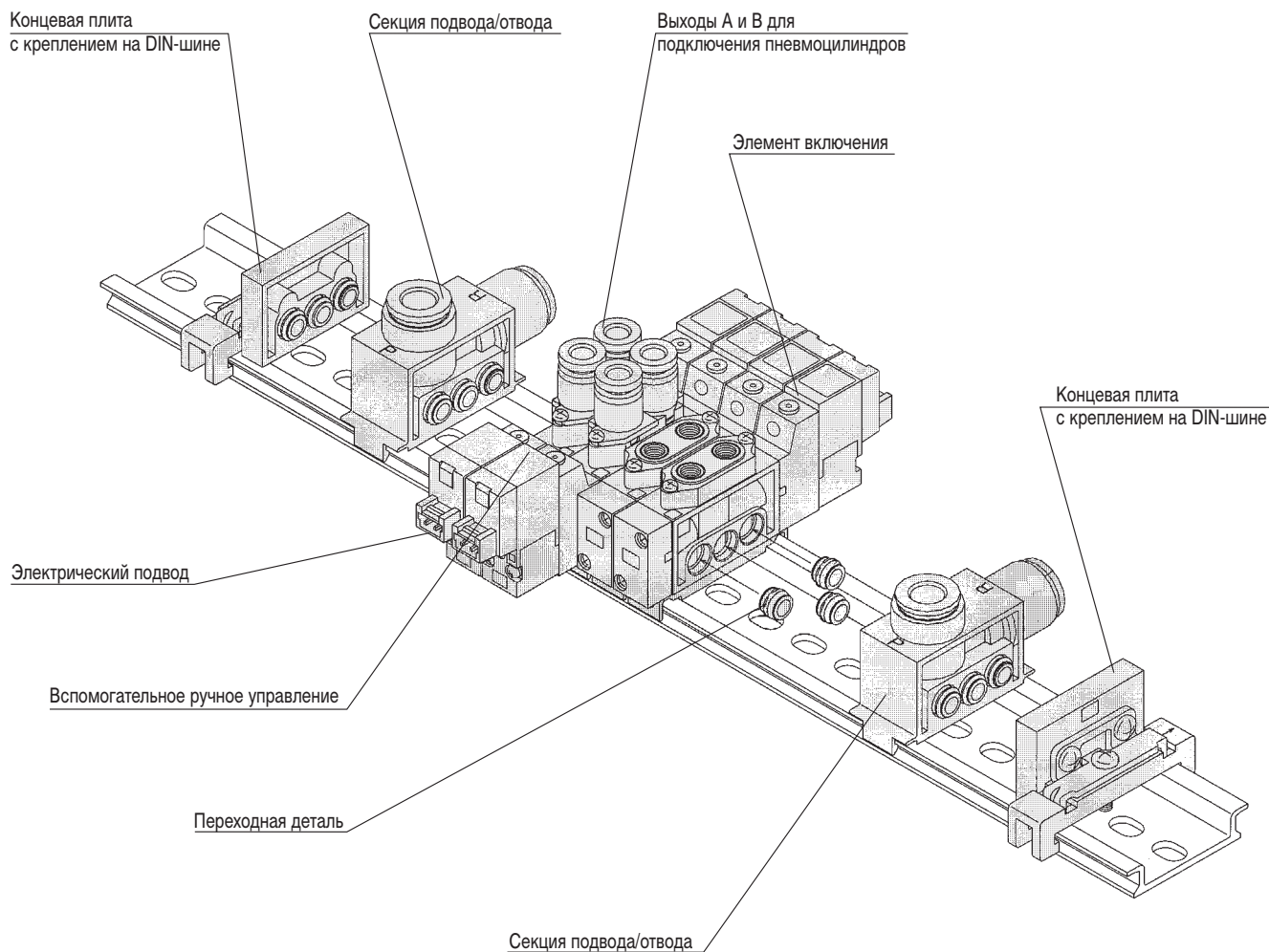
Быстродействие

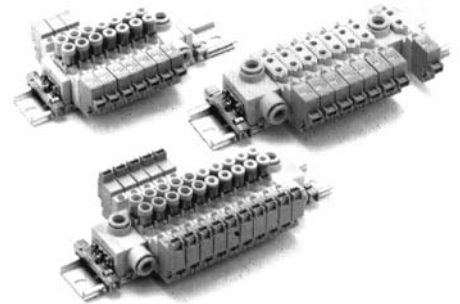
- время срабатывания 10 мс при потребляемой мощности 0.4 Вт (SY3060, с двусторонним управлением)

Компактность блока пневмораспределителей

Ресурс - более 50 млн. циклов

Современный дизайн




Технические характеристики

Типоразмер		SY3060	SY5060	SY7060
Среда	Очищенный сжатый воздух с содержанием масла или без него			
Тип управления	Электропневматическое управление			
Рабочий диапазон давлений (МПа)	5/2 с одностор. управлением	0.15 ~ 0.7		
	5/2 с двустор. управлением	0.1 ~ 0.7		
	5/3	0.2 ~ 0.7		
Диапазон рабочих температур (°C)	Макс. 50			
Время срабатывания (мс)		< 12	< 19	< 33
Частота срабатывания (Гц)	5/2 с одно/двустор. управлением	10	5	5
	5/3	3	3	3
Вспомогательное ручное управление	Не блокируется			
Монтажное положение	Произвольное			
Электрический подвод		2-х клеммный разъем	2-х клеммный разъем; DIN-разъем	
Напряжение ** (В)	DC	24		
	AC	220		
Допуск по напряжению	-15% до +5%			
Потребляемая мощность (Вт)	DC	0.55		
	AC	< 2.3		
Степень защиты		IP40	IP40 (IP65 – DIN-разъем)	
Класс изоляции	E			
Искрогашение	Стандартное исполнение			
Индикатор рабочего состояния	Стандартное исполнение *			

* Для DIN-разъема – по запросу (см. Ответные части разъема, стр. 71)

** Другие напряжения – по запросу.

Номер для заказа
SY 5 1 60 — 5 YO — C6 — Q
Типоразмер

3	3060
5	5060
7	7060

Действие пневмораспределителей

1	5/2 с односторонним управлением	
2	5/2 с двусторонним управлением	
3	5/3, в среднем положении закрыт	
4	5/3, в среднем положении открыт	
5	5/3, в среднем положении под давлением	

Выходы для присоединения цилиндров

Индекс	Описание	Расход (норм.л/мин)	Типоразмер
M5	Резьба M5	196	SY3060
C4	Быстроразъемное соединение Ø4	187	
C6	Быстроразъемное соединение Ø6	196	
01F	Резьба G 1/8	500	SY5060
C6	Быстроразъемное соединение Ø6	491	
C8	Быстроразъемное соединение Ø8	500	
02F	Резьба G 1/4	981	SY7060
C8	Быстроразъемное соединение Ø8	961	
C10	Быстроразъемное соединение Ø10	981	

Электрическое подсоединение (ответную часть заказывают отдельно, см. стр. 71)

Индекс	Напряжение	Описание	Серия
LOU	24 V DC	Разъем без ответной части	С индикатором рабочего состояния, искрогасителем
		С индикатором рабочего состояния, искрогасителем	SY3000 SY5000 SY7000
YO	24 V DC / 220 V AC	DIN-разъем (без ответной части) (имеется только для SY5060/SY7060)	Без индикатора рабочего состояния/искрогасителя (может встраиваться в ответную часть разъема)
		Без индикатора рабочего состояния/искрогасителя (может встраиваться в ответную часть разъема)	SY5000 SY7000

Напряжение на катушке

5	24 V DC
4*	220 V AC

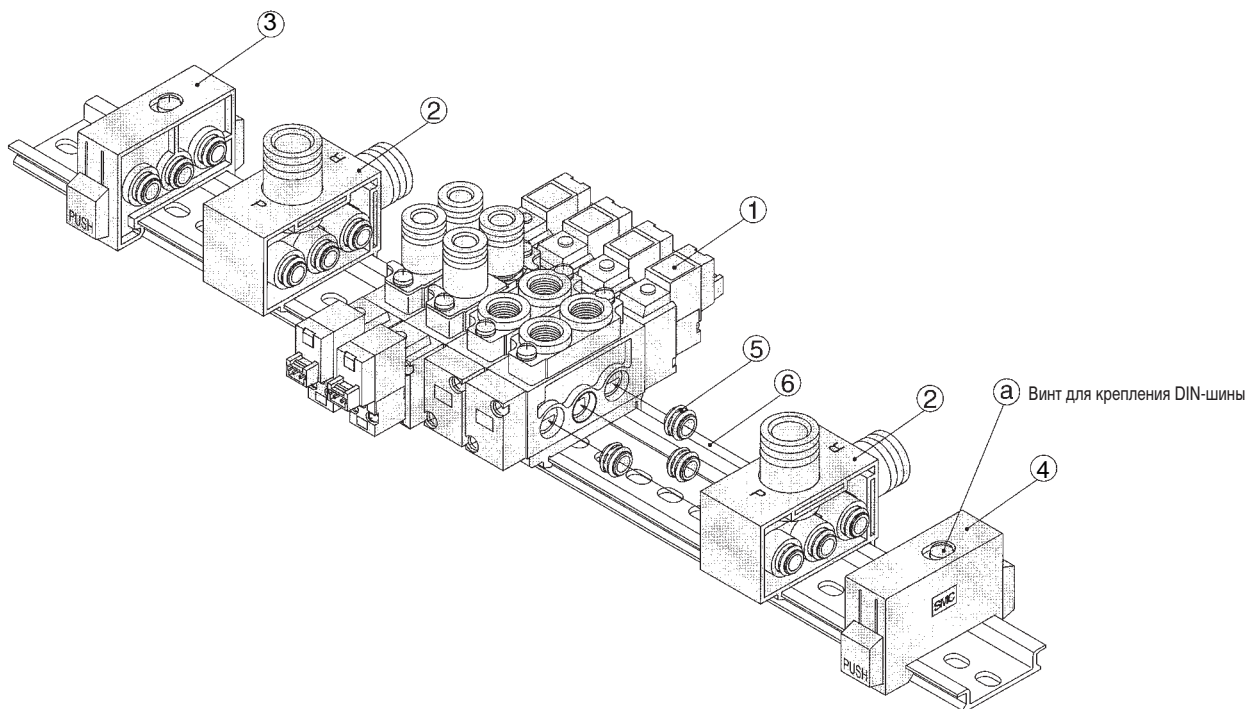
* только для SY5060, SY7060, только в модификации с DIN-разъемом.

5/2, 5/3 пневмораспределитель с электропневматическим управлением

Кассетный тип

SY3060/5060/7060

Спецификация



Поз.	Описание	Номер для заказа		
		Тип пневмораспределителя		
1	Пневмораспределитель (см. стр. 93)	SY3000	SY5000	SY7000
2	Секция подвода-отвода воздуха	SY3000-55-1A-Q	SY5000-55-1A-Q	SY7000-75-1A-Q
3	Концевая плита правая	SY3000-56-1A-Q	SY5000-56-1A-Q	SY7000-56-1A-Q
4	Концевая плита левая	SY3000-56-1B-Q	SY5000-56-1B-Q	SY7000-56-1A-Q
5*	Переходная деталь	SY3000-52-5A	SY5000-52-3A	SY7000-70-1A
6	DIN-рейка	заказывается отдельно		

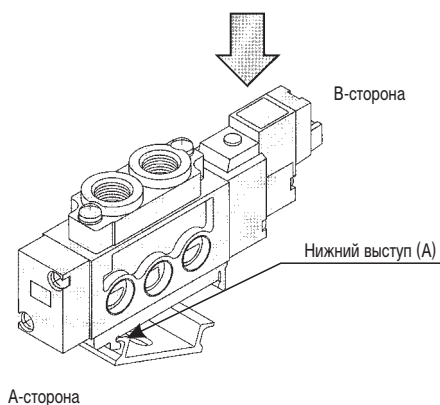
Примечание

Тип распределителя		
SY3000	SY5000	SY7000
Порт P, R секции подвода-отвода воздуха: быстроразъемное соединение $\varnothing 8$	Порт P, R секции подвода-отвода воздуха: быстроразъемное соединение $\varnothing 10$	Порт P, R секции подвода-отвода воздуха: быстроразъемное соединение $\varnothing 12$

В поставку каждого пневмораспределителя, а также секции подвода-отвода воздуха входят три переходных детали.

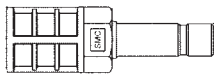
* Переходную деталь необходимо заказывать в количестве 3 штук.

1. Нижний выступ пневмораспределителя (A) надеть на рейку.
2. Нажать пневмораспределитель в направлении стрелки (B) вниз до фиксации пневмораспределителя на DIN-рейке. Произвести выверку положения пневмораспределителя на DIN-рейке.
3. Отдельные пневмораспределители (1) соединяют, прижимая их друг к другу до тех пор, пока переходные детали не войдут до упора в положенные отверстия. Путем дальнейшего соединения пневмораспределителей число их доводят до желаемого количества.
4. Присоединить секцию подвода-отвода (2), прижав ее к пневмораспределителям слева или, соответственно, справа. Переходные детали должны войти до упора в положенные отверстия.
5. Концевые плиты справа (3) и слева (4) насадить на DIN-рейку и присоединить к пневмораспределителям, прижимая их друг к другу до тех пор, пока переходные детали не войдут до упора в положенные отверстия. Фиксирующие винты (a) затянуть с усилием 1 Нм.
6. Перед подключением сжатого воздуха следует следить за тем, чтобы между пневмораспределителями не было зазоров.

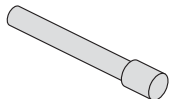


Принадлежности

Пневмоглушитель



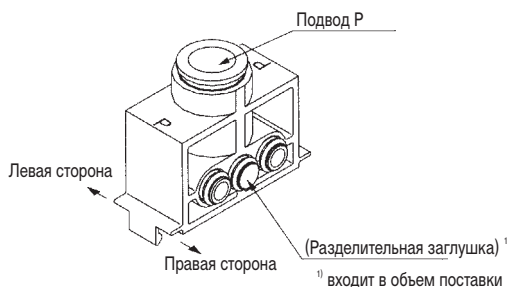
Пробка



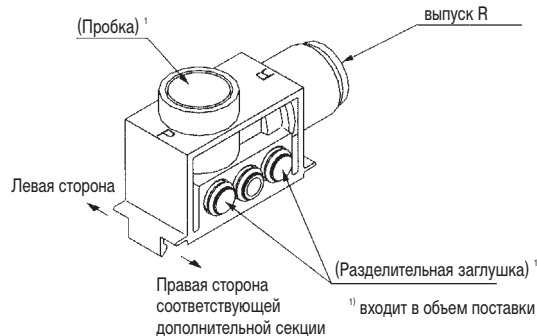
Разделительная заглушка



Доп. секция подвода воздуха



Доп. секция отвода воздуха



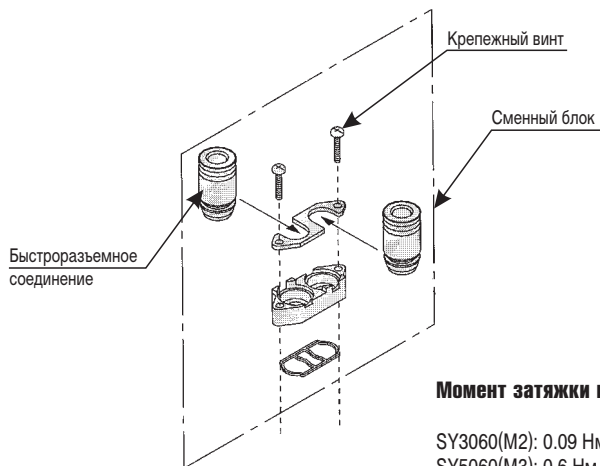
Тип	Номер для заказа					
	Пневмоглушитель	Пробка*		Доп. секция подвода воздуха	Доп. секция отвода воздуха	Разделительная заглушка**
SY3060	AN203-KM8	∅4	KQ2P-04	SY3000-54-1C	SY3000-55-1B	SY3000-52-2A
		∅6	KQ2P-06			
SY5060	AN200-KM10	∅4	KQ2P-04	SY5000-54-1C	SY5000-55-1B	SY5000-52-4A
		∅6	KQ2P-06			
		∅8	KQ2P-08			
SY7060	AN300-KM12	∅8	KQ2P-08	SY7000-54-1C	SY7000-55-1B	SY7000-52-2A
		∅10	KQ2P-10			

* С помощью пробки можно преобразовать распределители из 5/2 в 3/2.

** Универсальная для каналов подвода и отвода (деаэрации) воздуха.

Номер для заказа сменного блока фитингов см. стр. 70

Номер для заказа ответных частей разъема см. стр. 71



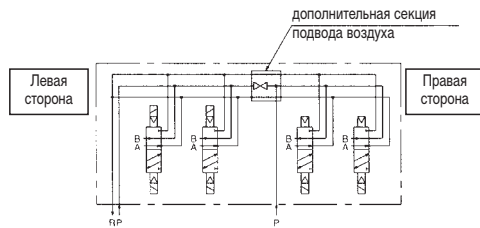
5/2, 5/3 пневмораспределитель с электропневматическим управлением

Кассетный тип

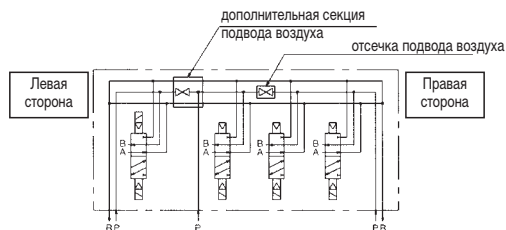
SY3060/5060/7060

Принадлежности

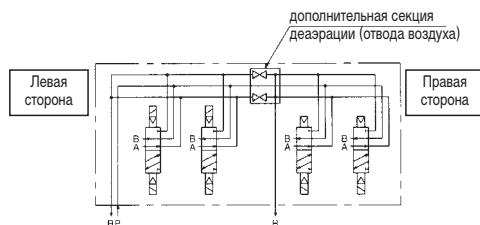
Пример использования, если на одной плите пневмораспределителей действуют два разных давления



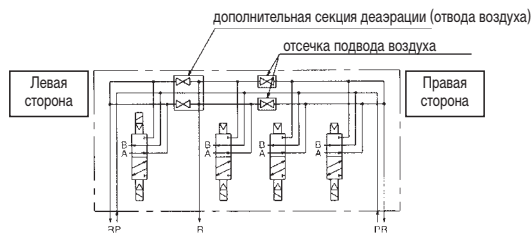
Пример использования, если только один пневмораспределитель работает на другом давлении



Пример использования, если требуется выпустить воздух в двух разных местах

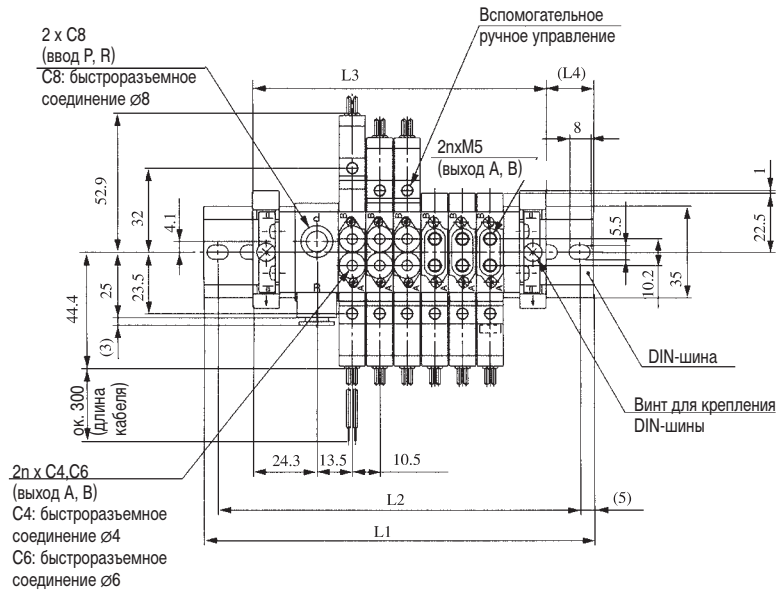
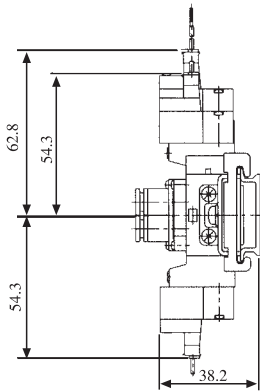
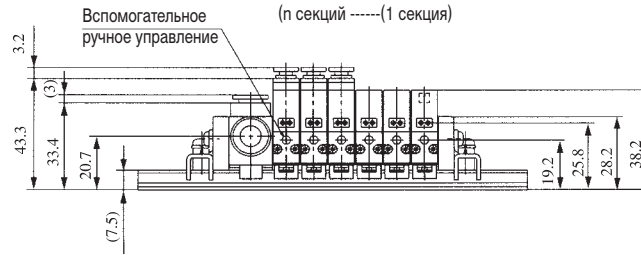


Пример использования, если дополнительно требуется выпустить воздух только из одного пневмораспределителя



Размеры

Тип SY3060 с одной секцией подвода-отвода воздуха



Размеры (мм)

n: количество секций

L \ n	2	3	4	5	6	7	8	9	10
L1*	98	110.5	123	135.5	135.5	148	160.5	173	185.5
L2	87.5	100	112.5	125	125	137.5	150	162.5	175
L3	69.5	80	90.5	101	111.5	122	132.5	143	153.5
L4	14	15	16	17	12	13	14	15	16

* Размер L1 показывает необходимую длину DIN-рейки

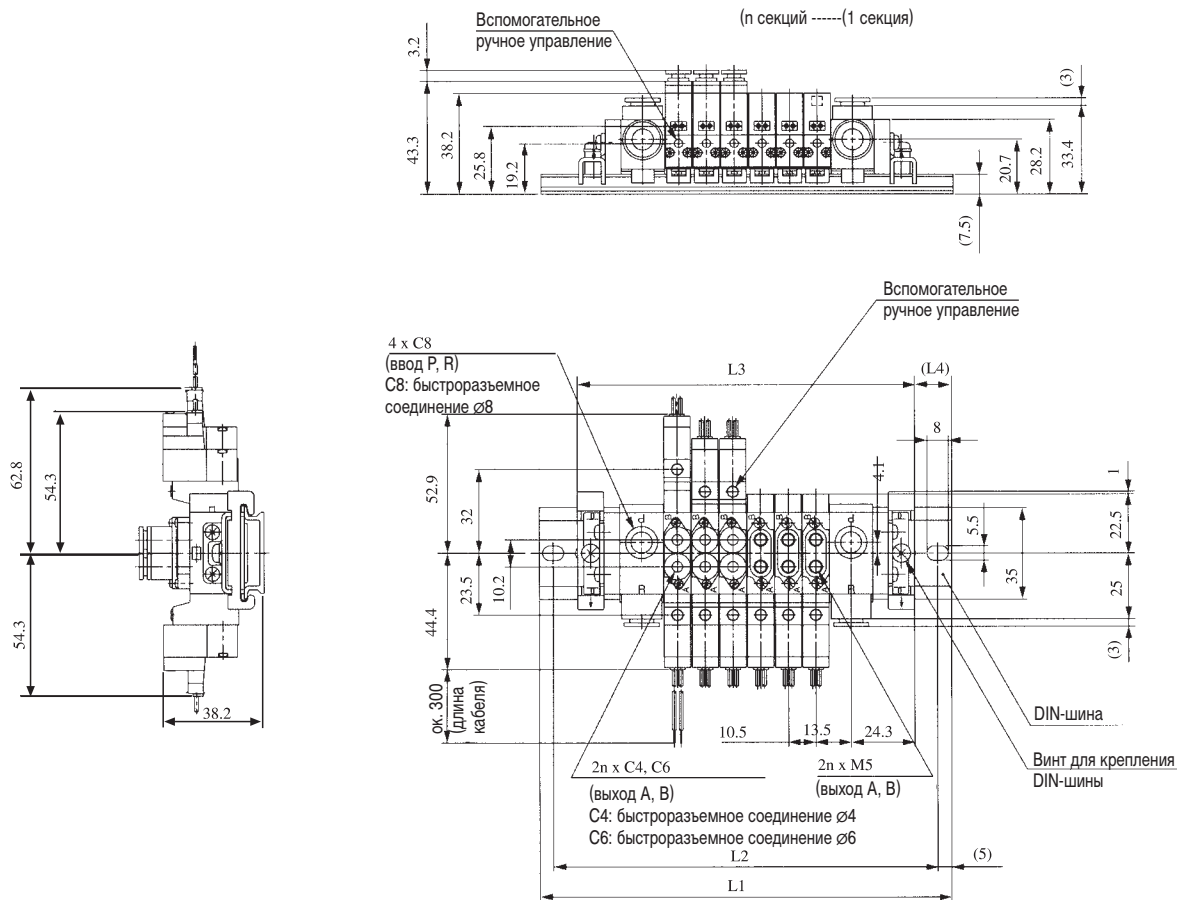
5/2, 5/3 пневмораспределитель с электропневматическим управлением

Кассетный тип

SY3060/5060/7060

Размеры

Тип SY3060 с двумя секциями подвода-отвода воздуха



Размеры (мм)

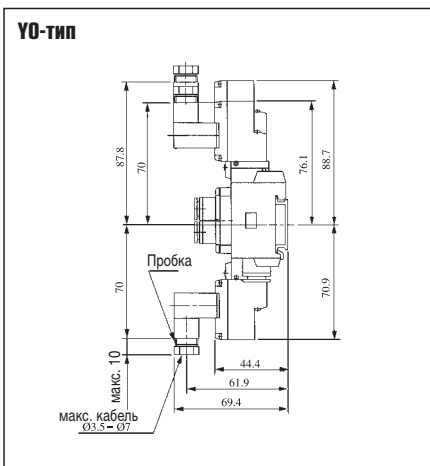
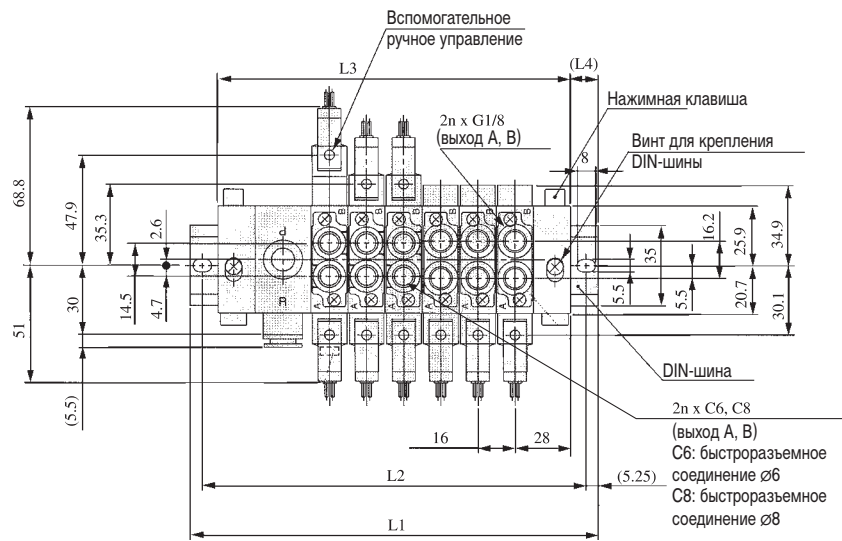
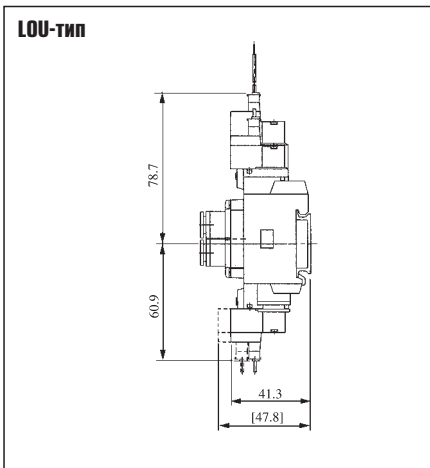
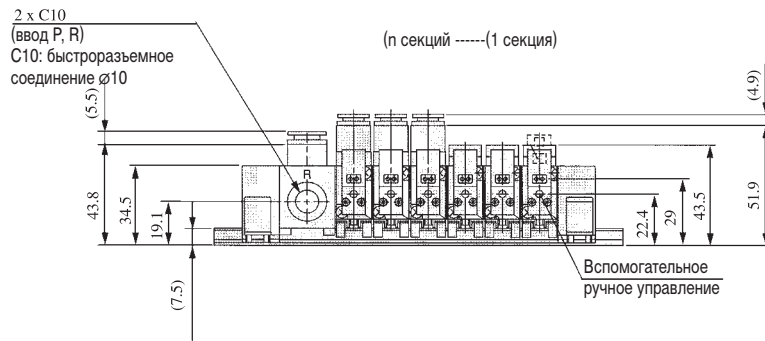
n: количество секций

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1*	110.5	123	135.5	148	160.5	173	173	185.5	198	210.5	223	235.5	235.5	248	260.5	273	285.5	298	310.5
L2	100	112.5	125	137.5	150	162.5	162.5	175	187.5	200	212.5	225	225	237.5	250	262.5	275	287.5	300
L3	86	96.5	107	117.5	128	138.5	149	159.5	170	180.5	191	201.5	212	222.5	233	243.5	254	264.5	275
L4	12	13	14	15	16	17	12	13	14	15	16	17	11.5	12.5	13.5	14.5	15.5	16.5	17.5

* Размер L1 показывает необходимую длину DIN-рейки

Размеры

Тип SY5060 с одной секцией подвода-отвода воздуха



Размеры (мм)

n: количество секций

L \ n	2	3	4	5	6	7	8	9	10
L1*	123	135.5	148	160.5	185.5	198	210.5	235.5	248
L2	112.5	125	137.5	150	175	187.5	200	225	237.5
L3	88	104	120	136	152	168	184	200	216
L4	17.5	15.5	14	12	16.5	15	13	17.5	16

* Размер L1 показывает необходимую длину DIN-рейки

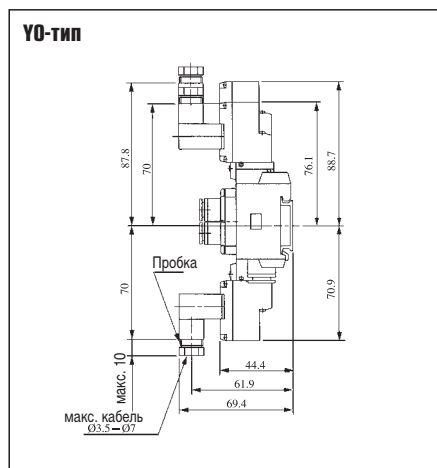
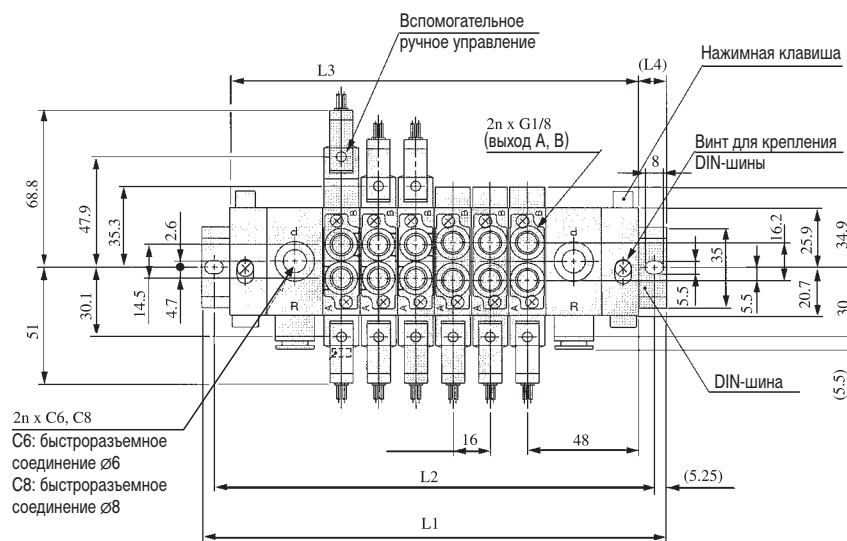
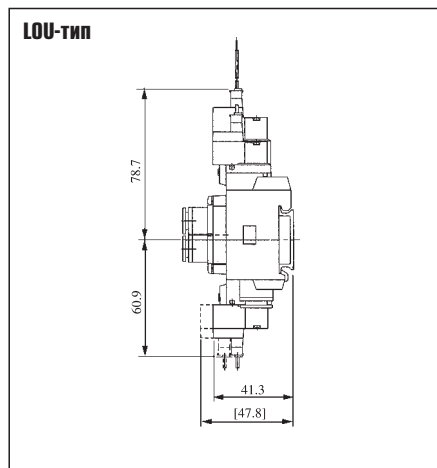
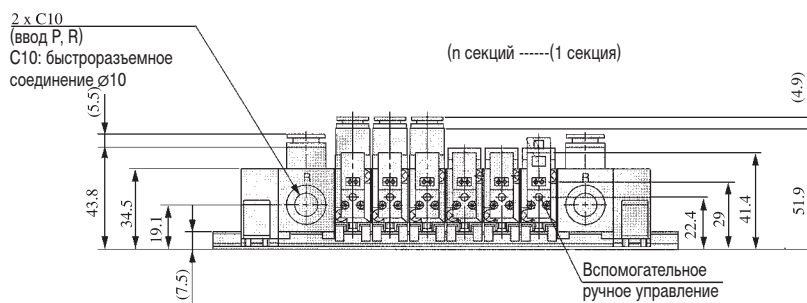
5/2, 5/3 пневмораспределитель с электропневматическим управлением

Кассетный тип

SY3060/5060/7060

Размеры

Тип SY5060 с двумя секциями подвода-отвода воздуха



Размеры (мм)

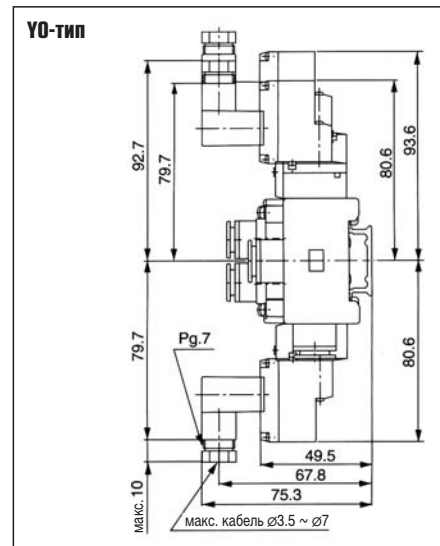
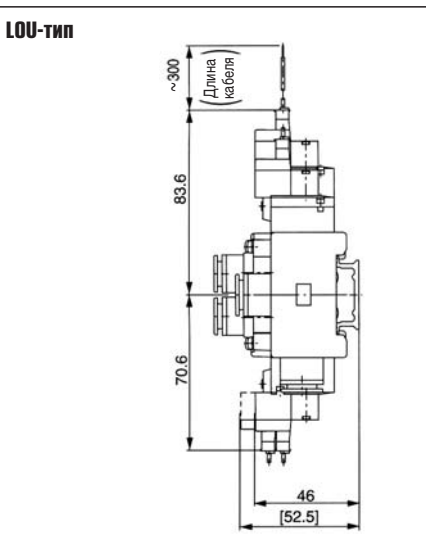
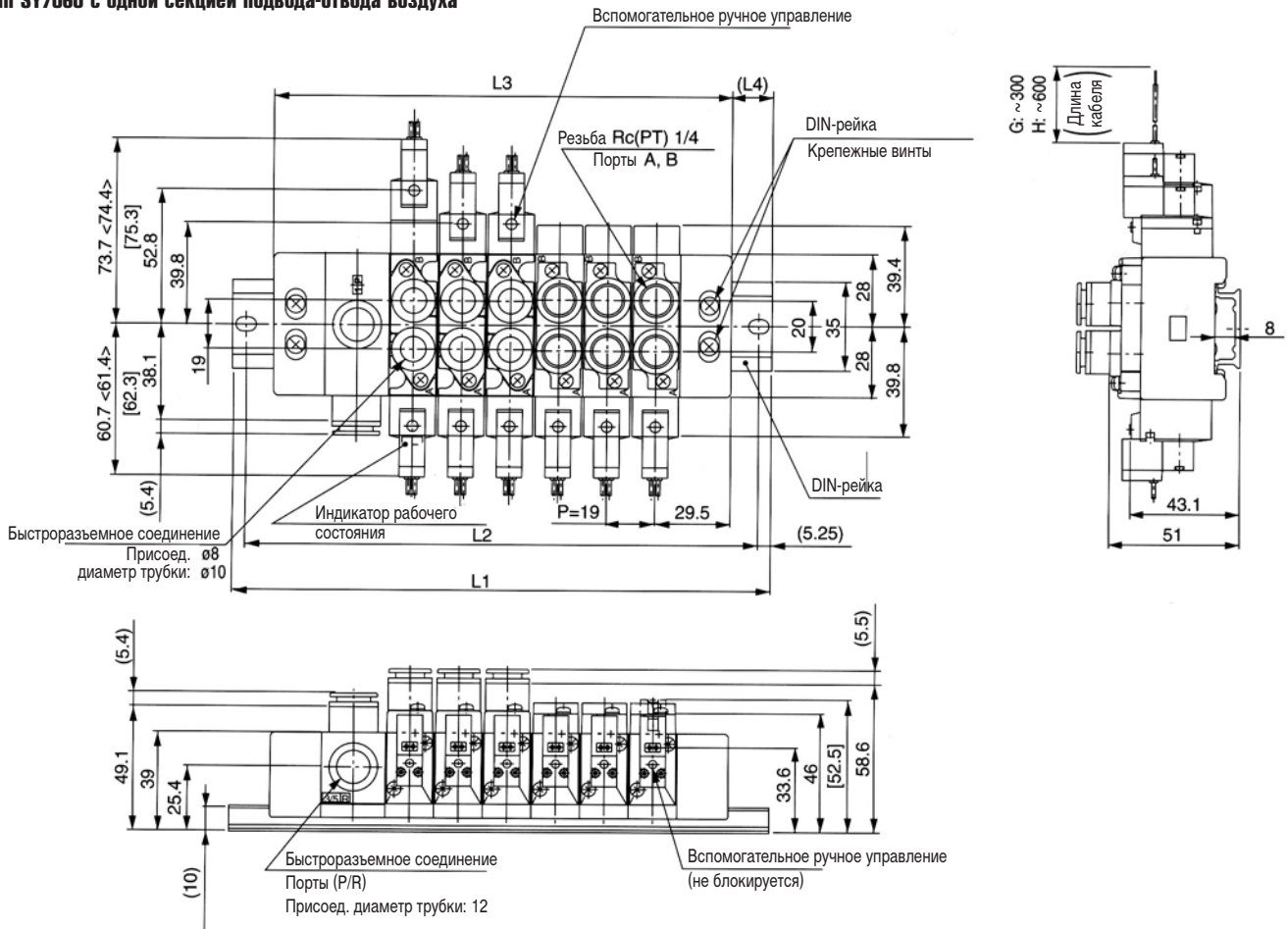
n: количество секций

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1*	135.5	160.5	173	185.5	210.5	223	235.5	248	273	285.5	298	323	335.5	348	360.5	385	398	410.5	435.5
L2	125	150	162.5	175	200	212.5	225	237.5	262.5	275	287.5	312.5	325	337.5	350	375	387.5	400	425
L3	112	128	144	160	176	192	208	224	240	256	272	288	304	320	336	352	368	384	400
L4	11.5	16	14.5	12.5	17.5	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12	16.5	15	13	17.5

* Размер L1 показывает необходимую длину DIN-рейки

Размеры

Тип SY7060 с одной секцией подвода-отвода воздуха



Размеры (мм)

n: количество секций

L \ n	2	3	4	5	6	7	8	9	10
L1*	135.5	148	173	185.5	210.5	223	248	260.5	285.5
L2	125	137.5	162.5	175	200	212.5	237.5	250	275
L3	103	122	141	160	179	198	217	236	255
L4	16	13	16	12.5	15.5	12.5	15.5	12	15

* Размер L1 показывает необходимую длину DIN-рейки

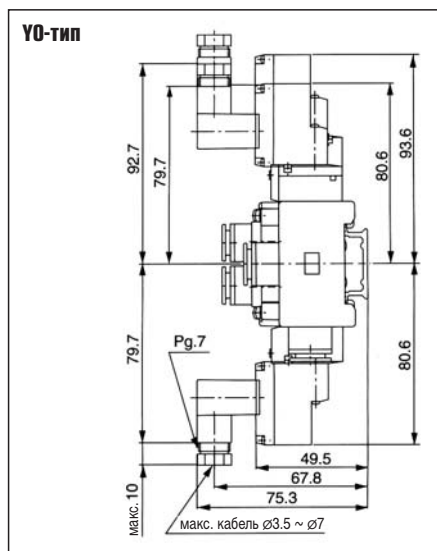
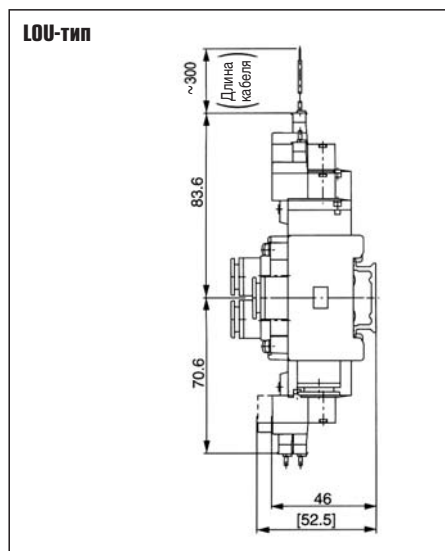
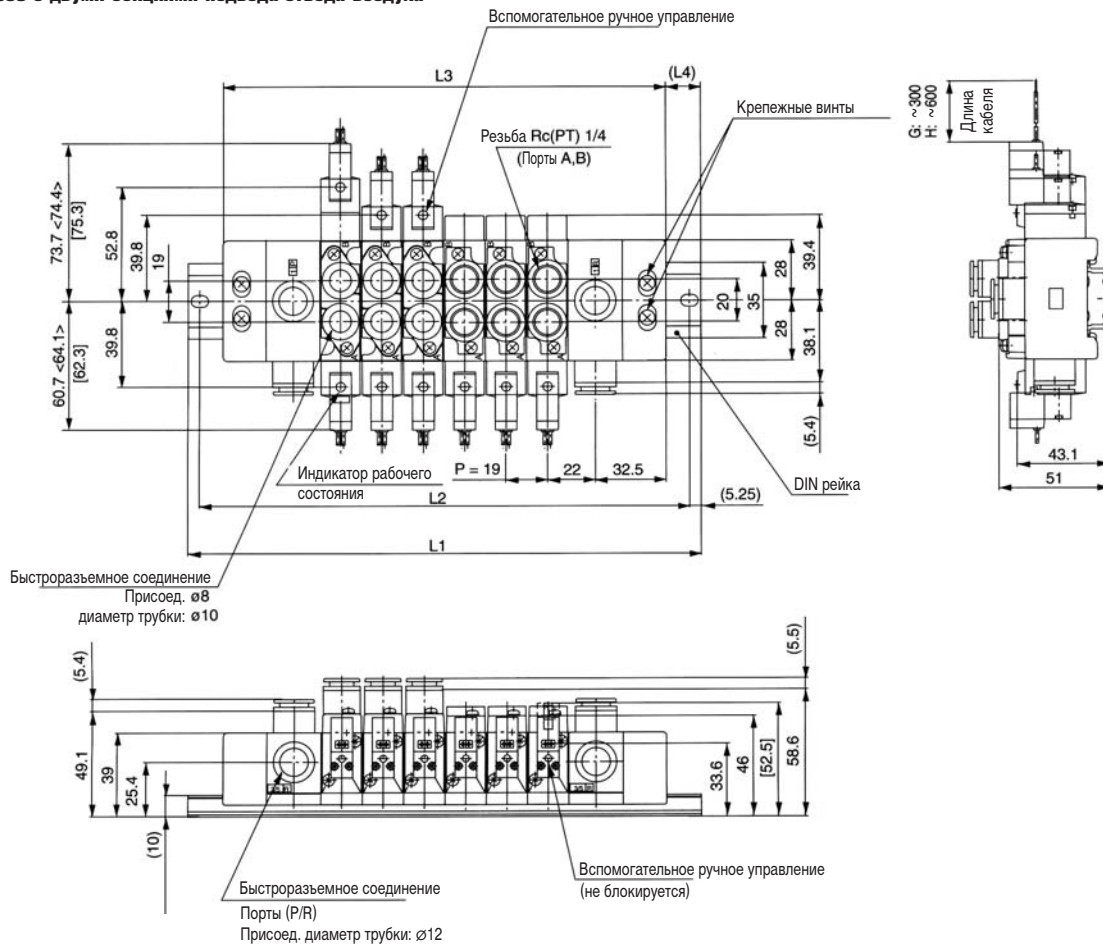
5/2, 5/3 пневмораспределитель с электропневматическим управлением

Кассетный тип

SY3060/5060/7060

Размеры

Тип SY7060 с двумя секциями подвода-отвода воздуха



Размеры (мм)

п: количество секций

L \ п	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L1*	160.5	173	198	210.5	235.5	248	273	285.5	310.5	323	348	360.5	385	410.5	423	448	460.5	485.5	498
L2	150	162.5	187.5	200	225	237.5	262.5	275	300	312.5	337.5	350	375	400	412.5	437.5	450	475	487.5
L3	128	147	166	185	204	223	242	261	280	299	318	337	356	375	394	413	432	451	470
L4	16	13	16	12.5	15.5	12.5	15.5	12	15	12	15	11.5	14.5	17.5	14.5	17.5	14	17	14

* Размер L1 показывает необходимую длину DIN-рейки

Type **41**
Type **42**

5 Port Solenoid Valve Base Mounted Manifold Bar Stock Type/Individual Wiring Series **SY3000/5000/7000**



[Option]
Note) AC-type models that are CE compliant have DIN terminals only.

How to Order Manifold

Type 41/Compact style

SS5Y 5 - 41 - 05 - C8 [] - []

Manifold series

3	SY3000
5	SY5000

Stations

02	2 stations
:	:
20	20 stations

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

* This also includes the number of blanking plate assemblies.

* Except for M5

**A, B port size
Thread piping**

Symbol	Port size	Applicable series
M5	M5 x 0.8	SY3000
01	1/8	SY5000

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY3000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	SY3000
N7	One-touch fitting for ø1/4"	SY5000
N9	One-touch fitting for ø5/16"	SY5000

Type 42/External pilot capable

SS5Y 5 - 42 - 05 - C8 [] - []

Manifold series

3	SY3000
5	SY5000
7	SY7000

Stations

02	2 stations
:	:
20	20 stations

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

**A, B port size
Thread piping**

Symbol	Port size	Applicable series
01	1/8	SY3000
02	1/4	SY5000
02	1/4	SY7000

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

One-touch fitting (Metric size)

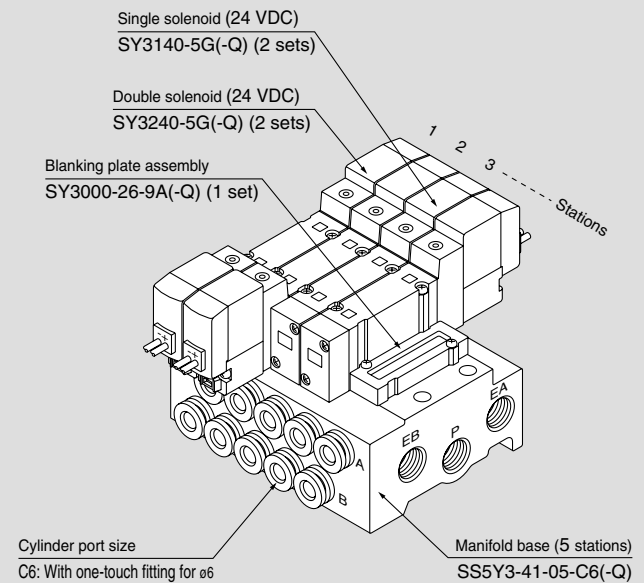
Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY3000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000
C10	One-touch fitting for ø10	SY7000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	SY3000
N7	One-touch fitting for ø1/4"	SY5000
N9	One-touch fitting for ø5/16"	SY5000
N11	One-touch fitting for ø3/8"	SY7000

How to Order Manifold Assembly (Example)

Example



SS5Y3-41-05-C6 (-Q)..... 1 set (Type 41, 5-station manifold base part no.)
*** SY3240-5G (-Q) 2 sets (Double solenoid part no.)**
*** SY3140-5G (-Q) 2 sets (Single solenoid part no.)**
*** SY3000-26-9A (-Q) ... 1 set (Blanking plate assembly part no.)**

The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.



How to Order Valve

Note) AC-type models that are CE compliant have DIN terminals only.

SY **5** **2** **40** - **5** **L** - -

Series

3	SY3000
5	SY5000
7	SY7000

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot type

Nil	Internal pilot
R	External pilot

Coil specifications

Nil	Standard
T	With power saving circuit (24 VDC, 12 VDC only)

* Power saving circuit is not available in the case of D, Y, DO, YO or W□ type.

Rated voltage

For DC

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

For AC (50/60 Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

* DC specifications of Type D, Y, DO and YO is only available with 12 and 24 VDC.
 * For type W□, DC voltage is only available.
 Note) AC-type models that are CE compliant have DIN terminals only.

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry for D, Y

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

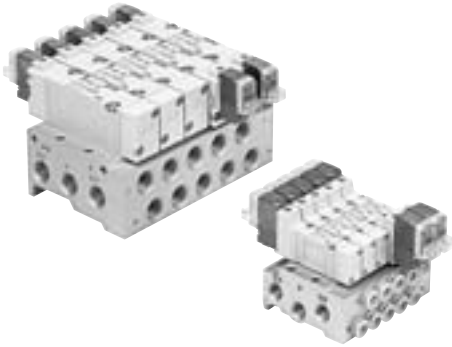
* DOZ and YOZ are not available.
 * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

		24, 12, 6, 5, 3 VDC/100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
		Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
		G: Lead wire length 300 mm lead H: Lead wire length 600 mm	L: With lead wire (Length 300 mm) LN: Without lead wire LO: Without connector	M: With lead wire (Length 300 mm) MN: Without lead wire MO: Without connector	(SY5000/7000 only) D: With connector DO: Without connector Y: With connector YO: Without connector	WO: Without connector cable W□: With connector cable <small>Note)</small>
CE compliant	DC	●	●	●	●	●
	AC	—	—	—	●	—

* LN, MN type: with 2 sockets.
 * Refer to page 337 for DIN terminal type of Series SY3000.
 * "Y" type is a DIN terminal conforming to EN-175301-803C (former DIN43650C). For details, refer to page 336.
 * For connector cable of M8 connector, refer to page 339.
 * M8 connector conforming to IEC60947-5-2 standard is also available. Refer to page 331 for details.
 * Refer to page 336 for the lead wire length of L and M plug connectors.
 * Refer to page 337 for the connector assembly with cover for L and M plug connectors.
 Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 340.

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7



Manifold Specifications

Model	SS5Y3-41(-Q)	SS5Y3-42(-Q)	SS5Y5-41(-Q)	SS5Y5-42(-Q)	SS5Y7-42(-Q)
Applicable valve	SY3□40		SY5□40		SY7□40
Manifold type	Single base/B mount				
P(SUP)/R(EXH)	Common SUP, Common EXH				
Valve stations	2 to 20 stations ^{Note 1)}				
A, B port	Location	Base			
	Direction	Side			
Port size	P, EA, EB port	1/8		1/4	
	A, B port	M5 x 0.8, C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	1/8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	1/4 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)
Manifold base mass W (g) n: Stations	W = 30n + 50	W = 37n + 63	W = 61n + 101	W = 79n + 127	W = 100n + 151



Note 1) For more than 10 stations (more than 5 stations in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both sides.

Note 2) Refer to "Manifold Option" on page 238.

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /s-bar)	b	Cv	C (dm ³ /s-bar)	b	Cv
SS5Y3-41(-Q)	1/8	C6	0.75	0.19	0.18	0.81	0.23	0.20
SS5Y3-42(-Q)	1/8	C6	0.75	0.20	0.18	0.82	0.20	0.20
SS5Y5-41(-Q)	1/4	C8	1.8	0.23	0.44	1.9	0.16	0.45
SS5Y5-42(-Q)	1/4	C8	1.9	0.20	0.46	1.9	0.12	0.43
SS5Y7-42(-Q)	1/4	C10	3.0	0.25	0.75	3.0	0.12	0.66

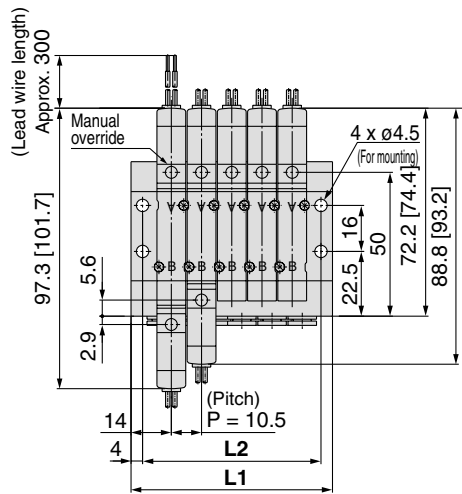


Note) The value is for manifold base with 5 stations and individually operated 2 position type.

SY3000: SS5Y3-41- Stations -M5, C4,N3
C6,N7

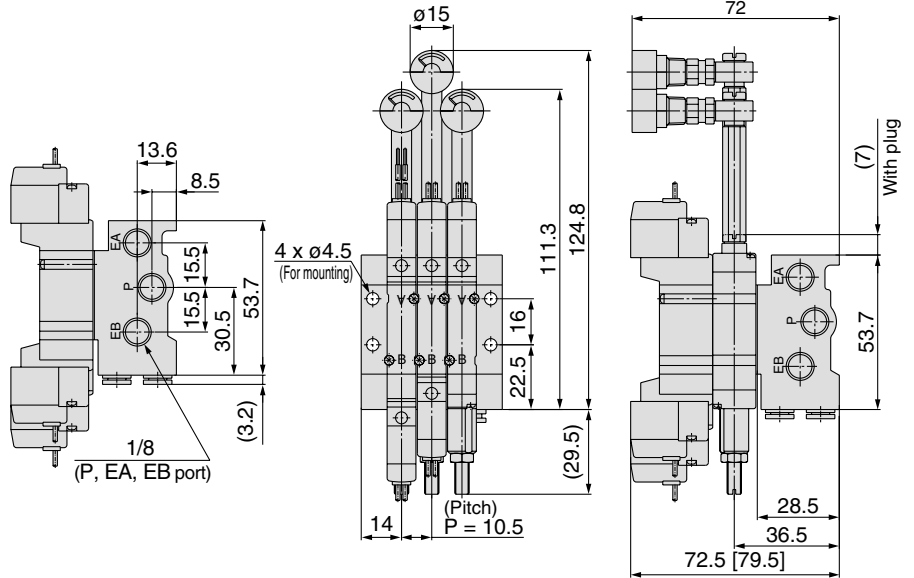


Grommet (G)

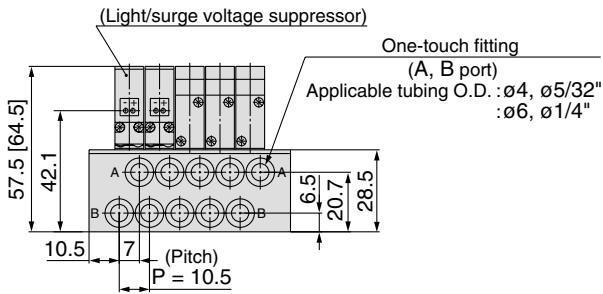


(Station 1) ----- (Station n)

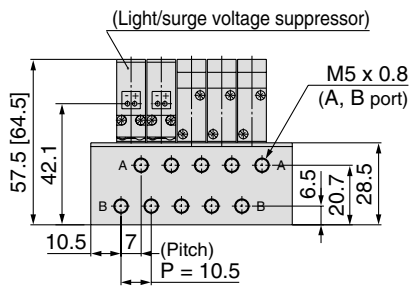
With interface regulator (with gauge)



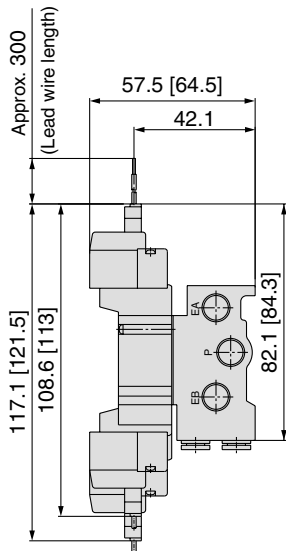
- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7



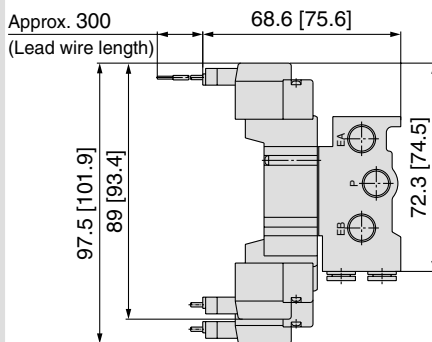
For M5



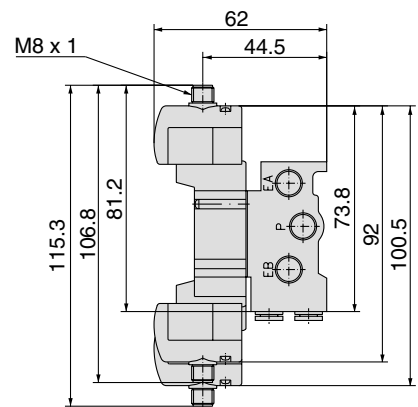
L plug connector (L)



M plug connector (M)



M8 connector (WO)



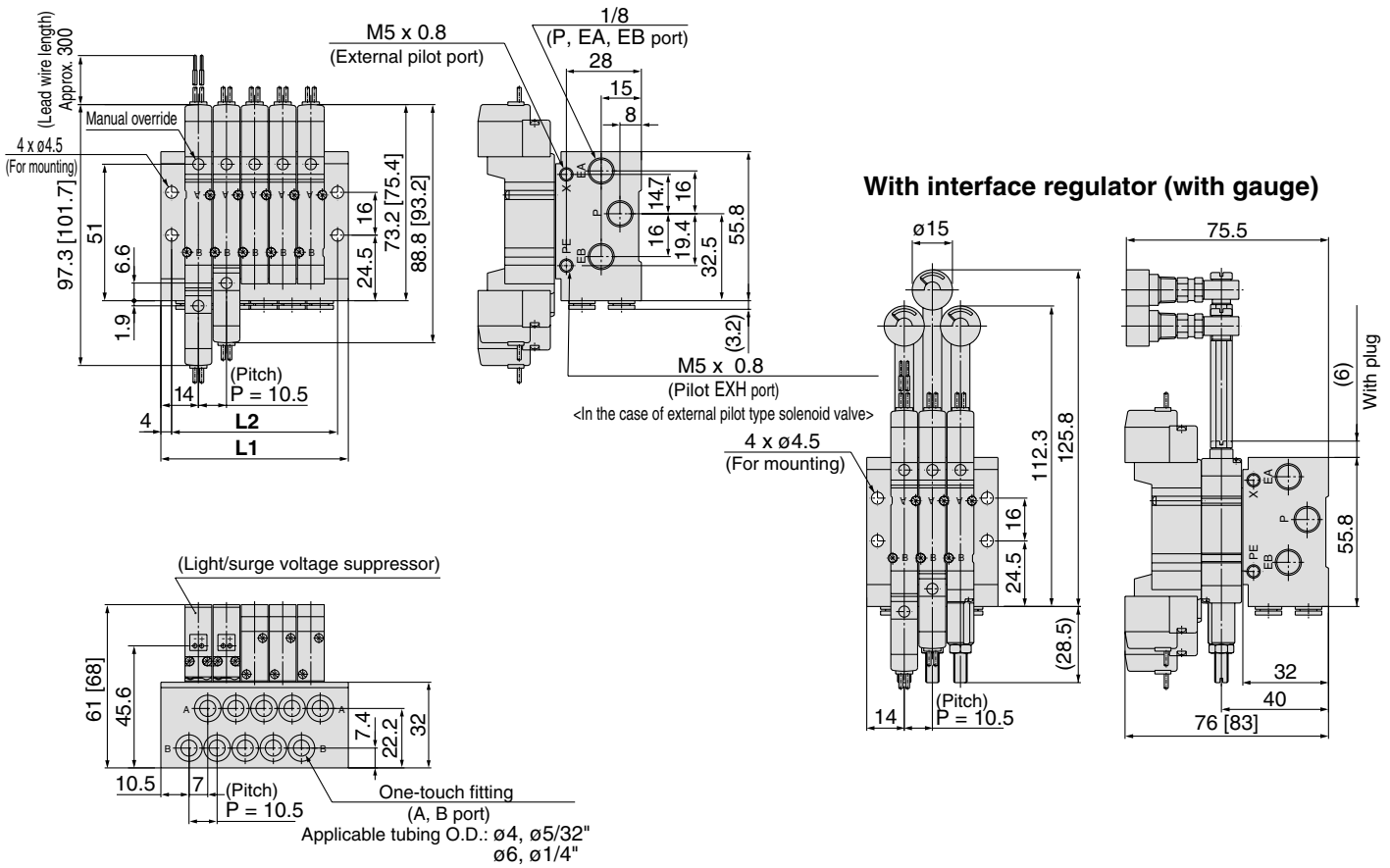
Note) Refer to page 340 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

SY3000: SS5Y3-42- Stations - C4, N3
C6, N7

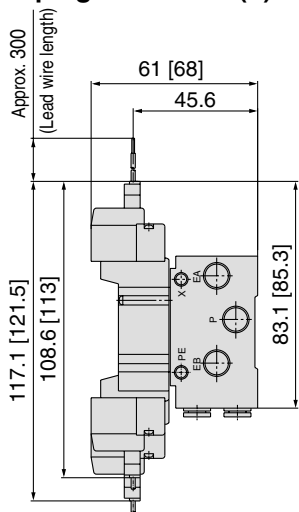


Grommet (G)

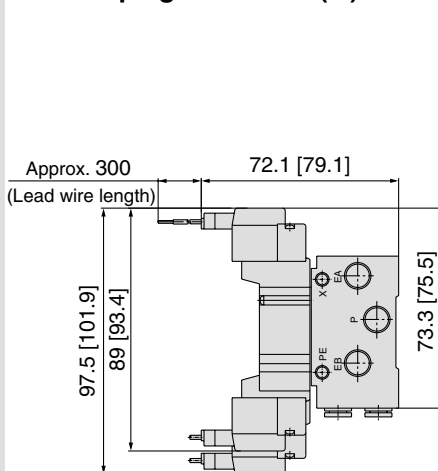


- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

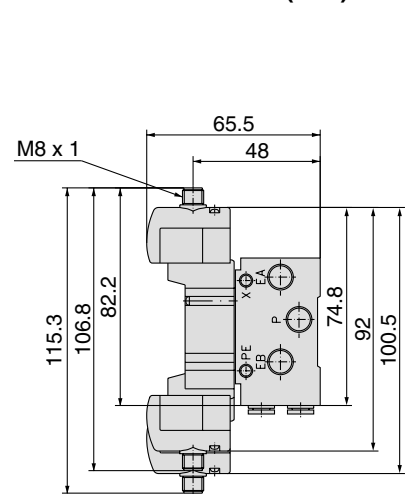
L plug connector (L)



M plug connector (M)



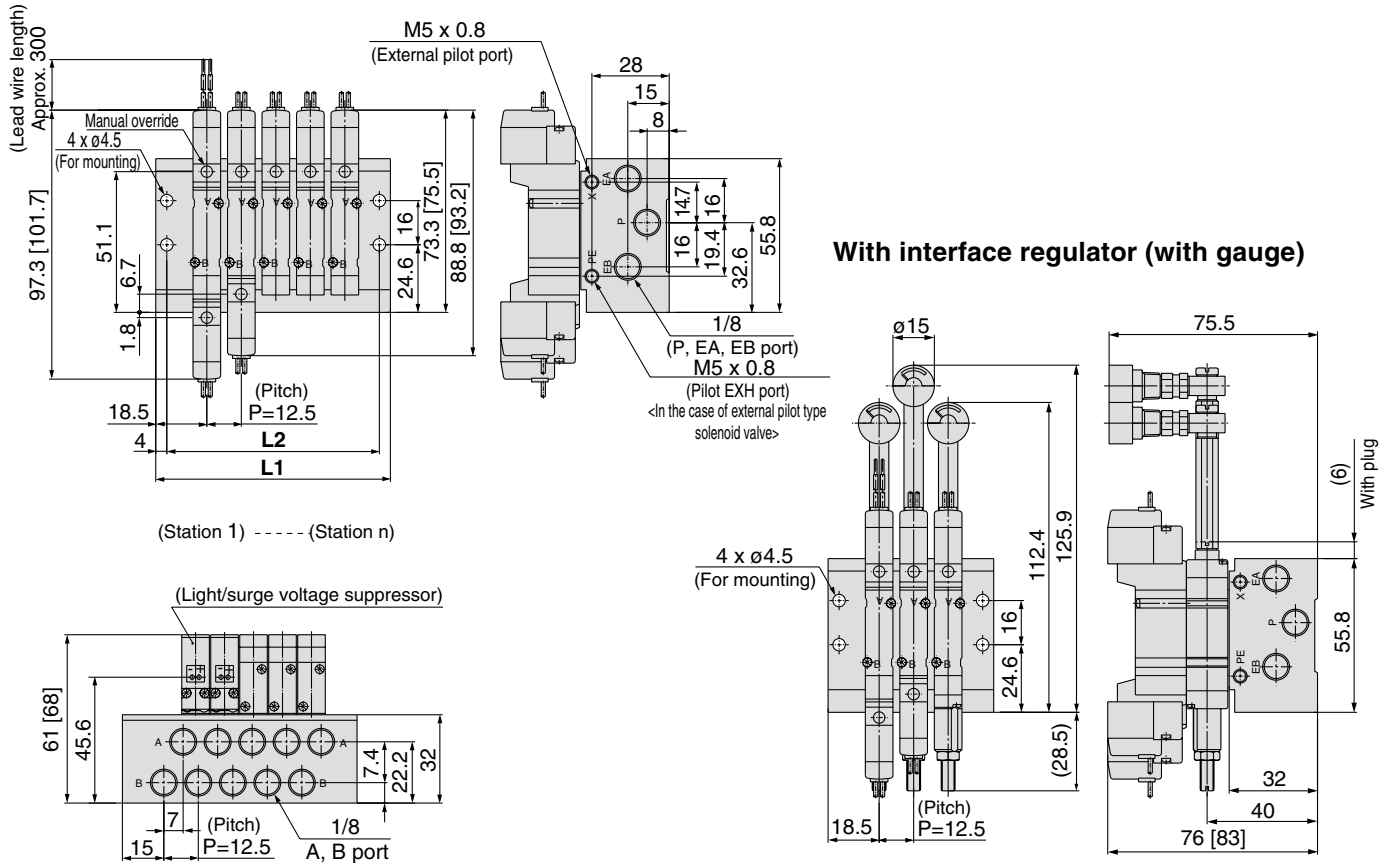
M8 connector (WO)



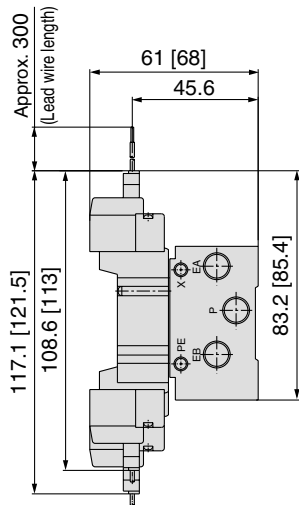
Note) Refer to page 340 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	38.5	49	59.5	70	80.5	91	101.5	112	122.5	133	143.5	154	164.5	175	185.5	196	206.5	217	227.5
L2	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

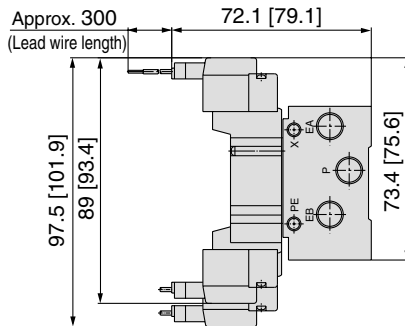
Grommet (G)



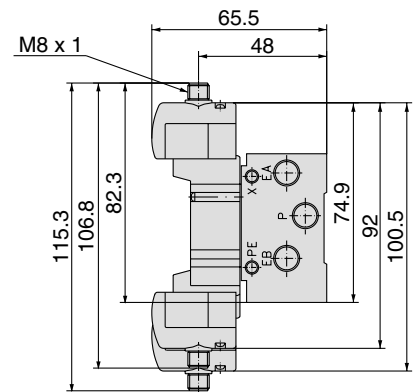
L plug connector (L)



M plug connector (M)



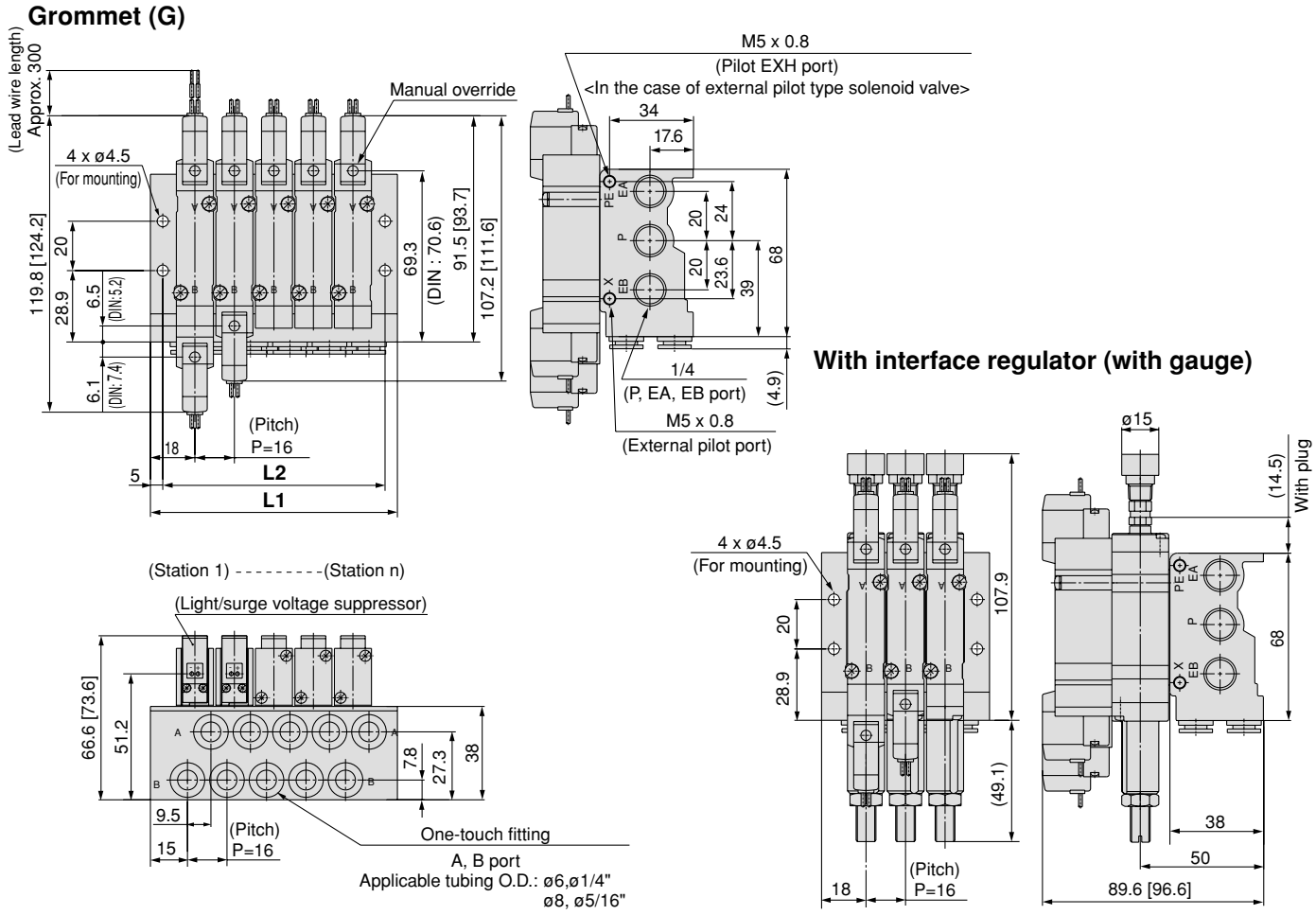
M8 connector (WO)



Note) Refer to page 340 for dimensions of connector types.

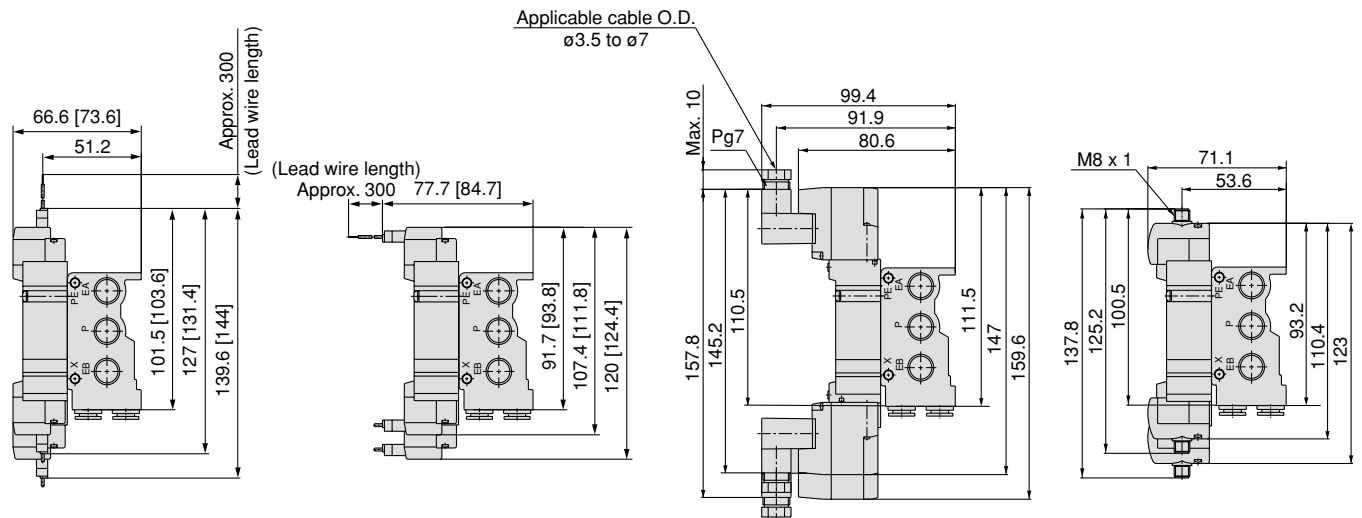
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	47.5	60	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5	235	247.5	260	272.5
L2	39.5	52	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5	227	239.5	252	264.5

SY5000: SS5Y5-42- Stations C6, N7
C8, N9



- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

L plug connector (L) M plug connector (M) DIN terminal (D, Y) M8 connector (WO)



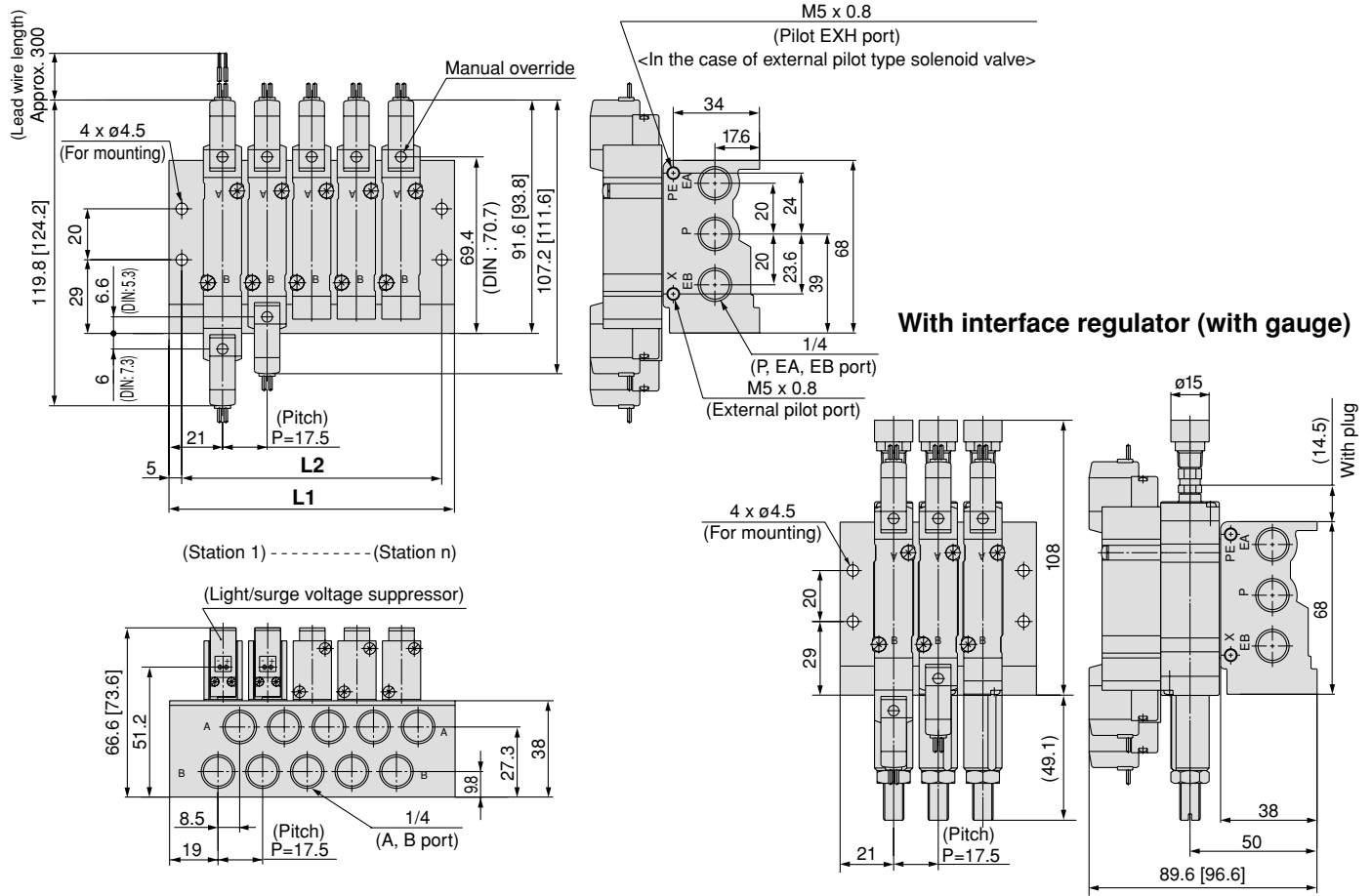
Note) Refer to page 340 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	52	68	84	100	116	132	148	164	180	196	212	228	244	260	276	292	308	324	340
L2	42	58	74	90	106	122	138	154	170	186	202	218	234	250	266	282	298	314	330

SY5000: SS5Y5-42- Stations -02



Grommet (G)

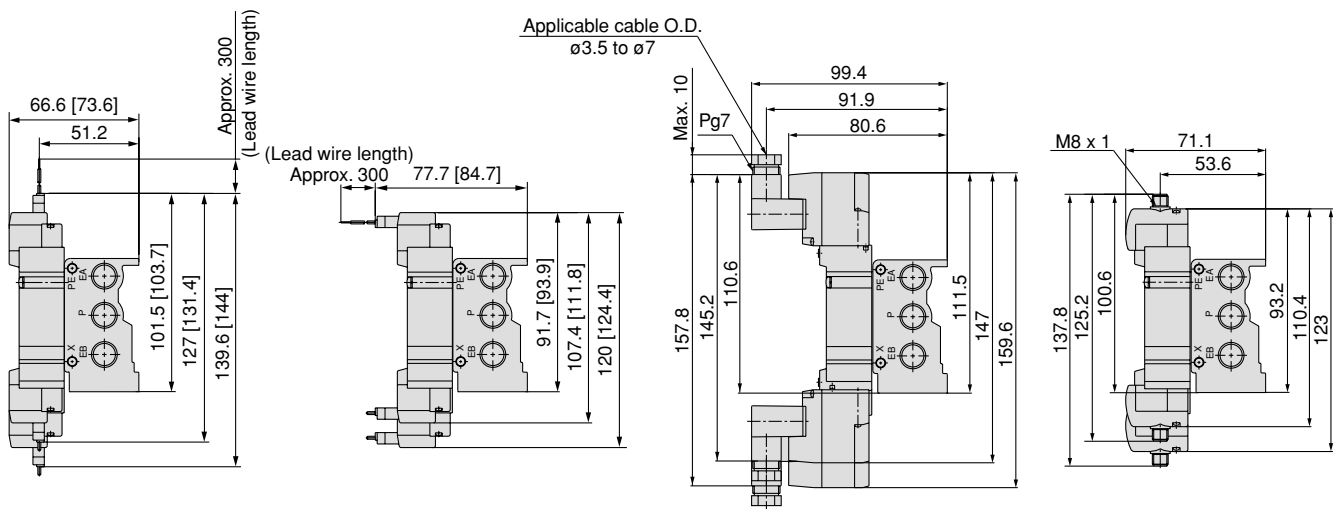


L plug connector (L)

M plug connector (M)

DIN terminal (D, Y)

M8 connector (WO)



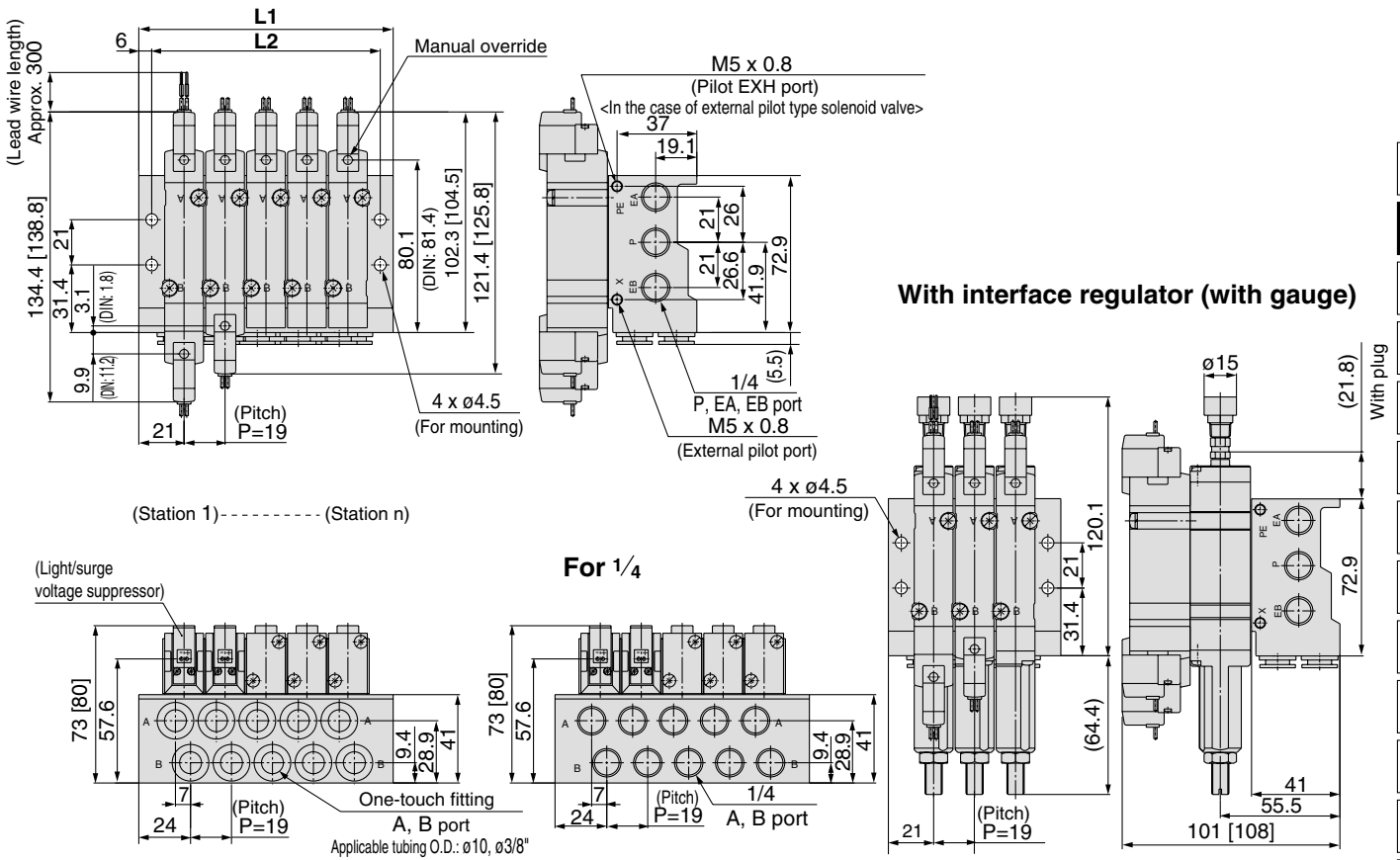
Note) Refer to page 340 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	59.5	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5	322	339.5	357	374.5
L2	49.5	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5	242	259.5	277	294.5	312	329.5	347	364.5

SY7000: SS5Y7-42- Stations -02, C10, N11



Grommet (G)



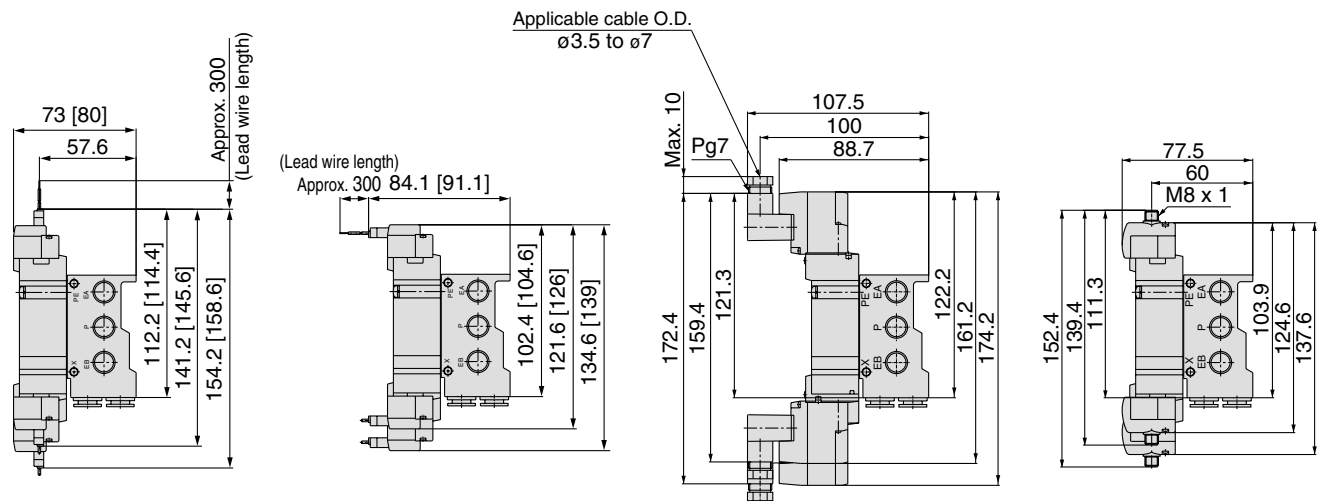
- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

L plug connector (L)

M plug connector (M)

DIN terminal (D, Y)

M8 connector (WO)



Note) Refer to page 340 for dimensions of connector types.

Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20 stations
L1	61	80	99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403
L2	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

Type **43**

5 Port Solenoid Valve Base Mounted Manifold Stacking Type/Individual Wiring Series **SY9000**



[Option]

Note) AC-type models that are CE compliant have DIN terminals only.

How to Order Manifold

SS5Y9-43-05U - **C8** - - - -

Manifold series

9	SY9000
---	--------

Valve stations

Symbol	Stations
02	2 stations
⋮	⋮
20	20 stations

* This also includes the number of blanking plate assemblies.

P, R port outlets

Symbol	Port outlet	Applicable stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	

SUP/EXH block assembly specifications

Symbol	Specifications
Nil	Standard/Internal pilot specification
R	External pilot specification
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Option

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (with DIN rail)
DO	DIN rail mounting (without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.

A, B port size

Thread piping

Symbol	Port size
02	1/4
03	3/8

One-touch fitting (Metric size)

Symbol	Port size
C8	One-touch fitting for $\phi 8$
C10	One-touch fitting for $\phi 10$
C12	One-touch fitting for $\phi 12$
M	Mixed

One-touch fitting (Inch size)

Symbol	Port size
N9	One-touch fitting for $\phi 5/16$ "
N11	One-touch fitting for $\phi 3/8$ "
M	Mixed

* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

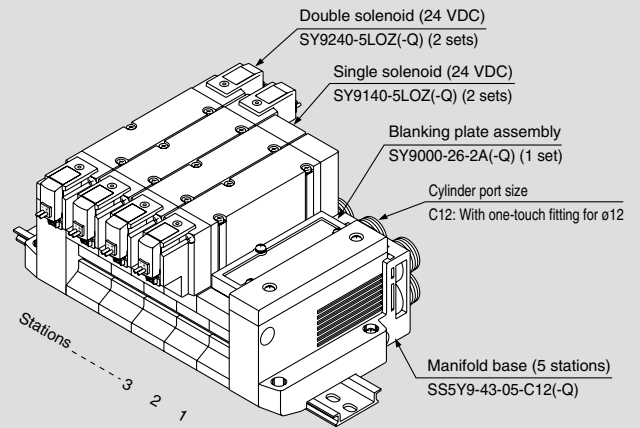
CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

How to Order Manifold Assembly (Example)

Example



SS5Y9-43-05B-C12 (-Q) ... 1 set (Type 43, 5-station manifold base part no.)
 * **SY9000-26-2A (-Q)** ... 1 set (Blanking plate assembly part no.)
 * **SY9140-5LOZ (-Q)** ... 2 sets (Single solenoid part no.)
 * **SY9220-5LOZ (-Q)** ... 2 sets (Double solenoid part no.)

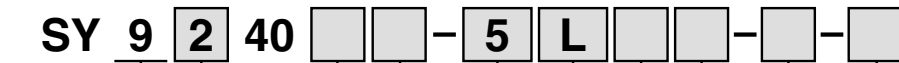
The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.



How to Order Valve

Note) AC-type models that are CE compliant have DIN terminals only.



Series

9	SY9000
---	--------

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot type

Nil	Internal pilot
R	External pilot

Coil specifications

Nil	Standard
T	With power saving circuit (24, 12 VDC only)

* Power saving circuit is not available in the case of D, Y, DO, YO or W□ type.

Rated voltage

For DC

5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

For AC (50/60 Hz)

1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

* DC specifications of Type D, Y, DO and YO is only available with 12 and 24 VDC.
 * For type W□, DC voltage is only available.
 Note) AC-type models that are CE compliant have DIN terminals only.

CE compliant

Nil	—
Q	CE compliant

Note) AC-type models that are CE compliant have DIN terminals only.

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light and surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.
 * For "R" and "U", DC voltage is only available.
 * Power saving circuit is only available in the "Z" type.

Electrical entry for D, Y

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

* DOZ and YOZ are not available.
 * For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

CE compliant	DC AC	24, 12, 6, 5, 3 VDC/ 100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
		Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
		G: Lead wire length 300 mm	L: With lead wire (Length 300 mm) LN: Without lead wire LO: Without connector	M: With lead wire (Length 300 mm) MN: Without lead wire MO: Without connector	D: With connector DO: Without connector Y: With connector YO: Without connector	WO: Without connector cable W□: With connector cable ^{Note)}
		●	●	●	●	●
		—	—	—	●	—

- * LN, MN type: with 2 sockets.
- * DIN terminal type "Y" which conforms to EN-175301-803C (former DIN43650C) is also available. For details, refer to page 336.
- * For connector cable of M8 connector, refer to page 339.
- * M8 connector conforming to IEC60947-5-2 standard is also available. Refer to page 331 for details.
- * Refer to page 336 for the lead wire length of L and M plug connectors.
- * Refer to page 337 for the connector assembly with cover for L and M plug connectors.
- Note) Enter the cable length symbols in □. Please be sure to fill in the blank referring to page 340.

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7



Manifold Specifications

Model		SS5Y9-43(-Q)
Applicable valve		SY9□40
Manifold type		Stacking type
P(SUP)/R(EXH)		Common SUP, Common EXH
Valve stations		2 to 20 stations ⁽¹⁾
A, B port	Location	Base
Porting specifications	Direction	Side
Port size	P, EA, EB port	C12 (One-touch fitting for ø12) 1/4 3/8
	A, B port	C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10) C12 (One-touch fitting for ø12)
Manifold base mass W (g), n: Stations		W = 107n + 330



Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA/EB port on both sides.

Note 2) Refer to "Manifold Option" on page 238.

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1→4/2 (P→A/B)			4/2→5/3 (A/B→EA/EB)		
			C (dm ³ /s/bar)	b	Cv	C (dm ³ /s/bar)	b	Cv
SS5Y9-43(-Q)	C12	C12	6.4	0.29	1.6	7.3	0.29	1.8

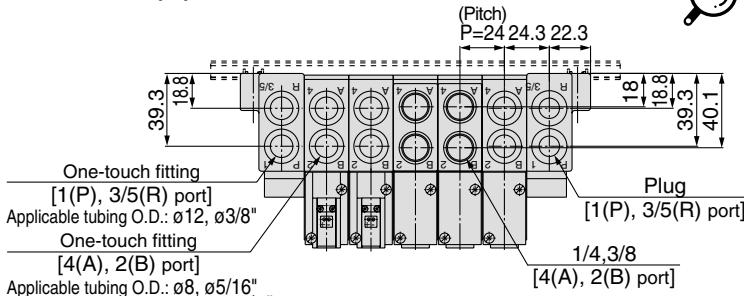


Note) The value is for manifold base with 5 stations and individually operated 2 position type.

SY9000: SS5Y9-43- Stations U ^{02, C9, N9} _{-03, C10, N11} (-D)

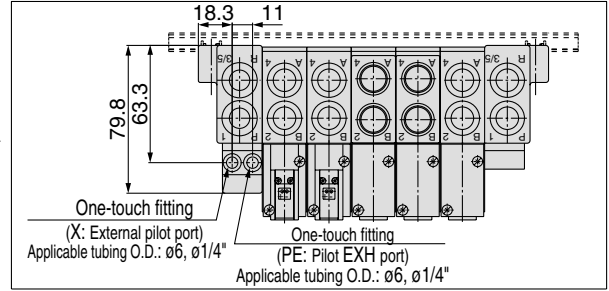
[] : AC

Grommet (G)

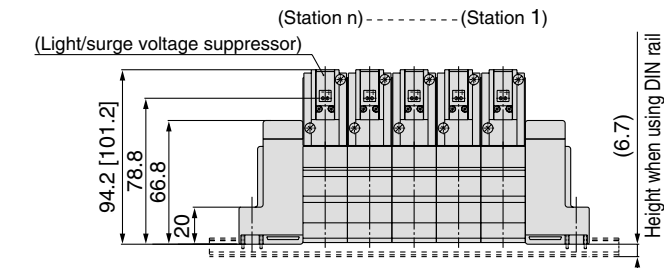
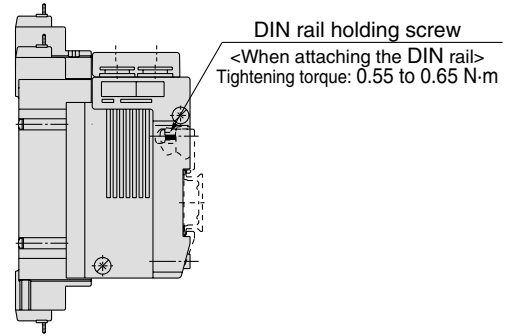
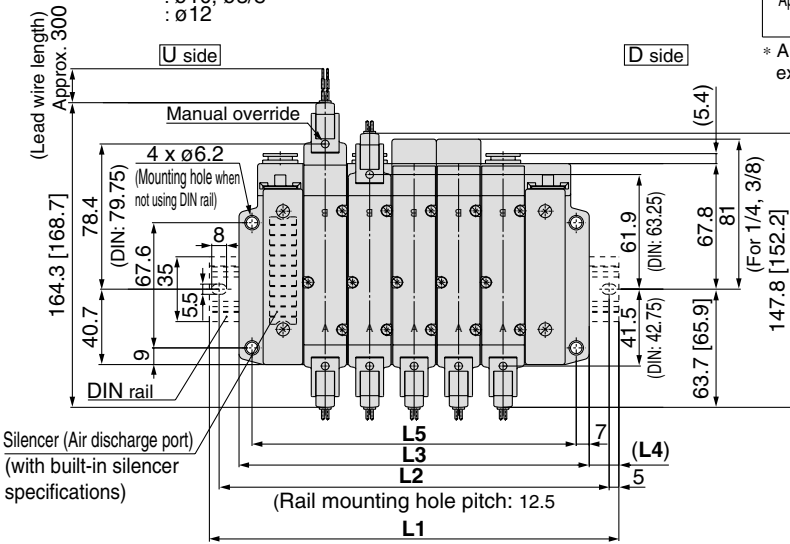


* When P, R port outlets are indicated on the U side, the P, R ports on the opposite side are plugged.

With External Pilot Specifications

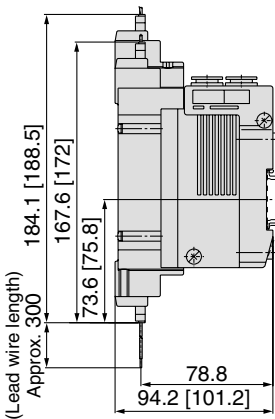


* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the D side.

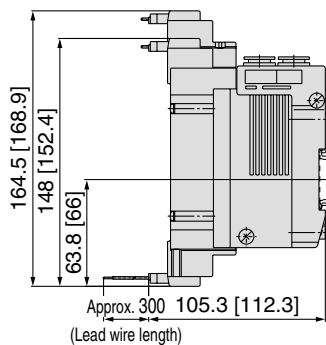


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	198	223	248	260.5	285.5	310.5	335.5
L2	137.5	162.5	187.5	212.5	237.5	250	275	300	325
L3	117	141	165	189	213	237	261	285	309
L4	15.5	16	16.5	17	17.5	12	12.5	13	13.5
L5	103	127	151	175	199	223	247	271	295

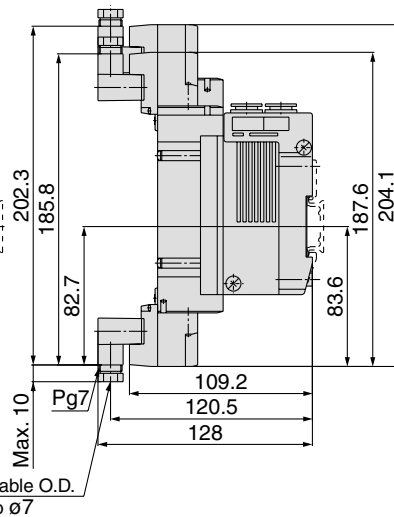
L plug connector (L)



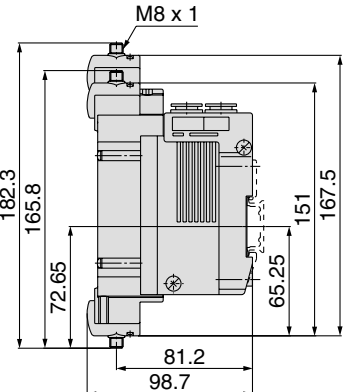
M plug connector (M)



DIN terminal (D, Y)



M8 connector (WO)

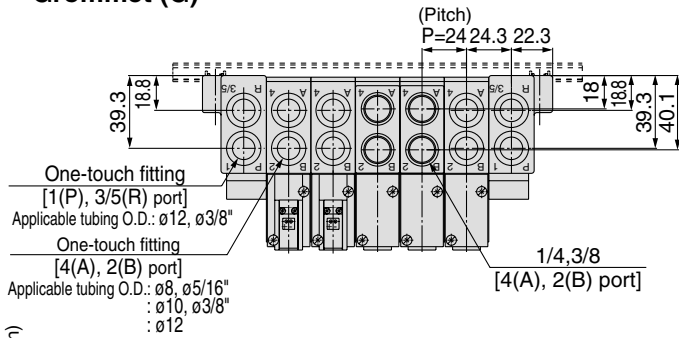


Note) Refer to page 340 for dimensions of connector types.

SY9000: SS5Y9-43- Stations B 02: C8, N9 03: C10, N11 (-D)

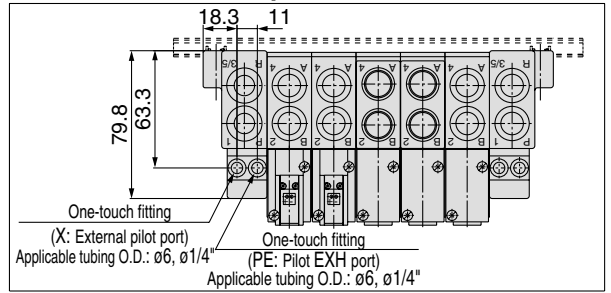


Grommet (G)

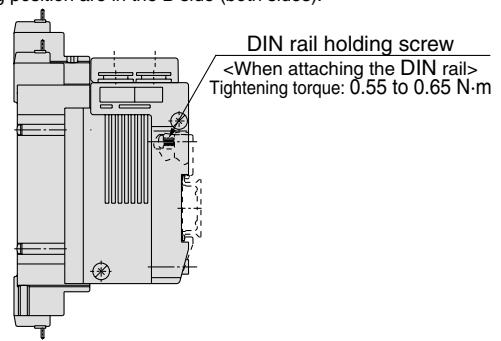
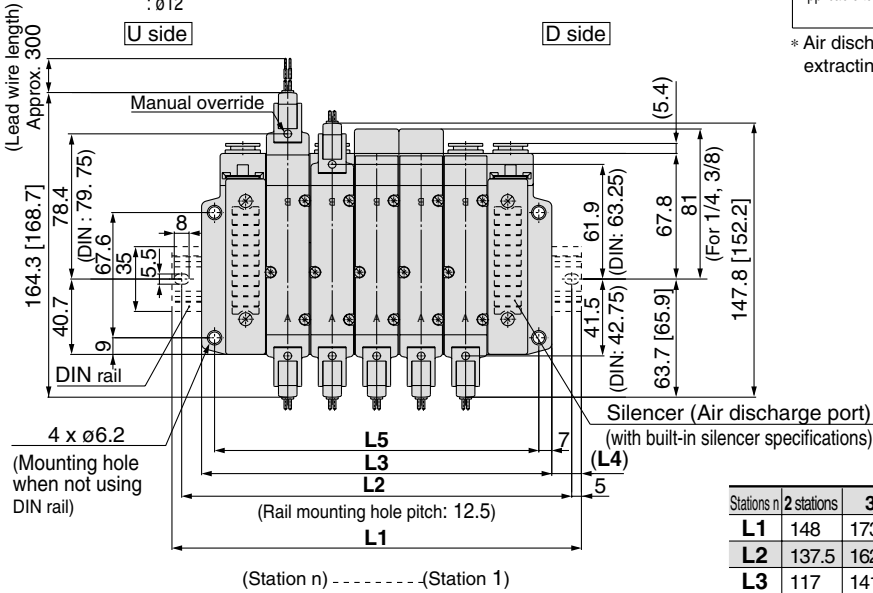


* When P, R port outlets are indicated on the B side, the P, R ports on the both sides are in the open state.

With External Pilot Specifications

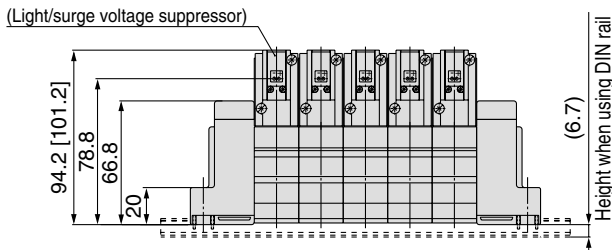


* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the B side (both sides).

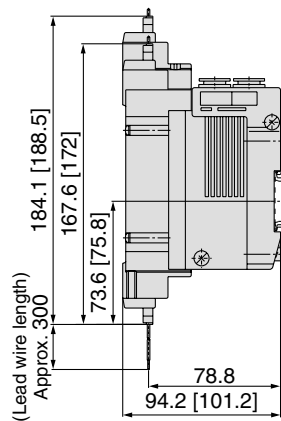


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	198	223	248	260.5	285.5	310.5	335.5
L2	137.5	162.5	187.5	212.5	237.5	250	275	300	325
L3	117	141	165	189	213	237	261	285	309
L4	15.5	16	16.5	17	17.5	12	12.5	13	13.5
L5	103	127	151	175	199	223	247	271	295

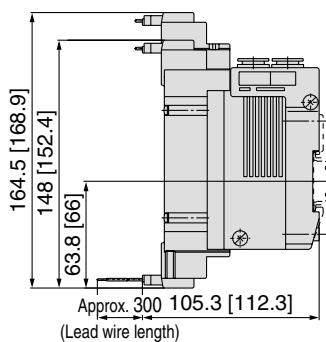
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	360.5	385.5	410.5	435.5	460.5	485.5	510.5	535.5	560.5	573
L2	350	375	400	425	450	475	500	525	550	562.5
L3	333	357	381	405	429	453	477	501	525	549
L4	14	14.5	15	15.5	16	16.5	17	17.5	18	12
L5	319	343	367	391	415	439	463	487	511	535



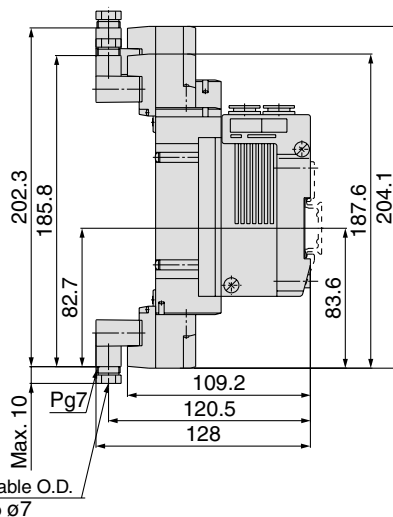
L plug connector (L)



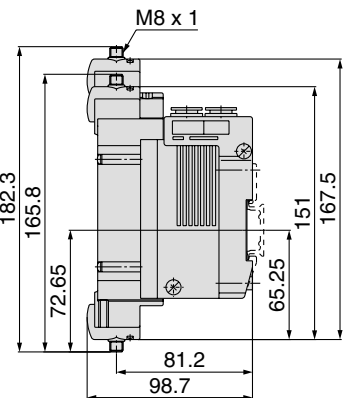
M plug connector (M)



DIN terminal (D, Y)



M8 connector (WO)



Note) Refer to page 340 for dimensions of connector types.

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Type **41P**
Type **42P**

5 Port Solenoid Valve Base Mounted Manifold Bar Stock Type/Flat Ribbon Cable Series **SY3000/5000/7000**

Note) CE compliant:
For DC only.



How to Order Manifold

Type 41P/Compact style

SS5Y 5 - 41P - 05 - C8 - [] - []

Manifold series

3	SY3000
5	SY5000

Stations

03	3 stations
⋮	⋮
12	12 stations

* SS5Y3 has 4 to 12 stations.

A, B port size Thread piping

Symbol	Port size	Applicable series
M5	M5 x 0.8	SY3000
01	1/8	SY5000

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY3000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000

Thread type

Thread type		CE compliant
Nil	Rc	—
F	G	—
N	NPT	—
T	NPTF	—

Note) CE compliant:
For DC only.

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	SY3000
N7	One-touch fitting for ø1/4"	SY5000
N9	One-touch fitting for ø5/16"	SY5000

Type 42P/Common external pilot capable

SS5Y 5 - 42P - 05 - C8 - [] - []

Manifold series

3	SY3000
5	SY5000
7	SY7000

Stations

03	3 stations
⋮	⋮
12	12 stations

* SS5Y3 has 4 to 12 stations.

A, B port size Thread piping

Symbol	Port size	Applicable series
01	1/8	SY3000
02	1/4	SY5000
02	1/4	SY7000

Thread type

Thread type		CE compliant
Nil	Rc	—
F	G	—
N	NPT	—
T	NPTF	—

Note) CE compliant:
For DC only.

One-touch fitting (Metric size)

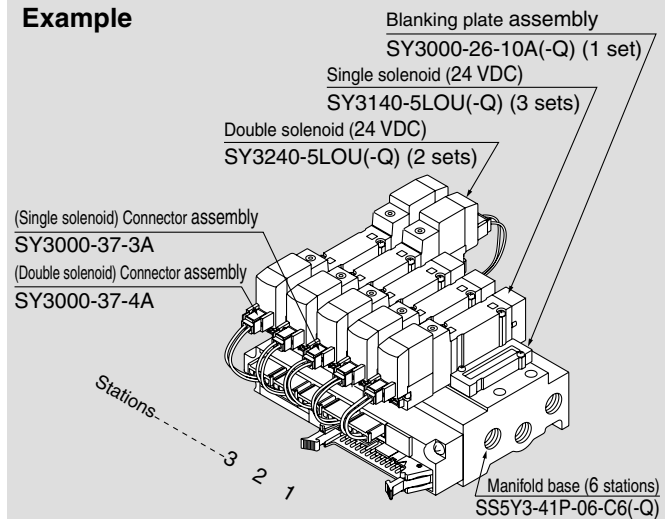
Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY3000
C6	One-touch fitting for ø6	SY5000
C8	One-touch fitting for ø8	SY5000
C10	One-touch fitting for ø10	SY7000

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	SY3000
N7	One-touch fitting for ø1/4"	SY5000
N9	One-touch fitting for ø5/16"	SY5000
N11	One-touch fitting for ø3/8"	SY7000

How to Order Manifold Assembly (Example)

Example



- SS5Y3-41P-06-C6 (-Q) ... 1 set (Type 41P, 6-station manifold base part no.)**
- * SX3000-26-10A (-Q) ... 1 set (Blanking plate assembly part no.)**
- * SY3140-5LOU (-Q) ... 3 sets (Single solenoid part no.)**
- * SY3240-5LOU (-Q) ... 2 sets (Double solenoid part no.)**
- * SY3000-37-3A ... 3 sets (Connector assembly part no.)**
- * SY3000-37-4A ... 2 sets (Connector assembly part no.)**

→ The asterisk denotes the symbol for assembly.
Prefix it to the part nos. of the solenoid valve, etc.

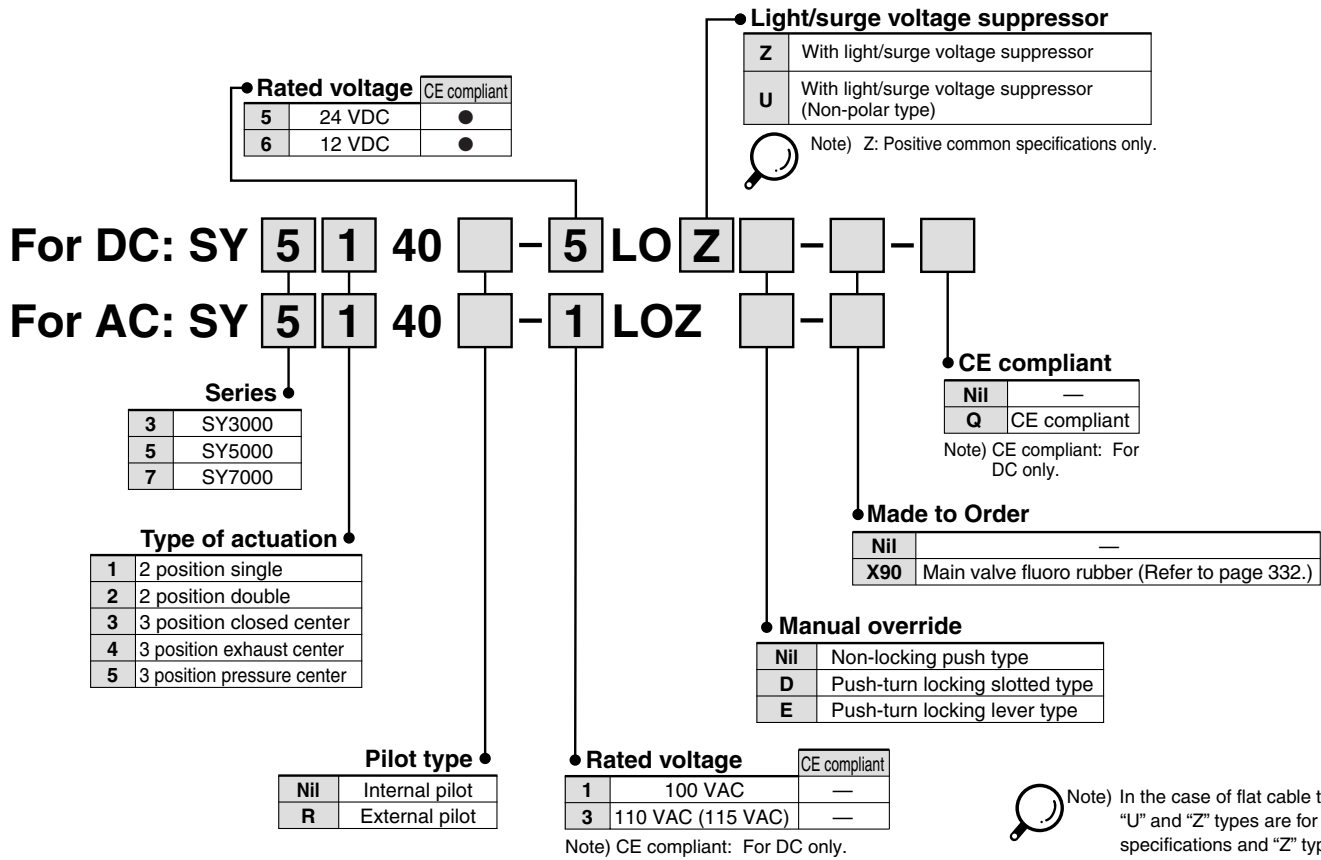
Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

Note) Please indicate the connector assembly part no. (page 215) that connects the valve and the manifold.



Note) CE compliant:
For DC only. [Option]

How to Order Valve



- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Note) In the case of flat cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specification only. For the other combination, please contact SMC.

Connector Assembly

For 12, 24 VDC

Specifications	For SY3000	For SY5000/7000
For single solenoid	SY3000-37-3A	SY5000-37-3A
Double solenoid, 3 position type	SY3000-37-4A	SY5000-37-4A
Single with spacer assembly	SY5000-37-3A	SY5000-37-5A
Double, 3 position with spacer assembly	SY3000-37-6A	SY5000-37-6A

For 100 VAC

Specifications	For SY3000	For SY5000/7000
For single solenoid	SY3000-37-32A	SY5000-37-15A
Double solenoid, 3 position type	SY3000-37-33A	SY5000-37-16A
Single with spacer assembly	SY5000-37-15A	SY5000-37-17A
Double, 3 position with spacer assembly	SY3000-37-34A	SY5000-37-18A

For 100 VAC (115 VAC)

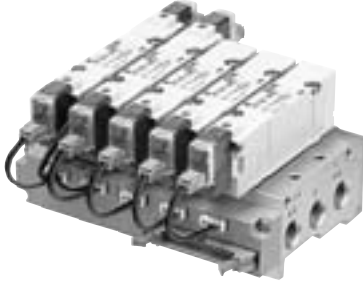
Specifications	For SY3000	For SY5000/7000
For single solenoid	SY3000-37-35A	SY5000-37-19A
Double solenoid, 3 position type	SY3000-37-36A	SY5000-37-20A
Single with spacer assembly	SY5000-37-19A	SY5000-37-21A
Double, 3 position with spacer assembly	SY3000-37-37A	SY5000-37-22A

Note) Spacer assembly indicates Individual SUP/EXH spacer.

Flat Ribbon Cable Manifold Specifications

- Multiple valve wiring is simplified through the use of the flat cable connector.
- Clean appearance

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Model	SS5Y3-41P(-Q)	SS5Y3-42P(-Q)	SS5Y5-41P(-Q)	SS5Y5-42P(-Q)	SS5Y7-42P(-Q)
Applicable valve	SY3□40		SY5□40		
Manifold type	Single base/B mount				
P(SUP)/R(EXH)	Common SUP, Common EXH				
Valve stations	4 to 12 stations ⁽¹⁾		3 to 12 stations ^(Note 1)		
A, B port	Base				
Porting specifications	Direction				
	Side				
Port size	P, EA, EB port		1/8		1/4
	A, B port		1/8	1/4	1/4
Manifold base mass W (g), n: Stations	M5 x 0.8	1/8	1/8	1/4	1/4
	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	C10 (One-touch fitting for ø10)
Manifold base mass W (g), n: Stations	W = 39n + 83	W = 48n + 99	W = 67n + 118	W = 88n + 151	W = 109n + 174
Applicable flat ribbon cable connector	Flat ribbon cable connector, Socket: 26 pins MIL type with strain relief, Conforming to MIL-C-83503				
Internal wiring	In common between +COM and -COM (Z type: +COM only).				
Rated voltage ^(Note 4)	12, 24 VDC, 100, 110 VAC				

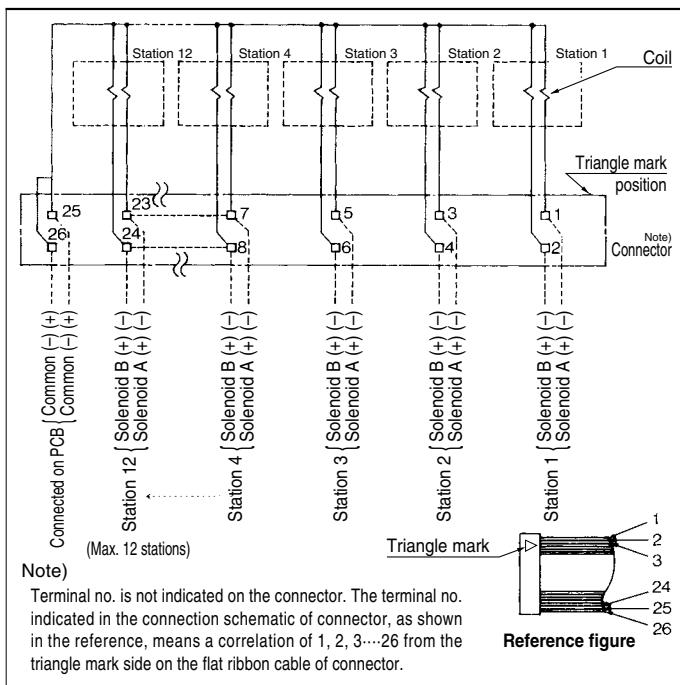
- Note 1) For more than 10 stations (more than 5 stations in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
- Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.
- Note 3) Refer to "Manifold Option" on page 238.
- Note 4) CE-compliant: For DC only.

Flow Characteristics

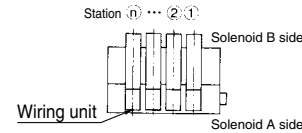
Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y3-41P	1/8	C6	0.75	0.19	0.18	0.81	0.23	0.20
SS5Y3-42P	1/8	C6	0.75	0.20	0.18	0.82	0.20	0.20
SS5Y5-41P	1/4	C8	1.8	0.23	0.44	1.9	0.16	0.45
SS5Y5-42P	1/4	C8	1.9	0.20	0.46	1.9	0.12	0.43
SS5Y7-42P	1/4	C10	3.0	0.25	0.75	3.0	0.12	0.66

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Internal Wiring of Manifold (Non-polar type)



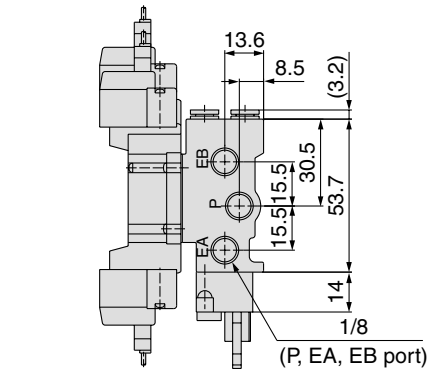
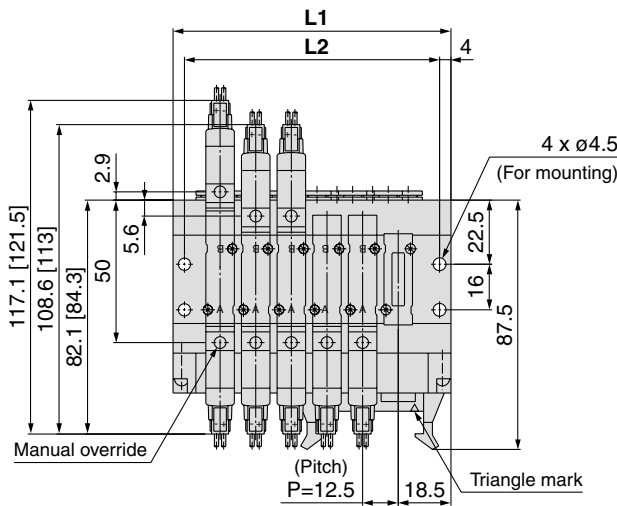
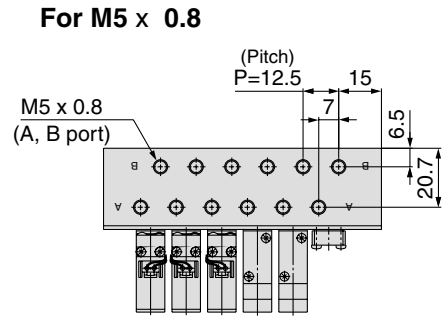
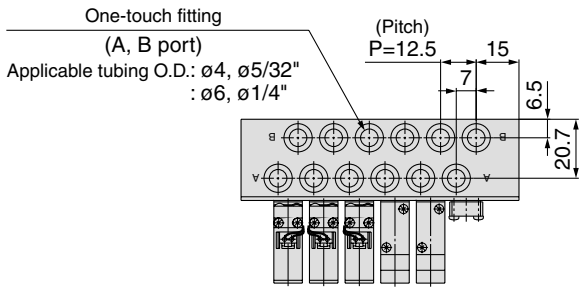
- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations that can be accommodated is 12. For more stations, please contact SMC.



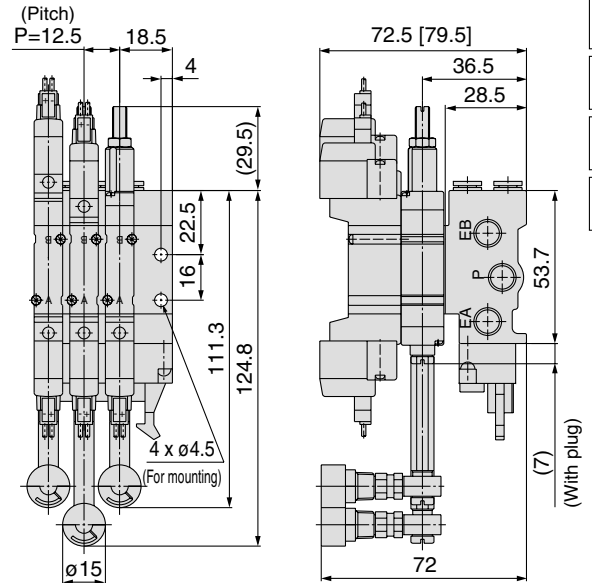
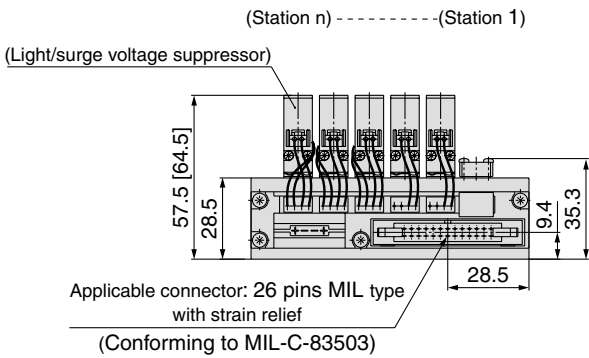
⚠ Caution

- For non-polar (U) valves, the electrical DC connections can be used with either positive and negative COM. For type (Z), only use with positive COM as the valve does not operate correctly when used with negative COM.

SY3000: SS5Y3-41P- Stations -M5, C4, N3 **C6, N7**

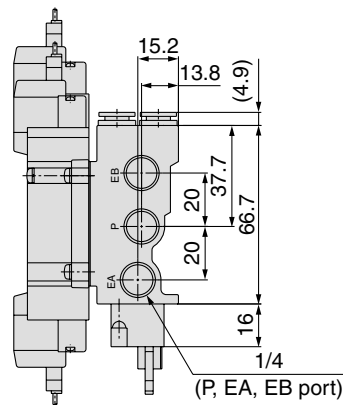
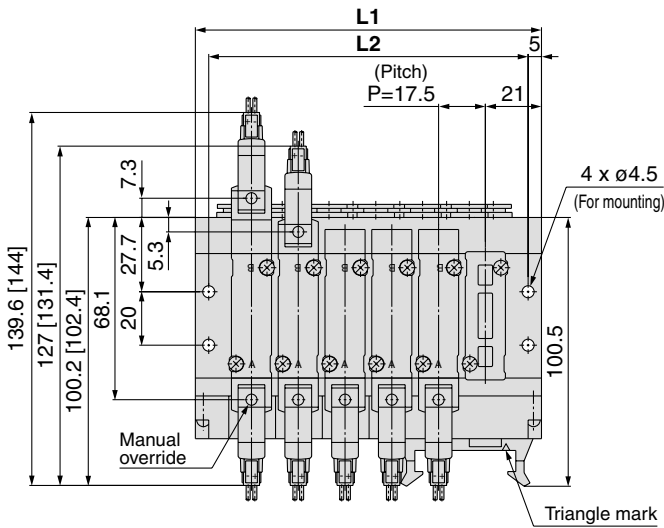
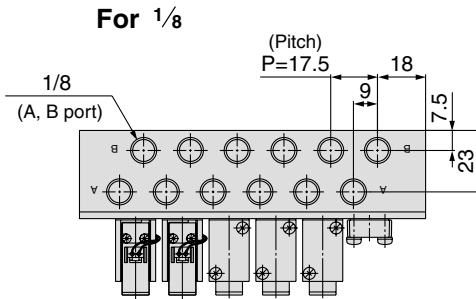
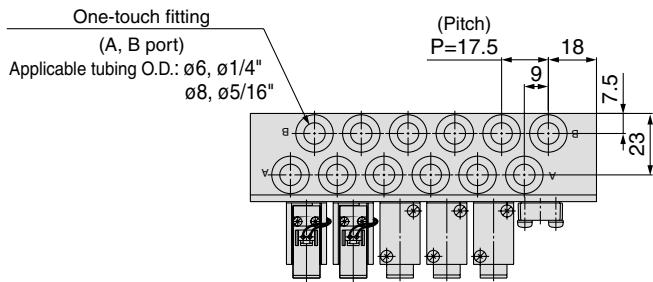


With interface regulator (with gauge)

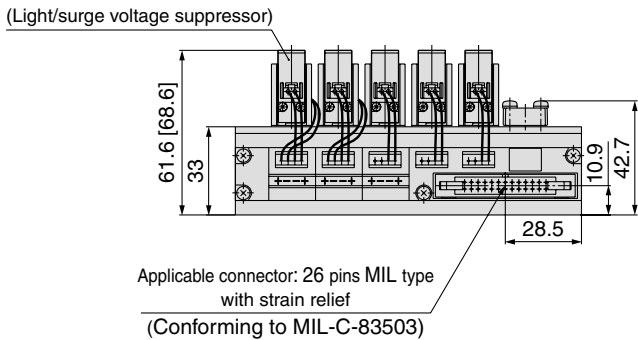


Stations n	4	5	6	7	8	9	10	11	12
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5

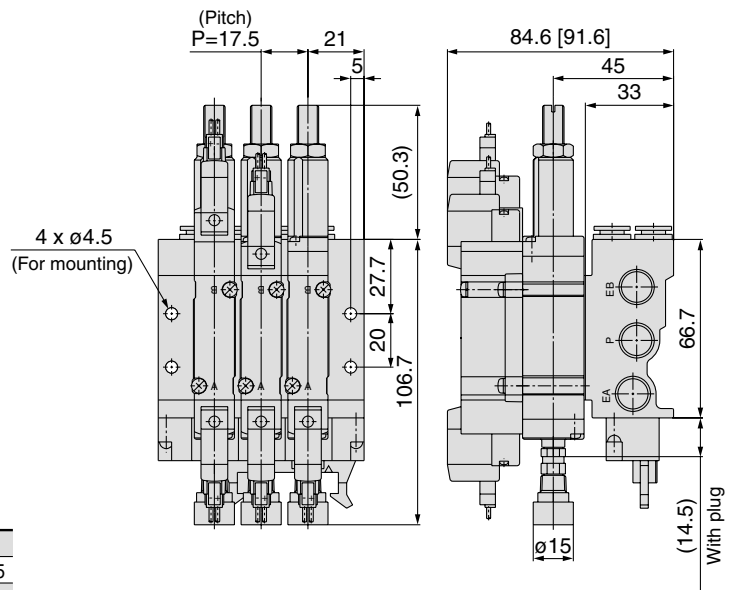
- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7



(Station n) ----- (Station 1)

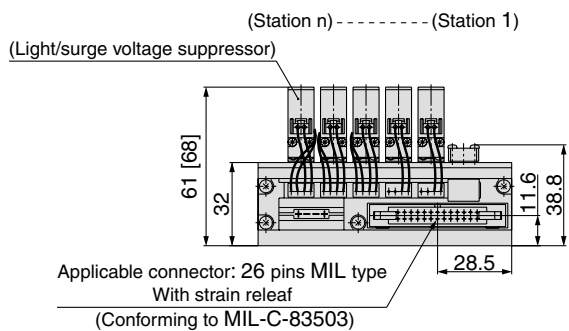
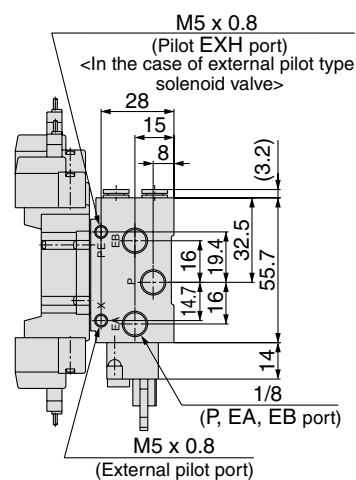
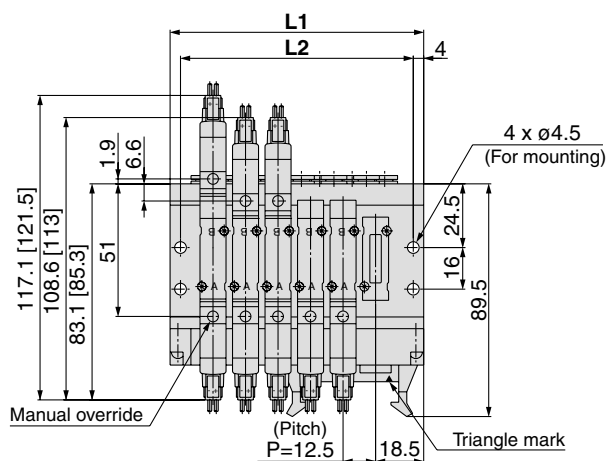
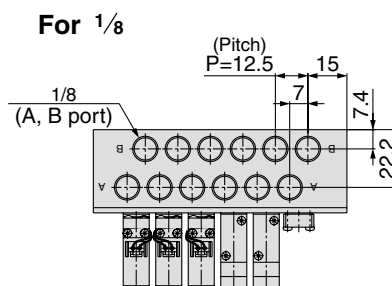
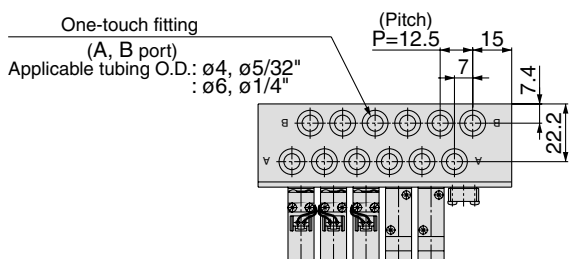


With interface regulator (with gauge)

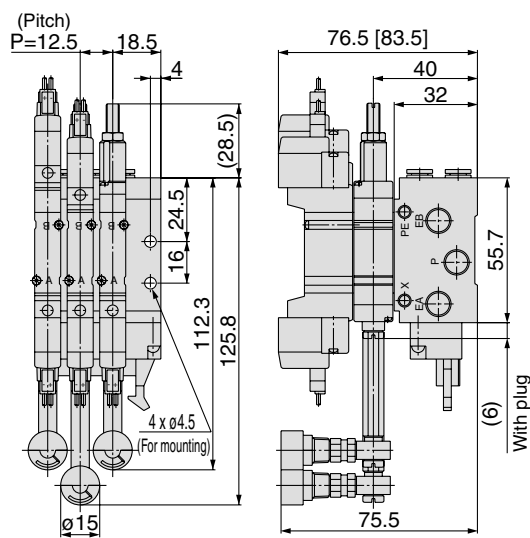


Stations n	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

SY3000: SS5Y3-42P- Stations -01, C4, N3
C6, N7



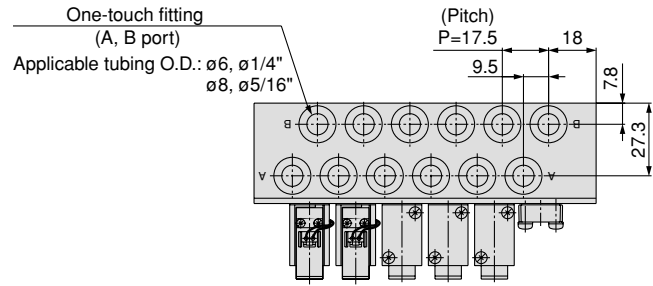
With interface regulator (with gauge)



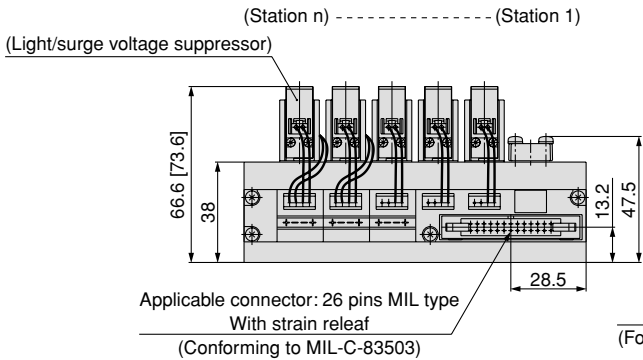
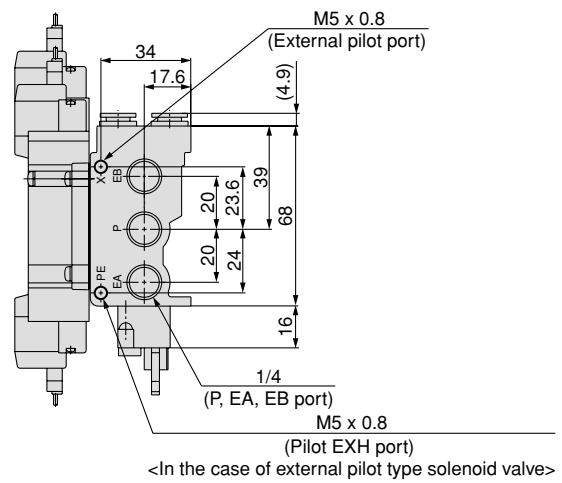
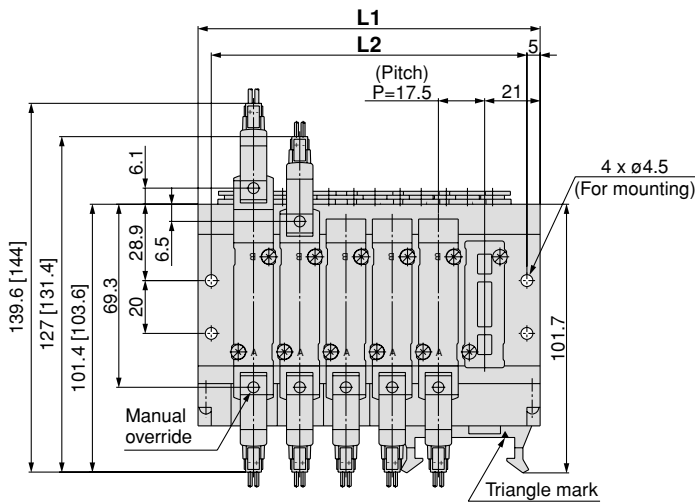
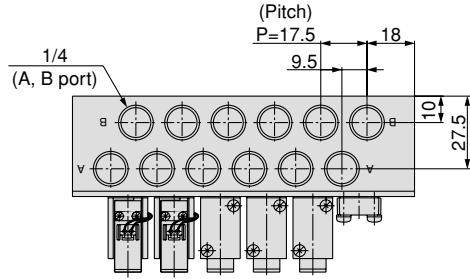
Stations n	4	5	6	7	8	9	10	11	12
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

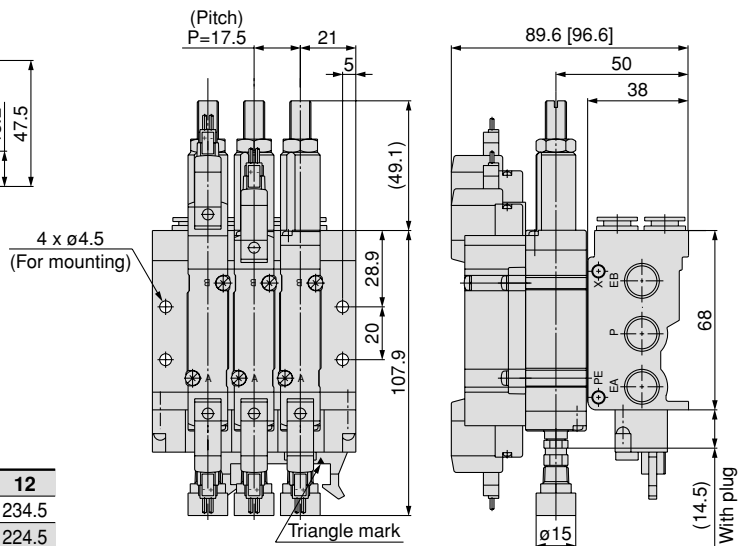
Grommet (G)



For 1/4



With interface regulator (with gauge)



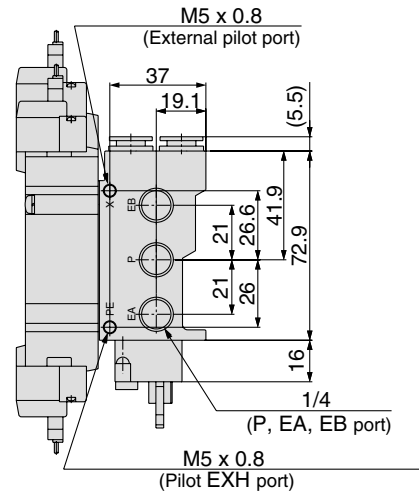
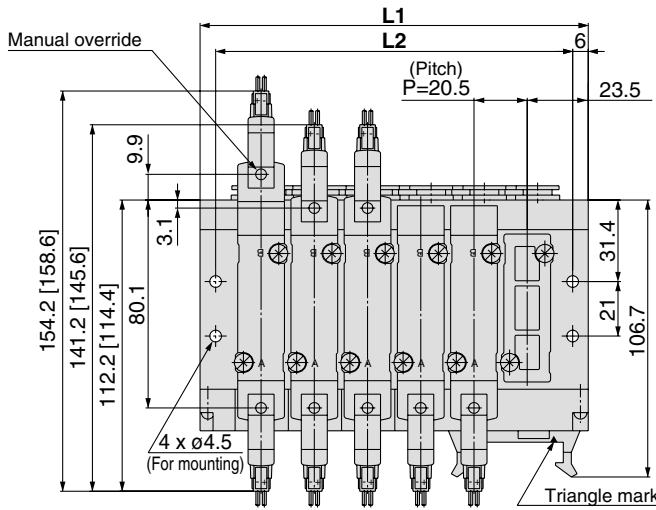
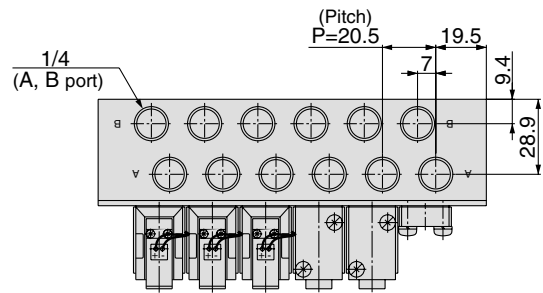
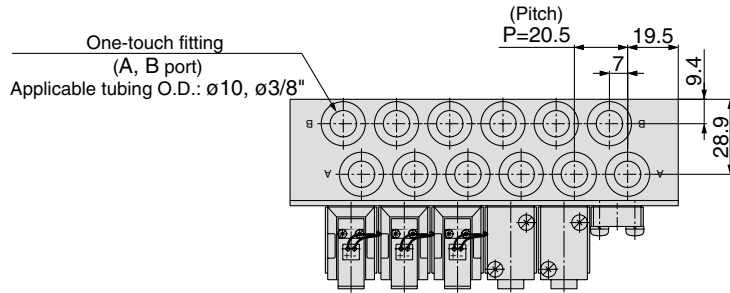
Stations n	3	4	5	6	7	8	9	10	11	12
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5

SY7000: SS5Y7-42P- Stations -02, C10, N11



Grommet (G)

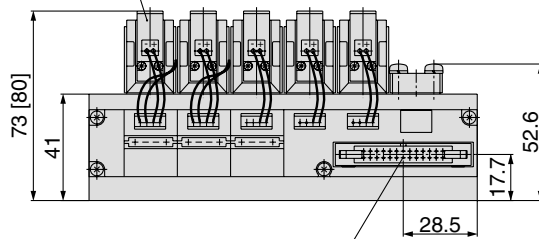
For 1/4



<In the case of external pilot type solenoid valve>

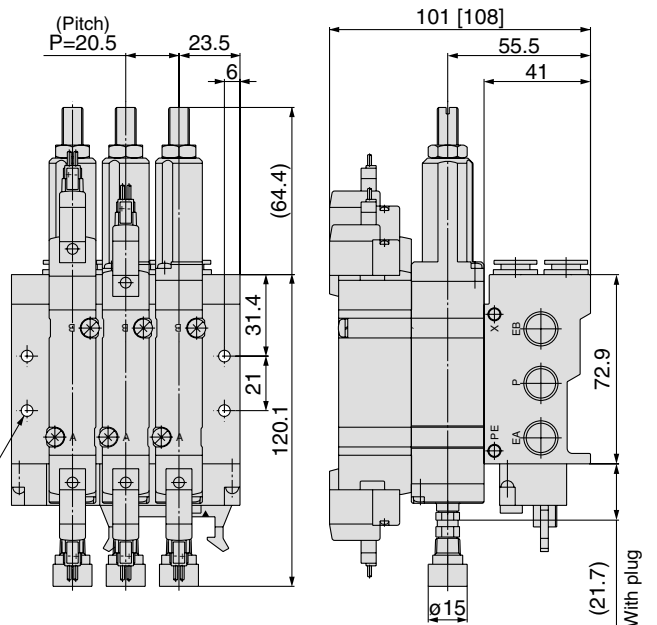
(Station n) ----- (Station 1)

(Light/surge voltage suppressor)



Applicable connector: 26 pins MIL type
With strain relief
(Conforming to MIL-C-83503)

With interface regulator (with gauge)



Stations n	3	4	5	6	7	8	9	10	11	12
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L2	76	96.5	117	137.5	158	178.5	199	219.5	240	260.5

4 x ø4.5
(For mounting)

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

5 Port Solenoid Valve Base Mounted Manifold Stacking Type/Flat Ribbon Cable Series SY9000

Type **43P**



[Option]
Note) CE compliant:
For DC only.

How to Order Manifold

SS5Y9-43P-05 U - C8

Manifold series

9	SY9000
---	--------

Valve stations

Symbol	Stations
04	4 stations
⋮	⋮
12	12 stations

* This also includes the number of blanking plate assemblies.

P, R port outlets

Symbol	Port outlet	Applicable stations
U	U side	4 to 10 stations
D	D side	4 to 10 stations
B	Both sides	4 to 12 stations

SUP/EXH block assembly specifications

Symbol	Specifications
Nil	Standard/Internal pilot specification
R	External pilot specification
S	Internal pilot/Built-in silencer
RS	External pilot/Built-in silencer

Thread type

Symbol	Thread type
Nil	Rc
F	G
N	NPT
T	NPTF

Option

Symbol	Mounting
Nil	Direct mounting
D	DIN rail mounting (with DIN rail)
D0	DIN rail mounting (without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.

A, B port size

Thread piping

Symbol	Port size
02	1/4
03	3/8

One-touch fitting (Metric size)

Symbol	Port size
C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12
M	Mixed

One-touch fitting (Inch size)

Symbol	Port size
N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"
M	Mixed

* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

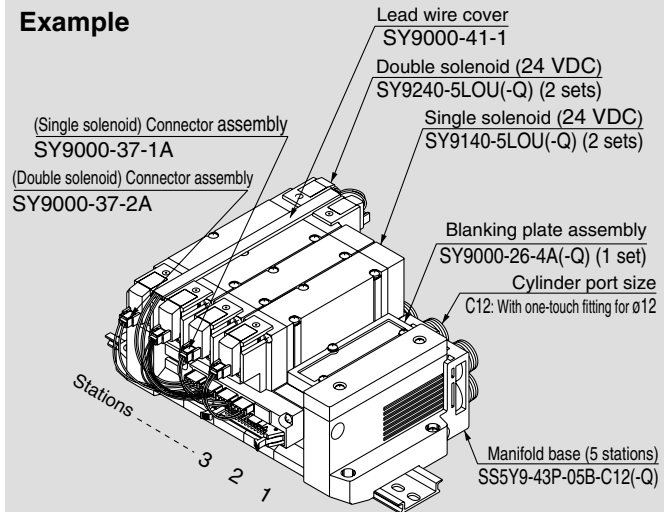
CE compliant

Nil	—
Q	CE compliant

Note) CE compliant: For DC only.

How to Order Manifold Assembly (Example)

Example



SS5Y9-43P-05B-C12 (-Q) ... 1 set (Type 43P, 5-station manifold base part no.)
 * SY9000-26-4A (-Q) 1 set (Blanking plate assembly part no.)
 * SY9140-5LOU (-Q) 2 sets (Single solenoid part no.)
 * SY9240-5LOU (-Q) 2 sets (Double solenoid part no.)
 * SY9000-37-1A 2 sets (Connector assembly part no.)
 * SY9000-37-2A 2 sets (Connector assembly part no.)
 * SY9000-41-1 1 set (Lead wire cover)

The asterisk denotes the symbol for assembly.
Prefix it to the part nos. of the solenoid valve, etc.

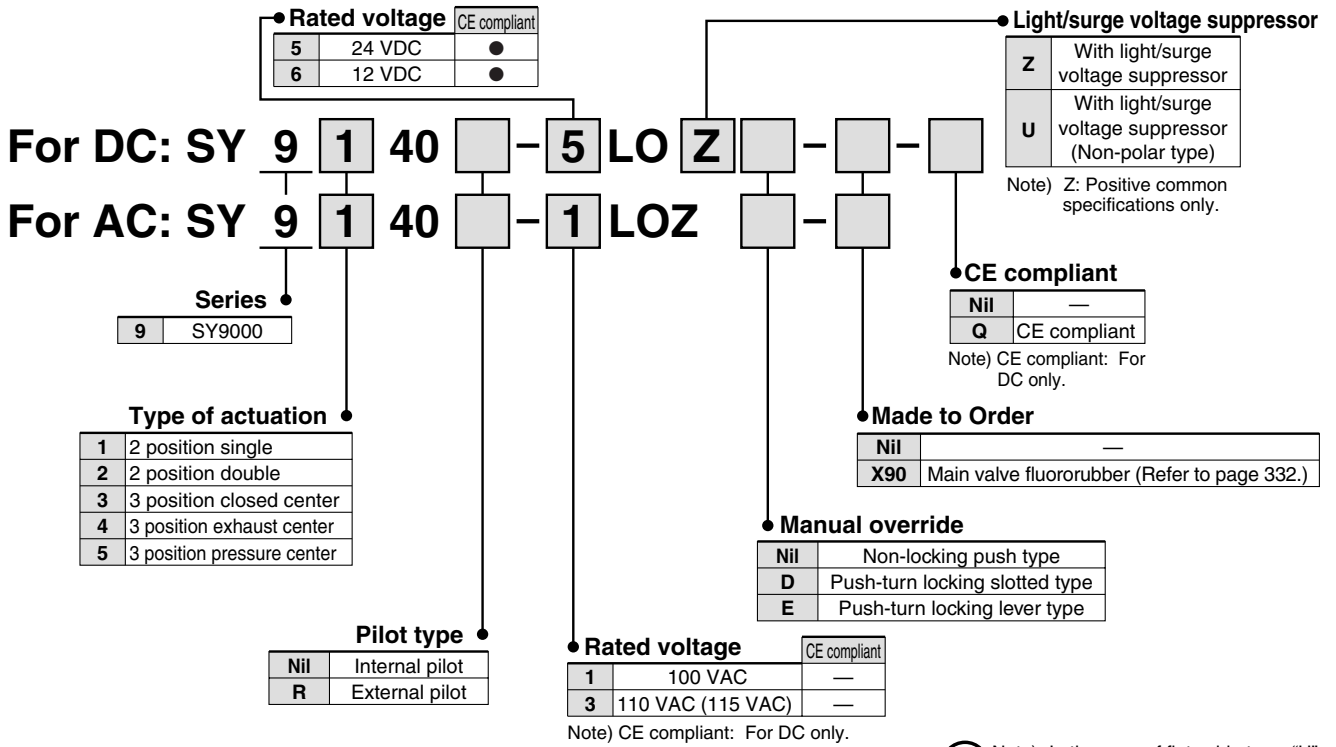
Add the valve and option part number under the manifold base part number. In the case of complex arrangement, specify them on the manifold specification sheet.

Note) Please indicate the connector assembly part no. (page 223) that connects the valve and the manifold.



Note) CE compliant:
For DC only. [Option]

How to Order Valve



Note) In the case of flat cable type, "U" and "Z" types are for DC specifications and "Z" type is for AC specifications. "Z" type for DC is positive common specification only. For the other combination, please contact SMC.

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Connector Assembly

For 12, 24 VDC

Specifications	For SY9000
For single solenoid	SY9000-37-1A
Double solenoid, 3 position type	SY9000-37-2A
Single with spacer assembly	SY9000-37-3A
Double, 3 position with spacer assembly	SY9000-37-4A

Note) Spacer indicates Individual SUP/EXH spacer.

For 100 VAC

Specifications	For SY9000
For single solenoid	SY9000-37-1B
Double solenoid, 3 position type	SY9000-37-2B
Single with spacer assembly	SY9000-37-3B
Double, 3 position with spacer assembly	SY9000-37-4B

For 110 VAC (115 VAC)

Specifications	For SY9000
For single solenoid	SY9000-37-1C
Double solenoid, 3 position type	SY9000-37-2C
Single with spacer assembly	SY9000-37-3C
Double, 3 position with spacer assembly	SY9000-37-4C

- Multiple valve wiring is simplified through the use of the flat ribbon cable connector.

• Clean appearance

In the case of a flat ribbon cable type, each valve is wired on the print board of manifold base to allow the external wiring to be piped all together with 26 pins MIL connector.



Flat Ribbon Cable Manifold Specifications

Model	SS5Y9-43P	
Applicable valve	SY9□40	
Manifold type	Stacking type	
P (SUP)/R (EXH)	Common SUP, Common EXH	
Valve stations	4 to 12 stations ^{Note 1)}	
A, B port Porting specifications	Location	Base
	Direction	Side
Port size	P, EA, EB port	C12 (One-touch fitting for ø12)
	A, B port	1/4 3/8 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10) C12 (One-touch fitting for ø12)
Manifold base mass W (g) n: Stations	W = 114n + 343	
Applicable flat ribbon cable connector	Flat ribbon cable connection, Socket: 26 pins MIL with strain relief, Conforming to MIL-C-83503	
Internal wiring	In common between +COM and -COM (Z type: +COM only)	
Rated voltage ^{Note 4)}	12, 24 VDC, 100, 110 VAC	

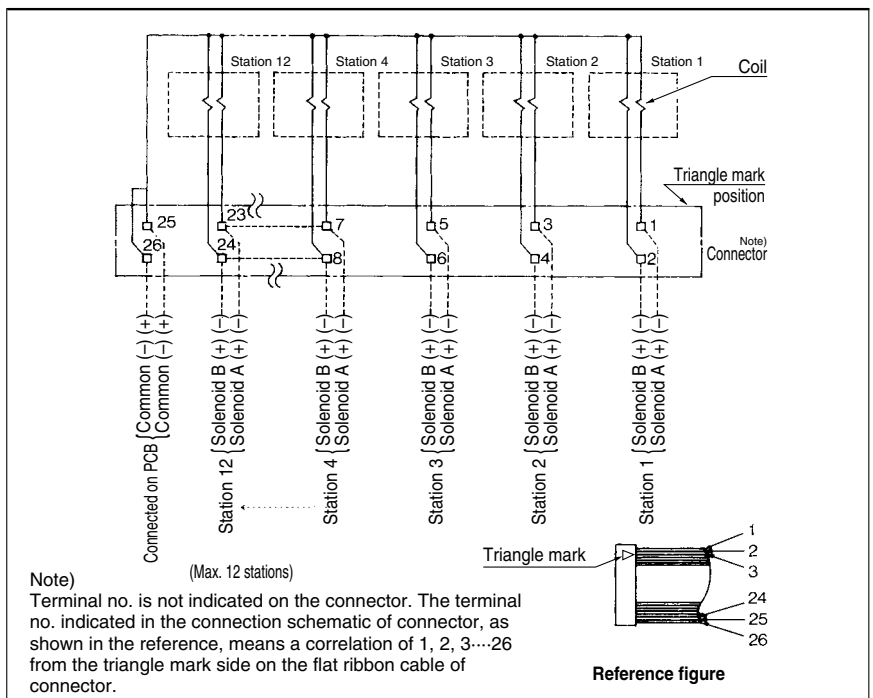
- Note 1) For more than 10 stations, supply pressure to P port on both sides and exhaust from EA/EB port on both sides.
- Note 2) The withstand voltage specification for the wiring unit section is JIS C 0704, Grade 1 or its equivalent.
- Note 3) Refer to "Manifold Option" on page 238.
- Note 4) CE-compliant: For DC only.

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm³/(s·bar))	b	Cv	C (dm³/(s·bar))	b	Cv
SS5Y9-43P	C12	C12	6.4	0.29	1.6	7.3	0.29	1.8

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

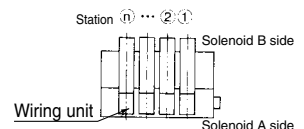
Internal Wiring of Manifold (Non-polar type)



Caution

- For non-polar (U) valves, the electrical DC connections can be used with either positive and negative COM. For type (Z), only use with positive COM as the valve does not operate correctly when used with negative COM.

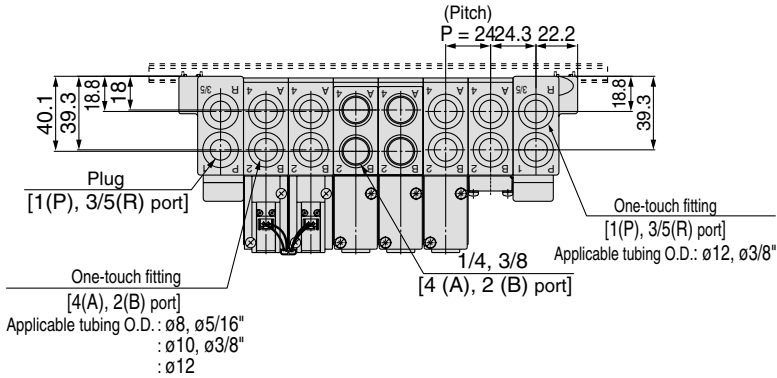
- For more than 10 stations, both poles of the common should be wired.
- For single solenoid, connect to the solenoid A side.
- The maximum number of stations that can be accommodated is 12. For more stations, please contact SMC.



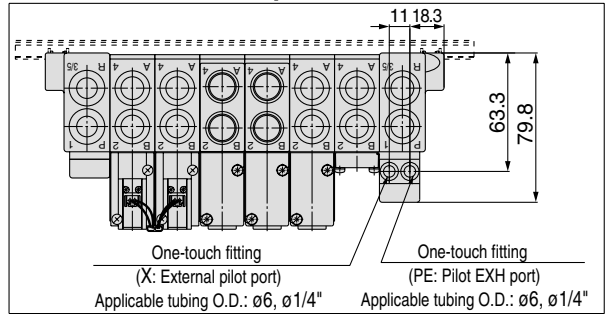
SY9000: SS5Y9-43P- Stations **D** ⁰² ₀₃ C8, N9 C10, N11 (-D)

[] : AC

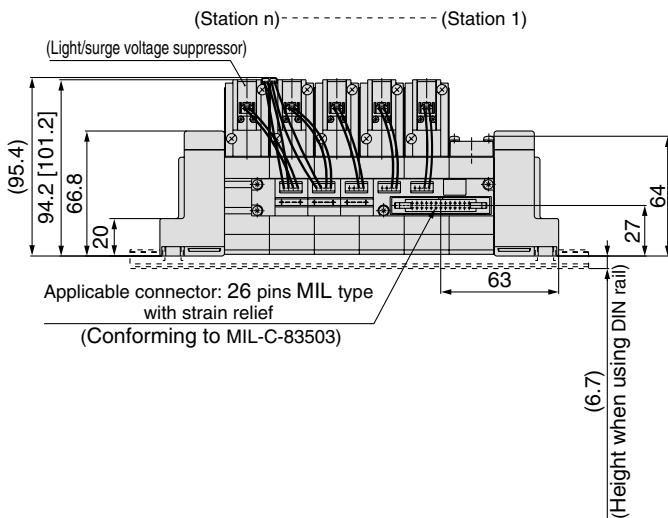
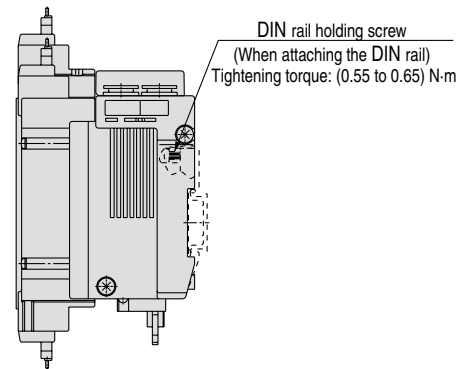
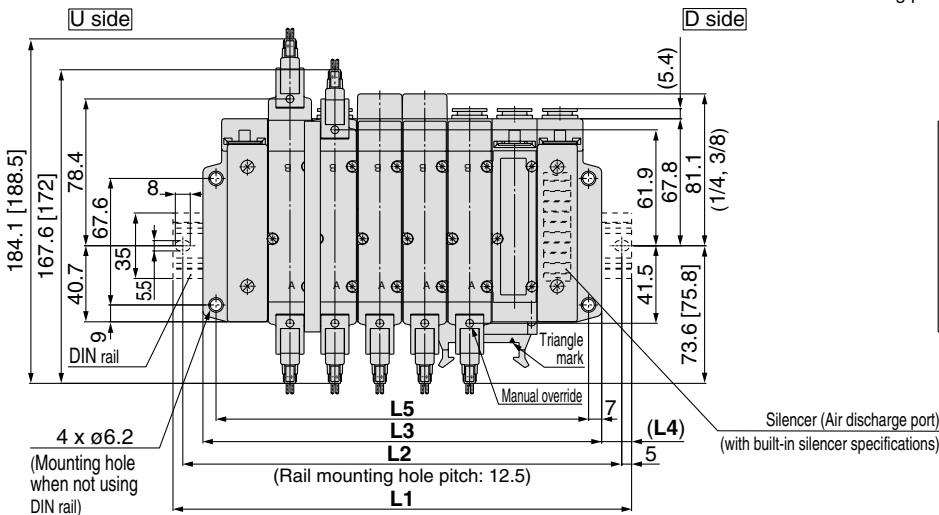
* When P, R port outlets are indicated on the D side, the P, R ports on the opposite side are plugged.



With External Pilot Specifications



* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the D side.



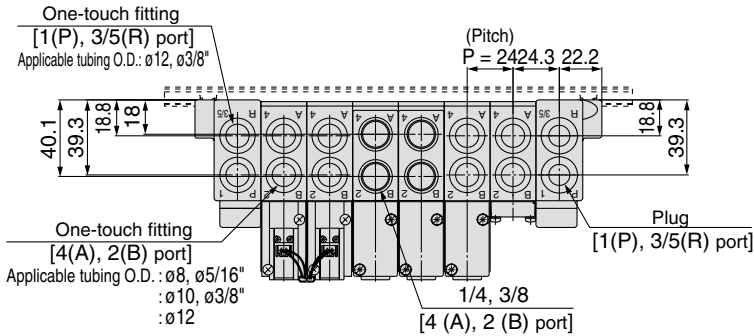
Stations n	4 stations	5	6	7	8	9	10 stations
L1	198	223	248	260.5	285.5	310.5	335.5
L2	187.5	212.5	237.5	250	275	300	325
L3	165	189	213	237	261	285	309
L4	16.5	17	17.5	12	12.5	13	13.5
L5	151	175	199	223	247	271	295

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

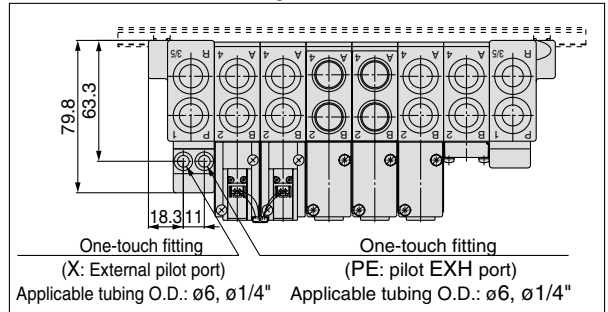
SY9000: SS5Y9-43P- Stations U ⁰² C8, N9 ⁰³ C10, N11 C12 (-D)

[] : AC

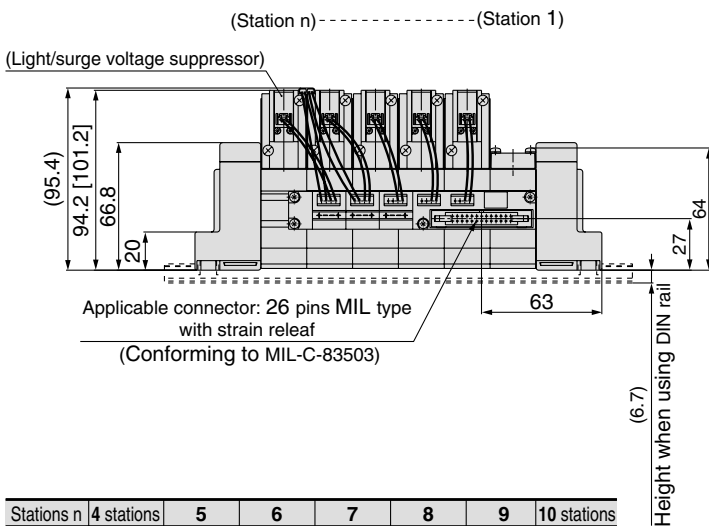
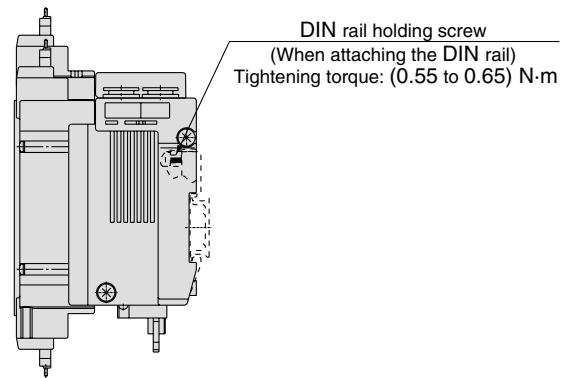
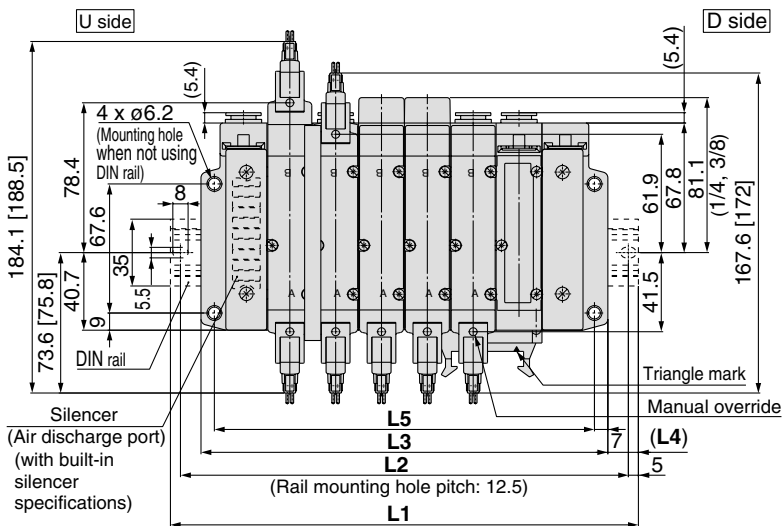
* When P, R port outlets are indicated on the U side, the P, R ports on the opposite side are plugged.



With External Pilot Specifications



* Air discharge port on the built-in silencer type and the external pilot's extracting position are in the U side.



Stations n	4 stations	5	6	7	8	9	10 stations
L1	198	223	248	260.5	285.5	310.5	335.5
L2	187.5	212.5	237.5	250	275	300	325
L3	165	189	213	237	261	285	309
L4	16.5	17	17.5	12	12.5	13	13.5
L5	151	175	199	223	247	271	295

EX510 Gateway System Serial Transmission System Base Mounted Manifold/Integrated Type Series SY3000/5000/7000

Type **42SA**



How to Order Manifold

SS5Y 3 - 42SA - 03 - 01 - -

Manifold series

3	SY3000
5	SY5000
7	SY7000

SI unit

Nil	NPN output (+COM.)
N	PNP output (-COM.)

Valve stations

Symbol	Stations	Note
03	3 stations	Double wiring ^{Note 1)}
:	:	
08	8 stations	Specified layout ^{Note 2)} (Compatible with 16 solenoid valves)
03	3 stations	
:	:	
16	16 stations	

CE compliant

Nil	—
Q	CE compliant

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size Thread piping

01	1/8	SY3000
02	1/4	SY5000/7000

One-touch fitting (Metric size)

C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	SY7000

One-touch fitting (Inch size)

N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
N11	One-touch fitting for ø3/8"	SY7000

- SS5Y3 can be set from 4 stations.
 - The number of the blanking plate assembly is also included.
- Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

How to Order Manifold Assembly (Example)

Example

SS5Y3-42SA-06-C6 (-Q) 1 set (42SA type 6-station manifold part no.)
 * SY3140-5LOU (-Q) 4 sets (Single solenoid part no.)
 * SY3240-5LOU (-Q) 2 sets (Double solenoid part no.)

↳ The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. When entry of part numbers becomes complicated, indicate by the manifold specification sheet. For a manifold for an EX510, the length of the lead wire for a connector assembly depends on the number of stations. Therefore, the manifold assembly is shipped with the valves (including blanking plates) and connector assembly mounted on it, as the standard specification. Be sure to specify the part nos. of the solenoid valves to be mounted.

SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S001	P.1715 to 1717
N	PNP output (-COM.)	EX510-S101	

For details of "Gateway System Serial Transmission System, Series EX510", refer to pages 1696 through to 1724.



How to Order Valves

SY **3** **1** 40 - 5 LO **Z** - -

Series •

3	SY3000
5	SY5000
7	SY7000

Type of actuation •

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot specifications •

Nil	Internal pilot
R	External pilot

Rated voltage: 24 VDC •

• CE compliant

Nil	—
Q	CE compliant

• Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

• Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

• Light/surge voltage suppressor

Z	With light/surge voltage suppressor
U	Without light/surge voltage suppressor (non-polar type)

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

VFS

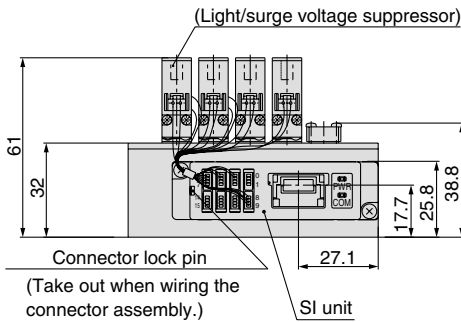
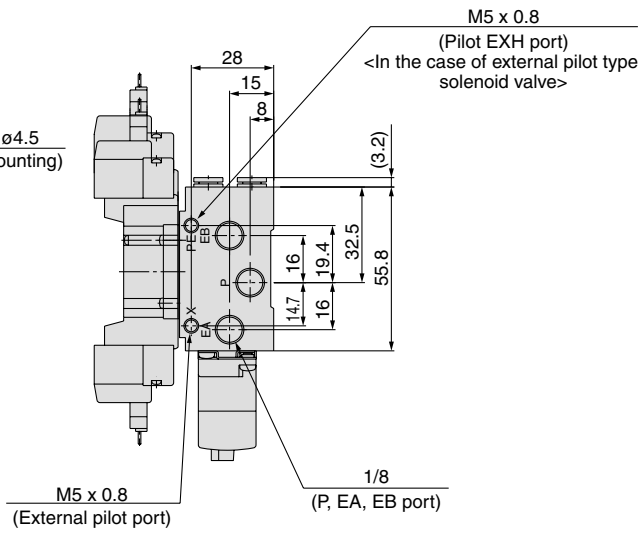
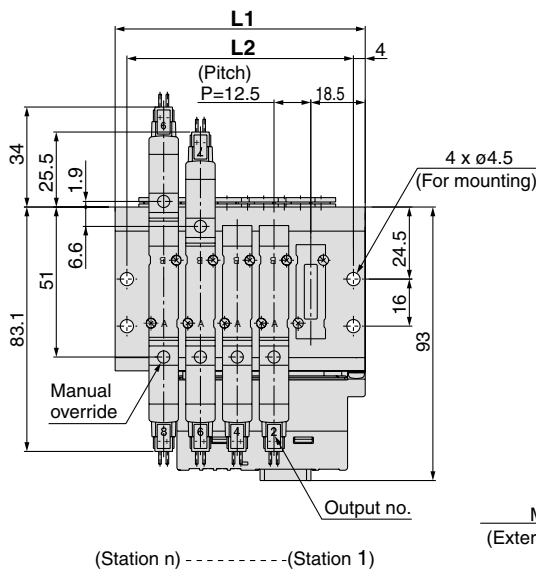
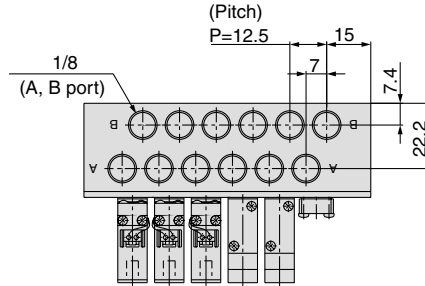
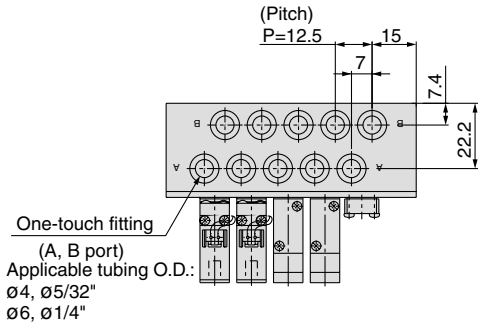
VFR

VQ7

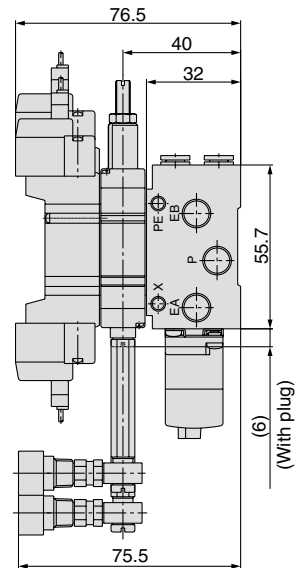
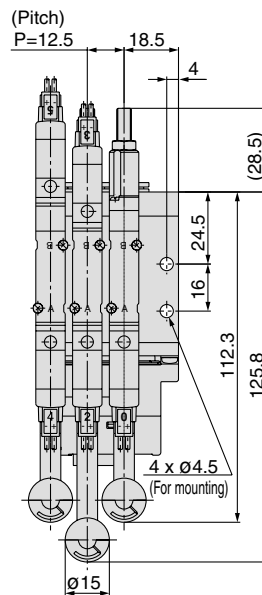
Type **42SA** Series **SY3000/5000/7000**

SY3000: SS5Y3-42SA - Stations - **01** , C4, N3
C6, N7

For 1/8

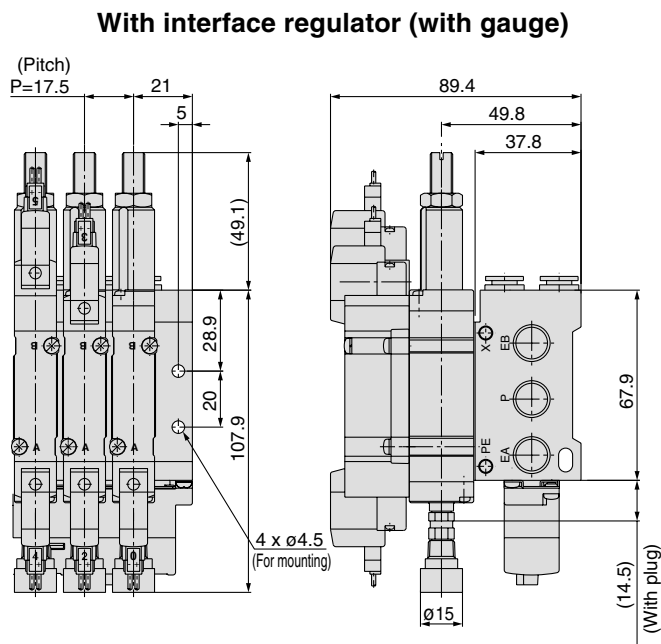
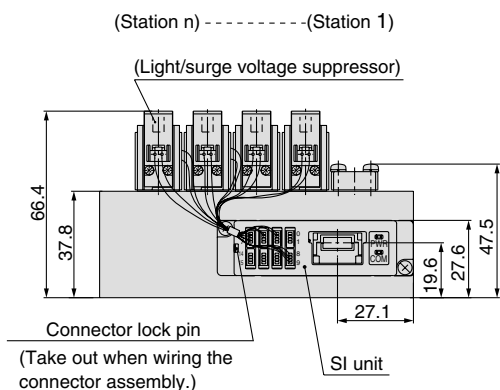
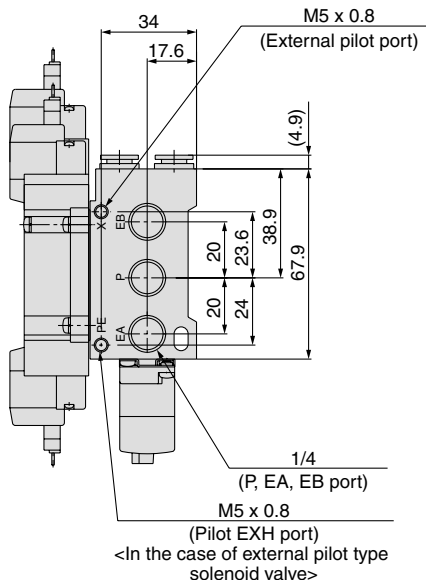
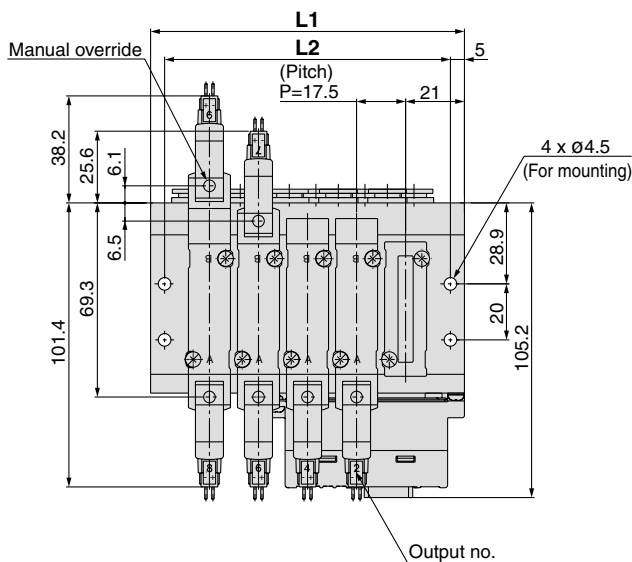
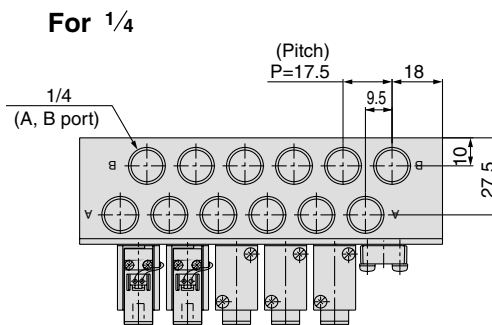
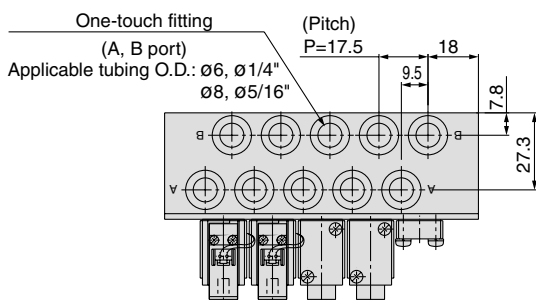


With interface regulator (with gauge)



Stations n	4 stations	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	72.5	85	97.5	110	122.5	135	147.5	160	172.5	185	197.5	210	222.5
L2	64.5	77	89.5	102	114.5	127	139.5	152	164.5	177	189.5	202	214.5

SY5000: SS5Y5-42SA - Stations -02 , C6, N7
C8, N9

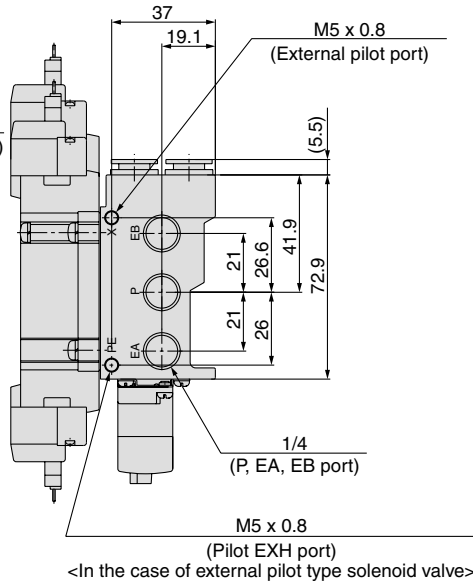
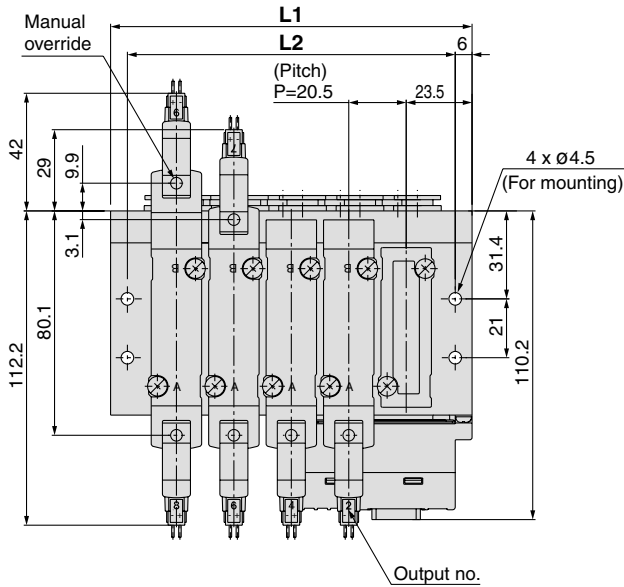
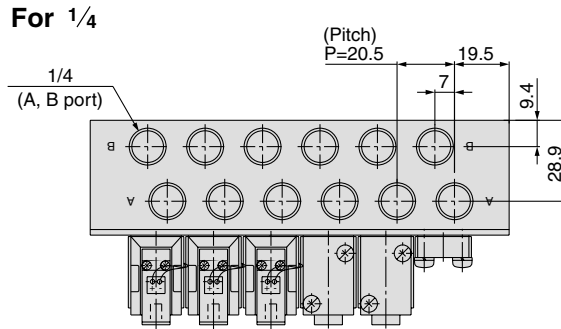
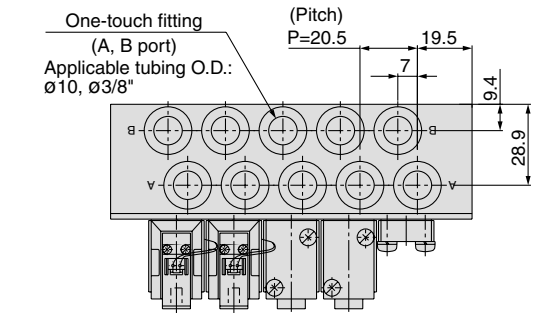


Stations n	3 stations	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5	252	269.5	287	304.5
L2	67	84.5	102	119.5	137	154.5	172	189.5	207	224.5	242	259.5	277	294.5

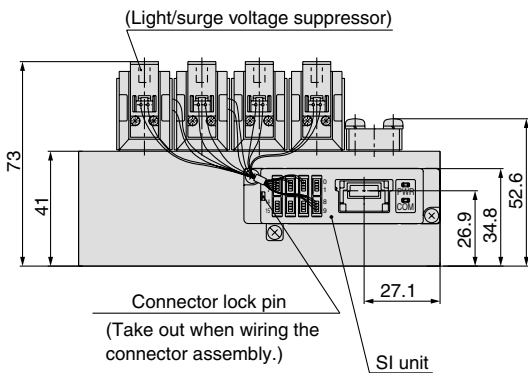
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Type **42SA** Series **SY3000/5000/7000**

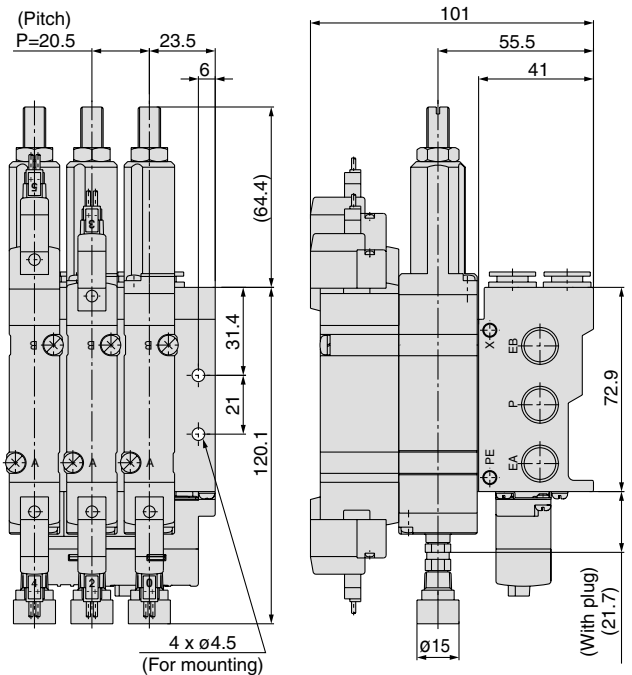
SY7000: SS5Y7-42SA - Stations -02 , C10, N11



(Station n) ----- (Station 1)



With interface regulator (with gauge)



Stations n	3 stations	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5	293	313.5	334	354.5
L2	76	96.5	117	137.5	158	178.5	199	219.5	240	260.5	281	301.5	322	342.5

EX510 Gateway System Serial Transmission System Base Mounted Manifold/Stacking Type

Series SY9000

Type **43SA**



How to Order Manifold

SS5Y9 - 43SA [] - **03** **U** [] - **02** [] - [] - []

SI unit

Nil	NPN output (+COM.)
N	PNP output (-COM.)

CE compliant

Nil	—
Q	CE compliant

Valve stations

Symbol	Stations	Note
03	3 stations	Double wiring ^{Note 1)}
:	:	
08	8 stations	Specified layout ^{Note 2)} (Compatible with 16 solenoid valves)
03	3 stations	
:	:	
16	16 stations	

- The number of the blanking plate assembly is also included.
- Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

Option

Nil	Direct mounting
D	DIN rail mounting (With DIN rail)
DO	DIN rail mounting (Without DIN rail)
D*	When a longer DIN rail is desired than the specified stations, specify the station number to be required into * mark.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size Thread piping

02	1/4
03	3/8

One-touch fitting (Metric size)

C8	One-touch fitting for ø8
C10	One-touch fitting for ø10
C12	One-touch fitting for ø12
M	Mixed

One-touch fitting (Inch size)

N9	One-touch fitting for ø5/16"
N11	One-touch fitting for ø3/8"
M	Mixed

- For the mixed specification, indicate separately on a manifold specification sheet.

SUP/EXH block assembly specifications

Nil	Standard/Internal pilot
R	External pilot
S	Internal pilot, Built-in silencer
RS	External pilot, Built-in silencer

P, R port outlets

U	U side	3 to 10 stations
D	D side	3 to 10 stations
B	Both sides	3 to 16 stations

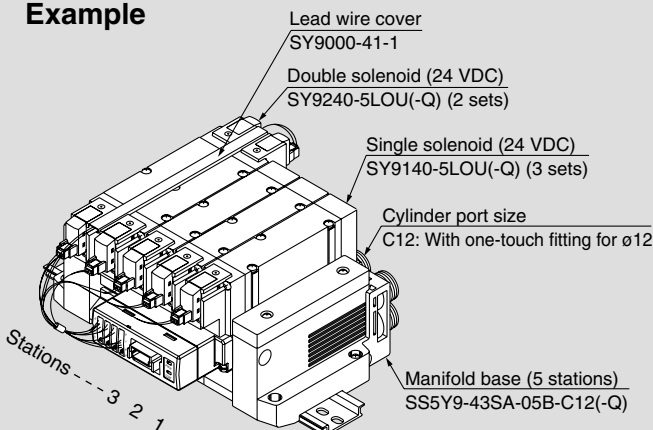
SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S001	P.1715 to 1717
N	PNP output (-COM.)	EX510-S101	

For details of "Gateway System Serial Transmission System, Series EX510", refer to pages 1696 through to 1724.

How to Order Manifold Assembly (Order Example)

Example



- SS5Y9-43SA-05B-C12 (-Q) ... 1 set (43SA type 5-station manifold part no.)
- * SY9140-5LOU (-Q) 3 sets (Single solenoid part no.)
- * SY9240-5LOU (-Q) 2 sets (Double solenoid part no.)
- * SY9000-41-1 (-Q) 1 set (Lead wire cover)

The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. When entry of part numbers becomes complicated, indicate by the manifold specification sheet. For a manifold for an EX510, the length of the lead wire for a connector assembly depends on the number of stations. Therefore, the manifold assembly is shipped with the valves (including blanking plates) and connector assembly mounted on it, as the standard specification. Be sure to specify the part nos. of the solenoid valves to be mounted.

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

How to Order Valves

SY9 **1** **40** **□** - **5** **LO** **Z** **□** - **□** - **□**

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot specifications

Nil	Internal pilot
R	External pilot

Rated voltage: 24 VDC

CE compliant

Nil	—
Q	CE compliant

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

Manual override

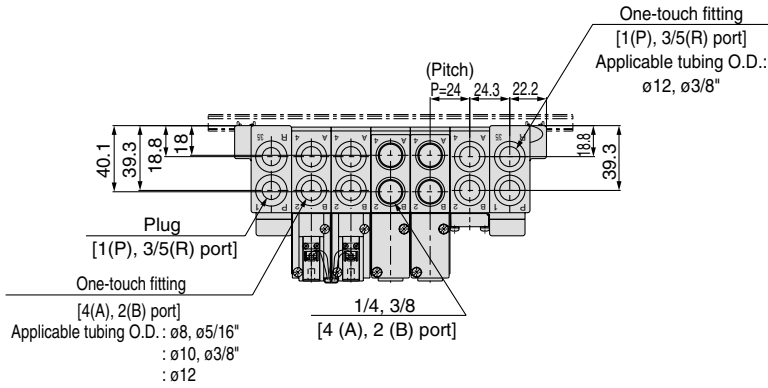
Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/surge voltage suppressor

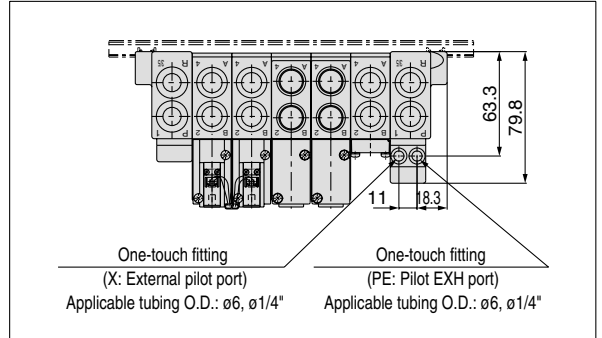
Z	With light/surge voltage suppressor
U	Without light/surge voltage suppressor (non-polar type)

Type 43SA Series SY9000

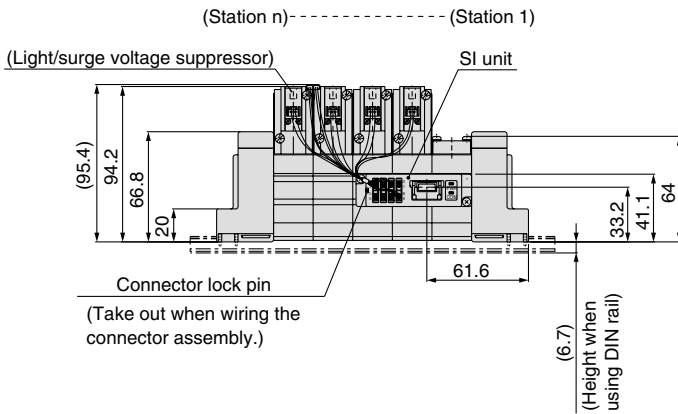
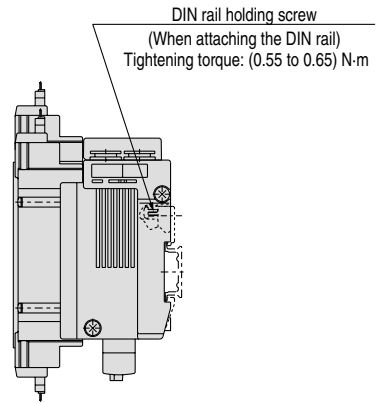
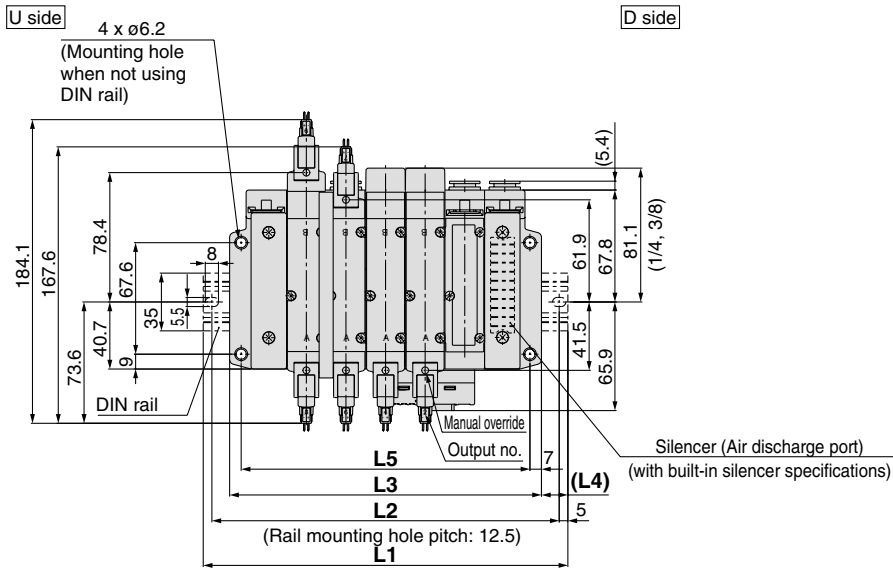
SY9000: SS5Y9-43SA - Stations D - 02 03 , C8, N9 C10, N11 (-D) C12



With External Pilot Specifications



- * When P, R port outlets are indicated on the D side, the P, R ports on the opposite side are plugged.
- * Air discharge port on the built-in silencer type and the external pilot's extracting position are in the D side.



Stations n	3 stations	4	5	6	7	8	9	10 stations
L1	173	198	223	248	260.5	285.5	310.5	335.5
L2	162.5	187.5	212.5	237.5	250	275	300	325
L3	141	165	189	213	237	261	285	309
L4	16	16.5	17	17.5	12	12.5	13	13.5
L5	127	151	175	199	223	247	271	295

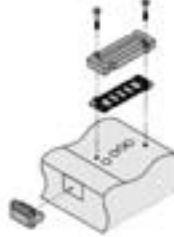
Manifold Option

■ Type 41, 42, 43, 42SA, 43SA Blanking plate assembly



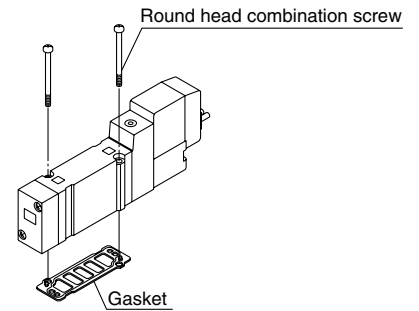
Series	Assembly part no.
SY3000	SY3000-26-9A(-Q)
SY5000	SY5000-26-20A(-Q)
SY7000	SY7000-26-22A(-Q)
SY9000	SY9000-26-2A(-Q)

■ Type 41P, 42P, 43P Blanking plate assembly



Series	Assembly part no.
SY3000	SY3000-26-10A(-Q)
SY5000	SY5000-26-21A(-Q)
SY7000	SY7000-26-23A(-Q)
SY9000	SY9000-26-4A(-Q)

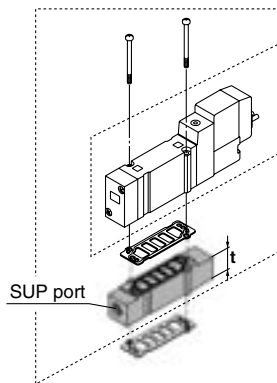
■ Gasket assembly part no.



Series	Gasket assembly part no.
SY3000	SY3000-GS-2
SY5000	SY5000-GS-2(-Q)
SY7000	SY7000-GS-2(-Q)
SY9000	SY9000-GS-2

Note) The gasket assembly includes 10 sets of mounting screws and a gasket.

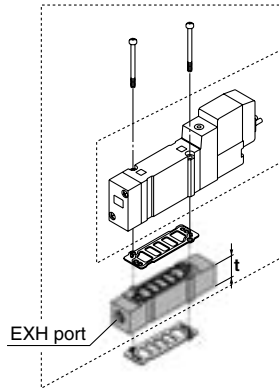
■ Individual SUP spacer assembly



Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A(-Q)	M5 x 0.8	11
SY5000	SY5000-38-16*A(-Q)	1/8	15
SY7000	SY7000-38-16*A(-Q)	1/4	18
SY9000	SY9000-38-2*A(-Q)	1/4	20

Note) • The SUP port of SY3000, 5000 and 7000 may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)
 • The end plate side is only available to SY9000.

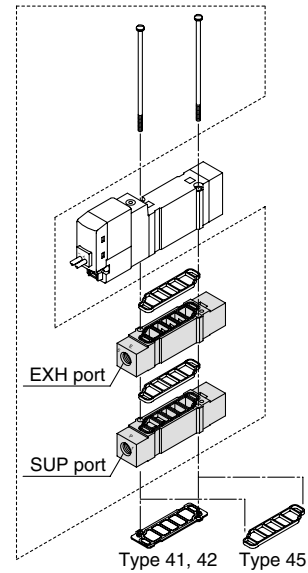
■ Individual EXH spacer assembly



Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A(-Q)	M5 x 0.8	11
SY5000	SY5000-39-16*A(-Q)	1/8	15
SY7000	SY7000-39-16*A(-Q)	1/4	18
SY9000	SY9000-39-2*A(-Q)	1/4	20

Note) In case of 41P, 42P and 43P, for protection of the wiring unit section from drainage, piping at the EA port should be arranged so that it will not be directly exposed to exhaust from the valve.

■ Individual SUP spacer assembly + Individual EXH spacer assembly (Double spacer)



[●: Available X: Not available —: Nonapplicable manifold]

Series	Individual SUP + Individual EXP Assemble part no.	Port size	Applicable manifold types						
			41	41P	42	42P	45	45-A 45-NA	45*
SY3000	SY3000-120-2A(-Q)	M5 x 0.8	●	×	●	×	●	×	×
SY5000	SY5000-75-1*A(-Q)	1/8	●	×	●	×	●	×	×
SY7000	SY7000-73-1*A(-Q)	1/4	●	×	●	×	—	—	—

Note) The port on a spacer can be directed to the pilot valve side or end plate side. For mounting the port to the pilot valve side, please make sure to connect the ports to protect the pilot valve wiring section from drainage.
 The individual SUP spacer and EXH spacer can be mounted either on the upper side or lower side. (The above illustration shows the condition when the product is shipped out from a factory.)

⚠ Caution

Mounting screw tightening torques

M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

* Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

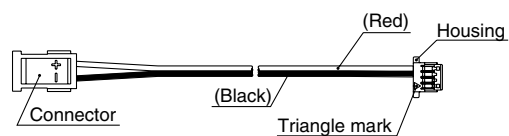
⚠ Warning

When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions, and then mount it.

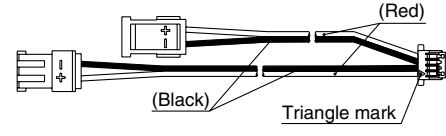
Manifold Option

■ Connector assembly

For single solenoid (SY3000-37-81A-□-N)



For double solenoid (SY3000-37-81A-□-□)



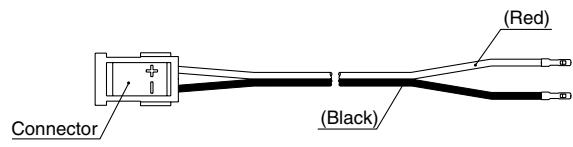
Connector assembly order no. (Can be used for the manifold without a specified layout (8 stations or less))
Integrated type

Model	Part no.	Connector mounting position
SS5Y3-42SA	SY3000-37-81A-3-N	Single: For 1 to 4 stations
	SY3000-37-81A-3-6	Double/3 position: For 1 to 4 stations
	SY3000-37-81A-2-N	Single: For 5 to 8 stations
	SY3000-37-81A-2-4	Double/3 position: For 5 to 8 stations
SS5Y5-42SA	SY3000-37-81A-3-N	Single: For 1 to 8 stations
	SY3000-37-81A-3-6	Double/3 position: For 1 to 8 stations
SS5Y7-42SA	SY3000-37-81A-3-N	Single: For 1 to 4 stations
	SY3000-37-81A-3-6	Double/3 position: For 1 to 4 stations
	SY3000-37-81A-4-N	Single: For 5 to 8 stations
	SY3000-37-81A-4-7	Double/3 position: For 5 to 8 stations

Note) The above is for the station addition or maintenance. When ordering a connector assembly separately, a number would not be printed on the connector.

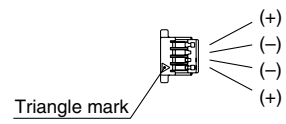
■ Connector assembly

SY3000-37-80A-□



■ Housing (8 pcs./set)

SY3000-44-3A



Connector assembly order no. (Can be used for the manifold with a specified layout)

Model	Part no.	Connector mounting position
SS5Y3-42SA	SY3000-37-80A-3	For A side
	SY3000-37-80A-6	For B side
	SY3000-37-80A-4	For A side
	SY3000-37-80A-7	For B side
SS5Y5-42SA	SY3000-37-80A-3	For A side
	SY3000-37-80A-6	For B side
	SY3000-37-80A-7	For A side
	SY3000-37-80A-9	For B side
SS5Y7-42SA	SY3000-37-80A-4	For A side
	SY3000-37-80A-7	For B side
	SY3000-37-80A-8	For A side
	SY3000-37-80A-11	For B side
SS5Y9-43SA	SY3000-37-80A-6	For A side
	SY3000-37-80A-11	For B side
	SY3000-37-80A-9	For A side
	SY3000-37-80A-14	For B side
	SY3000-37-80A-13	For A side
	SY3000-37-80A-18	For B side

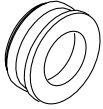
Note 1) The above is for station addition or maintenance. When ordering a connector assembly separately, a number will not be printed on the connector.
 Note 2) After inserting the connector assembly into the housing, be sure to confirm that the lead wire will not come off by lightly pulling the wire. Furthermore, do not reuse the lead wire after it has been inserted and removed.
 Note 3) Wiring is set longer than the actual wiring distance.

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Manifold Option

■ SUP blocking disk (For SY9000)

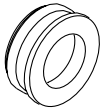
By installing a SUP blocking disk in the pressure supply passage of a manifold base, it is possible to supply two or more different high and low pressures to one manifold.



Series	No.
SY9000	SY9000-57-1A

■ EXH blocking disk (For SY9000)

By installing an EXH blocking disk in the exhaust passage of a manifold base, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two blocking disks are needed to divide both exhausts.)



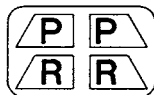
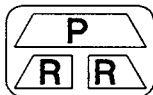
Series	No.
SY9000	SY9000-57-1A

■ Label for block disk (For SY9000)

The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

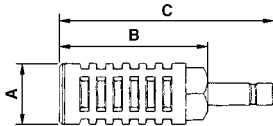
Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



Note) When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

■ Silencer with One-touch fitting (For SY9000)

The silencer plugs directly into the One-touch fittings of the manifold R (exhaust) port.



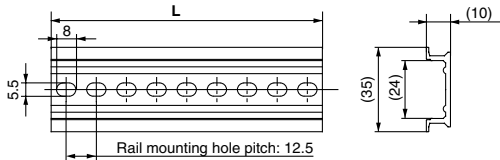
For Series	Model	Effective area	A	B	C
SY9000 (ø12)	AN300-KM12	41 mm ²	ø25	70	98

■ DIN Rail Dimensions/Mass for SY9000

VZ1000-11-4-□

Refer to L dimensions

* Fill in □ with an appropriate no. listed on the table of DIN rail dimensions shown below.

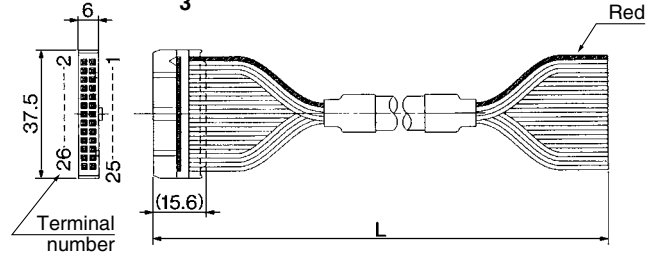


No.	0	1	2	3	4	5	6	7	8	9
L Dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5
Mass (g)	24.8	28	31.1	34.3	37.4	40.6	43.8	46.9	50.1	53.3
No.	10	11	12	13	14	15	16	17	18	19
L Dimension	223	235.5	248	260.5	273	285.5	298	310.5	323	335.5
Mass (g)	56.4	59.6	62.7	65.9	69.1	72.2	75.4	78.6	81.7	84.9
No.	20	21	22	23	24	25	26	27	28	29
L Dimension	348	360.5	373	385.5	398	410.5	423	435.5	448	460.5
Mass (g)	88	91.2	94.4	97.5	100.7	103.9	107	110.2	113.3	116.5

Note) • Refer to page 338 for DIN rail.
• Refer to L1 dimension on pages 211 to 213, 225 to 227 and 235 to 237 for lengths that correspond to the number of manifold stations.

■ Cable assembly

AXT100-FC26- $\frac{1}{3}$



Connector Assembly for Flat Ribbon Cables

Cable length (L)	Ass'y part no.	Note
1.5m	AXT100-FC26-1	Cable 26 core x 28 AWG
3m	AXT100-FC26-2	
5m	AXT100-FC26-3	

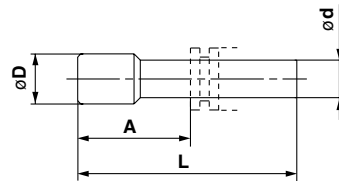
* For other commercial connectors, use a 26 pins with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

- Hirose Electric Company
- Japan Aviation Electronics Industry, Ltd.
- Sumitomo 3M Limited
- J.S.T. Mfg. Co., Ltd.
- Fujitsu Limited

■ Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
12	KQ2P-12	24	44.5	14
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10
3/8"	KQ2P-11	22	43	11.5

Manifold Option

How to Order Interface Regulator

Series SY3000

ARBY3000 - 05 - P - 2

Pressure gauge connection port

05	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Series SY5000

ARBY5000 - 00 - P - 2

Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Note In the case of Series ARBY3000 with a pressure gauge when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no. stations to avoid gauges from interfering from each others.

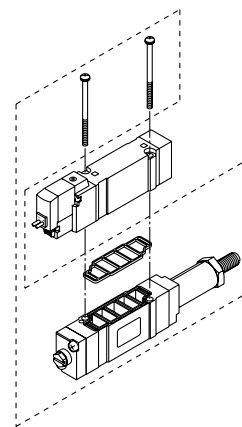
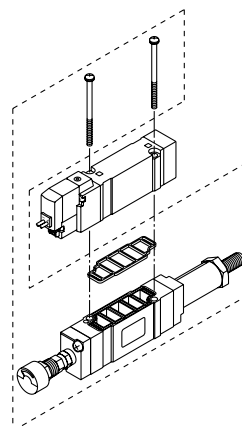
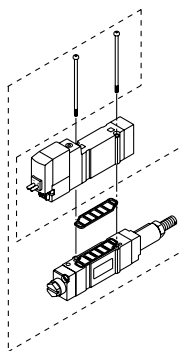
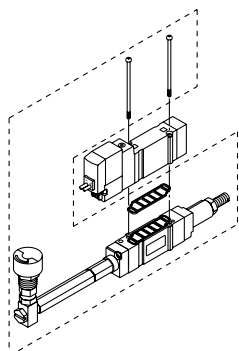
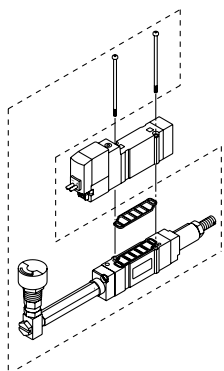
ARBY3000-05-□-2
(For odd number stations)

ARBY3000-06-□-2
(For even number stations)

ARBY3000-M1-□-2

ARBY5000-00-□-2

ARBY5000-M1-□-2



Note The M8 connector for wiring cannot be mounted for the ARBY3000 series.

Series SY7000

ARBY7000 - 00 - P - 2

Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

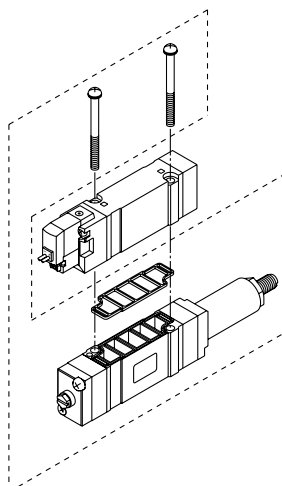
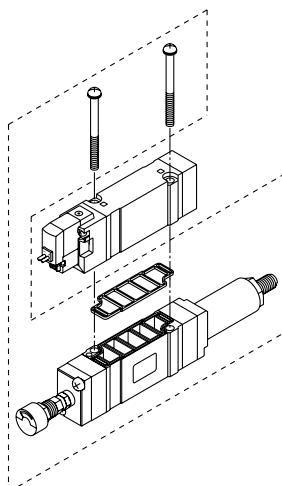
Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

Note ARBY is not CE compliant.

ARBY7000-00-□-2

ARBY7000-M1-□-2



Accessory

Series	Round head combination screw	Gasket
ARBY3000	SY3000-23-10 (M2 x 36)	SX3000-57-4
ARBY5000	M3 x 48.5, Matt nickel plated	SX5000-57-6
ARBY7000	M4 x 58, Matt nickel plated	SX7000-57-5

Caution

Mounting screw tightening torques

- M2: 0.16 N·m
- M3: 0.8 N·m
- M4: 1.4 N·m

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

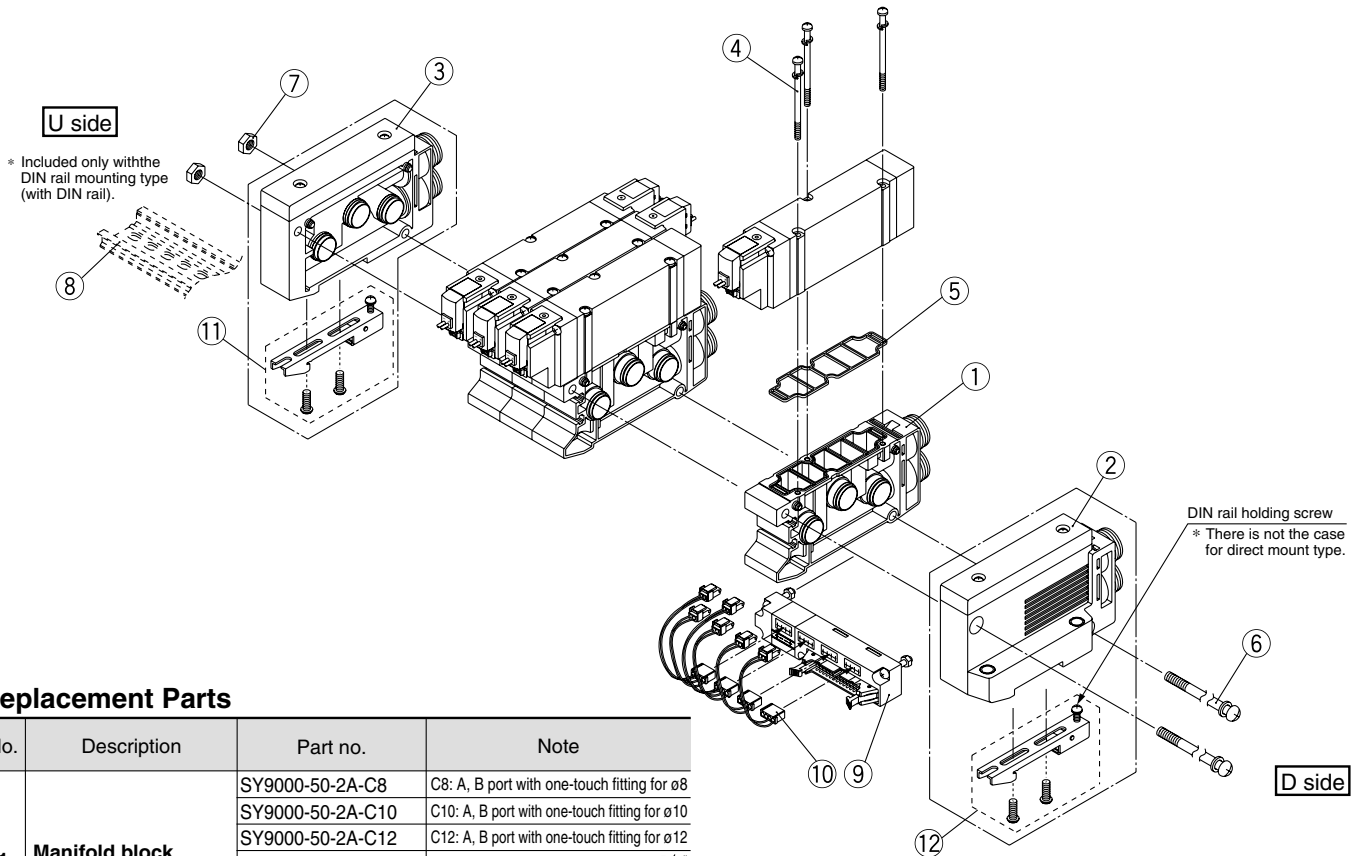
SQ

VFS

VFR

VQ7

Base Mounted Manifold Exploded View

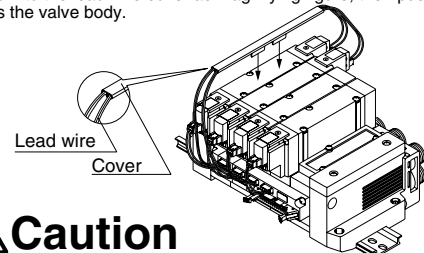


Replacement Parts

No.	Description	Part no.	Note
1	Manifold block assembly	SY9000-50-2A-C8	C8: A, B port with one-touch fitting for $\phi 8$
		SY9000-50-2A-C10	C10: A, B port with one-touch fitting for $\phi 10$
		SY9000-50-2A-C12	C12: A, B port with one-touch fitting for $\phi 12$
		SY9000-50-2A-N9	N9: A, B port with one-touch fitting for $\phi 5/16$ "
		SY9000-50-2A-N11	N11: A, B port with one-touch fitting for $\phi 3/8$ "
		SY9000-50-2A-O2*	O2: A, B port $1/4$ " (* thread type)
		SY9000-50-2A-O3*	O3: A, B port $3/8$ " (* thread type)
4	Round head combination screw	SY9000-18-2	M3 x 42, Matt nickel plated
5	Gasket	SY9000-11-2	
6	Tension bolt	SY9000-23-□	□ at the end of part number corresponds with the number of manifold station. Specify the same number as the number of stations.
7	Hexagon nut	SY9000-25-1	
8	DIN rail	VZ1000-11-4-□	Refer to page 240.
9	Wiring unit assembly	SY9000-36-□A	□ at the end of part number corresponds with the number of manifold station. Specify the same number as the number of stations (4 to 12 stations).
10	Connector assembly	SY9000-37-□□	Refer to page 223.
11	Lead wire cover	SY9000-41-1	
12	Clamp sub assembly	SY9000-30-1A	Included only with the DIN rail mounting type.

⑪ How to assemble lead wire cover

Lead wire cover is only usable for double solenoid valves. Lead wire is inserted into the lead wire cover as magnifying figure, then push it until it touches the valve body.



⚠ Caution

For type 43P (Flat cable manifold) of Series SY9000, the lead wire cover is attached for bundling the lead wires for each solenoid. In case such as adding double solenoid valve, etc., order separately lead wire cover as well.

② SUP/EXH block assembly no. (D side mounting)

- Direct mount type: **SY9000-70-**□□**A-**□□
- DIN rail mount type: **SY9000-72-**□□**A-**□□

• P, R port

C12	One-touch fitting for $\phi 12$
N11	One-touch fitting for $\phi 3/8$ "
00	Plug

• Specifications

1	Internal pilot type
3	External pilot type
4	Internal pilot / Built-in silencer type
5	External pilot / Built-in silencer type

③ SUP/EXH block assembly no. (U side mounting)

- Direct mount type: **SY9000-71-**□□**A-**□□
- DIN rail mount type: **SY9000-73-**□□**A-**□□

• P, R port

C12	One-touch fitting for $\phi 12$
N11	One-touch fitting for $\phi 3/8$ "
00	Plug

• Specifications

1	Internal pilot type
3	External pilot type
4	Internal pilot / Built-in silencer type
5	External pilot / Built-in silencer type

How to Increase Manifold Bases (Series SY9000 only) Manifold case can be added at any location.

When a type 43 manifold base is added, tension bolts as well as manifold block assembly will be required. Order the tension bolt suitable for the stations after a station was increased (decreased), since the length of a tension bolt differs by the number of stations. (For changing the number of stations for a type 43P manifold, wiring unit for the stations and lead assembly will be required.)

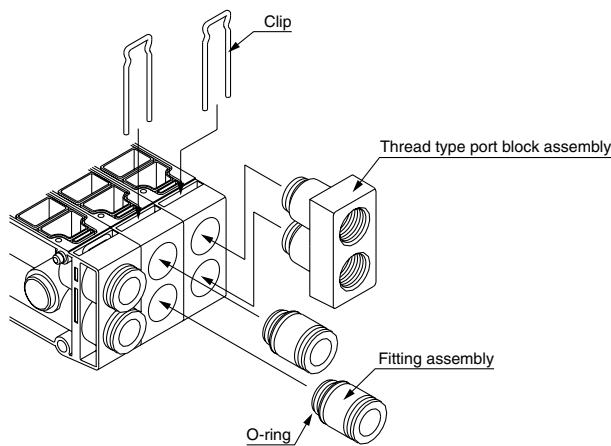
- 1 Loosen the tension bolts connecting the manifold base, and pull out both of 2 tension bolts.
(When equipped with a DIN rail, loosen one DIN rail holding screw on either U side or D side.)
- 2 Separate the blocks at the location where station expansion is desired.
- 3 Mount additional manifold block assembly.
- 4 Press block-to-block so that there's no gap. After connection, insert a tension bolt for desired stations and then tighten it.
⚠ Caution (Tightening torque: 2.9 N·m)
 (When equipped with a DIN rail, be sure to tighten the DIN rail holding screws after tightening the tension bolts. Tightening torque: 1.4 N·m)

⚠ Caution

1. Be sure to shut off the power and air supplies before disassembly. Furthermore, since air may remain inside the actuator, piping and manifold, confirm that the air is completely exhausted before performing any work.
2. When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate.
3. By adding wiring unit assembly to type 43 manifold, it can be changed to type 43P manifold, too.

How to Replace A, B Port Fitting Assembly

By replacing manifold block fitting assemblies or the threaded port block assembly of a type 43(P) manifold, the port size of the A and B ports can be changed. To replace these parts, remove the clip with a flat head screwdriver after the valve has been removed. Insert the fitting assemblies or threaded port block assembly, and then reinsert the clip so that it does not protrude from the manifold block.



Fitting Assembly Part No.

Port size	No.	Note
One-touch fitting assembly for ø8	VVQ4000-50B-C8	
One-touch fitting assembly for ø10	VVQ4000-50B-C10	
One-touch fitting assembly for ø12	VVQ4000-50B-C12	
One-touch fitting for ø 5/16"	VVQ4000-50B-N9	
One-touch fitting for ø 3/8"	VVQ4000-50B-N11	
1/4 threaded type port block assembly	SY9000-58A-02*	—* at the end of part number denotes the thread type.
3/8 threaded type port block assembly	SY9000-58A-03*	—* at the end of part number denotes the thread type.
Plug assembly	SY9000-62-1A	

Note 1) Be careful to avoid damage or contamination of O-rings, as this can cause air leakage.
 Note 2) Although replacing One-touch fittings of P, R port is also possible, use caution to the cases, etc. in which solenoid valves are often used at the same time by using the smaller sized fittings than the standard size (ø12). Because there may not be able to supply or exhaust air sufficiently in comparison with the valve performances. Besides, although fittings used for A, B port are the same, it is not possible to use the threaded type port block assembly.

SJ
 SY
 SV
 SYJ
 SZ
 VP4
 S0700
 VQ
 VQ4
 VQ5
 VQC
 VQZ
 SQ
 VFS
 VFR
 VQ7

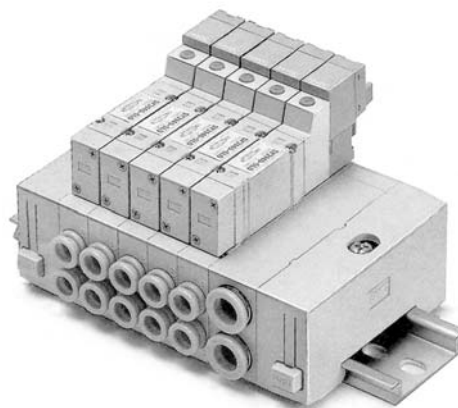
5/2, 5/3 пневмораспределитель Монтаж на плите кассетного типа

SY3000/5000

Низкое потребление энергии: 0.5 Вт

(при 21 мА, 24 В пост тока)

Низкое потребление энергии позволяет использовать контроллеры для прямого управления пневмораспределителем. Использование источника питания меньшей мощности экономит средства.



Тип с индивидуальным подводом электропитания

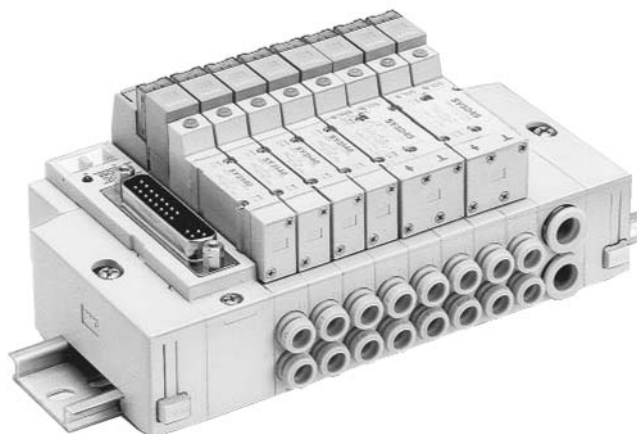
Специальное уплотнение

Новое уплотнение позволило повысить срок службы и качество работы распределителя. Сбои в работе по вине загрязнения магистрали сведены к минимуму. (уплотнение, устойчивое к озону поставляется по специальному заказу).

Срок службы превышает 50 миллионов циклов

Высокая пропускная способность и компактность

Пропускает в 3 раза больше воздуха, чем традиционные модели тех же размеров.


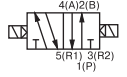
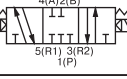
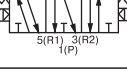


Тип с общим подводом электропитания

Быстро перенастраиваемая система за счет удобного монтажа

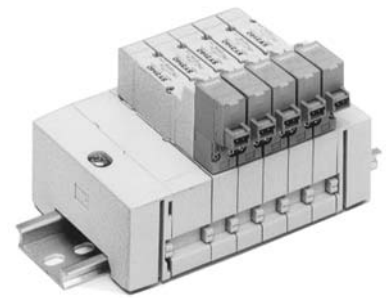
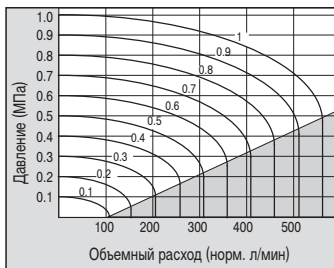
Пневмораспределители могут легко сниматься и закрепляться на плите кассетного типа, обеспечивая гибкость структуры пневмосистемы.

Исполнение

Конструктивное исполнение	Тип ⁴⁾	Принцип действия	Условное обозначение	Присоед. резьба А, В	Расход (л/мин) ¹⁾	Вес (г)	Напряжение питания ³⁾	Номер для заказа
Монтаж на DIN-рейке ²⁾	SY3140	5/2 с односторонним управлением		∅4, ∅6	255	51	24 V DC	SY3140-5LOU-Q
	SY5140			∅6, ∅8	687	59		SY5140-5LOU-Q
	SY3240	5/2 с двусторонним управлением		∅4, ∅6	255	69		SY3240-5LOU-Q
	SY5240			∅6, ∅8	687	77		SY5240-5LOU-Q
	SY3340	5/3 в среднем положении закрыт		∅4, ∅6	255	70		SY3340-5LOU-Q
	SY5340			∅6, ∅8	422	83		SY5340-5LOU-Q
SY3440	5/3 в среднем положении открыт		∅4, ∅6	255	70	SY3440-5LOU-Q		
SY5440			∅6, ∅8	422	83	SY5440-5LOU-Q		

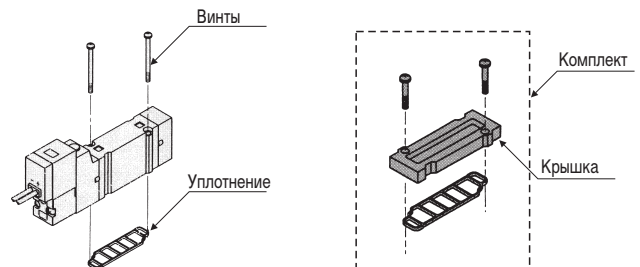
- 1) Данные по расходу при 5 секциях пневмораспределителей.
- 2) Технические характеристики см. стр. 67.
- 3) Для серии SY5000 возможно напряжение 220 V AC – по запросу.
- 4) 5/3 в среднем положении под давлением – по запросу.

Характеристики расхода



Принадлежности

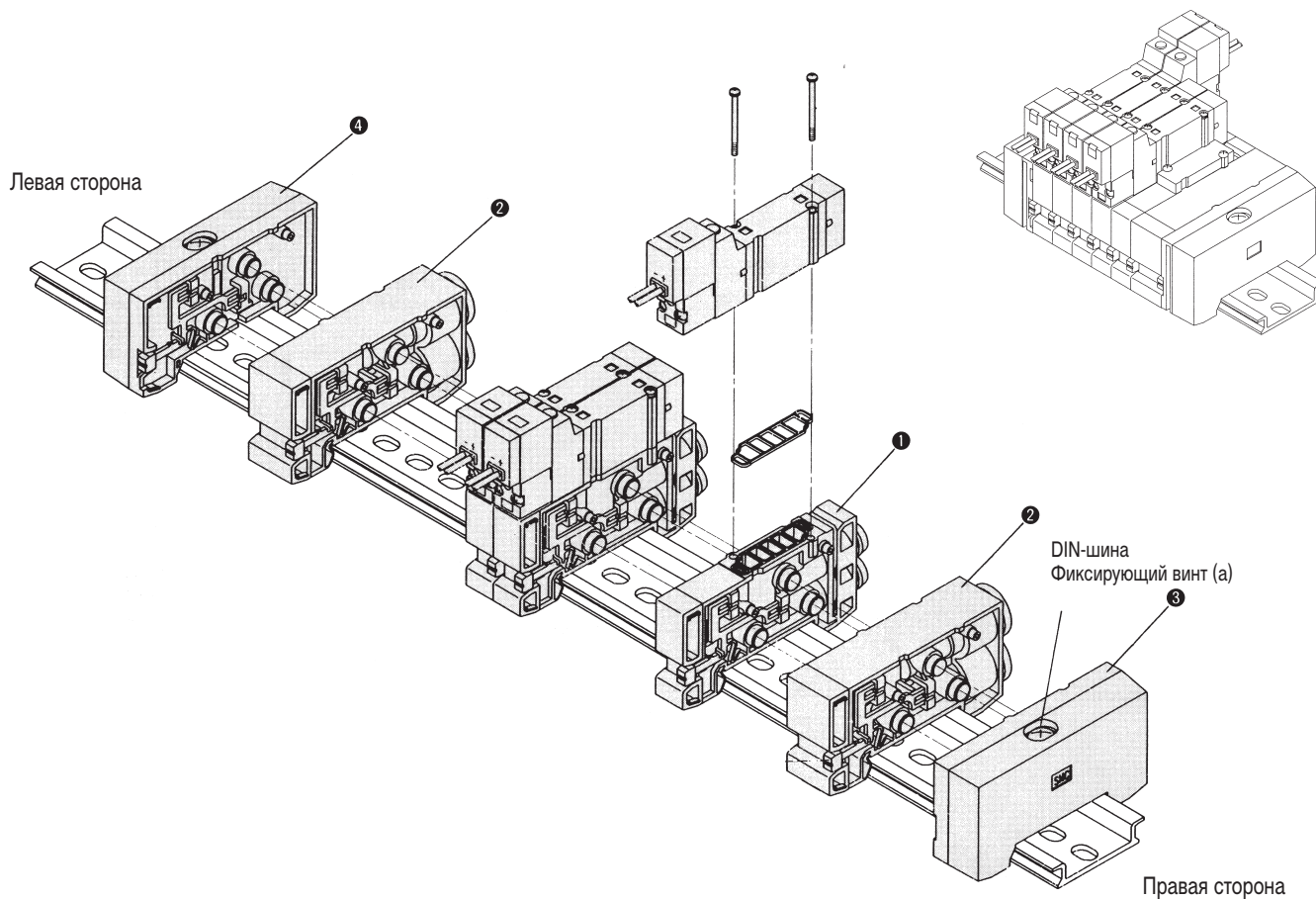
Обозначение	Тип	Номер для заказа
Уплотнение	SY3000	SY3000-11-14
	SY5000	SY5000-57-1
Крепежный винт	SY3000	SY3000-23-4
	SY5000	M3x26
Комплект, состоящий из крышки, уплотнения между пневмораспределителями и крепежных винтов	SY3000	SX3000-75-1A-Q
	SY5000	SX5000-76-1A-Q
Пневмоглушитель	SY3000	AN203-KM8
	SY5000	AN200-KM10



Ответные части разъемов см. стр. 71

5/2, 5/3 пневмораспределитель с электропневматическим управлением для монтажа на плате кассетного типа SY3000/SY5000

Спецификация



Поз.	Обозначение	Тип	Встроенное быстро-разъемное соединение	Номер для заказа
1	Индивидуальная плата пневмораспределителя *	SY3000	4	SX3000-50-1A-C4-Q
			6	SX3000-50-1A-C6-Q
		SY5000	6	SX5000-50-1A-C6-Q
			8	SX5000-50-1A-C8-Q
2	Секция подвода/отвода воздуха (деаэрация)	SY3000	8	SX3000-51-1A
		SY5000	10	SX5000-51-1A
3	Концевая плата правая	SY3000	–	SX3000-52-1A
		SY5000	–	SX5000-52-1A
4	Концевая плата левая	SY3000	–	SX3000-53-1A
		SY5000	–	SX5000-53-1A

* вкл. уплотнение SX3000-11-25, SX5000-11-14 соответственно

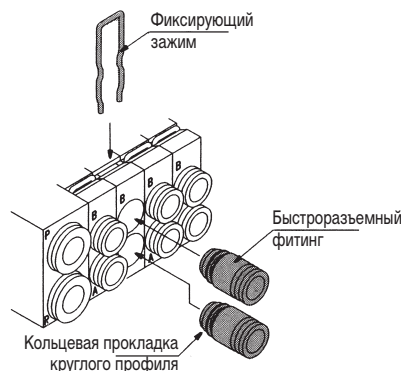
На каждую многосекционную присоединительную плату допускается макс. 20 секций.

Указание по монтажу см. на стр. 94

Принадлежности/данные по заказу

Сменный быстроразъемный фитинг для выходов А, В

Убедитесь, что в блок пневмораспределителей не подается сжатый воздух. Присутствие сжатого воздуха или неправильная установка могут привести к аварийным ситуациям. Металлический фиксирующий зажим извлечь посредством отвертки. Вытащить быстроразъемный фитинг из гнезда и установить фитинг другого размера. Металлический фиксирующий зажим вдавливать до тех пор, пока он не защелкнется и полностью не окажется утопленным в секции пневмораспределителя.



Быстроразъемный фитинг

Быстроразъемное соединение	Тип	Номер для заказа
∅4	SY3000	VVQ1000-50A-C4
∅6		VVQ1000-50A-C6
∅6	SY5000	VVQ1000-51A-C6
∅8		VVQ1000-51A-C8

Разделительная заглушка

для разделения каналов подвода/отвода (деаэрации) P/R

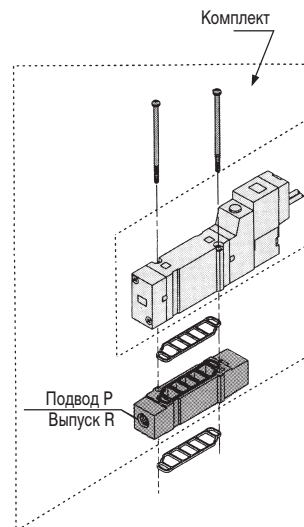
В случае работы с двумя различными давлениями с ее помощью может отсекается канал P или R.



Обозначение	Тип	Номер для заказа
Разделительная заглушка между индивидуальными секциями пневмораспределителей	SY3000	SX3000-77-1A
	SY5000	SX5000-77-1A

Индивидуальный подвод/выпуск воздуха

Обозначение	Тип	Присоединительная резьба	Размеры (дл. x шир. x выс.)	Номер для заказа
Индивидуальный выпуск воздуха с уплотнением и винтами	SY3000	M5 односторонний	46x10x11	SY3000-39-2A-Q
	SY5000	1/8 односторонний	84x15x15	SY5000-39-2A-Q
Индивидуальный подвод воздуха с уплотнением и винтами	SY3000	M5 односторонний	46x10x11	SY3000-38-2A-Q
	SY5000	1/8 односторонний	64x15x15	SY5000-38-2A-Q



Запасные части

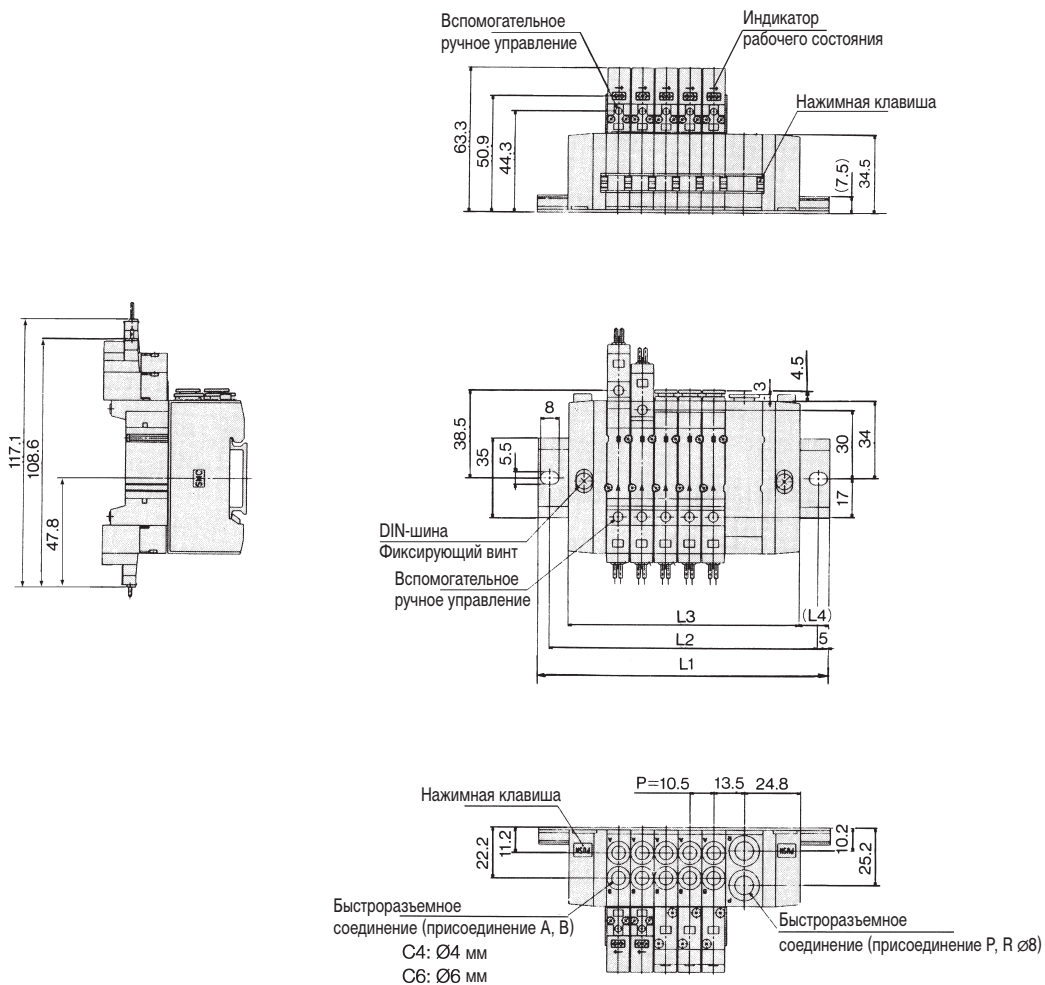
Обозначение	Тип	Номер для заказа
Запасной элемент включения с катушкой электромагнита 24 V DC	SY3000	V111-5LOU-Q
	SY5000	

5/2, 5/3 пневмораспределитель с электропневматическим управлением для монтажа на плате кассетного типа SY3000/SY5000

Размеры

Тип SY3000

Для 2 – 10 секций без дополнительной секции подвода/отвода



Количество секций	2	3	4	5	6	7	8	9	10
L1	98	110.5	123	135.5	148	148	160.5	173	185.5
L2	87.5	100	112.5	125	137.5	137.5	150	162.5	175
L3	70.5	81	91.5	102	112.5	123	133.5	144	154.5
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5
Вес (г)*	162	184	206	228	250	272	294	316	338

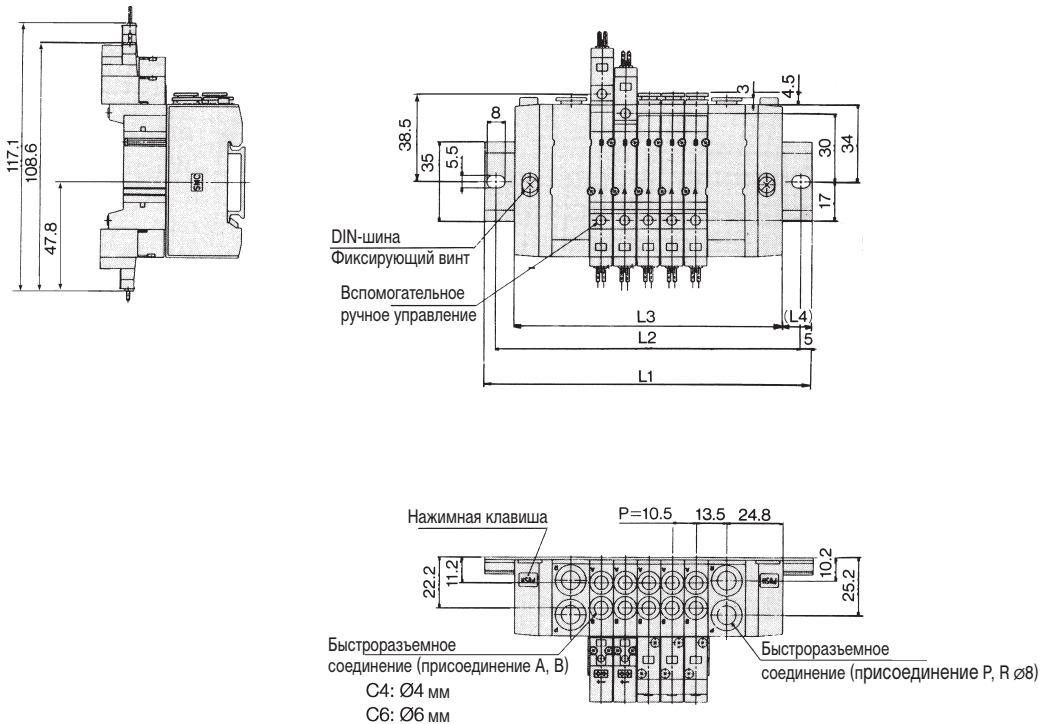
* Вес указан без учета пневмораспределителей

Размеры

Тип SY3000

Для 2 – 10 секций с дополнительной секцией подвода/отвода

Для поддержания требуемого рабочего давления рекомендуется, начиная с 10 секций, устанавливать не менее 1 дополнительной секции подвода/отвода.



Количество секций	2	3	4	5	6	7	8	9	10
L1	110.5	123	135.5	148	160.5	173	185.5	185.5	198
L2	100	112.5	125	137.5	150	162.5	175	175	187.5
L3	87	97.5	108	118.5	129	139.5	150	160.5	171
L4	11.5	12.5	13.5	14.5	15.5	16.5	17.5	12.5	13.5
Вес (г)*	184	206	228	250	272	294	316	338	360

Количество секций	11	12	13	14	15	16	17	18	19	20
L1	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5
L2	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	181.5	192	202.5	213	223.5	234	244.5	255	265.5	276
L4	14.5	15.5	16.5	17.5	12	13	14	15	16	17
Вес (г)*	382	404	426	448	470	492	514	536	558	580

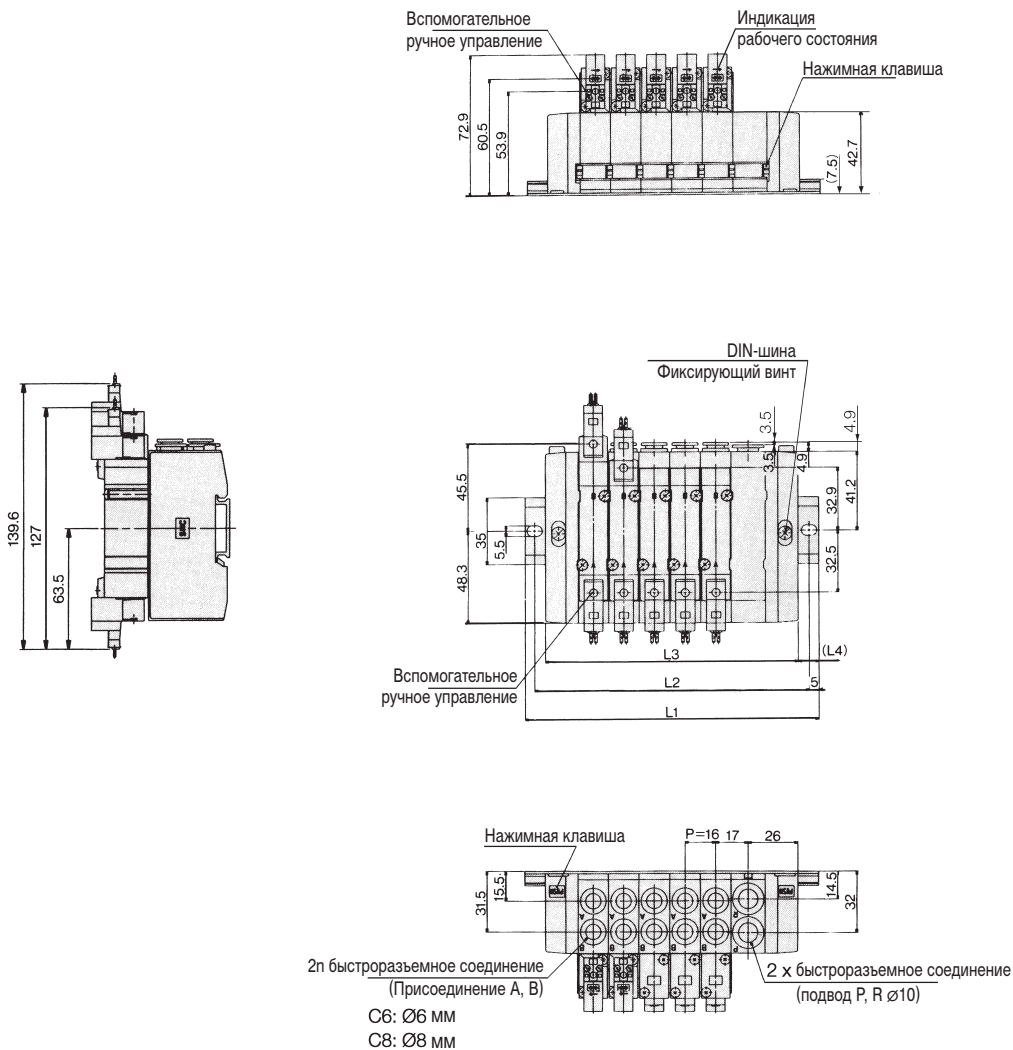
* Вес указан без учета пневмораспределителей

5/2, 5/3 пневмораспределитель с электропневматическим управлением для монтажа на плите кассетного типа SY3000/SY5000

Размеры

Тип SY5000

Для 2 – 10 секций без дополнительной секции подвода/отвода



Количество секций	2	3	4	5	6	7	8	9	10
L1	110.5	135.5	148	160.5	173	198	210.5	223	235.5
L2	100	125	137.5	150	162.5	187.5	200	212.5	225
L3	84	100	116	132	148	164	180	196	212
L4	13	17.5	16	14	12.5	17	15	13.5	11.5
Вес (г)*	250	297	344	391	438	485	532	579	626

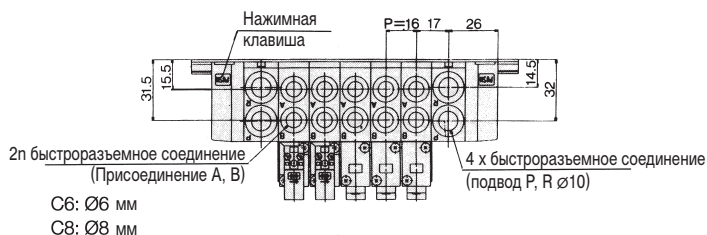
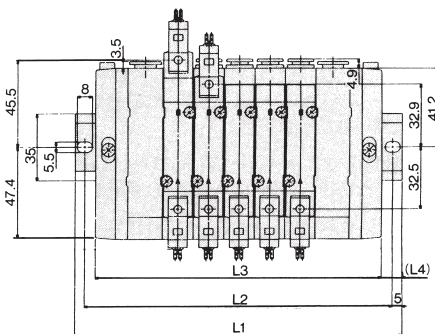
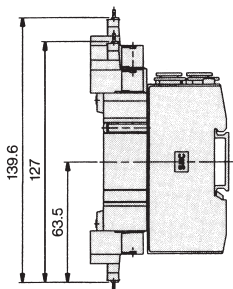
* Вес указан без учета пневмораспределителей

Размеры

Тип SY5000

Для 2 – 10 секций с дополнительной секцией подвода/отвода

Для поддержания требуемого рабочего давления мы рекомендуем, начиная с 10 секций, устанавливать не менее 1 дополнительной секции подвода/отвода.



C6: $\varnothing 6$ мм
C8: $\varnothing 8$ мм

Количество секций	2	3	4	5	6	7	8	9	10
L1	135.5	148	160.5	185.5	198	210.5	223	248	260.5
L2	125	137.5	150	175	187.5	200	212.5	237.5	250
L3	102	118	134	150	166	182	198	214	230
L4	16.5	15	13	17.5	16	14	12.5	17	15
Вес (г)*	284	331	378	425	472	519	566	613	660

Количество секций	11	12	13	14	15	16	17	18	19	20
L1	273	285.5	310.5	323	335.5	360.5	373	385.5	398	423
L2	262.5	275	300	312.5	325	350	362.5	375	387.5	412.5
L3	246	262	278	294	310	326	342	358	374	390
L4	13.5	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5
Вес (г)*	707	754	801	848	895	942	989	1036	1083	1130

* Вес указан без учета пневмораспределителей

5 Port Solenoid Valve Base Mounted Manifold Stacking Type/DIN Rail Mounted/Connector Box



Type **45-A-NA**

Series SY3000/5000

How to Order Manifold

SS5Y **3** -45- **A** **U** -05 **D** -C6- [] - []

Series

3	SY3000
5	SY5000

Specifications

Symbol	Specifications
A	With connector box (+COM spec.)
NA	With connector box (-COM spec.)



The style of attached lead wire assembly is different.

Connector box mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Applicable up to 16 solenoid valves.
:	:	
16	16 stations	

SUP/EXH block assembly mounting position

Symbol	Mounting position	Applicable stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 16 stations
M*	Special specifications	

* For special specifications, indicate separately by the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (Max. 20 stations)

A/B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø ⁵ / ₃₂ "	SY3000
N7	One-touch fitting for ø ¹ / ₄ "	
M	Mixed	
N3	One-touch fitting for ø ⁵ / ₃₂ "	SY5000
N7	One-touch fitting for ø ¹ / ₄ "	
N9	One-touch fitting for ø ⁵ / ₁₆ "	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

CE compliant

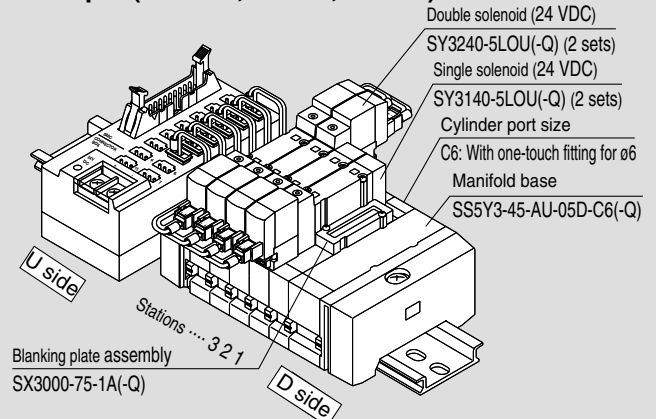
Nil	—
Q	CE compliant



Refer to pages 324 to 328 for external pilot specifications and built-in silencer.

How to Order Manifold Assembly (Example)

Example (SY3000, +COM, U side)



SS5Y3-45-AU-05D-C6 (-Q) ... 1 set (Type 45, 5-station manifold base part no.)
 * SX3000-75-1A (-Q) 1 set (Blanking plate assembly part no.)
 * SY3140-5LOU (-Q) 2 sets (Single solenoid part no.)
 * SY3240-5LOU (-Q) 2 sets (Double solenoid part no.)
 ↳ The asterisk denotes the symbol for assembly.
 Prefix it to the part nos. of the solenoid valve, etc.

The valve arrangement is numbered as the 1st. station from D side regardless of the mounting position of connector box. In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the manifold specification sheet to instruct us. SS5Y³-45-A^U-□□□□ is assembled with solenoid valve and lead wire assembly when shipping. When ordering manifold only (without valves/wires/options), refer to how to order on page 244 and list the connector box (VZ3000-106-1A) and the rail stopper (TXE1-SMC) below the manifold to allow for the connector box mounting at U side. (Be sure to order DIN rail 3 station longer than number of the manifold stations.) In this case, please note that dimensions, L1 and L2 on pages 260 and 261 may vary slightly.) For other components, refer to page 262.

How to Order Valve

SY **5** **2** 40-5 LOU [] - [] - []

Series

3	SY3000
5	SY5000

Rated voltage

5	24 VDC
---	--------

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Made to Order

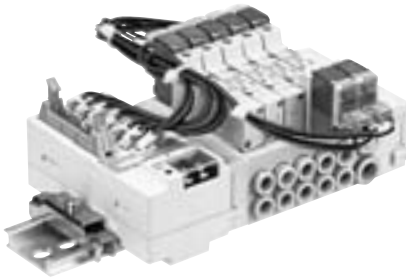
Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

CE compliant

Nil	—
Q	CE compliant



When ordering valve as a single unit, gaskets for the stacking base type are not included. Order them separately, if necessary. (Refer to page 262 for details.)



Manifold Specifications

Model	SS5Y3-45-A-NA-(Q)		SS5Y5-45-A-NA-(Q)	
Applicable valve	SY3□40		SY5□40	
Manifold type	Stacking type/DIN rail mounted			
P (SUP)/R (EXH)	Common SUP, Common EXH			
Valve stations	2 to 16 stations <small>Note 1, 2)</small>			
A, B port	Base			
Porting specifications	Location		Side	
	Direction			
Port size	P, R port		C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)	
	A, B port		C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	
Manifold base mass W (g)	2 to 10 stations: W = 26n + 207 11 to 20 stations: W = 26n + 229		2 to 10 stations: W = 52n + 245 11 to 16 stations: W = 52n + 279	
n: Stations				
Applicable flat ribbon cable connector	Flat ribbon cable connector Socket: 20 pins MIL type with strain relief conforming to MIL-C-83503			
Wiring specifications	+COM specifications (Type 45-A), -COM specifications (Type 45-NA)			

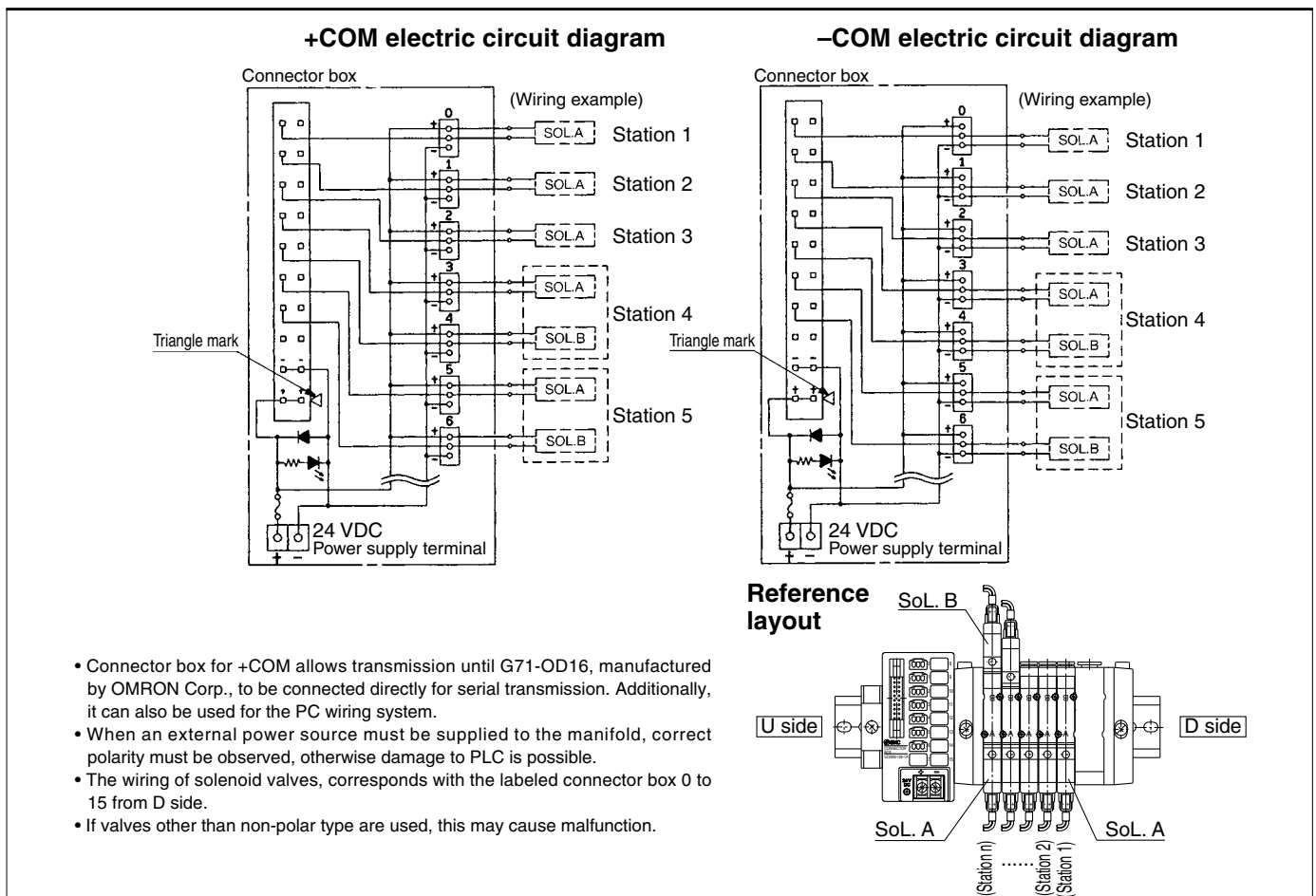
Note 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.
Note 2) There is a limit depending on the number of solenoids. Refer to "How to Order".

Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm ³ /(s·bar))	b	Cv	C (dm ³ /(s·bar))	b	Cv
SS5Y3-45-□	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45-□	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

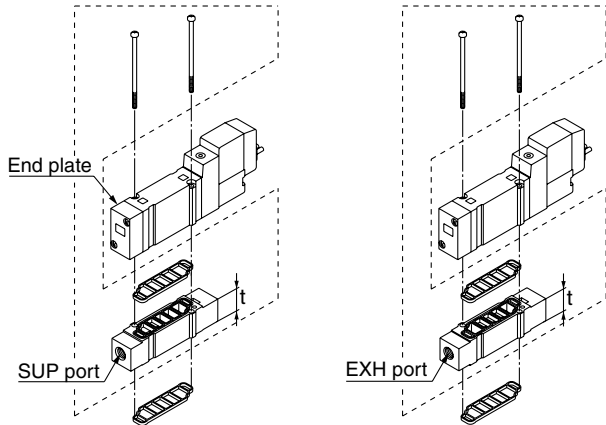
Manifold Wiring Diagram (Circuit diagram for the reference layout)



SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

Manifold Option

- Individual SUP spacer assembly
- Individual EXH spacer assembly



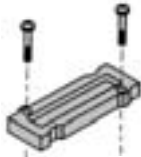
Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A(-Q)	M5 x 0.8	11
SY5000	SY5000-38-16+A(-Q)	1/8"	15

Note) The SUP port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A(-Q)	M5 x 0.8	11
SY5000	SY5000-39-16+A(-Q)	1/8"	15

Note) The EXH port may be either on the lead wire side or on the end plate side. (An assembly is shipped under the condition shown in the figure.)

- Blanking plate assembly



Series	Assembly part no.
SY3000	SX3000-75-1A(-Q)
SY5000	SX5000-76-5A(-Q)

* Thread type

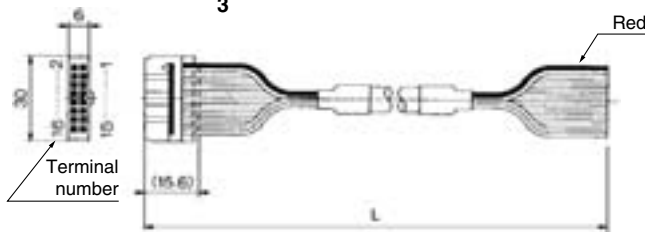
Nil	Rc
F	G
N	NPT
T	NPTF

Caution

Mounting screw tightening torques

M2: 0.16 N·m
M3: 0.8 N·m
M4: 1.4 N·m

- Cable assembly
AXT100-FC20-¹/₃



Connector Assembly for Flat Ribbon Cables

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-FC20-1	Cable 20 core x 22 AWG
3 m	AXT100-FC20-2	
5 m	AXT100-FC20-3	

Note) For other commercial connectors, use a 20 pins with strain relief conforming to MIL-C-83503.

Connector manufacturers' example

- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

Warning

When mounting a valve or spacer on the manifold base or sub-plate, etc., those mounting directions are determined. If mounted in the wrong direction, the equipment to be connected may cause malfunction. Refer to external dimensions, and then mount it.

- SUP blocking disk

By installing a SUP blocking disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.



Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

- EXH blocking disk

By installing an EXH blocking disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two blocking disks are needed to divide both exhausts.)



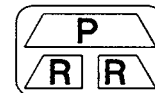
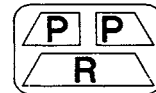
Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

- Label for block disk

The labels shown below are used on manifold stations containing SUP/EXH blocking disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

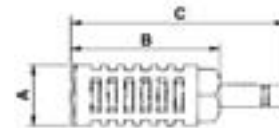
Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



Note) When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

- Silencer with One-touch fitting

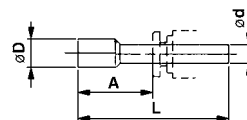
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm ²	ø16	26	51
For SY5000 (ø10)	AN200-KM10	26 mm ²	ø22	53.8	80.8
	AN300-KM10	30 mm ²	ø25	70	97

- Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

Manifold Option

▪How to Order Interface regulator (SY3000, 5000 only)

Series SY3000

ARBY3000 - 05 - P - 2

• **Regulating port**

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

• **Pressure gauge connection port**

05	Pressure gauge (G15-10-01) [for odd number station]
06	Pressure gauge (G15-10-01) [for even number station]
M1	Plug (M-5P)



* In the case of Series ARBY3000 with a pressure gauge when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no. stations to avoid gauges from interfering from each others.

Series SY5000

ARBY5000 - 00 - P - 2

• **Regulating port**

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

• **Pressure gauge connection port**

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

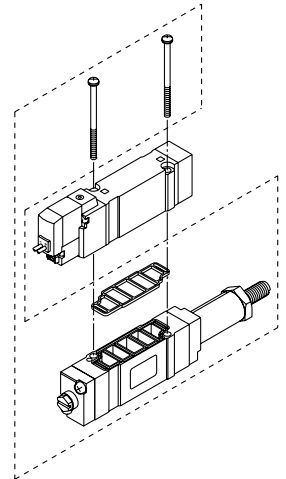
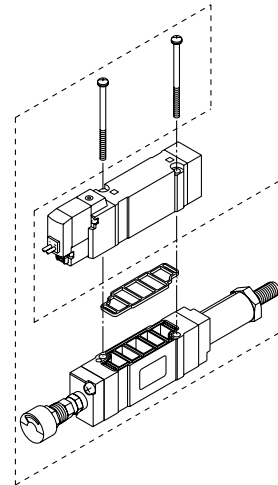
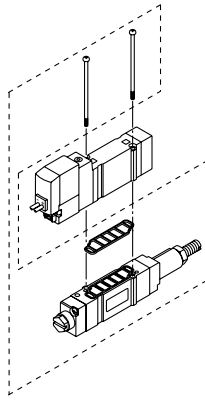
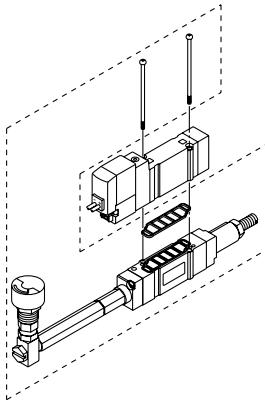
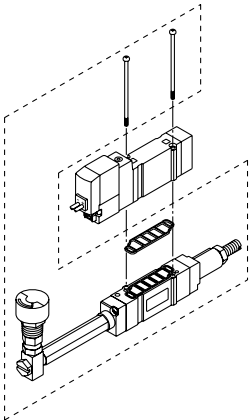
ARBY3000-05-□-2
(For odd number stations)

ARBY3000-06-□-2
(For even number stations)

ARBY3000-M1-□-2

ARBY5000-00-□-2

ARBY5000-M1-□-2



Note) ARBY is not CE-compliant.

Accessory

Series	Round head combination screw	Gasket
ARBY3000	SY3000-23-10 (M2 x 36)	SX3000-57-4
ARBY5000	M3 x 48.5, Matt nickel plated	SX5000-57-6

⚠ Caution

Mounting screw tightening torques

M2: 0.16 N·m

M3: 0.8 N·m

SJ

SY

SV

SYJ

SZ

VP4

S0700

VQ

VQ4

VQ5

VQC

VQZ

SQ

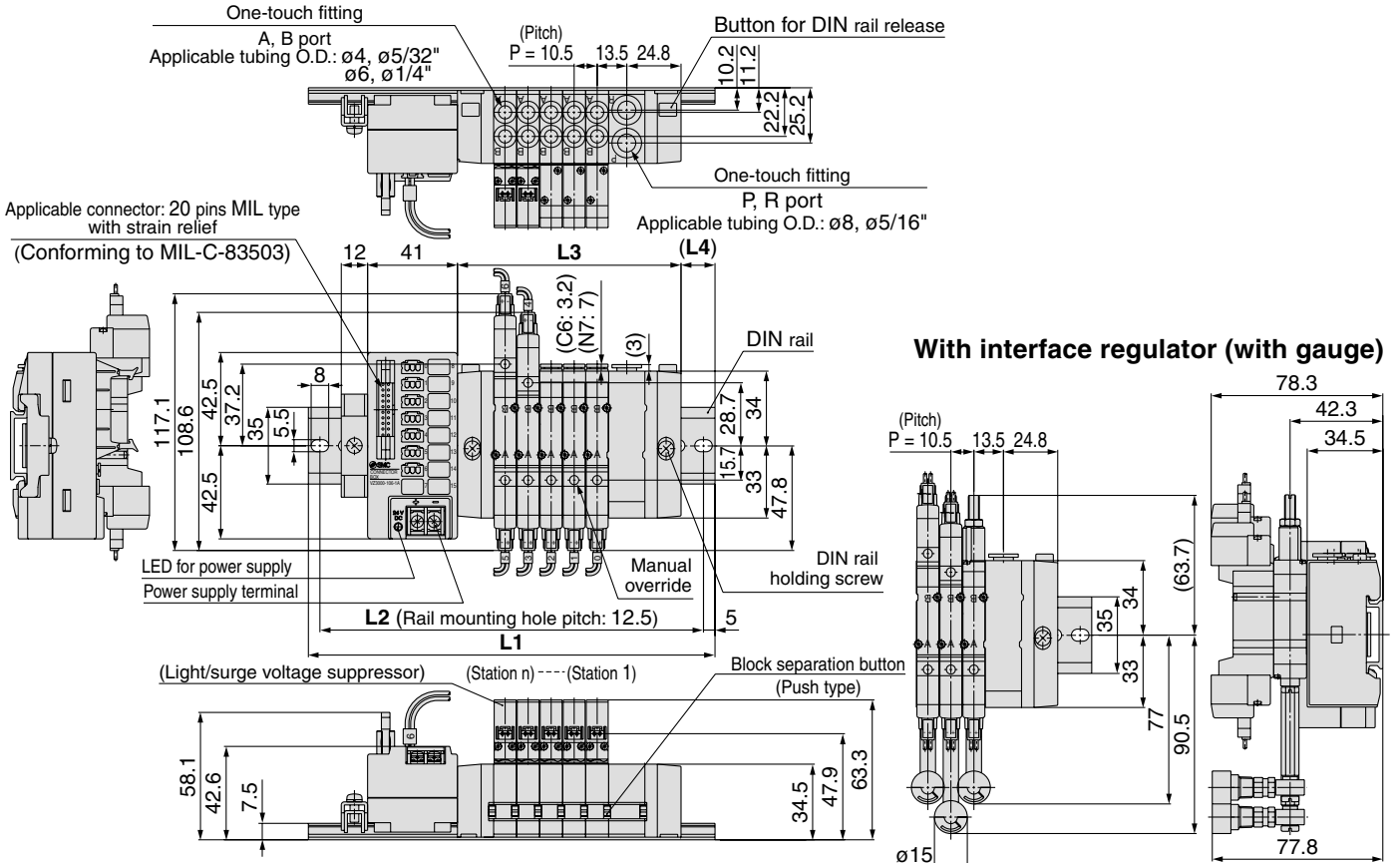
VFS

VFR

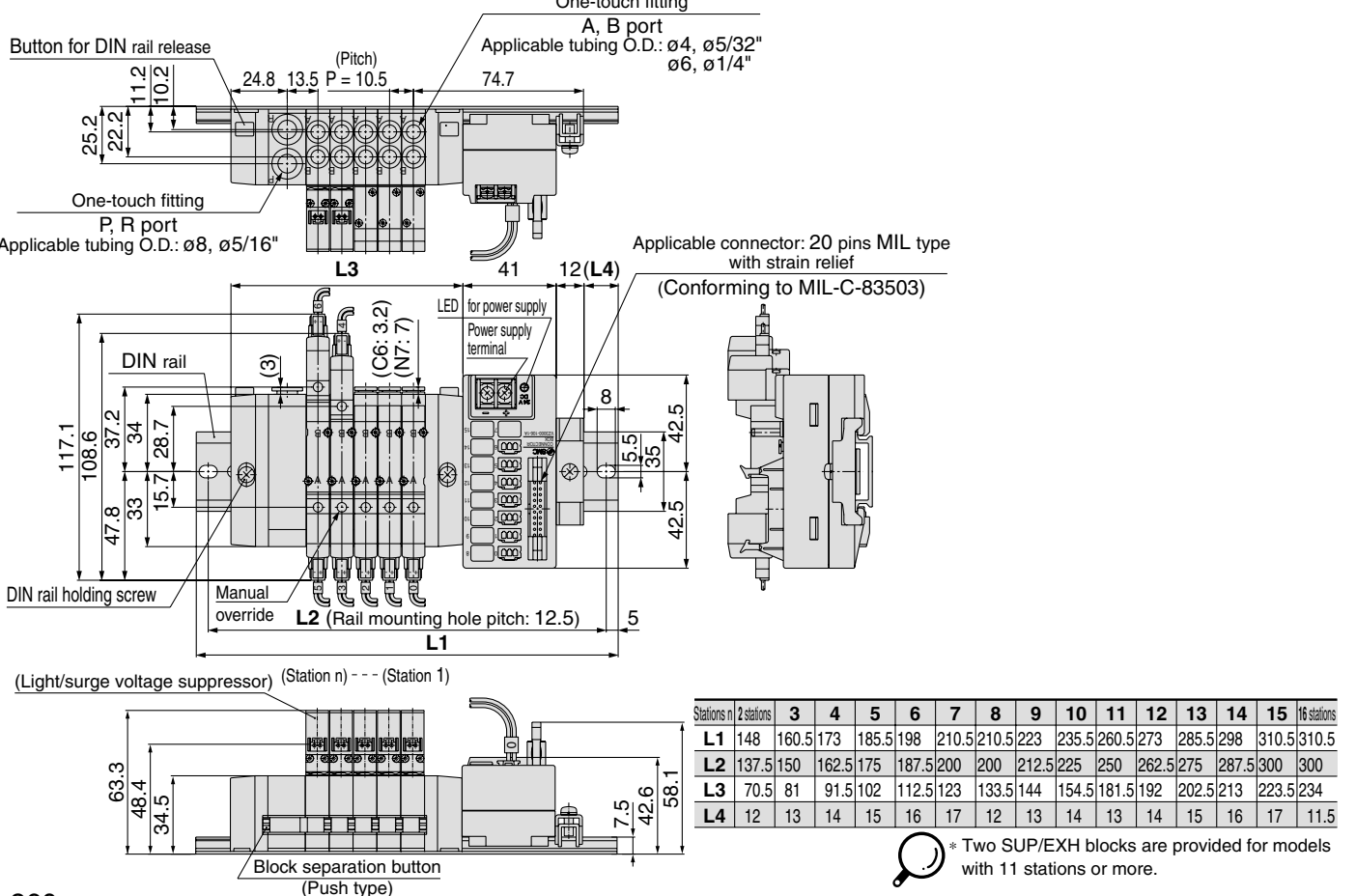
VQ7

Dimensions: Series SY3000

SS5Y3-45-AU- Stations D- C4, N3 C6, N7

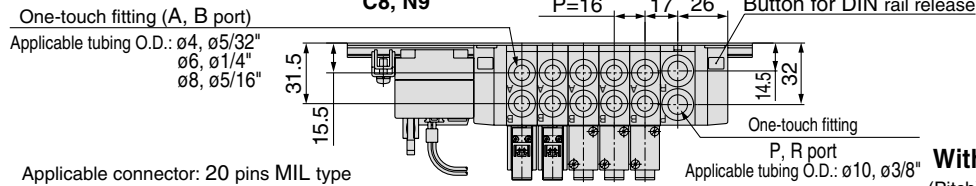


SS5Y3-45-AD- Stations U- C4, N3 C6, N7

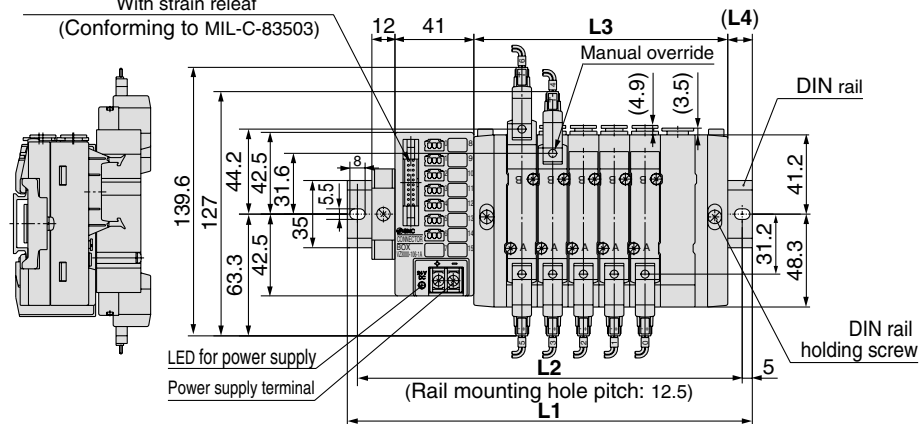


Dimensions: Series SY5000

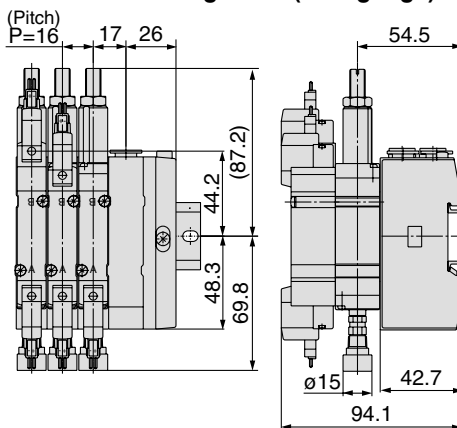
SS5Y5-45-AU- Stations D- C4, N3
C6, N7
C8, N9



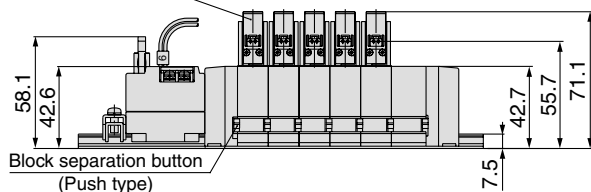
Applicable connector: 20 pins MIL type
With strain relief
(Conforming to MIL-C-83503)



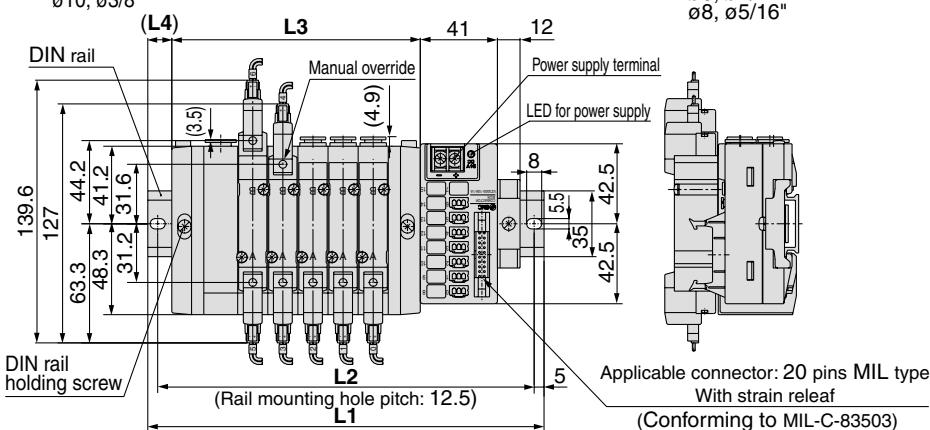
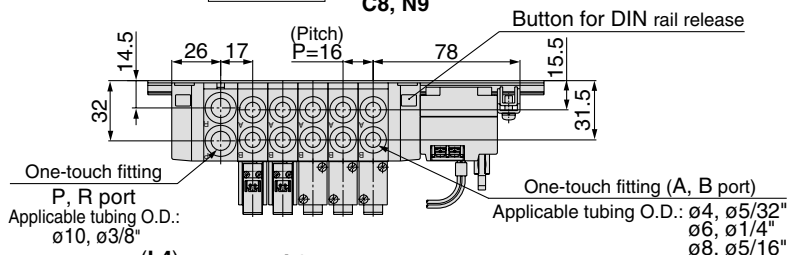
With interface regulator (with gauge)



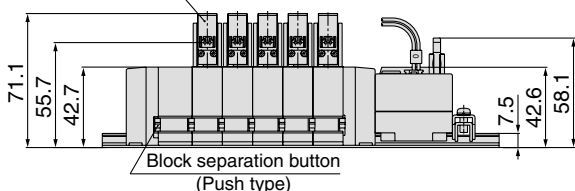
(Light/surge voltage suppressor) (Station n) - - - - (Station 1)



SS5Y5-45-AD- Stations U- C4, N3
C6, N7
C8, N9



(Light/surge voltage suppressor) (Station n) - - - (Station 1)



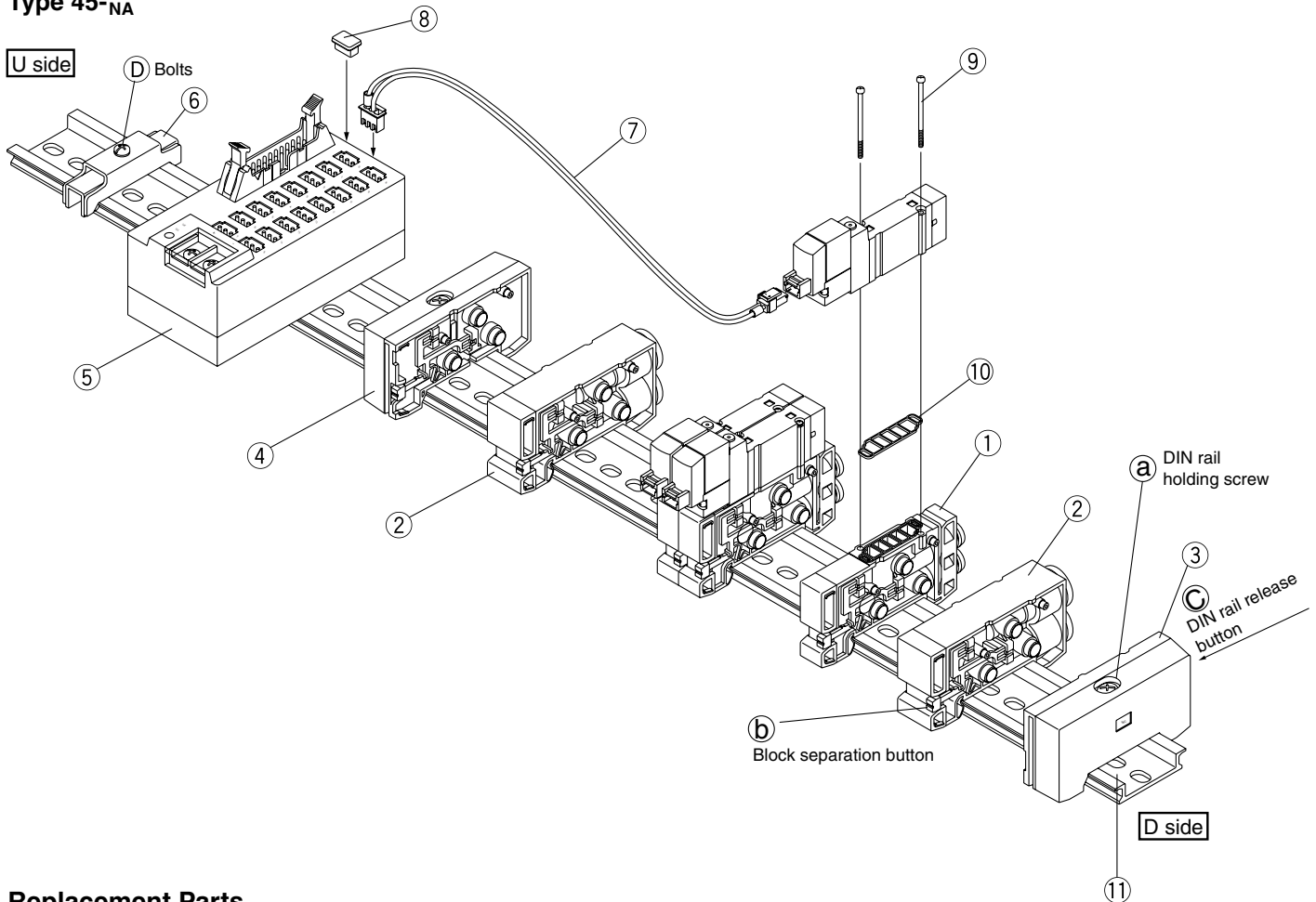
Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	160.5	185.5	198	210.5	235.5	248	260.5	273	298	323	348	360.5	373	398	410.5
L2	150	175	187.5	200	225	237.5	250	262.5	287.5	312.5	337.5	350	362.5	387.5	400
L3	84	100	116	132	148	164	180	196	212	246	262	278	294	310	326
L4	11.5	16	14.5	12.5	17	15.5	13.5	12	16.5	12	16.5	14.5	13	17.5	15.5

* Two SUP/EXH blocks are provided for models with 11 stations or more.

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

DIN Rail Manifold Exploded View

Type 45-^ANA



Replacement Parts

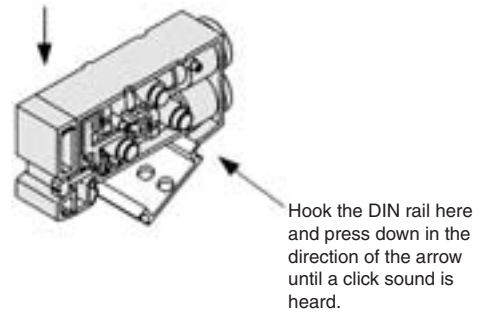
No.	Description	Part no.		Note
		SY3000	SY5000	
1	Manifold block assembly	SX3000-50-1A-□□(-Q)	SX5000-50-1A-□□(-Q)	<ul style="list-style-type: none"> •SY3000 (Metric size) (Inch size) C4: With one-touch fitting for ø4 N3: With one-touch fitting for ø5/32" C6: With one-touch fitting for ø6 N7: With one-touch fitting for ø1/4" •SY5000 (Metric size) (Inch size) C4: With one-touch fitting for ø4 N3: With one-touch fitting for ø5/32" C6: With one-touch fitting for ø6 N7: With one-touch fitting for ø1/4" C8: With one-touch fitting for ø8 N9: With one-touch fitting for ø5/16" (Gasket 10 is supplied as an accessory.)
2	SUP/EXH block assembly	(Metric size) SX3000-51-1A (Inch size) SX3000-51-15A	(Metric size) SX3000-51-1A (Inch size) SX5000-51-15A	P, R port SY3000 (Metric size) With one-touch fitting for ø8 (Inch size) With one-touch fitting for ø5/16" P, R port SY5000 (Metric size) With one-touch fitting for ø10 (Inch size) With one-touch fitting for ø3/8"
3	End block assembly R	SX3000-52-1A(-Q)	SX5000-52-1A(-Q)	For D side
4	End block assembly L	SX3000-53-1A(-Q)	SX5000-53-1A(-Q)	For U side
5	Connector box	VZ3000-106-1A		For 24 VDC only
6	Rail stopper	TXE1-SMC		Made by Kasuga Electric Works
7	Connecter assembly	SY3000-43-1A-□	SY3000-43-2A-□	+COM Type D, 2 to 8 stations Type U, 9 to 16 stations
		SY3000-43-2A-□	SY3000-43-3A-□	+COM Type D, 9 to 16 stations Type U, 2 to 8 stations
		SY3000-43-1NA-□	SY3000-43-2NA-□	-COM Type D, 2 to 8 stations Type U, 9 to 16 stations
		SY3000-43-2NA-□	SY3000-43-3NA-□	-COM Type D, 9 to 16 stations Type U, 2 to 8 stations
8	Dust cap	VZ3000-63-2		
9	Round head combination screw	SY3000-23-4	M3 x 26, Matt nickel plated	
10	Gasket	SX3000-57-4	SX5000-57-6	
11	DIN rail	VZ1000-11-1-□		Refer to page 247.

How to Increase Manifold Bases

Station expansion is possible at any position.

- 1 Loosen DIN rail holding screw (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons (c), at two locations, separate the manifold base from the DIN rail.)
- 2 Press manifold block assembly dividing button (b), that are at the location where manifold bases are to be added, until button (b) locks, and then separate the block assemblies.
- 3 Mount additional manifold block assembly on the DIN rail as shown in the figure 1.
- 4 Press the block assemblies until a click sound is produced, and tighten the DIN rail holding screw (a) to fix them to the DIN rail.
⚠Caution (Tightening torque: 1.4 N·m)
 (While lightly holding the blocks after fixing an end block on one side, tighten the other end block for for better sealing.)
- 5 Untighten the rail stopper bolt (d) to demount the connector box from the DIN rail, and when remounting it, tighten the bolt while pressing it against the rail.

Fig. (1) Block mounting procedure



⚠Caution

- Note 1) When there are 10 or fewer manifold block assemblies, and more are added to make a total of 11 or more, a supply/exhaust block assembly must also be added.
- Note 2) When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate. Before supplying air, confirm that there are no gaps, etc. between blocks, and that manifold blocks are securely fastened to the DIN rail. Then supply air and confirm that there is no air leakage before operating.
- Note 3) One connector assembly is necessary for one solenoid.
 When a number is necessary for the connector assembly mark tube, suffix the number to the part no. (0 to 15 are provided as mark tube numbers.)
 Ex) +COM spec.: D type for 2 to 8 stations: No. 10
SY3000-43-1A-10

How to Change Fitting Assembly

Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly.
 After removing the valve, remove the clip with a screwdriver, etc. For mounting a new fitting assembly, insert it and then insert a clip until it will not come out of the manifold block.

Fitting Assembly Part No.

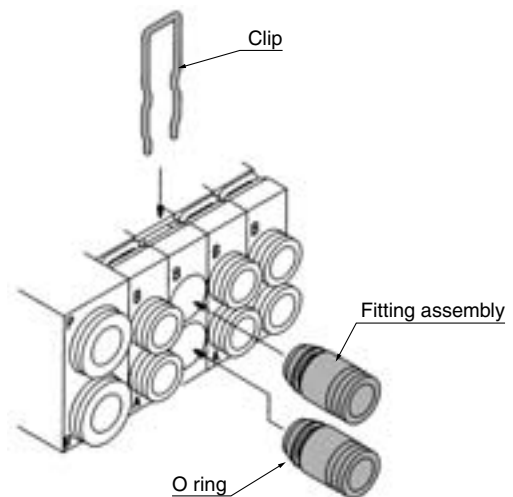
Metric size

SY3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SY5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8

Inch size

SY3000	One-touch fitting for ø ⁵ / ₃₂ "	VVQ1000-50A-N3
	One-touch fitting for ø ¹ / ₄ "	VVQ1000-50A-N7
SY5000	One-touch fitting for ø ⁵ / ₃₂ "	VVQ1000-51A-N3
	One-touch fitting for ø ¹ / ₄ "	VVQ1000-51A-N7
	One-touch fitting for ø ⁵ / ₁₆ "	VVQ1000-51A-N9

- ⦿ Note 1) P and R ports cannot be changed.
 Note 2) Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.



- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

EX510 Gateway System Serial Transmission System Base Mounted Manifold/Stacking Type [Option]

Series SY3000/5000



Type **45S6A**

How to Order Manifold

SS5Y 3 - 45S6A [] U - 02 U [] - C4 - [] - []

Manifold series

3	SY3000
5	SY5000

SI unit

Nil	NPN output (+COM.)
N	PNP output (-COM.)

SI unit mounting position

U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Double wiring ^{Note 1)}
:	:	
08	8 stations	Specified layout ^{Note 2)} (Compatible with 16 solenoid valves)
02	2 stations	
:	:	
16	16 stations	

- The number of the blanking plate assembly is also included.
- Note 1) Double wiring: Use of a single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.
- Note 2) Specified layout: Indicate wiring specifications on the manifold specification sheet. (Note that double and 3 position valves cannot be used where single solenoid wiring has been specified.)

CE compliant

Nil	—
Q	CE compliant

Option

When a DIN rail that is longer than the specified stations is desired, specify the required station number. (Max. 20 stations)

A, B port size

One-touch fitting (Metric size)

Symbol	One-touch fitting	Series
C4	One-touch fitting for $\phi 4$	SY3000
C6	One-touch fitting for $\phi 6$	
M	Mixed	SY5000
C4	One-touch fitting for $\phi 4$	
C6	One-touch fitting for $\phi 6$	
C8	One-touch fitting for $\phi 8$	
M	Mixed	

One-touch fitting (Inch size)

Symbol	One-touch fitting	Series
N3	One-touch fitting for $\phi 5/32$ "	SY3000
N7	One-touch fitting for $\phi 1/4$ "	
M	Mixed	SY5000
N3	One-touch fitting for $\phi 5/32$ "	
N7	One-touch fitting for $\phi 1/4$ "	
N9	One-touch fitting for $\phi 5/16$ "	
M	Mixed	

For the mixed specification, indicate separately on a manifold specification sheet.

Pilot specifications

Nil	Internal pilot
S	Internal pilot/built-in silencer
R	External pilot
RS	External pilot/built-in silencer

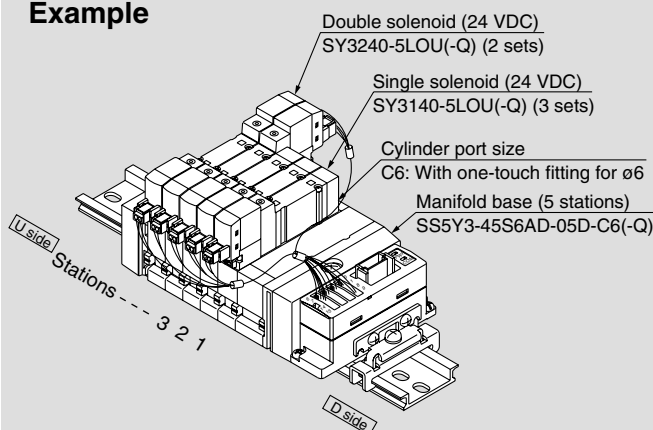
SUP/EXH block assembly mounting position

U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 16 stations
M	Special specifications*	

*For the special specifications, indicate separately on a manifold specification sheet.

How to Order Manifold Assembly (Order Example)

Example



SS5Y3-45S6AD-05D-C6 (-Q) .. 1 set (45S6A type 5-station manifold part no.)
 *SY3140-5LOU (-Q) 3 sets (Single solenoid part no.)
 *SY3240-5LOU (-Q) 2 sets (Double solenoid part no.)

The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.

Add the valve and option part number under the manifold base part number. When entry of part numbers becomes complicated, indicate by the manifold specification sheet. For a manifold for an EX510, the length of the lead wire for a connector assembly depends on the number of stations. Therefore, the manifold assembly is shipped with the valves (including blanking plates) and connector assembly mounted on it, as the standard specification. Be sure to specify the part nos. of the solenoid valves to be mounted.

SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S001	P.1715 to 1717
N	PNP output (-COM.)	EX510-S101	

For details of "Gateway System Serial Transmission System, Series EX510", refer to pages 1696 through to 1724.



How to Order Valves

SY 3 1 40 [] - 5 LO Z [] - [] - []

Series

3	SY3000
5	SY5000

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Pilot specifications

Nil	Internal pilot
R	External pilot

Rated voltage: 24 VDC

CE compliant

Nil	—
Q	CE compliant

Made to Order


Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/surge voltage suppressor

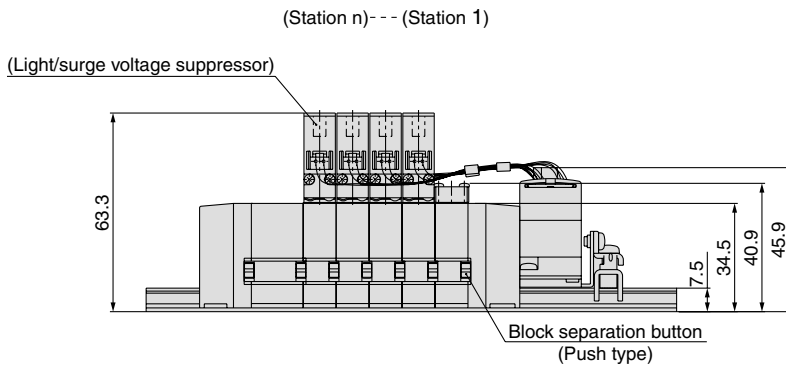
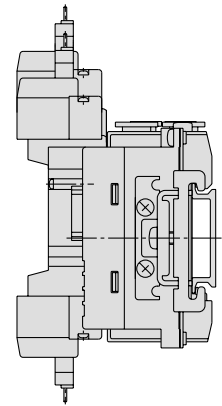
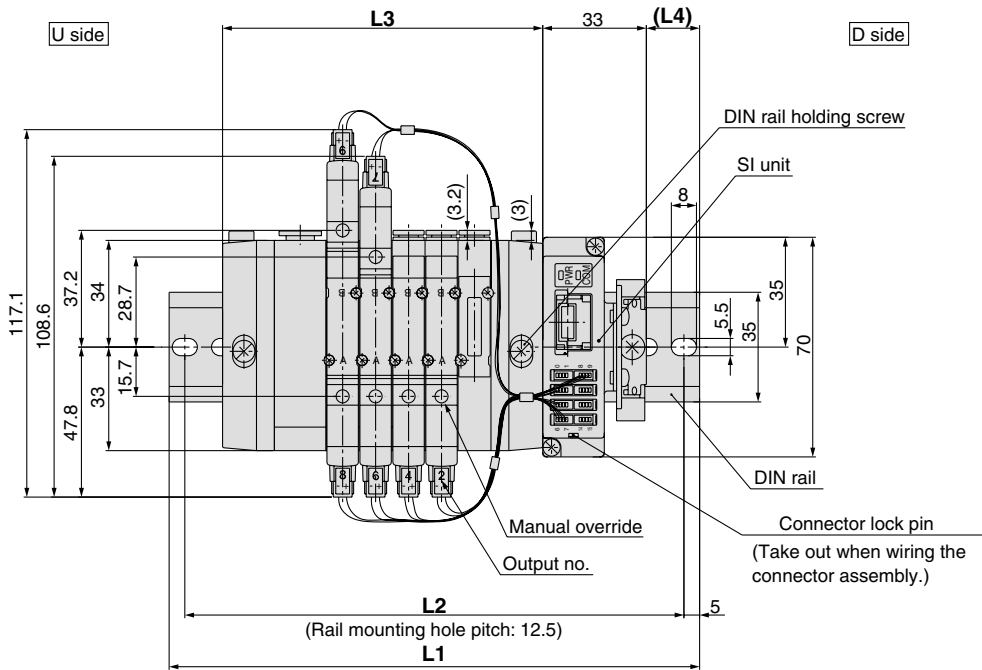
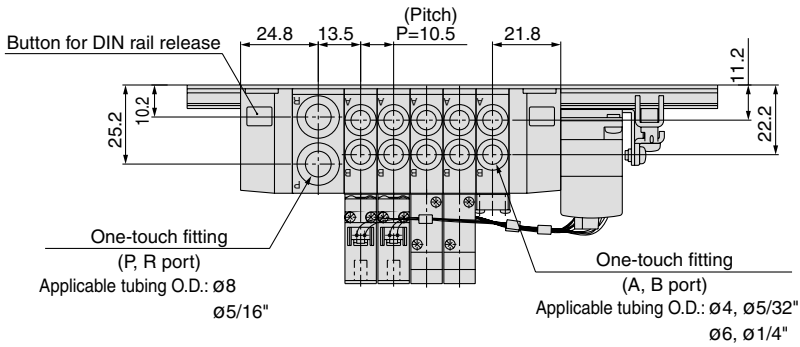
Z	With light/surge voltage suppressor
U	Without light/surge voltage suppressor (non-polar type)

 When ordering valve as a single unit, gaskets for the stacking base type are not included. Order them separately, if necessary. (Refer to page 262 for details.)

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Type **45S6A** Series **SY3000/5000**

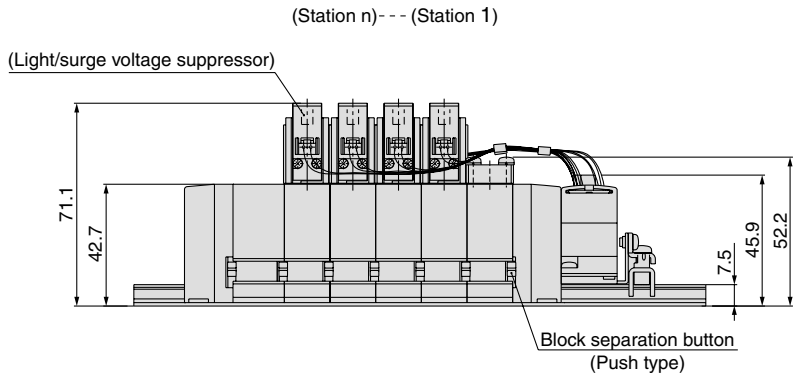
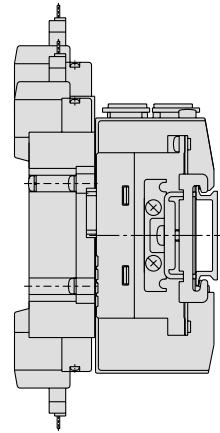
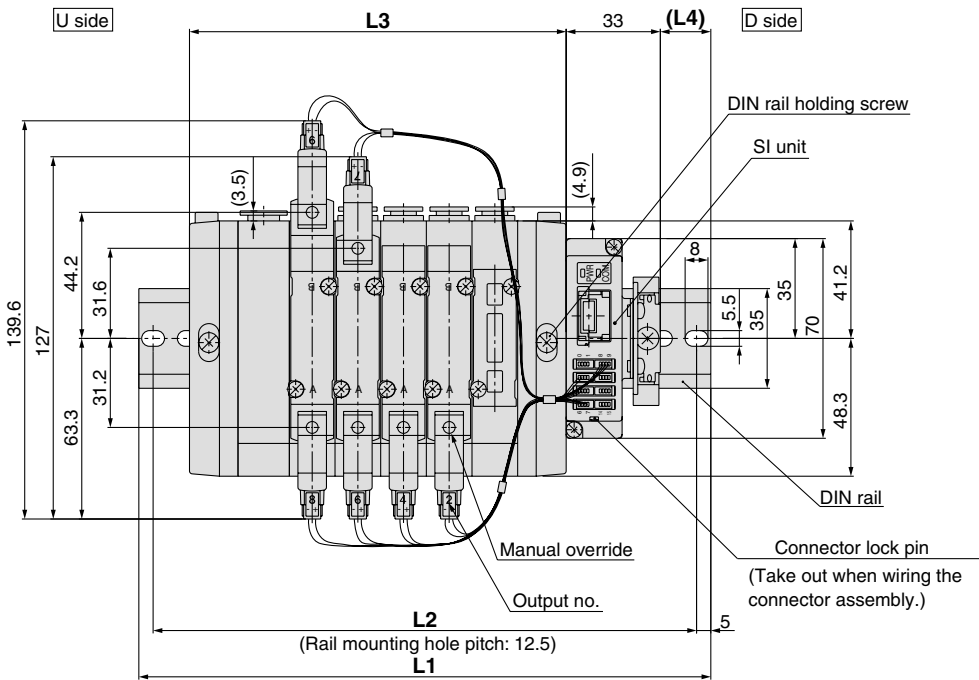
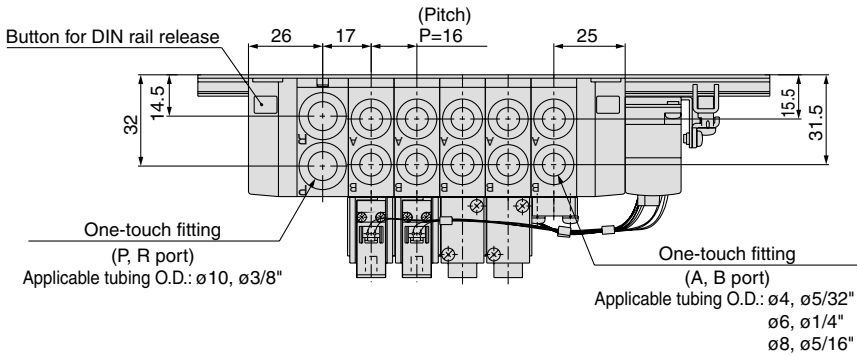
SY3000: SS5Y3-45S6A **D- Stations** **U-** C4, N3
C6, N7



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	148	160.5	173	185.5	198	210.5	223
L2	125	137.5	137.5	150	162.5	175	187.5	200	212.5
L3	70.5	81	91.5	102	112.5	123	133.5	144	154.5
L4	16	17	12	13	14	15	16	17	18

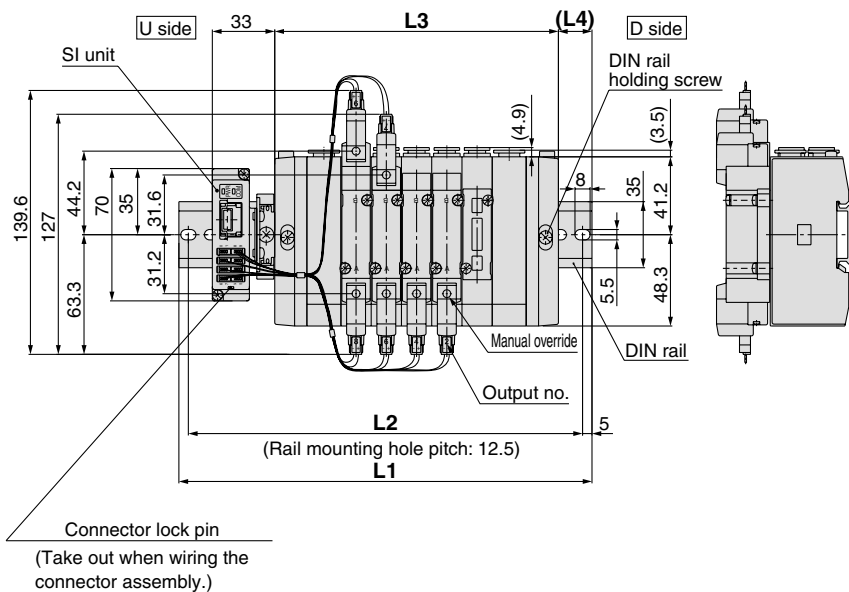
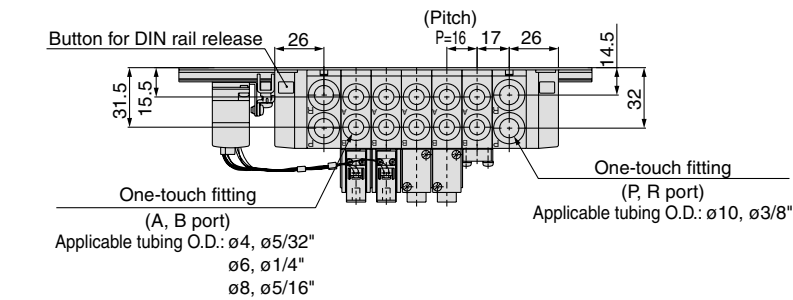
Type **45S6A** Series **SY3000/5000**

SY5000: SS5Y5-45S6A **D- Stations** **U-** C4, N3
C6, N7
C8, N9

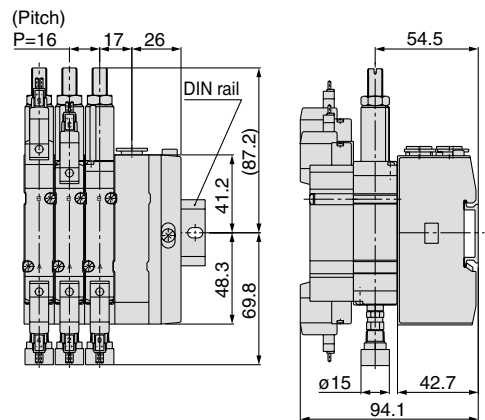


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	160.5	173	198	210.5	223	248	260.5	273
L2	137.5	150	162.5	187.5	200	212.5	237.5	250	262.5
L3	84	100	116	132	148	164	180	196	212
L4	15.5	14	12	16.5	15	13	17.5	16	14

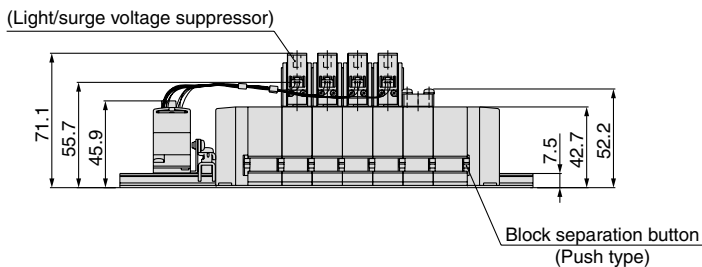
SY5000: SS5Y5-45S6A **U- Stations** **B-** C4, N3
C6, N7
C8, N9



With interface regulator (with gauge)



(Station n) --- (Station 1)

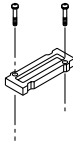


Stations n	2 stations	3	4	5	6	7	8	9	10	11	12	13	14	15	16 stations
L1	160.5	185.5	198	210.5	223	248	260.5	273	298	310.5	323	335.5	360.5	373	385.5
L2	150	175	187.5	200	212.5	237.5	250	262.5	287.5	300	312.5	325	350	362.5	375
L3	102	118	134	150	166	182	198	214	230	246	262	278	294	310	326
L4	13	17.5	15.5	14	12	16.5	15	13	17.5	16	14	12.5	17	15	13.5

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Manifold Option

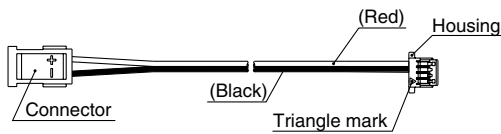
For type SS5Y³-45S6A Blanking plate assembly



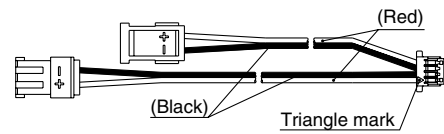
(The shape varies depending on the series.)

Model	Blanking plate assembly part no.
SS5Y3-45S6A	SX3000-75-1A(-Q)
SS5Y5-45S6A	SX5000-76-5A(-Q)

Connector assembly For single solenoid (SY3000-37-81A-□-N)



For double solenoid (SY3000-37-81A-□-□)

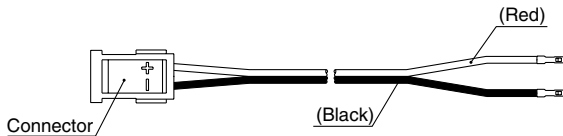


Connector assembly order no. (Can be used for the manifold without a specified layout (8 stations or less)) Integrated type

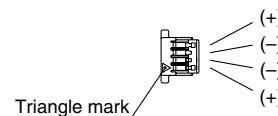
Model	Part no.	Connector mounting position
SS5Y3-45S6A	SY3000-37-81A-3-N	Single : Starting from the SI unit side From unit 1 to unit 4
	SY3000-37-81A-3-3	Double/3 position: Starting from the SI unit side From unit 1 to unit 4
	SY3000-37-81A-4-N	Single : Starting from the SI unit side From unit 5 to unit 8
	SY3000-37-81A-4-4	Double/3 position: Starting from the SI unit side From unit 5 to unit 8
SS5Y5-45S6A	SY3000-37-81A-4-N	Single : Starting from the SI unit side From unit 1 to unit 4
	SY3000-37-81A-4-4	Double/3 position: Starting from the SI unit side From unit 1 to unit 4
	SY3000-37-81A-6-N	Single : Starting from the SI unit side From unit 5 to unit 8
	SY3000-37-81A-6-6	Double/3 position: Starting from the SI unit side From unit 5 to unit 8
SS5Y9-²³/₄₃ SA	SY3000-37-81A-4-N	Single : For 1 to 4 stations
	SY3000-37-81A-4-9	Double/3 position: For 1 to 4 stations
	SY3000-37-81A-6-N	Single : For 5 to 8 stations
	SY3000-37-81A-6-11	Double/3 position: For 5 to 8 stations

Note) The above is for the station addition or maintenance. When ordering a connector assembly separately, a number would not be printed on the connector.

Connector assembly SY3000-37-80A-□



Housing (8 pcs./set) SY3000-44-3A



Connector assembly order no. (Can be used for the manifold with a specified layout)

Model	Part no.	Connector mounting position
SS5Y3-45S6A	SY3000-37-80A-3	Starting from the SI unit side: From unit 1 to unit 4
	SY3000-37-80A-4	Starting from the SI unit side: From unit 5 to unit 8
	SY3000-37-80A-6	Starting from the SI unit side: From unit 9 to unit 12
	SY3000-37-80A-7	Starting from the SI unit side: From unit 13 to unit 16
SS5Y5-45S6A	SY3000-37-80A-4	Starting from the SI unit side: From unit 1 to unit 4
	SY3000-37-80A-6	Starting from the SI unit side: From unit 5 to unit 8
	SY3000-37-80A-8	Starting from the SI unit side: From unit 9 to unit 12
	SY3000-37-80A-10	Starting from the SI unit side: From unit 13 to unit 16

Note 1) The above is for station addition or maintenance. When ordering a connector assembly separately, a number will not be printed on the connector.

Note 2) After inserting the connector assembly into the housing, be sure to confirm that the lead wire will not come off by lightly pulling the wire.

Furthermore, do not reuse the lead wire after it has been inserted and removed.

Note 3) Wiring is set longer than the actual wiring distance.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

5 Port Solenoid Valve Base Mounted Manifold Stacking Type/DIN Rail Mounted/Plug-in



Type **45**

Series SY3000/5000

How to Order Manifold

Type 45F (D-sub connector, 25 pins)

SS5Y **3** -45 **F** **D** -05 **U** -**C4** - - -

Series

3	SY3000
5	SY5000

Common specifications

Nil	Positive common
N	Negative common

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Voltage

Nil	24 VDC
12V	12 VDC

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 20 solenoid valves.)
⋮	⋮	
20	20 stations	



- * This also includes the number of blanking plate assemblies.
- * Two stations are necessary for the double, 3 position (Dual body type).

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	(Both sides)	2 to 20 stations
M	Special specifications	

- * For special specifications, indicate separately by the manifold specification

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY3000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
M	Mixed	
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY5000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
N9	One-touch fitting for ø $\frac{5}{16}$ "	
M	Mixed	

- * In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required.
(20 stations at maximum)

CE compliant

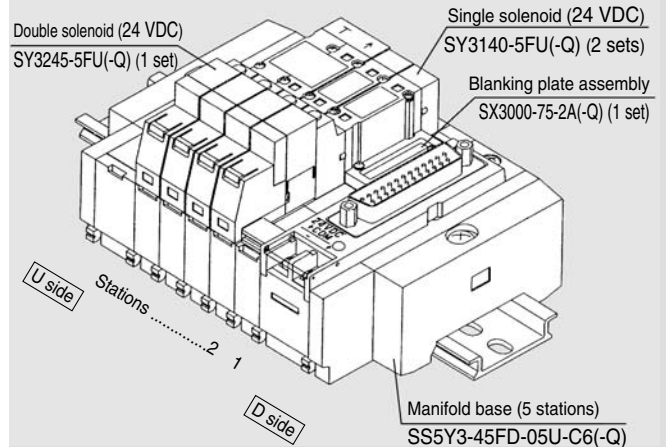
Nil	—
Q	CE compliant



Refer to pages 324 to 328 for external pilot specifications and built-in silencer.

How to Order Manifold Assembly (Example)

Example (Type 45F/D-sub connector (25 pin))



SS5Y3-45FD-05U-C6 (-Q) .. 1 set (Type 45F, D-sub connector 5-station manifold base part no.)
 * SX3000-75-2A (-Q) 1 set (Blanking plate assembly part no.)
 * SY3140-5FU (-Q) 2 sets (Single solenoid part no.)
 * SY3245-5FU (-Q) 1 set (Double solenoid part no.)

The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

- * The valve arrangement is numbered as the 1st. station from D side regardless of the mounting position of connector box.
- * When ordering double solenoid valves/3 position (Dual body type), please keep in mind that they require two manifold stations.

How to Order Valve

(Type 45F, 45P□, 45T, 45T1)

2 position single SY **3** **1** 40 - **5** FU - - -

Double, 3 position SY **3** **2** 45 - **5** FU - - -

Series

3	SY3000
5	SY5000

Type of actuation

2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Rated voltage

5	24 VDC
6	12 VDC

Dual body type

(Double, 3 position)

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

CE compliant

Nil	—
Q	CE compliant



When ordering plug-in type valve as a single unit, gaskets are not included. Order them separately, if necessary. (Refer to page 300 for details.)



How to Order Manifold

Type 45P (Flat ribbon cable)

SS5Y **3** - 45 **P** **D** - 05 **U** - **C4** - [] - [] - []

Series

3	SY3000
5	SY5000

Common specifications

Nil	Positive common
N	Negative common

Connector poles

Symbol	Poles	Stations
Nil	26	2 to 20 stations
G	20	2 to 16 stations
H	10	2 to 8 stations

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY3000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
M	Mixed	
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY5000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
N9	One-touch fitting for ø $\frac{9}{16}$ "	
M	Mixed	

Voltage

Nil	24 VDC
12V	12 VDC

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 20 stations
M	Special specifications	

Option
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

CE compliant

Nil	—
Q	CE compliant

Valve stations (Blanking plate assemblies are included.)

26 pins (P) connector

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 20 solenoid valves.)
:	:	
20	20 stations	

20 pins (PG) connector

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
:	:	
16	16 stations	

10 pins (PH) connector

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 8 solenoid valves)
:	:	
08	8 stations	

• Two stations are necessary for the double, 3 position (Dual body type).

Type 45T (9 pins terminal block)

SS5Y **3** - 45T **D** - 05 **U** - **C4** - [] - [] - []

Series

3	SY3000
5	SY5000

Terminal block mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 8 solenoid valves)
:	:	
08	8 stations	

• This also includes the number of blanking plate assemblies.
• Two stations are necessary for the double, 3 position (Dual body type).

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 8 stations
D	D side	2 to 8 stations
B	Both sides	2 to 8 stations
M	Special specifications	

* For special specifications, indicate separately by the manifold specification sheet.

Note) The terminal block (45T□) manifold has no common polarity. It can be used for both positive and negative common.

Option
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

CE compliant

Nil	—
Q	CE compliant

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY3000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
M	Mixed	
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY5000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
N9	One-touch fitting for ø $\frac{9}{16}$ "	
M	Mixed	

* In the case of mixed specifications (M), indicate separately on the manifold

Type 45T1 (18 pins terminal block)

SS5Y **3** - 45T1 **D** - 15 **B** - **C4** - [] - [] - []

Series

3	SY3000
5	SY5000

Terminal block mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 17 solenoid valves.)
:	:	
17	17 stations	

• This also includes the number of blanking plate assemblies.
• Two stations are necessary for the double, 3 position (Dual body type).

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 17 stations
M	Special specifications	

* For special specifications, indicate separately by the manifold specification sheet.

Option
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

CE compliant

Nil	—
Q	CE compliant

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY3000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
M	Mixed	
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY5000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
N9	One-touch fitting for ø $\frac{9}{16}$ "	
M	Mixed	

* In the case of mixed specifications (M), indicate separately on the manifold

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

How to Order Manifold

Type 45G (Flat ribbon cable, PC Wiring System compatible)

SS5Y 3 - 45G D - 05 U - C4 - [] - []

Series

3	SY3000
5	SY5000

Connector mounting position

Symbol	Mounting position
U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
⋮	⋮	
16	16 stations	

* Two stations are necessary for the double, 3 position (Dual body type).
* This also includes the number of blanking plate assemblies.

CE compliant

Nil	—
Q	CE compliant

Option
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	SY5000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	SY5000
N3	One-touch fitting for ø5/32"	
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø3/16"	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

* For special specifications, indicate separately by the manifold specification sheet.

SUP/EXH block assembly specifications

Symbol	Specifications
Nil	Internal pilot specifications
R	External pilot specifications
S	Internal pilot / Built-in silencer
RS	External pilot / Built-in silencer

How to Order Valve

2 position single **SY 3 1 4 0 - 5 FU**
Double, 3 position **SY 3 2 4 5 - 5 FU**

Series

3	SY3000
5	SY5000

Type of actuation

2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Rated voltage

5	24 VDC
---	--------

Pilot type

Nil	Internal pilot
R	External pilot

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Made to Order

Nil	—
X90	Main valve fluoro rubber (Refer to page 332.)

CE compliant

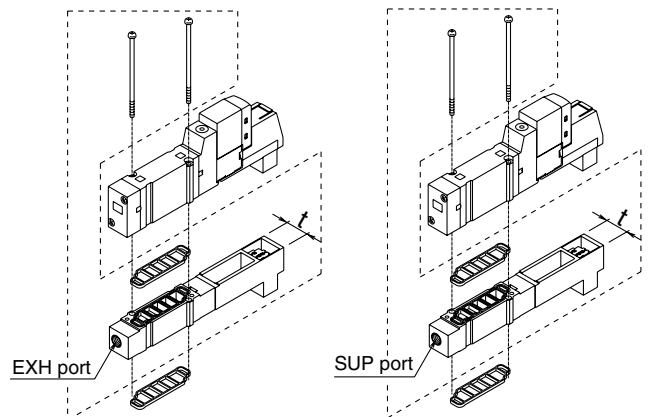
Nil	—
Q	CE compliant

Dual body type (Double, 3 position)

When ordering plug-in type valve as a single unit, gaskets are not included. Order them separately, if necessary. (Refer to page 300 for details.)

Manifold Option

Individual EXH spacer assembly Individual SUP spacer assembly



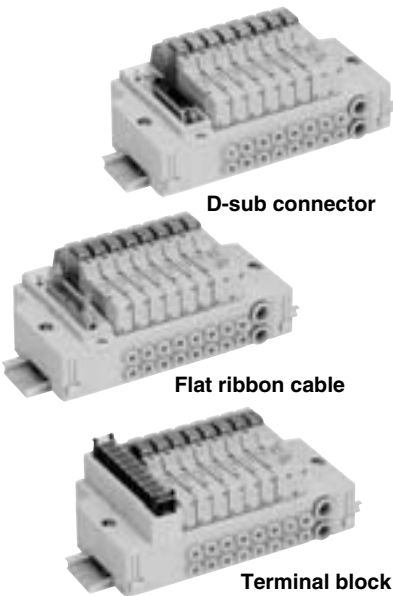
Series	Assembly part no.	Port no.	t	Series	Assembly part no.	Port no.	t
SY3000	SY3000-39-3A(-Q)	M5 x 0.8	11	SY3000	SY3000-38-3A(-Q)	M5 x 0.8	11
SY5000	SY5000-39-17A(-Q)	1/8	15	SY5000	SY5000-38-17A(-Q)	1/8	15

Note) Please be careful because the dual body type (double solenoid, 3-position) requires two pieces. In this case, the exhaust is performed in the direction of the arrow mark indicated on the valve surface.

Note) Please be careful because the dual body type (double solenoid, 3-position) requires two pieces. In this case, both supply ports require the piping.

Manifold Specifications

Model	D-sub connector Type 45F	Flat ribbon cable Type 45PI			Terminal block		Flat ribbon cable PC wiring system compatible	
		Type 45P	Type 45PG	Type 45PH	Type 45T	Type 45T1	Type 45G	
Manifold		Plug-in						
P (SUP)/R (EXH)		Common SUP, Common EXH						
Valve stations <small>Note 1, 2)</small>		2 to 20 stations	2 to 16 stations	2 to 8 stations	2 to 17 stations	2 to 16 stations		
A, B port	Location	Base						
	Porting specifications	Side						
Port size	P, R port	SY3000	C8 (One-touch fitting for ø8)					
		SY5000	C10 (One-touch fitting for ø10)					
	A, B port	SY3000	C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)					
		SY5000	C4 (One-touch fitting for ø4)/C6 (One-touch fitting for ø6)/C8 (One-touch fitting for ø8)					
Applicable connector		D-sub connector Complies with MIL-C-24308 JIS-X-5101	Flat ribbon cable connector Socket: 26 pins MIL type with strain relief Conforming to MIL-C-83503	Flat ribbon cable connector Socket: 20 pins MIL type with strain relief Conforming to MIL-C-83503	Flat ribbon cable connector Socket: 10 pins MIL type with strain relief Conforming to MIL-C-83503	Terminal block (M3) 9 pins	Terminal block (M3) 18 pins	Flat ribbon cable connector Socket: 20 pins MIL type with strain relief Conforming to MIL-C-83503
Internal wiring		+COM (Type 45□), -COM (Type 45N□)			In common between +COM and -COM.		+ COM	
Manifold base mass w (g)		SY3000	2 to 10 stations: W = 26n + 172					
n: Stations (D-sub connector)			SY5000	11 to 20 stations: W = 26n + 199				
		SY5000		2 to 10 stations: W = 54n + 227				
			SY5000	11 to 20 stations: W = 52n + 264				



Note 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.
 Note 2) There is a limit depending on the number of solenoids. Refer to "How to Order".

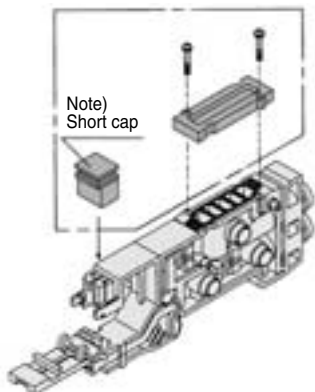
Flow Characteristics

Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm³/(s·bar))	b	Cv	C (dm³/(s·bar))	b	Cv
SS5Y3-45□	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
SS5Y5-45□	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58

Note) The value is for manifold base with 5 stations and individually operated 2 position type.

Manifold Option

Blanking plate assembly



Series	Assembly part no.
SY3000	SX3000-75-2A(-Q)
SY5000	SX5000-76-6A(-Q)

Note) • When mounting blanking plate, be sure to mount a short cap.
 • Two stations are necessary for the double, 3 position (Dual body type).

SUP blocking disk

By installing a SUP blocking disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.



Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

EXH blocking disk

By installing an EXH blocking disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two blocking disks are needed to divide both exhausts.)



Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

Label for block disk

The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)
VZ3000-123-1A (In common with SY3000, 5000)

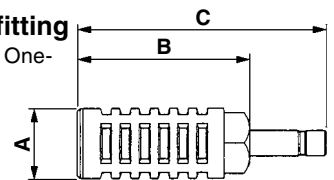
Label for SUP block disk Label for EXH block disk Label for SUP/EXH block disk



Note) When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

Silencer with One-touch fitting

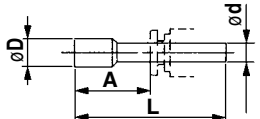
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm²	ø16	26	51
For SY5000 (ø10)	AN200-KM10	26 mm²	ø22	53.8	80.8
	AN300-KM10	30 mm²	ø25	70	97

Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

Caution

Mounting screw tightening torques

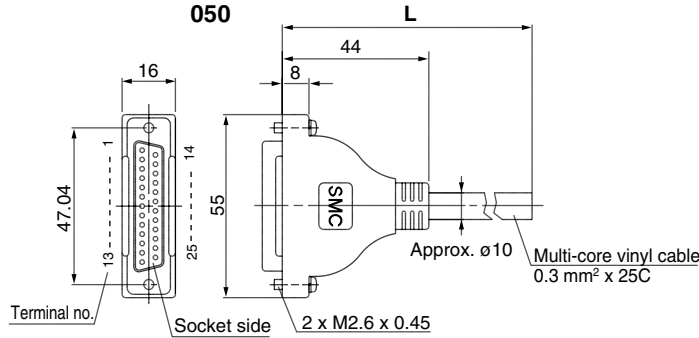
M2: 0.17 N·m
 M3: 0.8 N·m
 M4: 1.4 N·m

SJ
 SY
 SV
 SYJ
 SZ
 VP4
 S0700
 VQ
 VQ4
 VQ5
 VQC
 VQZ
 SQ
 VFS
 VFR
 VQ7

Manifold Option

■ D-sub connector (25 pins)/Cable assembly

015
AXT100-DS25-030
050



D-sub connector cable assembly

Terminal numbers

Terminal no.	Lead wire color	Dot marking
1	Black	None
2	Brown	None
3	Red	None
4	Orange	None
5	Yellow	None
6	Pink	None
7	Blue	None
8	Purple	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Purple	None
18	Gray	None
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	None

D-sub connector cable

Cable length (L)	Assembly part no.	Note
1.5 m	AXT100-DS25-015	Cable 25 core x 24 AWG
3 m	AXT100-DS25-030	
5 m	AXT100-DS25-050	

Electric characteristics

Item	Characteristics
Conductor resistance Ω/km, 20°C	65 or less
Voltage limit V, 1 min, AC	1000
Insulation resistance MΩkm, 20°C	5 or more

Note) The min. bending radius of D-sub cable assembly is 20 mm.

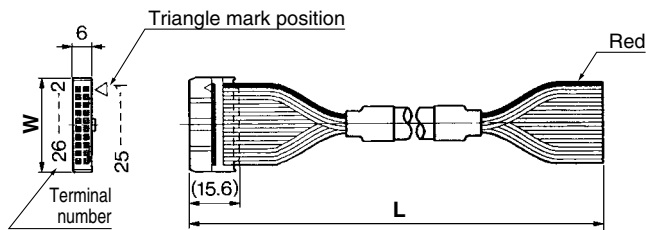
* When a commercially available connector is required, use a 25 pin female connector conforming to MIL-C24308.

Connector manufacturers' example

- Hirose Electric Co., Ltd.
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

■ Flat Ribbon Cable Connector/Cable assembly

AXT100-FC□- $\frac{1}{3}$



■ Dimensions/DIN rail

VZ1000-11-1-□

Refer to L dimensions

* Fill in □ with an appropriate no. listed on the table of DIN rail dimensions shown below.



Flat Ribbon Cable Assembly

Cable length (L)	10 pins	20 pins	26 pins
1.5 m	AXT100-FC10-1	AXT100-FC20-1	AXT100-FC26-1
3 m	AXT100-FC10-2	AXT100-FC20-2	AXT100-FC26-2
5 m	AXT100-FC10-3	AXT100-FC20-3	AXT100-FC26-3
Connector width (W)	17.2	30	37.5

* For other commercial connectors, use a type with strain relief that conform to MIL-C-83503.

Connector manufacturers' example

- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.

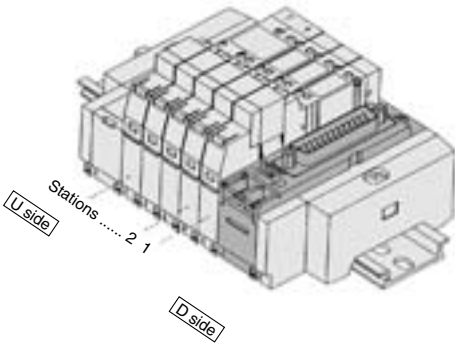
No.	0	1	2	3	4	5	6	7	8	9	10
L Dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223
No.	11	12	13	14	15	16	17	18	19	20	21
L Dimension	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5
No.	22	23	24	25	26	27	28	29	30	31	32
L Dimension	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498
No.	33	34	35	36	37	38	39	40	41	42	43
L Dimension	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	635.5
No.	44	45	46	47	48	49	50	51	52	53	54
L Dimension	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773
No.	55	56	57	58	59	60	61	62	63	64	65
L Dimension	785.5	798	810.5	823	835.5	848	860.5	873	885.5	898	910.5
No.	66	67	68	69	70	71					
L Dimension	923	935.5	948	960.5	973	985.5					

* Refer to L1 dimension on pages starting with pages 282 to 299 for lengths that correspond to the number of manifold stations.

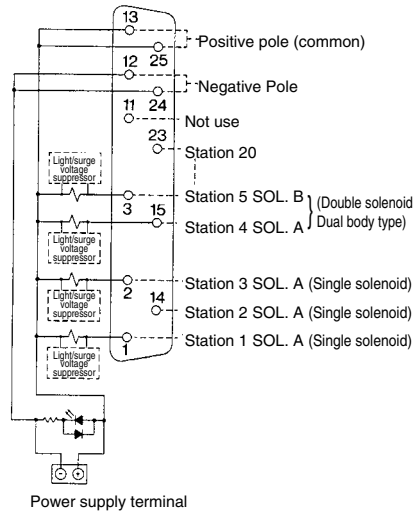
Manifold Internal Wiring

45(N)F/D-sub Connector

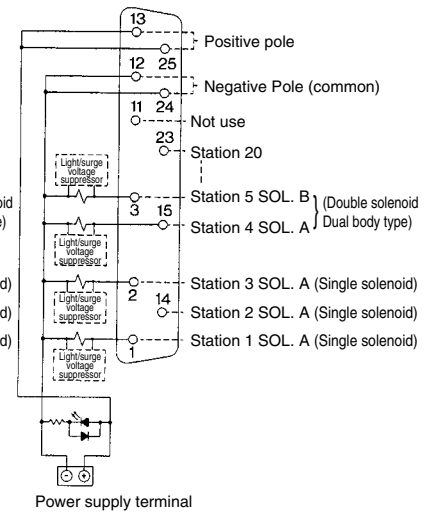
A D-sub connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



<For positive common (45F)>



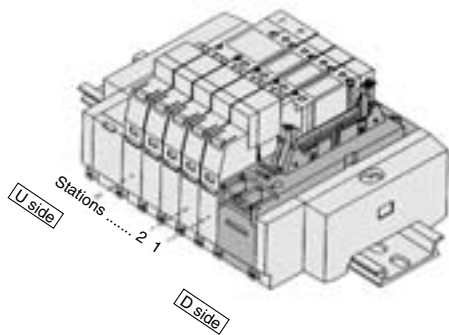
<For negative common (45NF)>



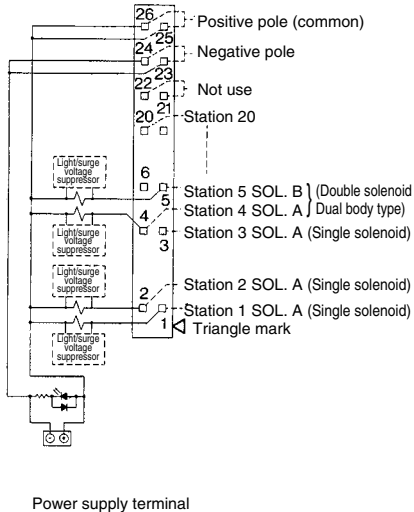
- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 20 manifold stations, with up to 20 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

Type 45(N)P/Flat Ribbon Cable (26 pins)

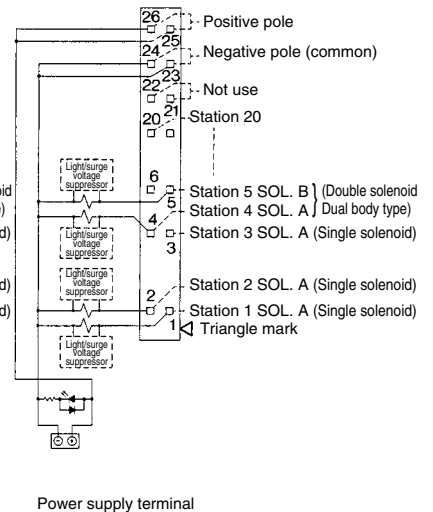
A flat ribbon cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



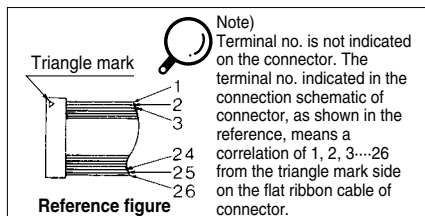
<For positive common (45P)>



<For negative common (45NP)>



- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 20 manifold stations, with up to 20 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

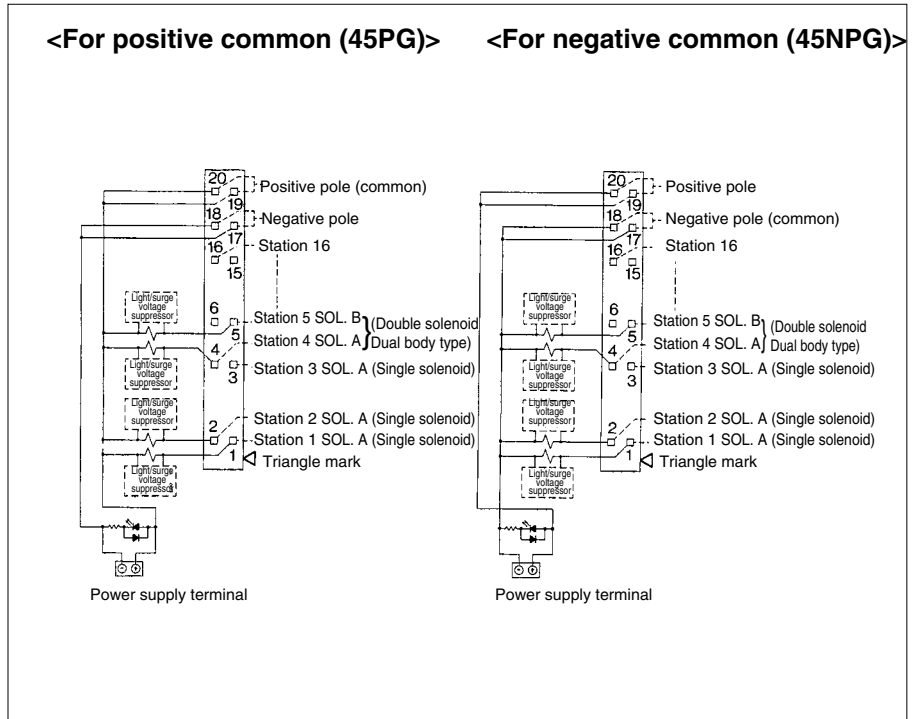
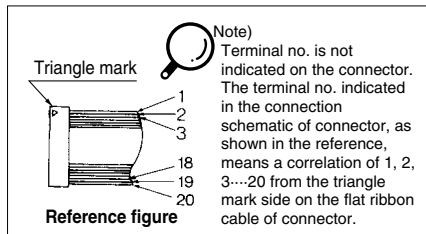
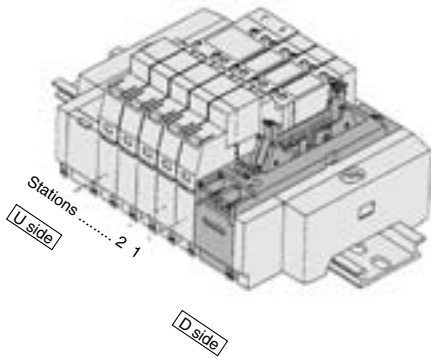


- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Manifold Internal Wiring

Type 45(N)PG/Flat Ribbon Cable (20 pins)

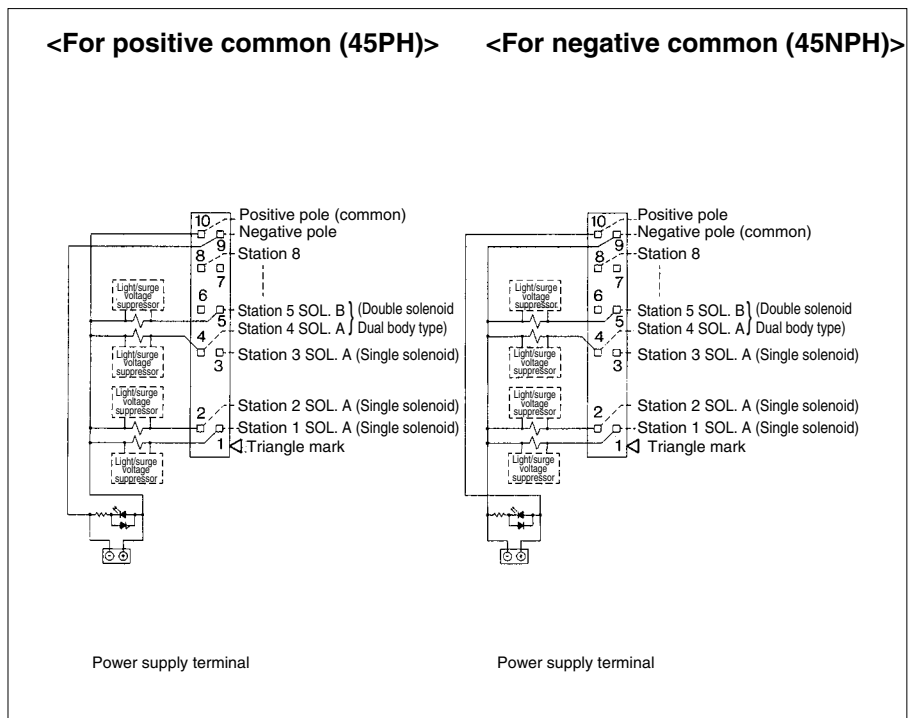
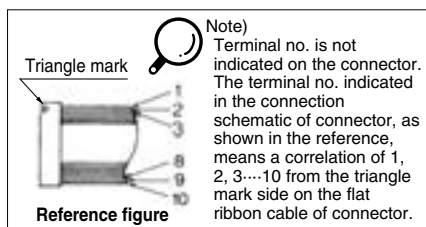
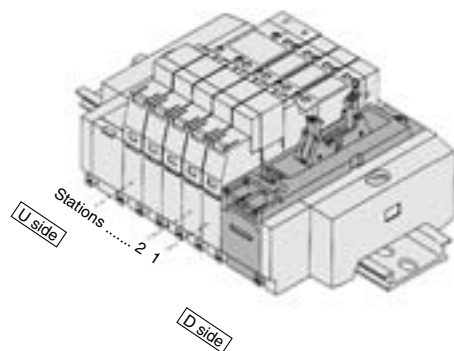
A flat ribbon cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.



- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 16 manifold stations, with up to 16 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

Type 45(N)PH/Flat Ribbon Cable (10 pins)

A flat ribbon cable connector used for electric wiring reduces labor during wiring operation. Connectors conforming to MIL are used for interchangeability.

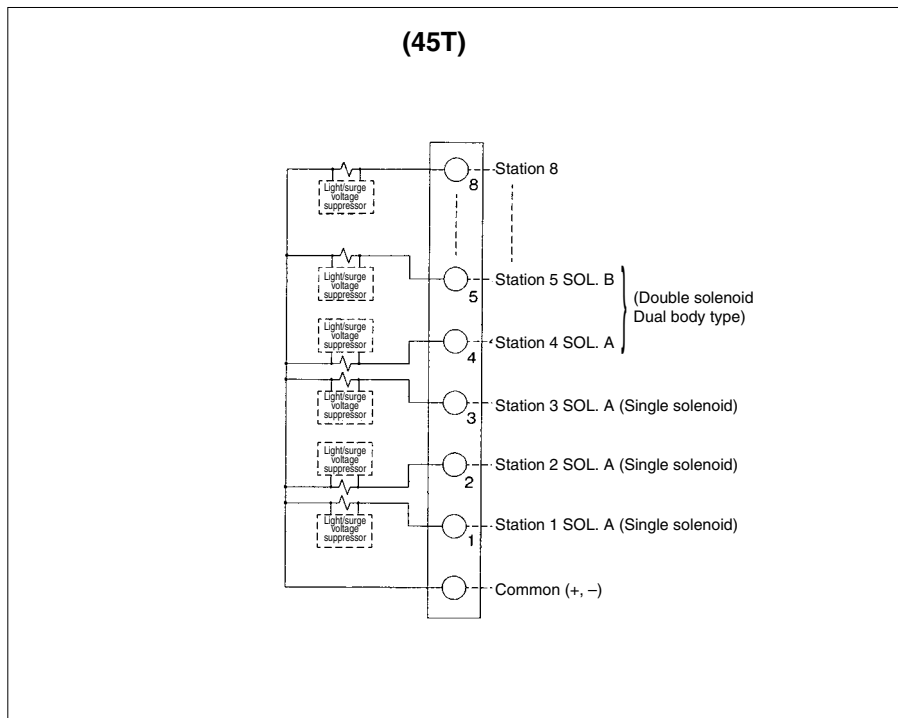
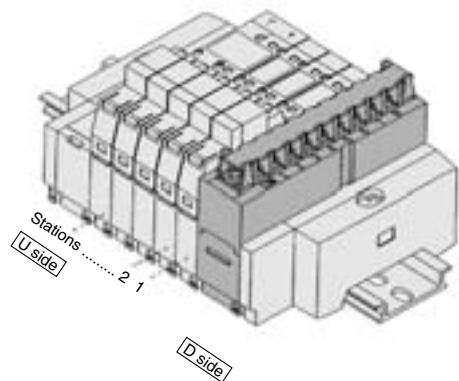


- The power source terminal is used for connecting to an external power source.
- The maximum number of stations that can be accommodated is 8 manifold stations, with up to 8 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.

Manifold Internal Wiring

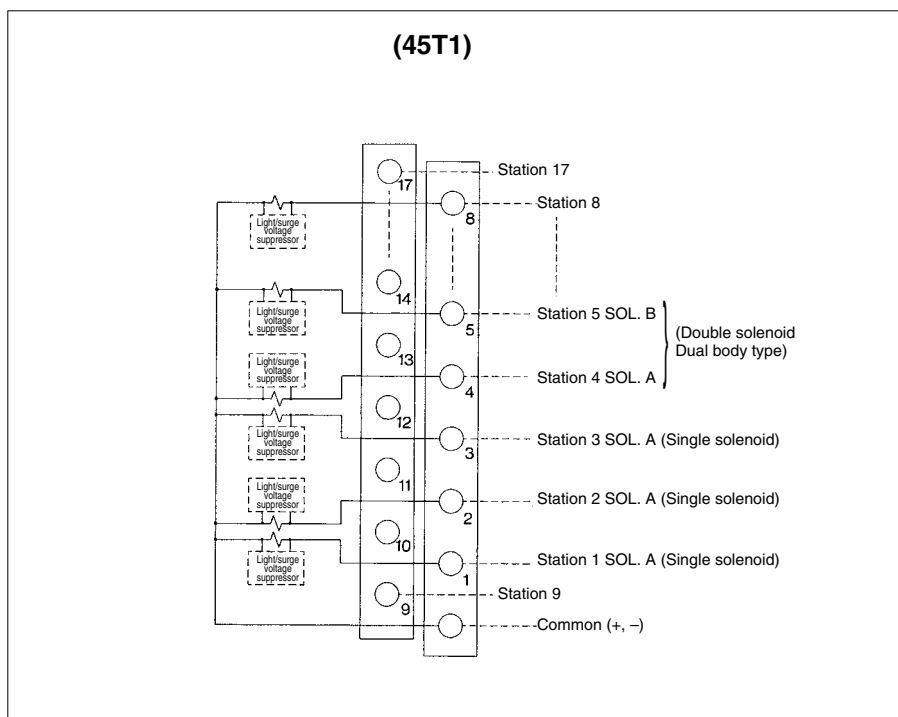
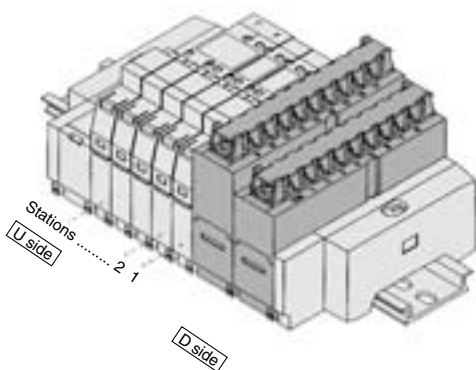
Type 45T/Terminal Block

A terminal block style permits direct cable connection without treatment of lead wires.



- The maximum number of stations that can be accommodated is 8 manifold stations, with up to 8 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
- There is no polarity in the COM wiring. Supply positive power for +COM spec. and negative power for -COM spec.

Type 45T1/Terminal Block



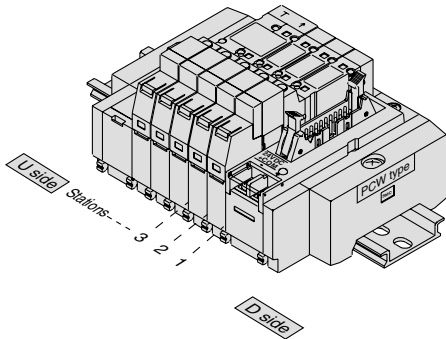
- The maximum number of stations that can be accommodated is 17 manifold stations, with up to 17 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
- There is no polarity in the COM wiring. Supply positive power for +COM spec. and negative power for -COM spec.

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

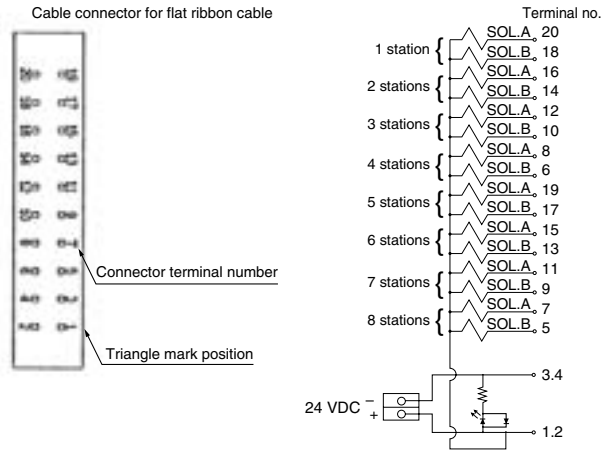
Manifold Internal Wiring

Type 45G Flat Ribbon Cable (PC Wiring System compatible)

It's the manifold for 20 pins flat ribbon cable connector which is compliant for PC wiring system.



Electric circuit diagram
(Below wiring is the case of all double solenoid connections.)

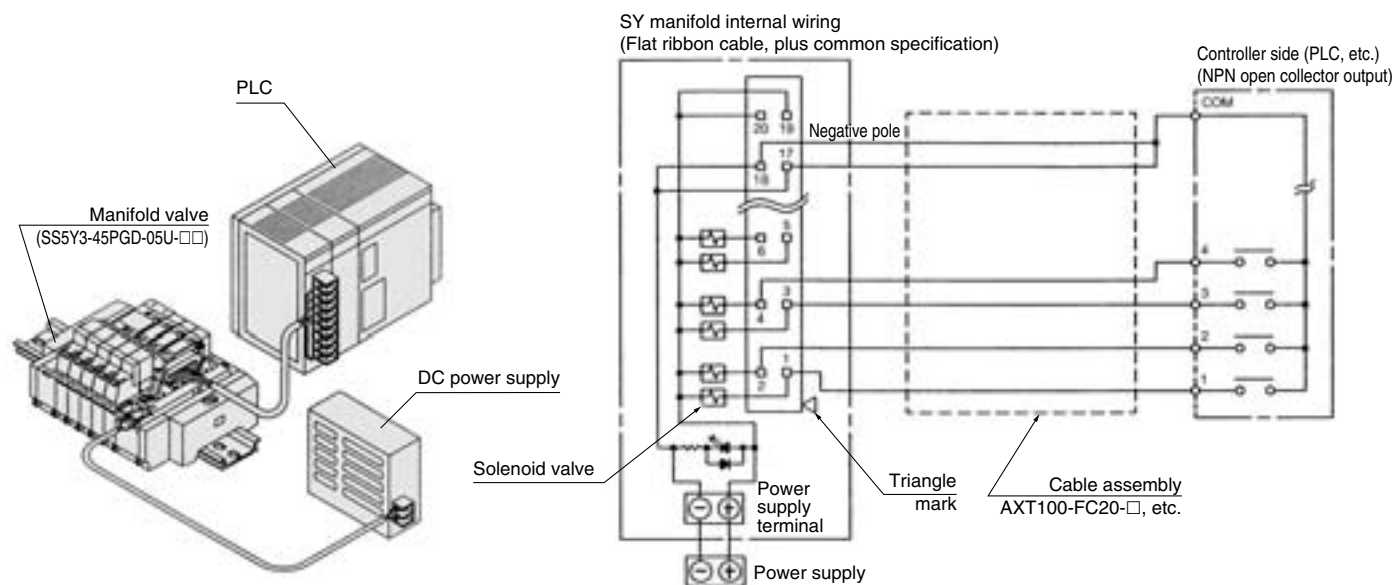


- The maximum number of stations that can be accommodated is 16 manifold stations, with up to 16 solenoids. (For more stations, please contact SMC.)
- Regardless of the connector mounting position, stations are to be counted from D side as the 1st one.
(For details about the PC wiring system, refer to catalog)
(CAT.E02-20 separately.)

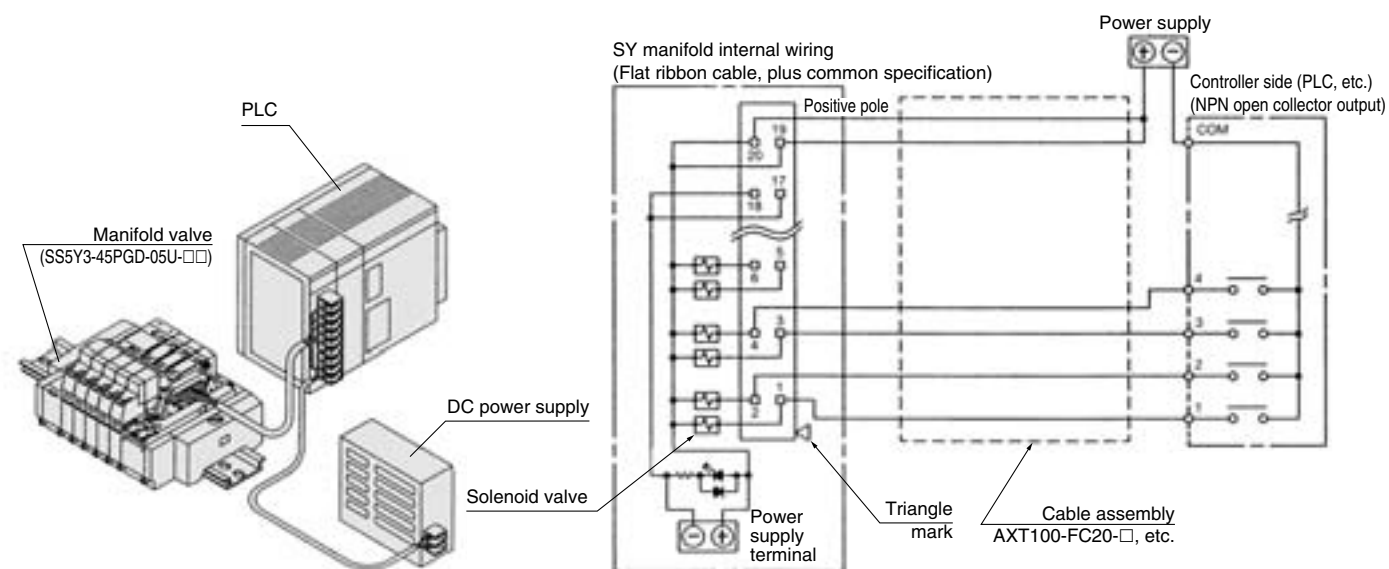
How to Connect SS5Y□-45□ (Plug-in)

Power terminal is equipped with plug-in manifold of Series SY as standard.
 Power terminal enables the power supply to valve from either of manifold or controller side.
 The wiring examples should be used for reference when wiring is performed.

1. Wiring example when using manifold power supply terminals



2. Wiring example when not using manifold power supply terminals (Power is supplied to the controller side or along the wiring, etc.)



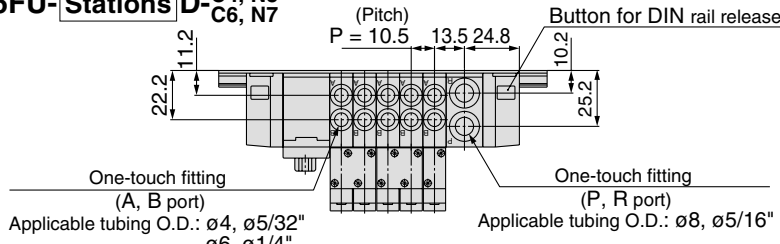
⚠ Caution

- Single wire, COM position, etc. of PLC are different from each manufacturer. When connecting with PLC, read the specifications carefully and understand the electrical circuit. Poor wiring could cause damage to PLC, power source, etc. as well as manifold and valve.

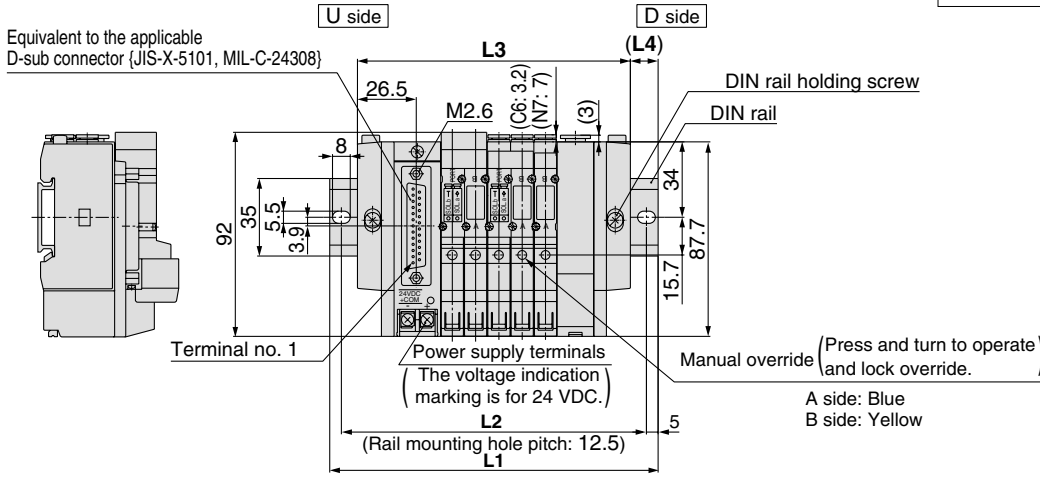
SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

SY3000: D-sub Connector/Plug-in

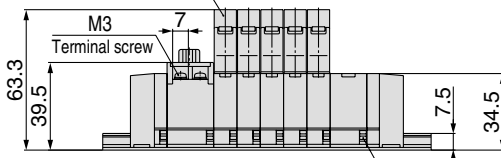
**SS5Y3-45FU- Stations D-C4, N3
C6, N7**



Note) The L1 to L4 dimensions of **SS5Y3-45FU- Stations U-C4, N3 C6, N7** are identical to those of **SS5Y3-45FU- Stations D-C4, N3 C6, N7**.

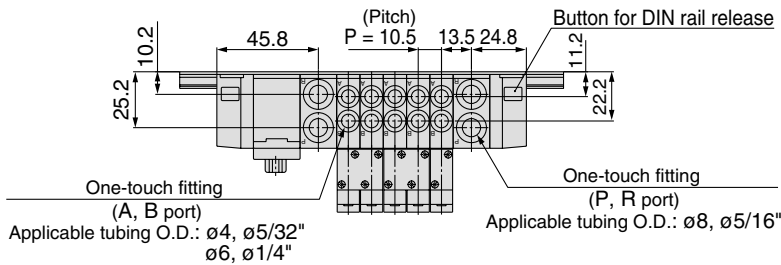


(Station n) --- (Station 1)
(Light/surge voltage suppressor)

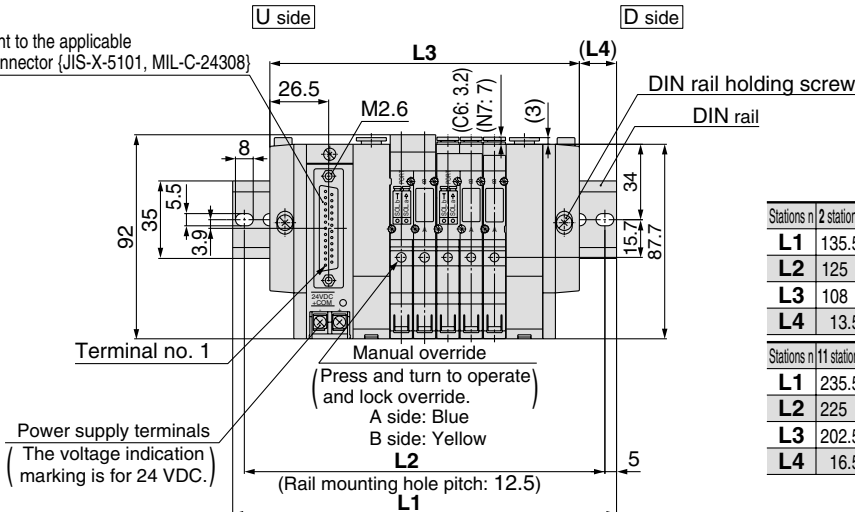


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

**SS5Y3-45FU- Stations B-C4, N3
C6, N7**



Equivalent to the applicable
D-sub connector (JIS-X-5101, MIL-C-24308)

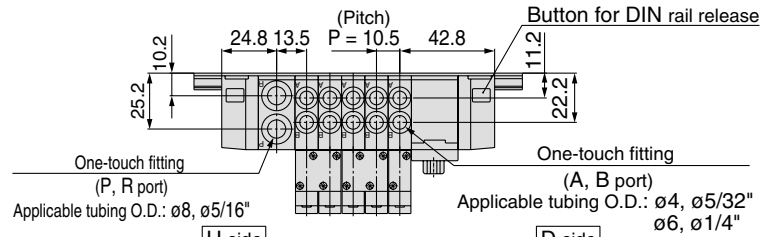


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

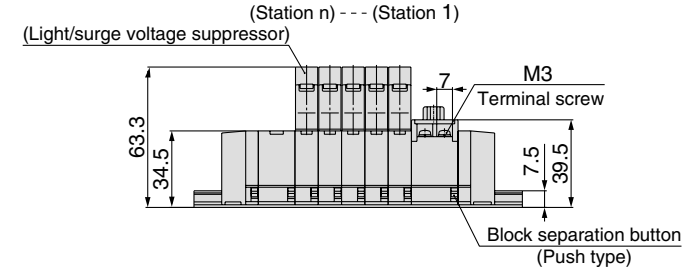
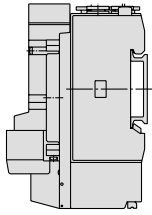
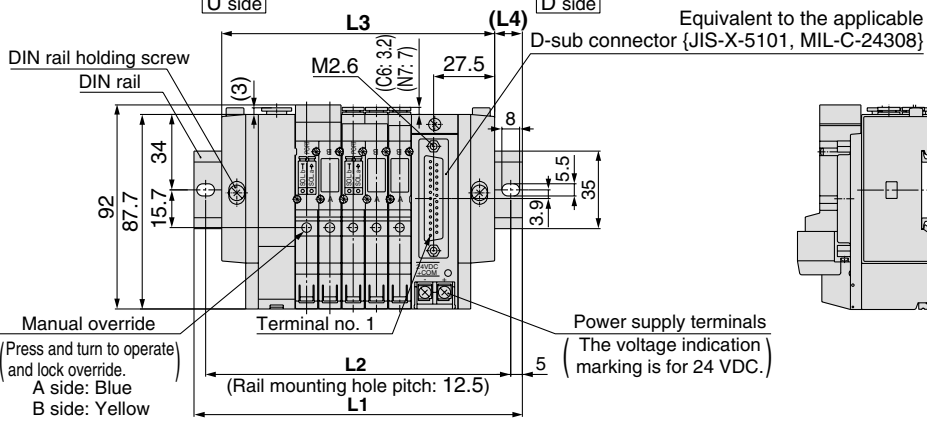
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

SY3000: D-sub Connector/Plug-in

**SS5Y3-45FD- Stations U-C4, N3
C6, N7**

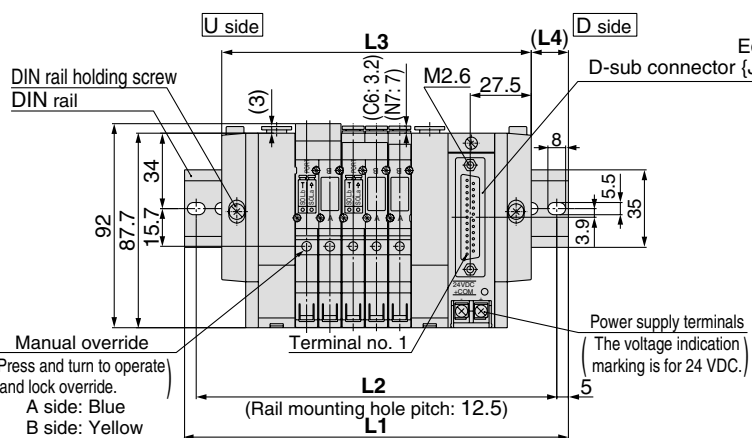
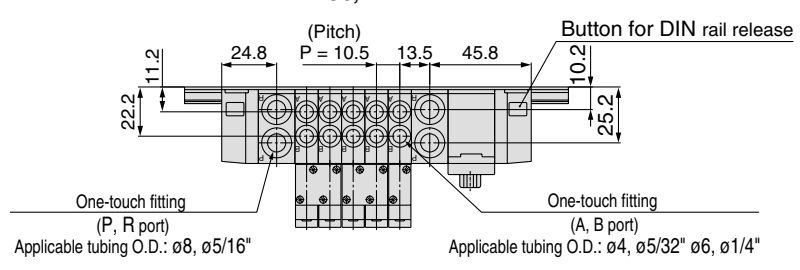


Note) The L1 to L4 dimensions of **SS5Y3-45FD- Stations D-C4, N3
C6, N7** are identical to those of **SS5Y3-45FD- Stations U-C4, N3
C6, N7**.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

**SS5Y3-45FD- Stations B-C4, N3
C6, N7**



Equivalent to the applicable D-sub connector (JIS-X-5101, MIL-C-24308)

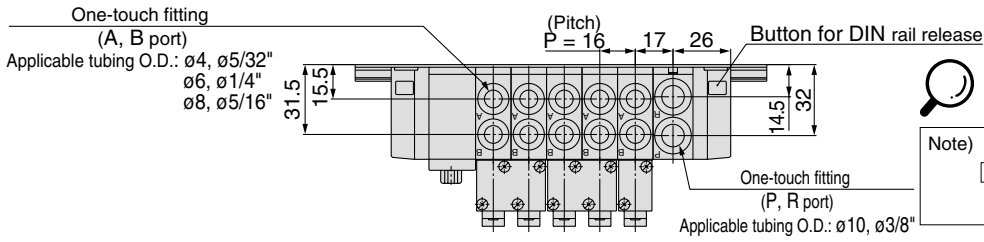
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

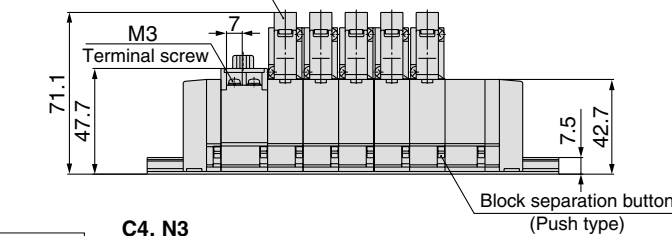
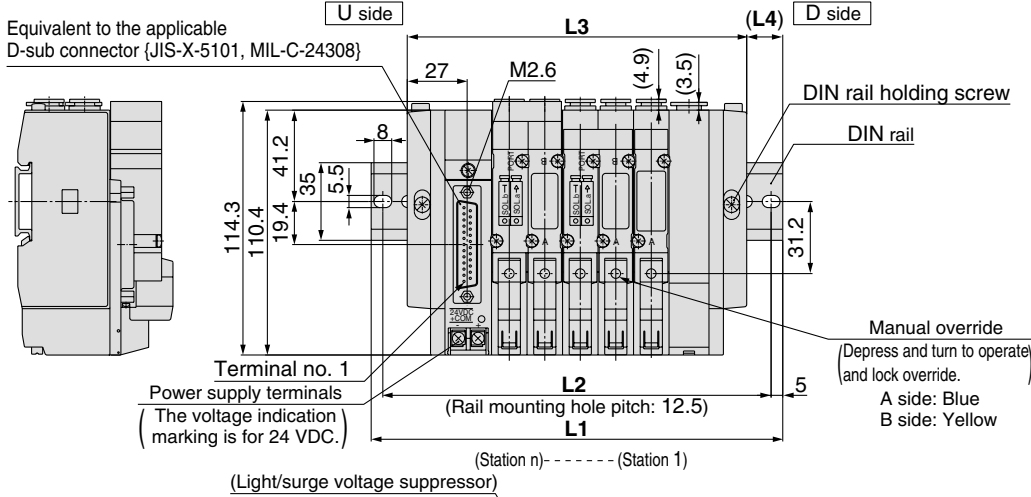
SY5000: D-sub Connector/Plug-in

SS5Y5-45FU- Stations D- ^{C4, N3}
^{C6, N7}
^{C8, N9}



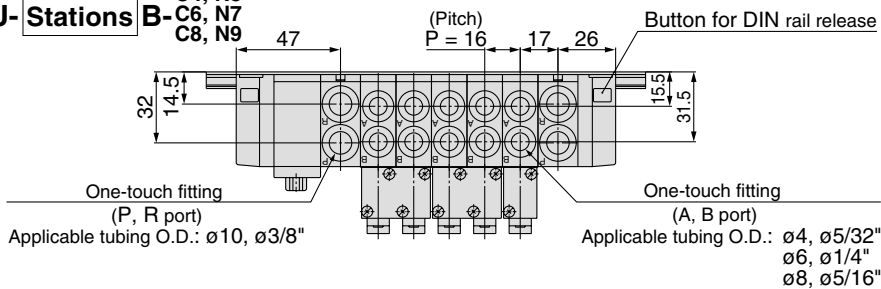
Note) The L1 to L4 dimensions of **SS5Y5-45FU- Stations U-** ^{C4, N3}
^{C6, N7} are identical to those of **SS5Y5-45FU- Stations D-** ^{C4, N3}
^{C6, N7}, ^{C8, N9}.

Equivalent to the applicable D-sub connector {JIS-X-5101, MIL-C-24308}

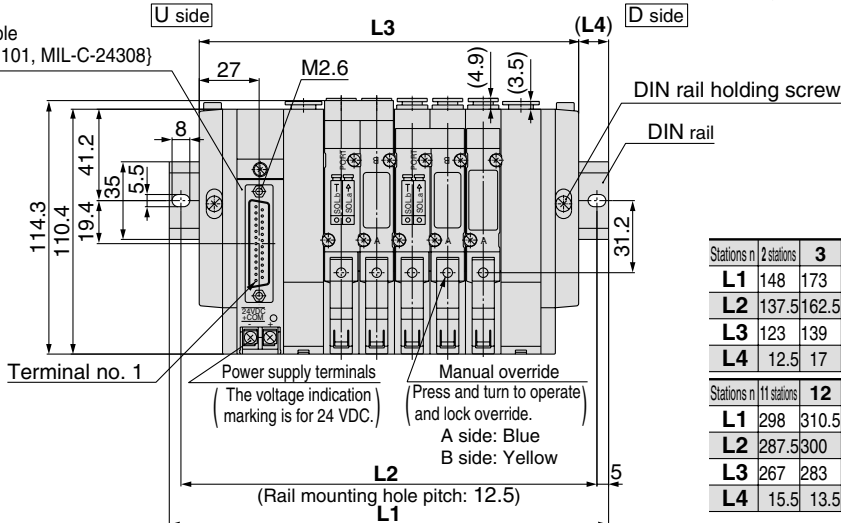


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5Y5-45FU- Stations B- ^{C4, N3}
^{C6, N7}
^{C8, N9}



Equivalent to the applicable D-sub connector {JIS-X-5101, MIL-C-24308}

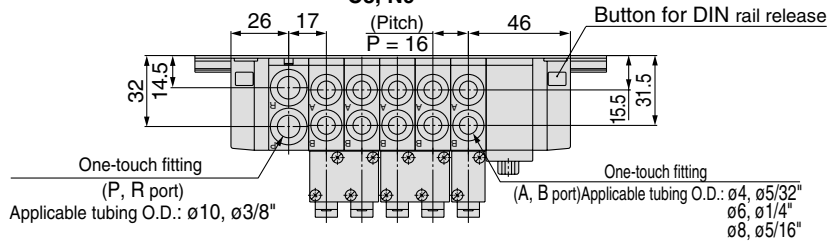


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

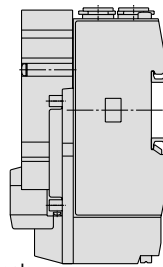
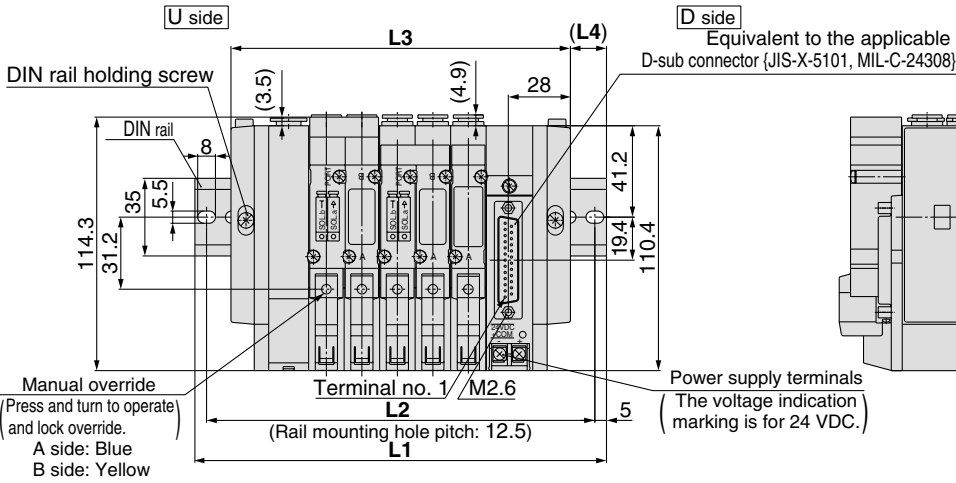
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SY5000: D-sub Connector/Plug-in

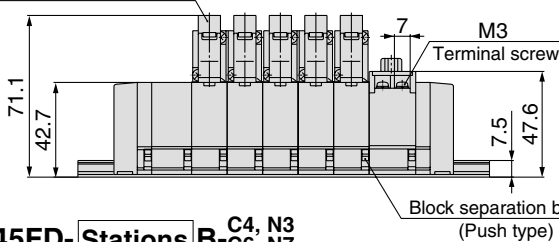
SS5Y5-45FD- Stations U- C4, N3
C6, N7
C8, N9



Note) The L1 to L4 dimensions of **SS5Y5-45FD- Stations D-** C4, N3
C6, N7 are identical to those of
SS5Y5-45FD- Stations U- C4, N3
C6, N7.

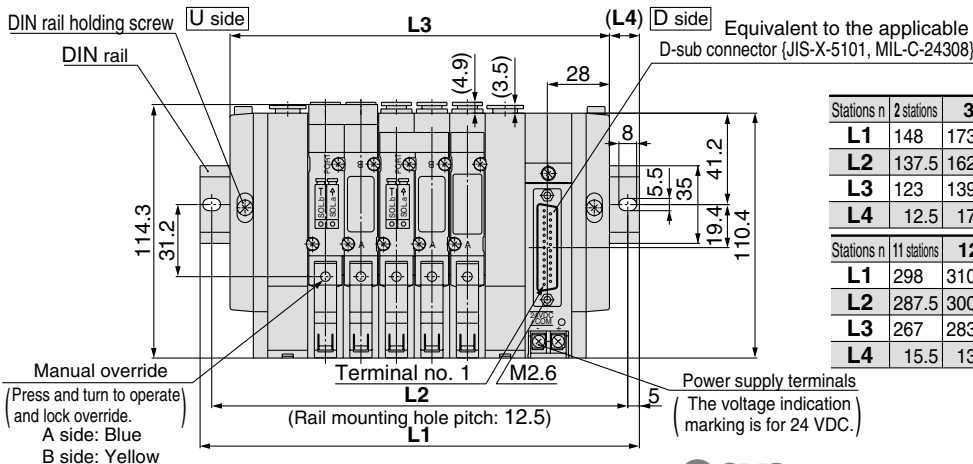
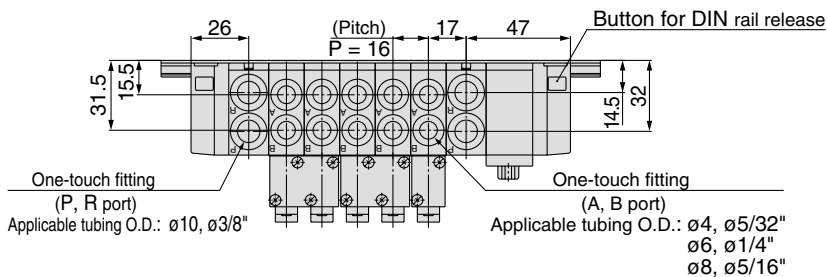


(Station n) - - - - - (Station 1)
(Light/surge voltage suppressor)



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5Y5-45FD- Stations B- C4, N3
C6, N7
C8, N9



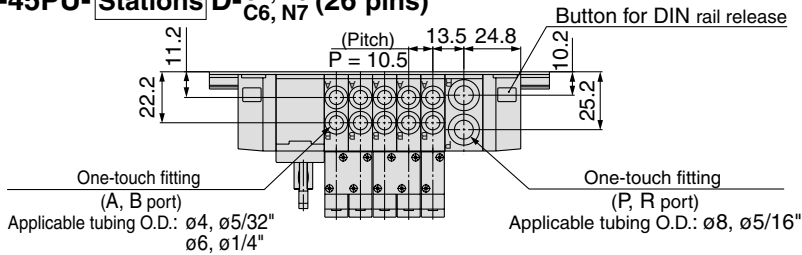
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

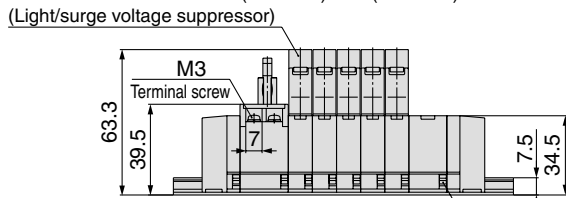
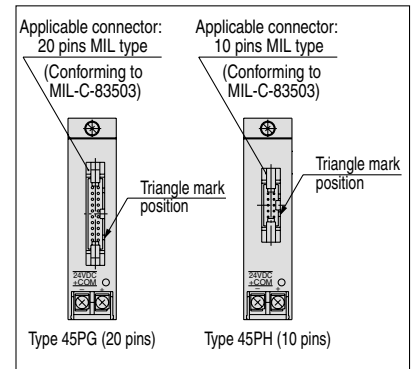
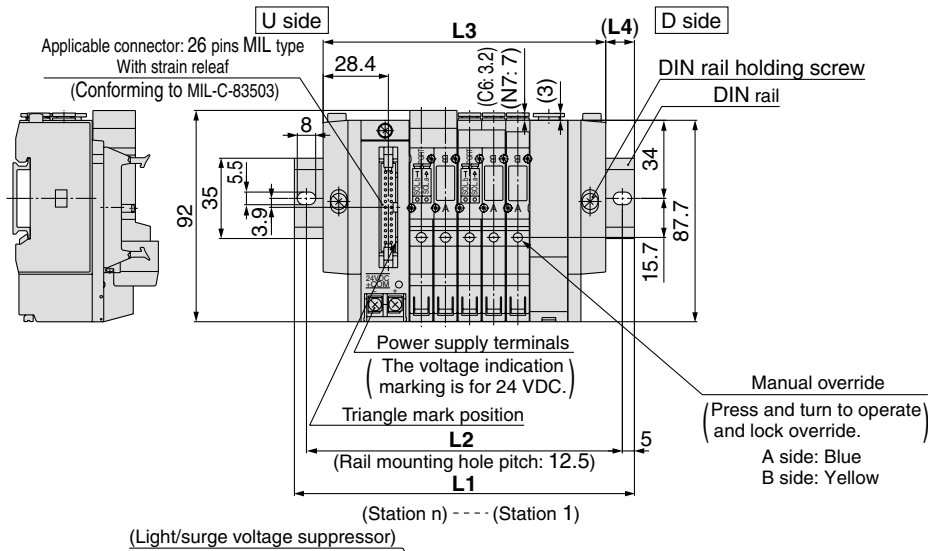
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY3000: Flat Ribbon Cable/Plug-in

SS5Y3-45PU- Stations D-C₄, N₃ C₆, N₇ (26 pins)

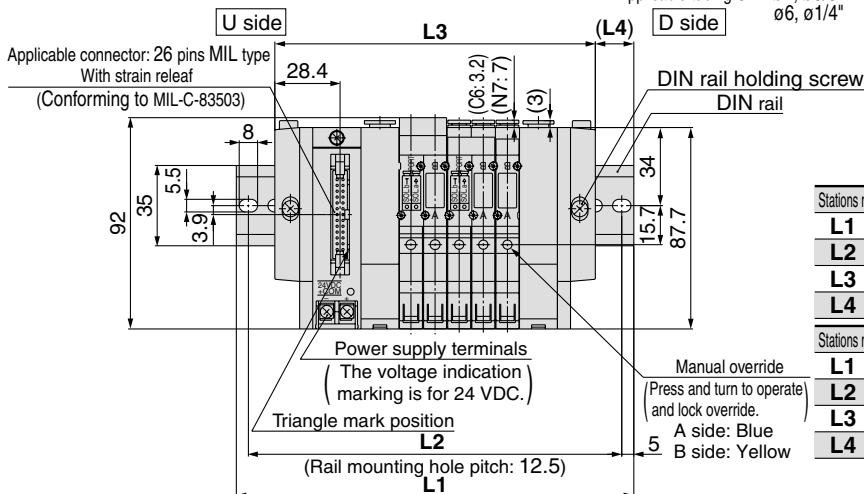
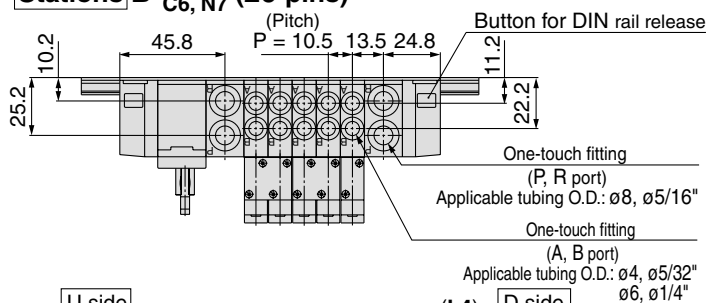


Note) The L1 to L4 dimensions of **SS5Y3-45P□U- Stations U-C₄, N₃ C₆, N₇** are identical to those of **SS5Y3-45PIU- Stations D-C₄, N₃ C₆, N₇**.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

SS5Y3-45PU- Stations B-C₄, N₃ C₆, N₇ (26 pins)

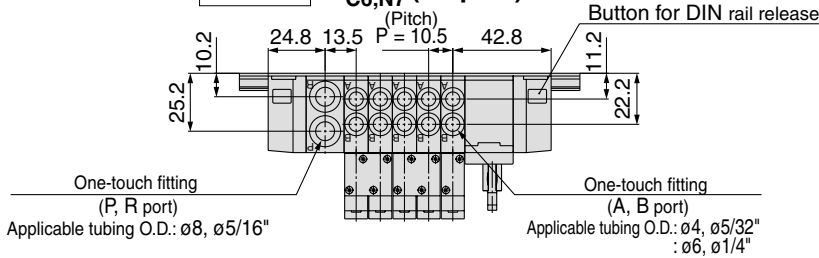


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

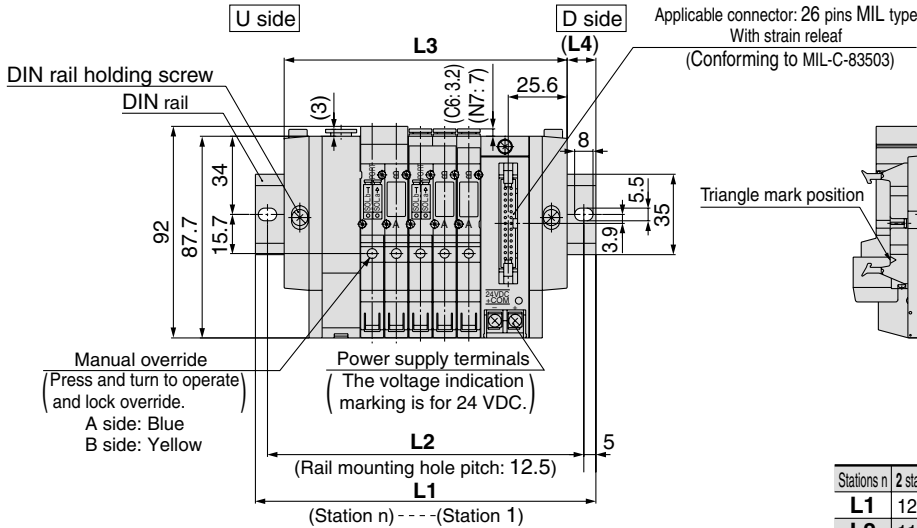
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

SY3000: Flat Ribbon Cable/Plug-in

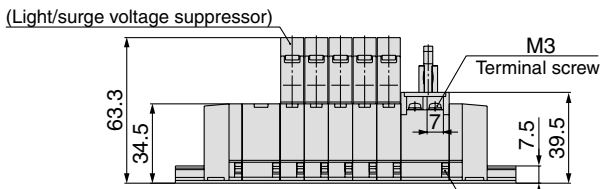
SS5Y3-45PD- Stations U-C_{4,N3} C_{6,N7} (26 pins)



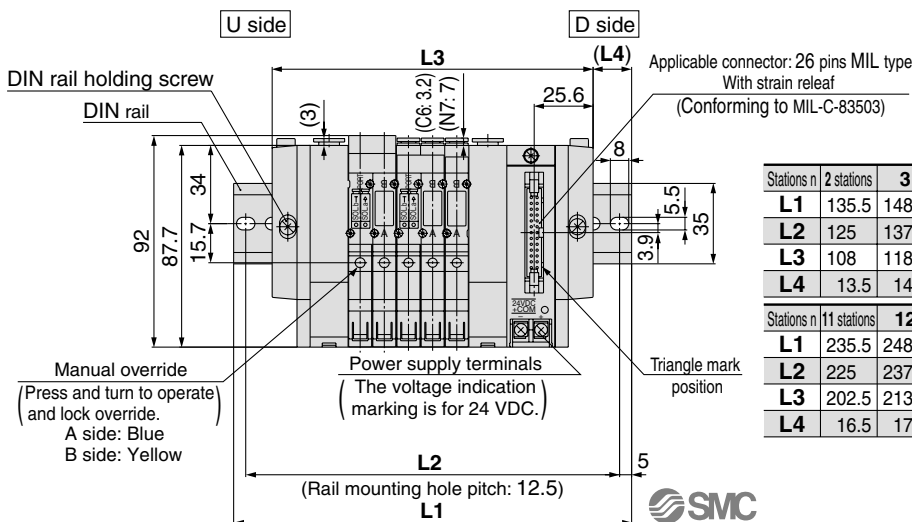
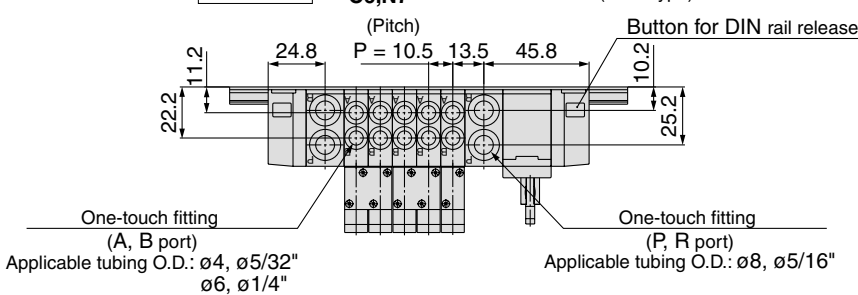
Note) The L1 to L4 dimensions of SS5Y3-45P□D- Stations D-C_{4,N3} C_{6,N7} are identical to those of SS5Y3-45P□D- Stations U-C_{4,N3} C_{6,N7}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5



SS5Y3-45PD- Stations B-C_{4,N3} C_{6,N7} (26 pins)



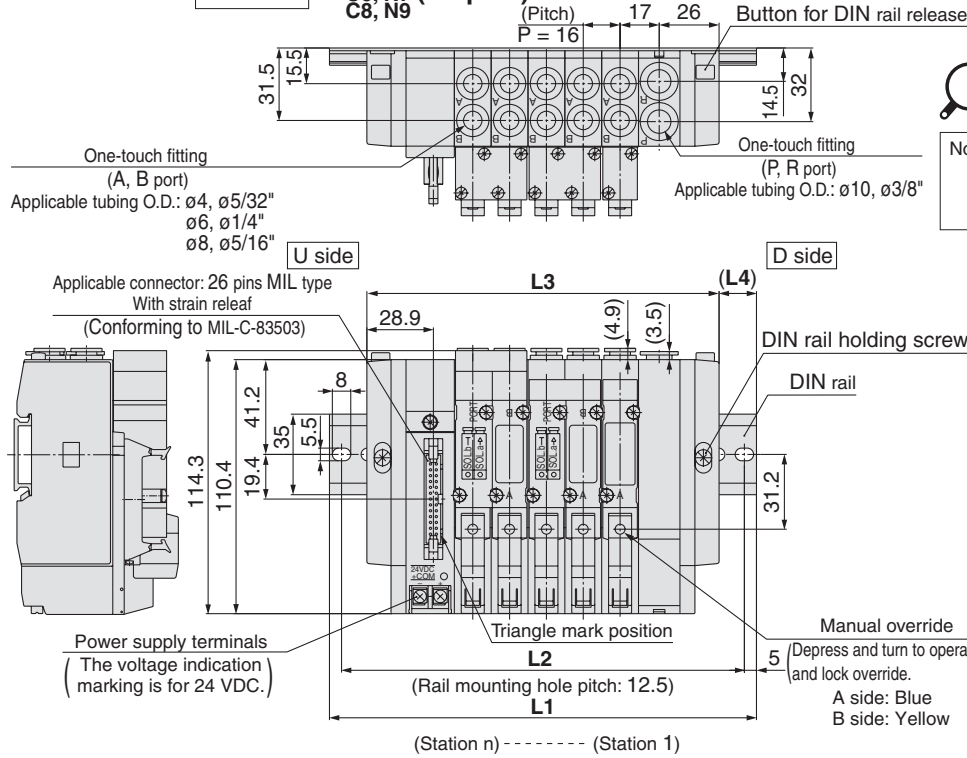
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	235.5	248	248	260.5	273	285.5	298	310.5	310.5	323
L2	225	237.5	237.5	250	262.5	275	287.5	300	300	312.5
L3	202.5	213	223.5	234	244.5	255	265.5	276	286.5	297
L4	16.5	17.5	12	13	14	15	16	17	12	13

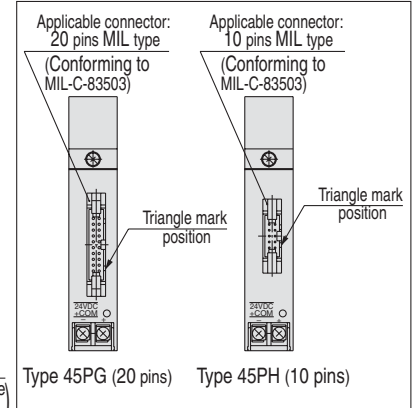
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY5000: Flat Ribbon Cable/Plug-in

SS5Y5-45PU- Stations D-^{C4, N3}_{C6, N7} (26 pins)
^{C8, N9}

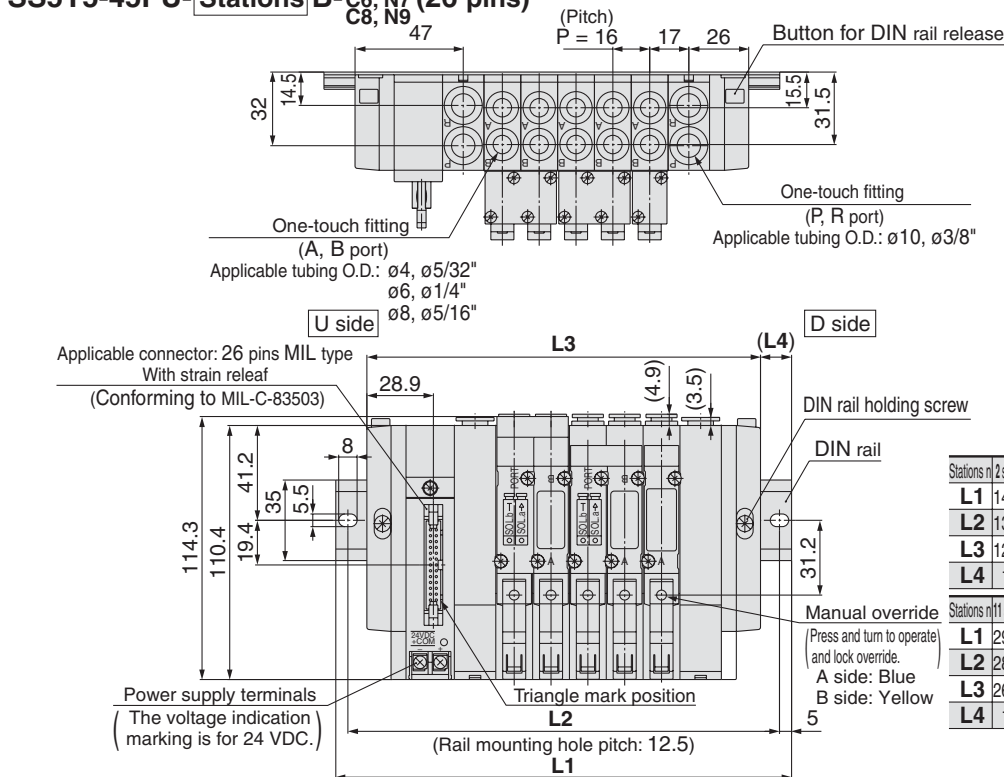


Note) The L1 to L4 dimensions of SS5Y5-45P□U- Stations U-^{C4, N3}_{C6, N7} are identical to those of SS5Y5-45P□U- Stations D-^{C4, N3}_{C6, N7}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5Y5-45PU- Stations B-^{C4, N3}_{C6, N7} (26 pins)
^{C8, N9}

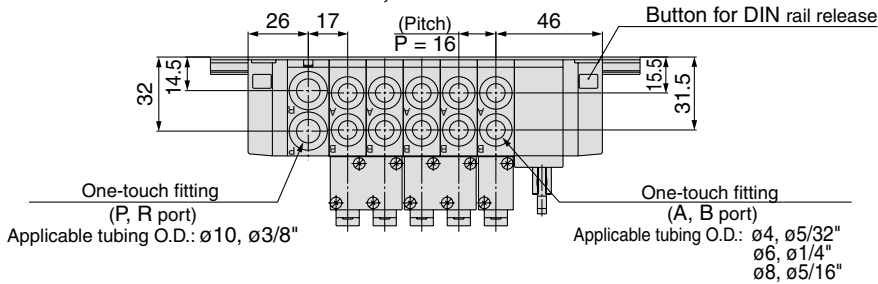


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

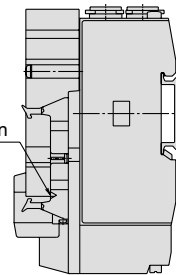
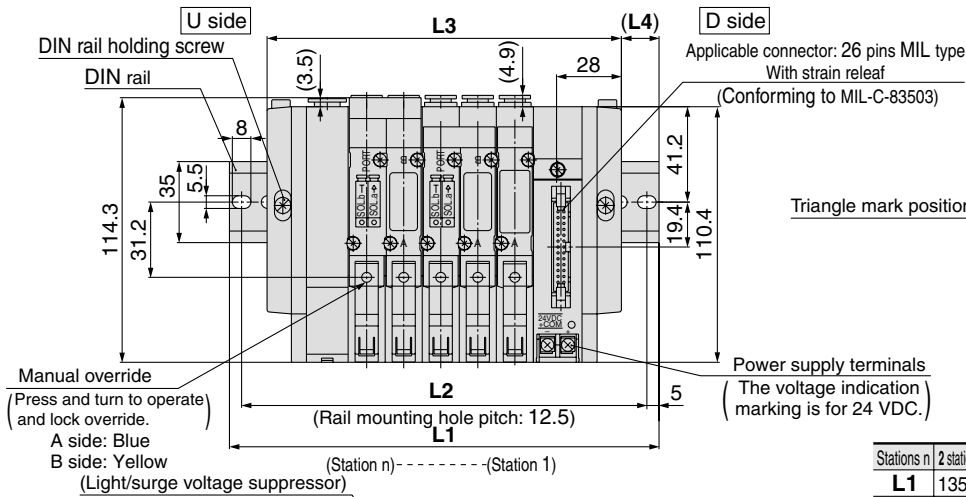
Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SY5000: Flat Ribbon Cable/Plug-in

SS5Y5-45PD- Stations U-^{C4, N3}_{C6, N7} (26 pins)

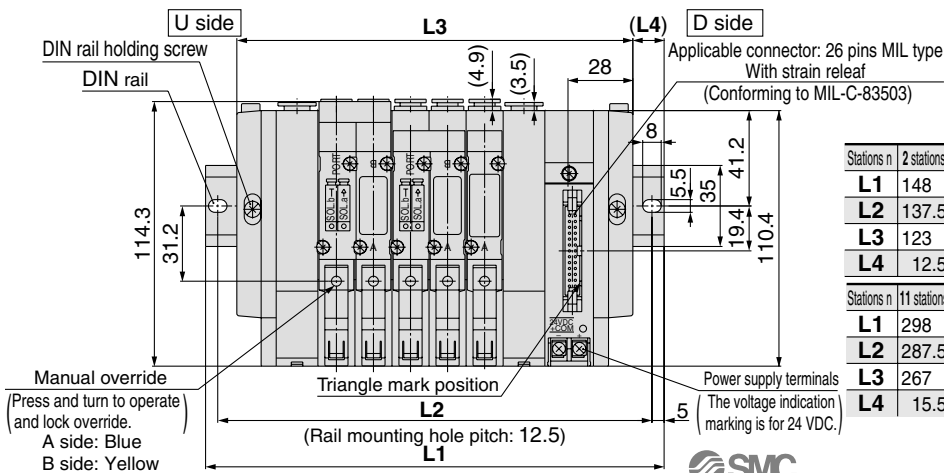
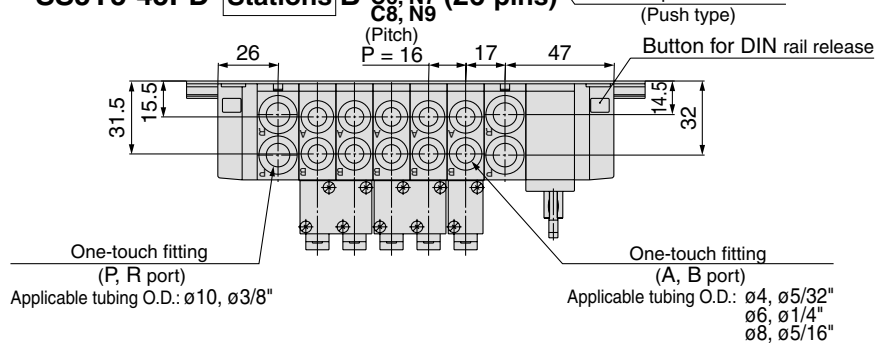


Note) The L1 to L4 dimensions of **SS5Y5-45P□D-**
Stations D-^{C4, N3}_{C6, N7} are identical to those of
SS5Y3-45P□D- Stations U-^{C4, N3}_{C6, N7}



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5Y5-45PD- Stations B-^{C4, N3}_{C6, N7} (26 pins)



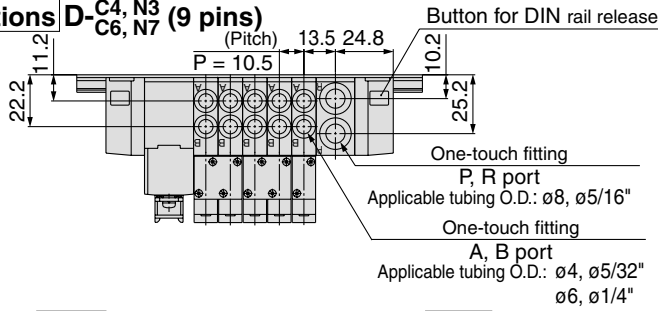
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16	17	18	19	20 stations
L1	298	310.5	323	348	360.5	373	398	410.5	423	435.5
L2	287.5	300	312.5	337.5	350	362.5	387.5	400	412.5	425
L3	267	283	299	315	331	347	363	379	395	411
L4	15.5	13.5	12	16.5	14.5	13	17.5	15.5	14	12

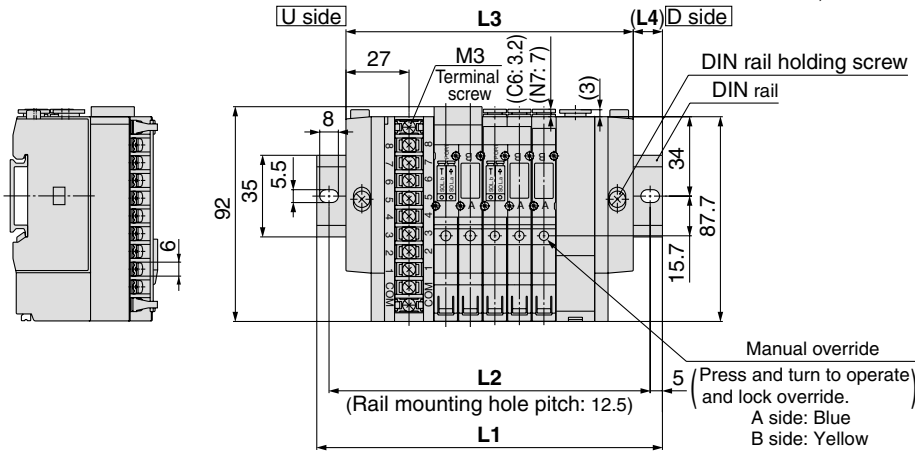
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY3000: 9 Pins Terminal Block/Plug-in

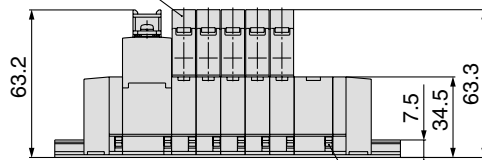
SS5Y3-45TU- Stations D-C₄, N₃ C₆, N₇ (9 pins)



Note) The L1 to L4 dimensions of **SS5Y3-45TU- Stations U-C₄, N₃ C₆, N₇**, **SS5Y3-45TD- Stations U-C₄, N₃ C₆, N₇**, **SS5Y3-45TD- Stations D-C₄, N₃ C₆, N₇** are identical those of SS5Y3-45TU- Stations D-C₄, N₃ C₆, N₇.



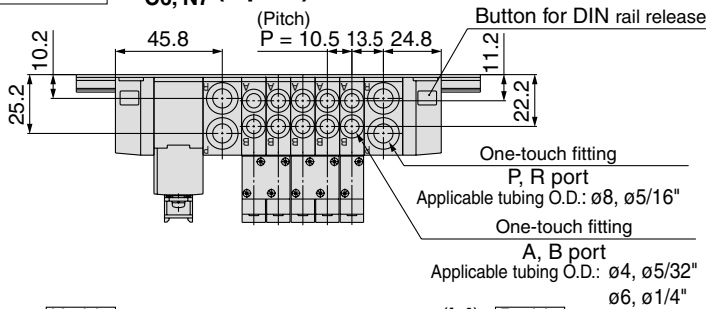
(Light/surge voltage suppressor) (Station n) --- (Station 1)



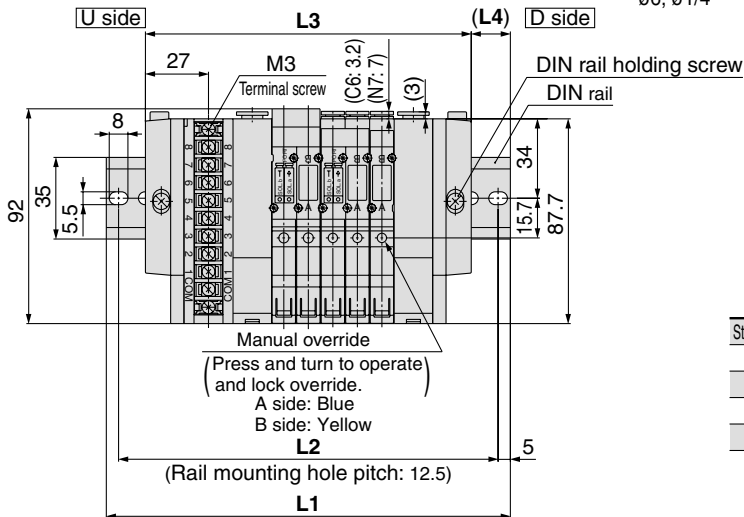
Stations n	2 stations	3	4	5	6	7	8 stations
L1	123	135.5	148	148	160.5	173	185.5
L2	112.5	125	137.5	137.5	150	162.5	175
L3	91.5	102	112.5	123	133.5	144	154.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5



SS5Y3-45TU- Stations B-C₄, N₃ C₆, N₇ (9 pins)



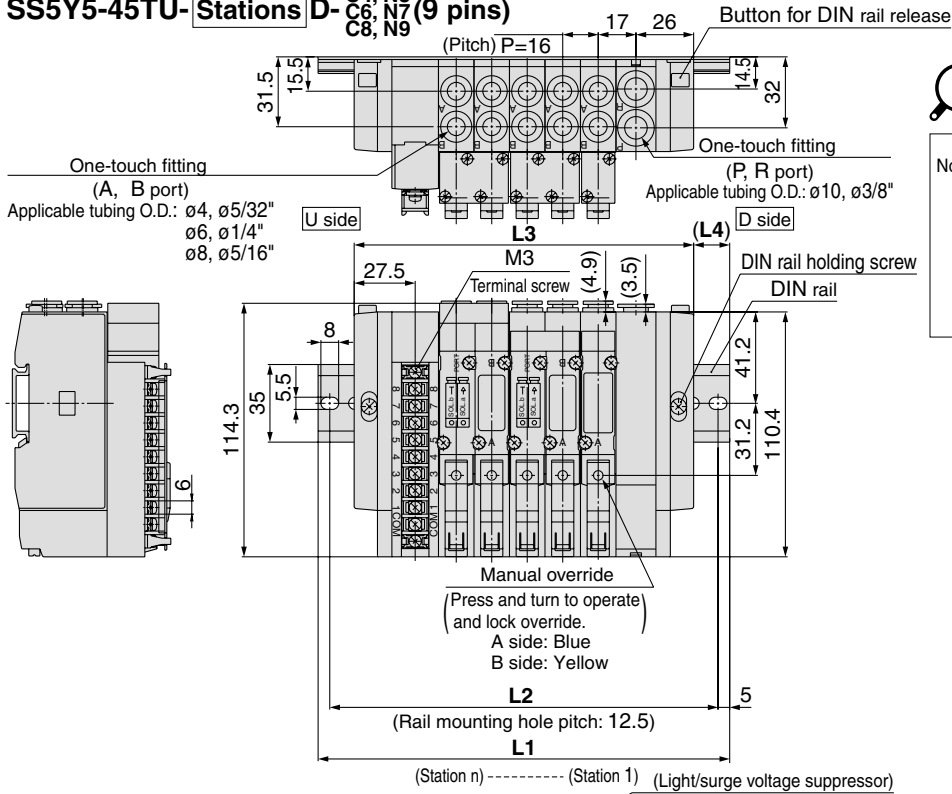
Note) The L1 to L4 dimensions of **SS5Y3-45TD- Stations B-C₄, N₃ C₆, N₇** are identical to those of SS5Y3-45TU- Stations B-C₄, N₃ C₆, N₇.



Stations n	2 stations	3	4	5	6	7	8 stations
L1	135.5	148	160.5	173	185.5	185.5	198
L2	125	137.5	150	162.5	175	175	187.5
L3	108	118.5	129	139.5	150	160.5	171
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5

SY5000: 9 Pins Terminal Block/Plug-in

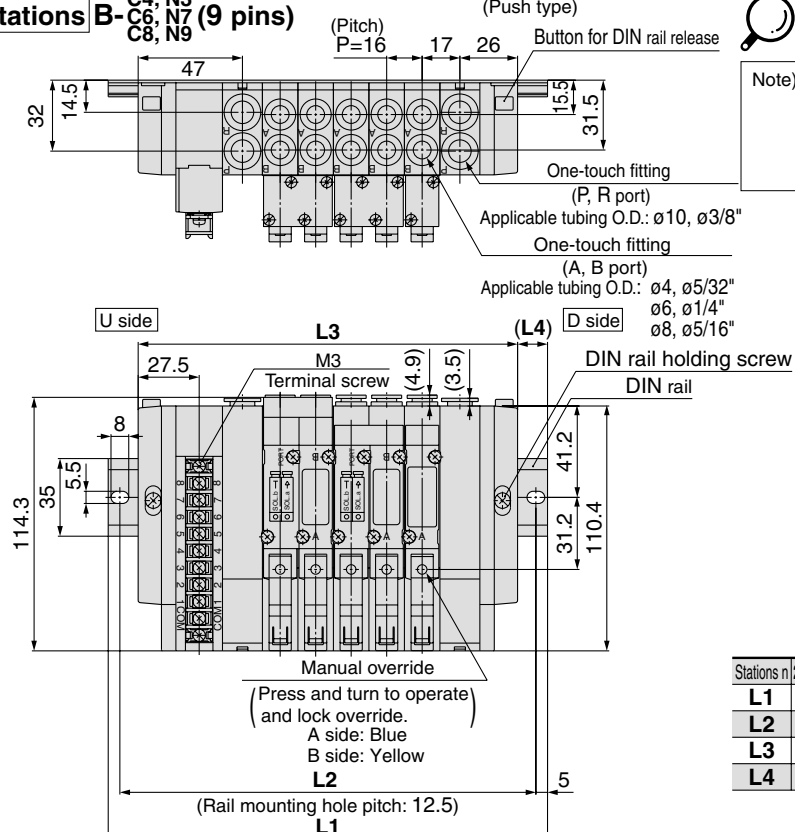
SS5Y5-45TU- Stations D-^{C4, N3}_{C6, N7, C8, N9} (9 pins)



Note) The L1 to L4 dimensions of **SS5Y5-45TU-**
Stations U-^{C4, N3}_{C6, N7, C8, N9}, **SS5Y5-45TD-**
Stations U-^{C4, N3}_{C6, N7, C8, N9} are identical those of SS5Y5-45TU-
Stations D-^{C4, N3}_{C6, N7, C8, N9}

Stations n	2 stations	3	4	5	6	7	8 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5
L2	125	137.5	150	175	187.5	200	225
L3	105	121	137	153	169	185	201
L4	15	13.5	11.5	16	14.5	12.5	17

SS5Y5-45TU- Stations B-^{C4, N3}_{C6, N7, C8, N9} (9 pins)



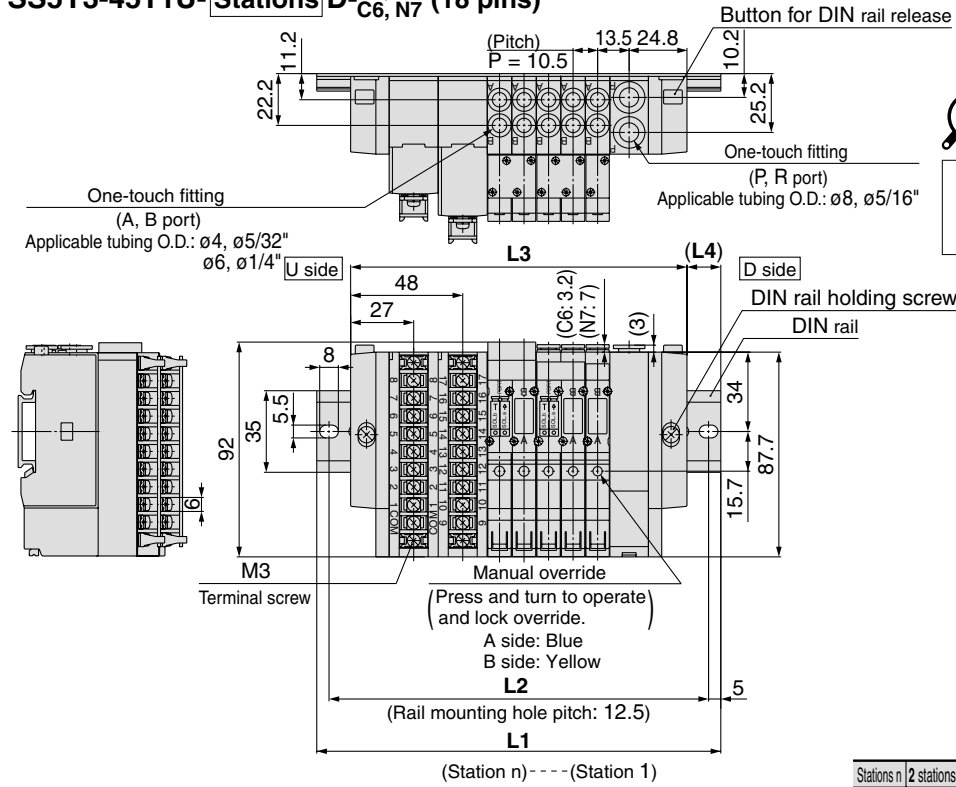
Note) The L1 to L4 dimensions of **SS5Y5-45TD-**
Stations B-^{C4, N3}_{C6, N7, C8, N9} are identical to those of
SS5Y5-45TU- Stations B-^{C4, N3}_{C6, N7, C8, N9}

Stations n	2 stations	3	4	5	6	7	8 stations
L1	148	173	185.5	198	210.5	235.5	248
L2	137.5	162.5	175	187.5	200	225	237.5
L3	123	139	155	171	187	203	219
L4	12.5	17	15	13.5	11.5	16	14.5

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY3000: 18 Pins Terminal Block/Plug-in

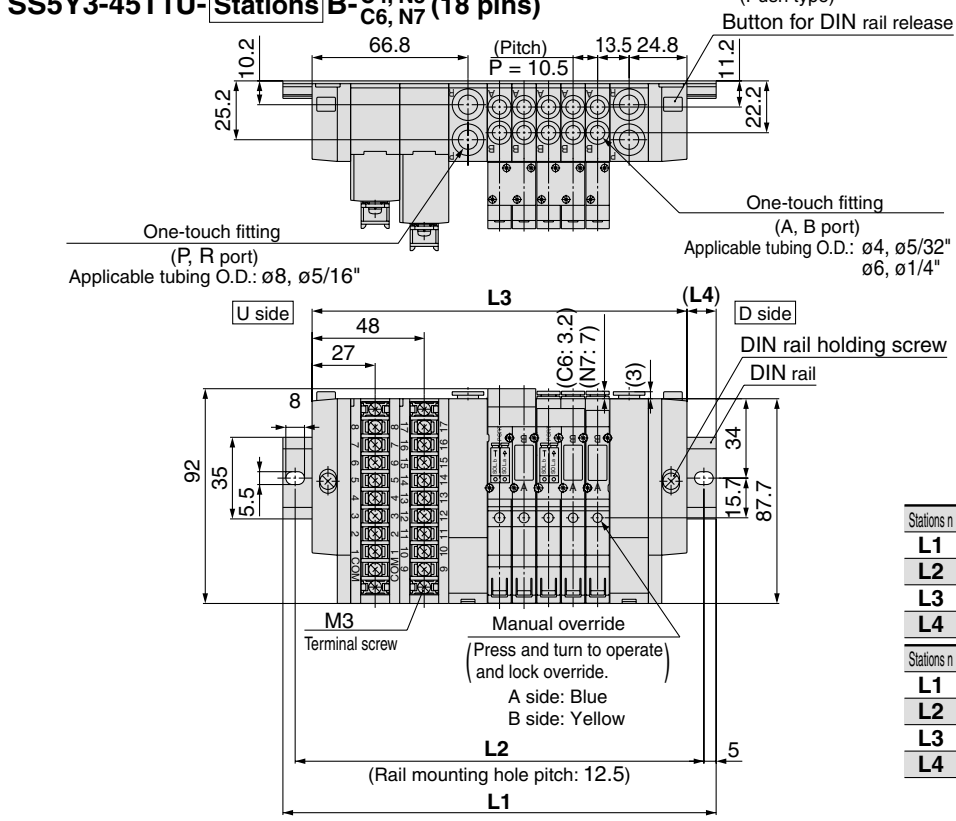
SS5Y3-45T1U- Stations D-C₄, N₃ C₆, N₇ (18 pins)



Note) The L1 to L4 dimensions of **SS5Y3-45T1U- Stations U-C₄, N₃ C₆, N₇** are identical to those of **SS5Y3-45T1U- Stations D-C₄, N₃ C₆, N₇**.

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	148	160.5	173	185.5	198	210.5	210.5	223
L2	137.5	137.5	150	162.5	175	187.5	200	200	212.5
L3	112.5	123	133.5	144	154.5	165	175.5	186	196.5
L4	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13

SS5Y3-45T1U- Stations B-C₄, N₃ C₆, N₇ (18 pins)

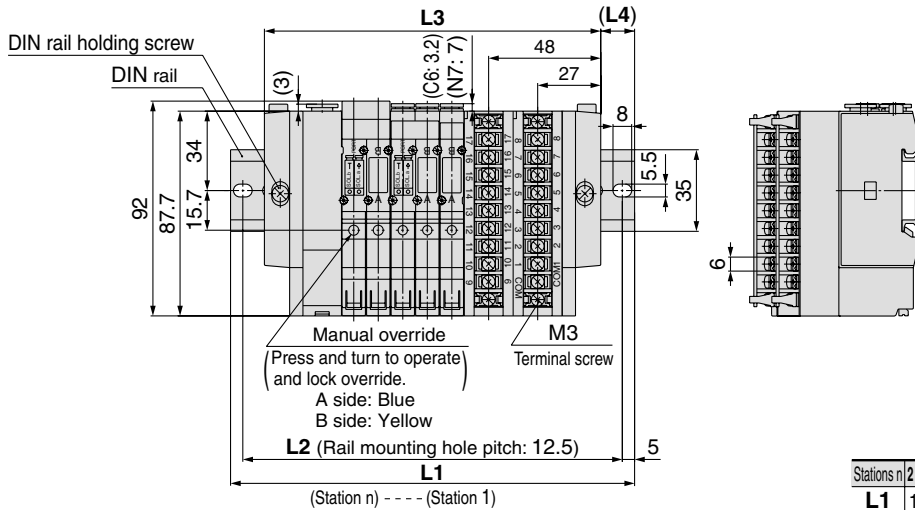
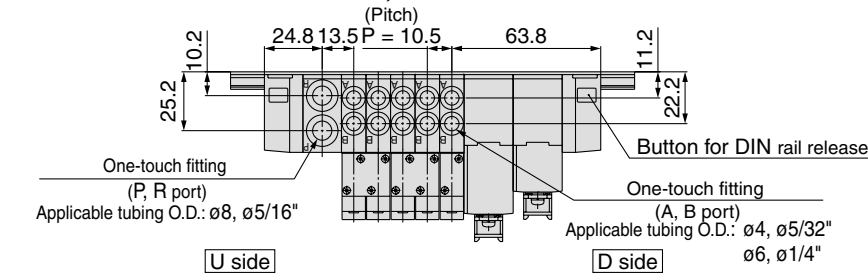


Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	160.5	173	185.5	185.5	198	210.5	223	235.5
L2	150	162.5	175	175	187.5	200	212.5	225
L3	129	139.5	150	160.5	171	181.5	192	202.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5

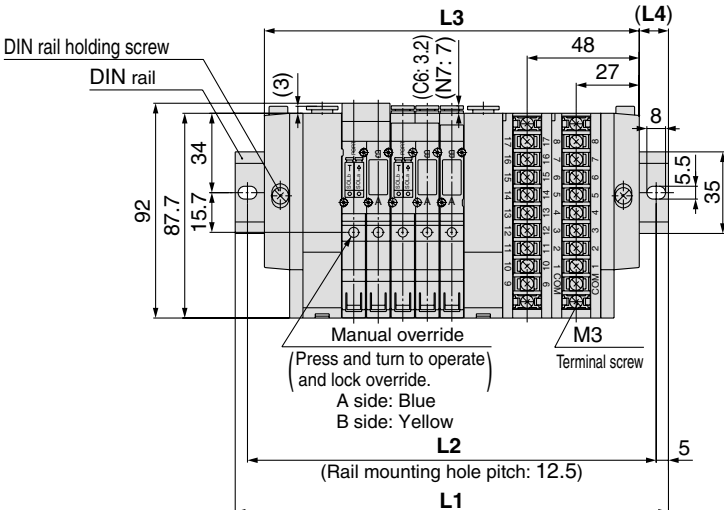
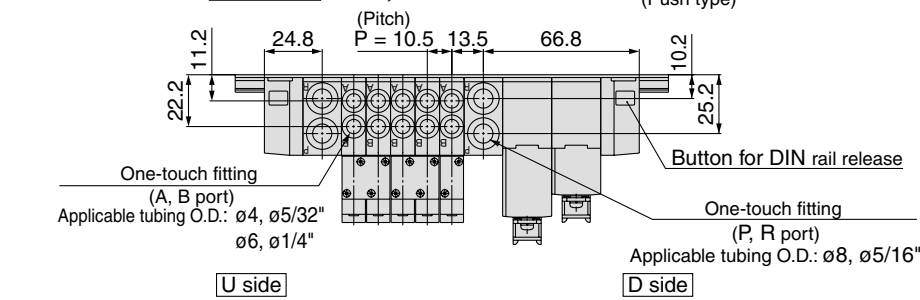
Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	248	248	260.5	273	285.5	298	310.5	310.5
L2	237.5	237.5	250	262.5	275	287.5	300	300
L3	213	223.5	234	244.5	255	265.5	276	286.5
L4	17.5	12	13	14	15	16	17	12

SY3000: 9 Pins Terminal Block/Plug-in

SS5Y3-45T1D- Stations U-C₆^{N3} (18 pins)



SS5Y3-45T1D- Stations B-C₄^{N3} (18 pins)



Note) The L1 to L4 dimensions of **SS5Y3-45T1D- Stations D-C₆^{N3}** are identical to those of **SS5Y3-45T1D- Stations U-C₆^{N3}**.

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	148	160.5	173	185.5	198	210.5	210.5	223
L2	137.5	137.5	150	162.5	175	187.5	200	200	212.5
L3	112.5	123	133.5	144	154.5	165	175.5	186	196.5
L4	17.5	12.5	13.5	14.5	15.5	16.5	17.5	12	13

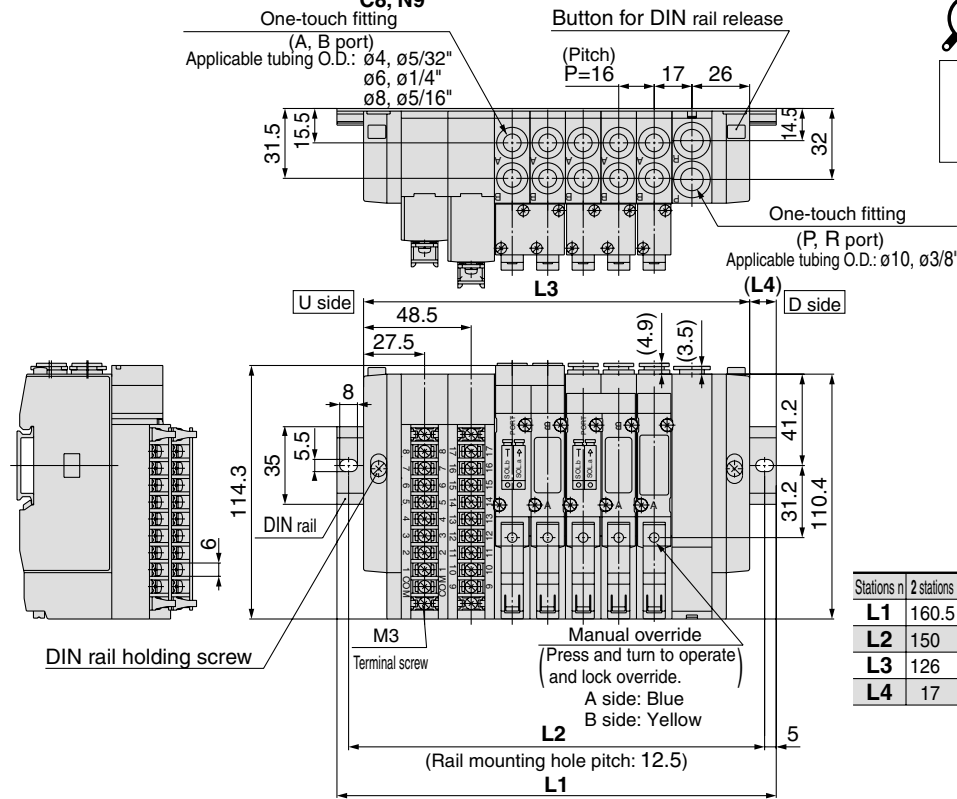
Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	160.5	173	185.5	185.5	198	210.5	223	235.5
L2	150	162.5	175	175	187.5	200	212.5	225
L3	129	139.5	150	160.5	171	181.5	192	202.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5

Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	248	248	260.5	273	285.5	298	310.5	310.5
L2	237.5	237.5	250	262.5	275	287.5	300	300
L3	213	223.5	234	244.5	255	265.5	276	286.5
L4	17.5	12	13	14	15	16	17	12

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY5000: 18 Pins Terminal Block/Plug-in

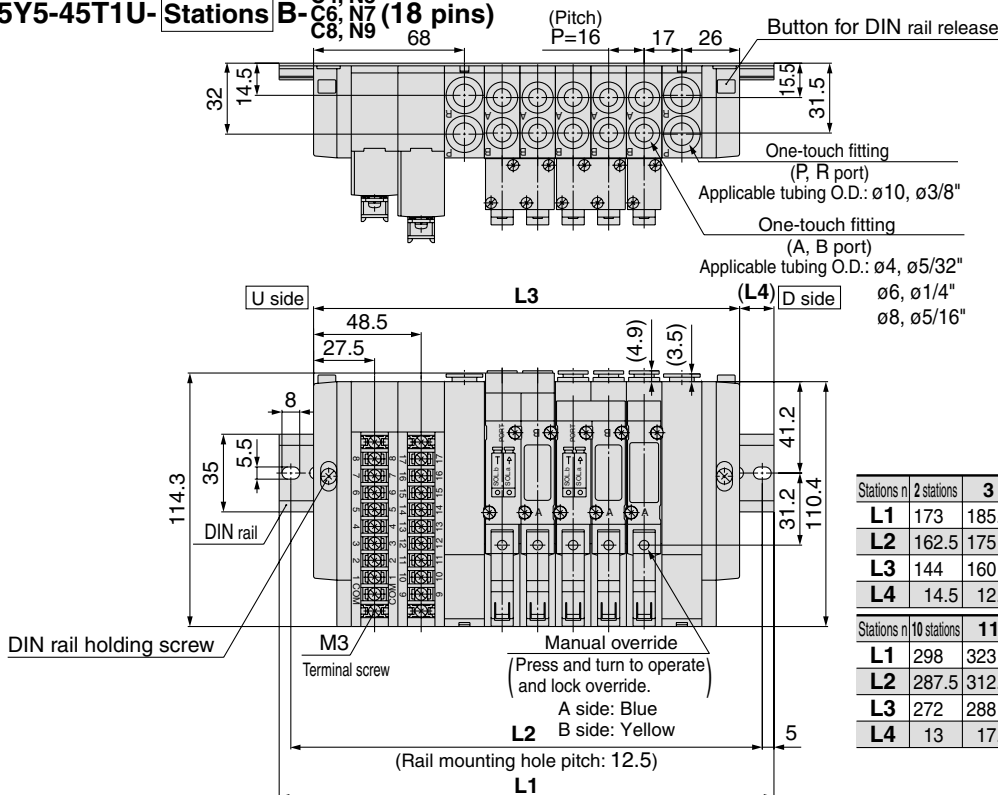
**SS5Y5-45T1U- Stations D-C₄, N₃
C₆, N₇ (18 pins)**



Note) The L1 to L4 dimensions of **SS5Y5-45T1U- Stations U-C₄, N₃
C₆, N₇** are identical to those of **SS5Y5-45T1U- Stations D-C₄, N₃
C₆, N₇**

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	223	235.5	248	273	285.5
L2	150	162.5	175	187.5	212.5	225	237.5	262.5	275
L3	126	142	158	174	190	206	222	238	254
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

**SS5Y5-45T1U- Stations B-C₄, N₃
C₆, N₇ (18 pins)**

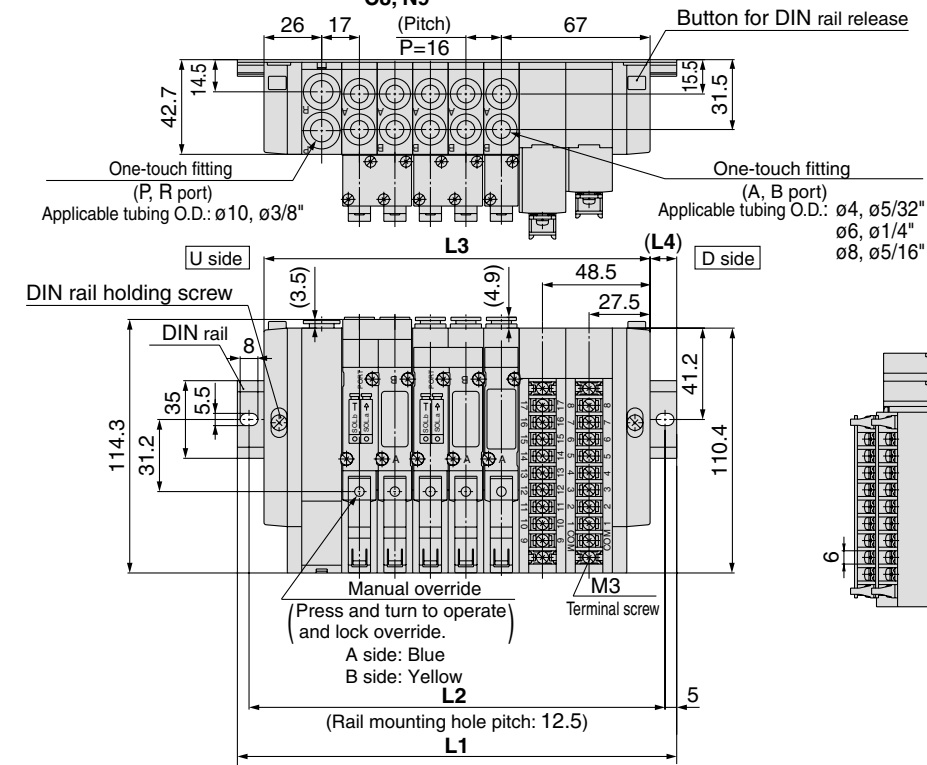


Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	173	185.5	210.5	223	235.5	248	273	285.5
L2	162.5	175	200	212.5	225	237.5	262.5	275
L3	144	160	176	192	208	224	240	256
L4	14.5	12.5	17	15.5	13.5	12	16.5	14.5

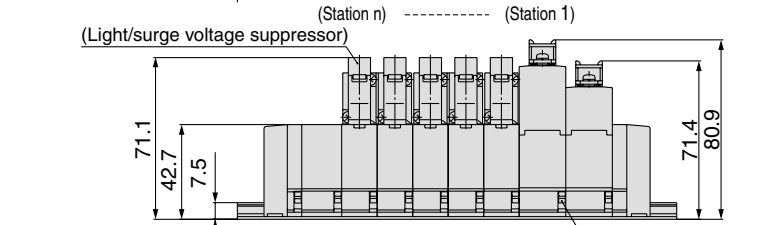
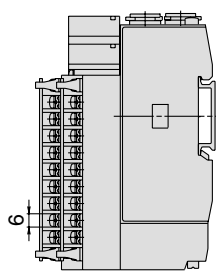
Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	298	323	335.5	348	360.5	385.5	398	410.5
L2	287.5	312.5	325	337.5	350	375	387.5	400
L3	272	288	304	320	336	352	368	384
L4	13	17.5	15.5	14	12	16.5	15	13

SY5000: 18 Pins Terminal Block/Plug-in

**SS5Y5-45T1D- Stations U- C4, N3
C6, N7 (18 pins)
C8, N9**

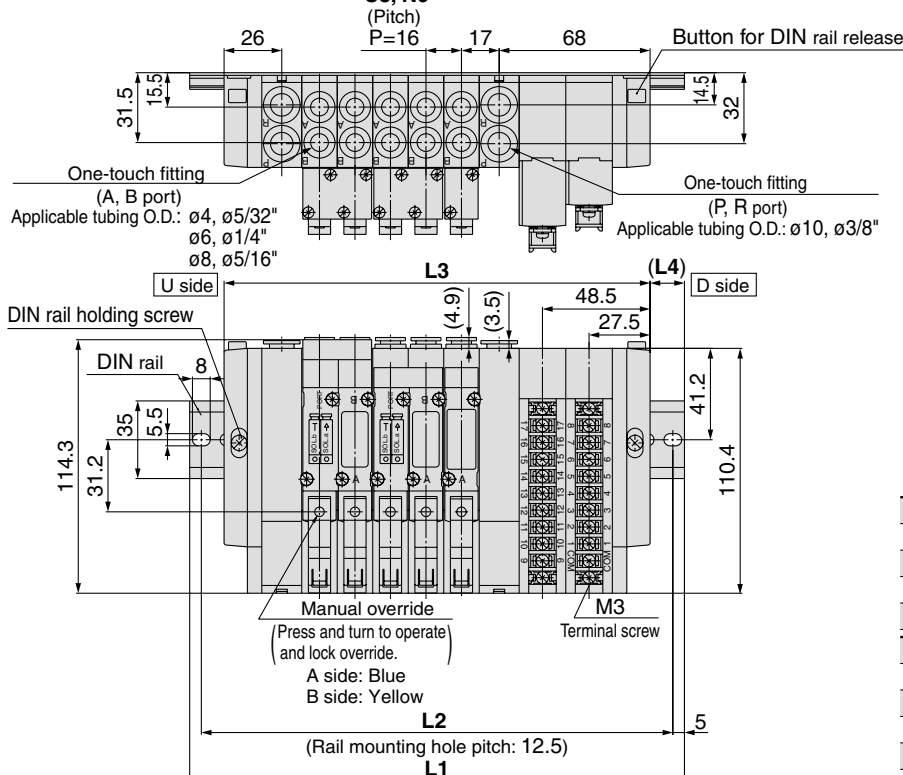


Note) The L1 to L4 dimensions of **SS5Y5-45T1D- Stations D- C4, N3
C6, N7
C8, N9** are identical to those of **SS5Y5-45T1D- Stations U- C4, N3
C6, N7
C8, N9**



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	223	235.5	248	273	285.5
L2	150	162.5	175	187.5	212.5	225	237.5	262.5	275
L3	126	142	158	174	190	206	222	238	254
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

**SS5Y5-45T1D- Stations B- C4, N3
C6, N7 (18 pins)
C8, N9**



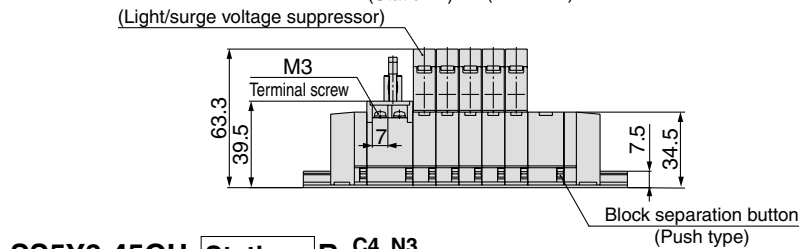
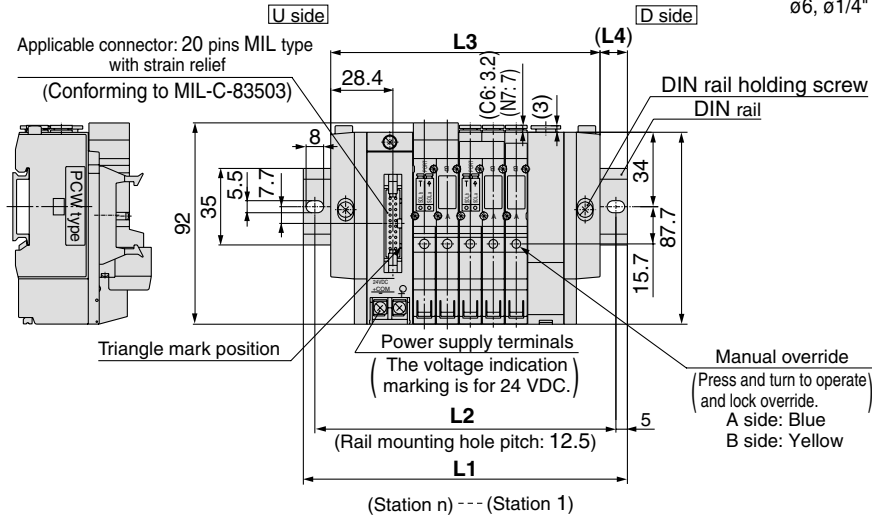
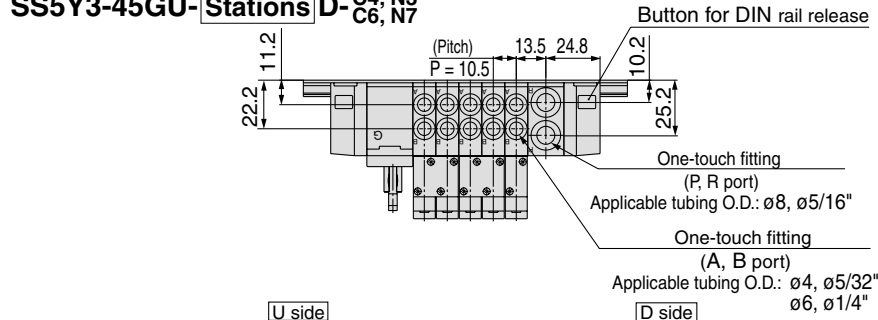
Stations n	2 stations	3	4	5	6	7	8	9 stations
L1	173	185.5	210.5	223	235.5	248	273	285.5
L2	162.5	175	200	212.5	225	237.5	262.5	275
L3	144	160	176	192	208	224	240	256
L4	14.5	12.5	17	15.5	13.5	12	16.5	14.5

Stations n	10 stations	11	12	13	14	15	16	17 stations
L1	298	323	335.5	348	360.5	385.5	398	410.5
L2	287.5	312.5	325	337.5	350	375	387.5	400
L3	272	288	304	320	336	352	368	384
L4	13	17.5	15.5	14	12	16.5	15	13

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY3000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

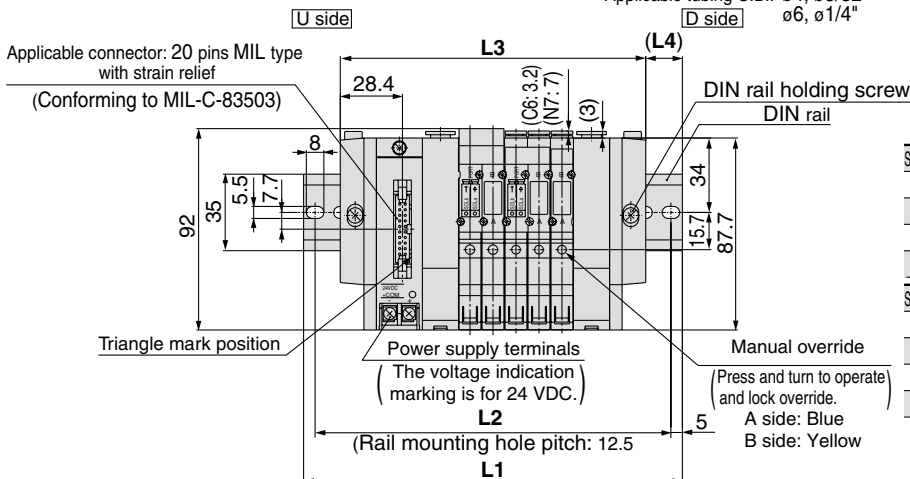
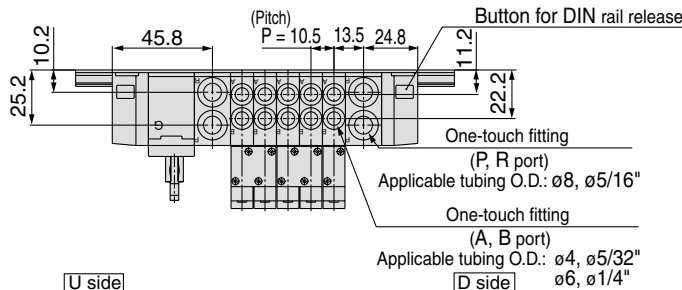
**SS5Y3-45GU- Stations D- C4, N3
C6, N7**



Note) The L1 to L4 dimensions of **SS5Y3-45GU- Stations U- C4, N3
C6, N7** are identical to those of **SS5Y3-45GU- Stations D- C4, N3
C6, N7**.

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

**SS5Y3-45GU- Stations B- C4, N3
C6, N7**

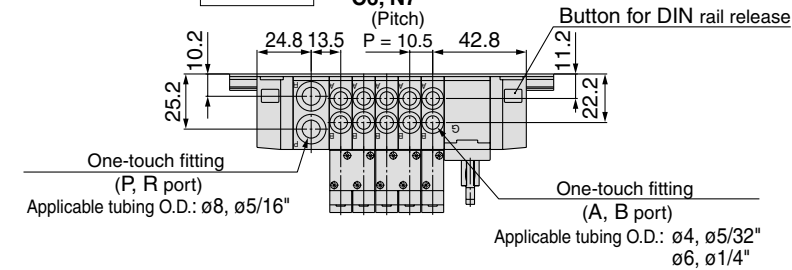


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

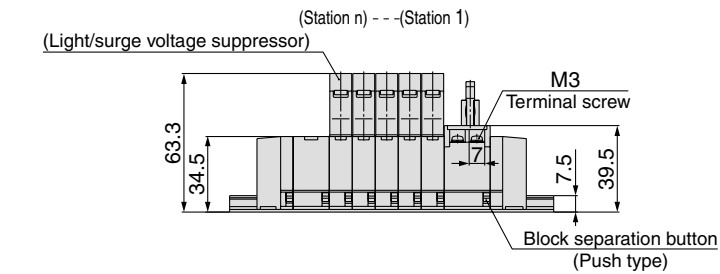
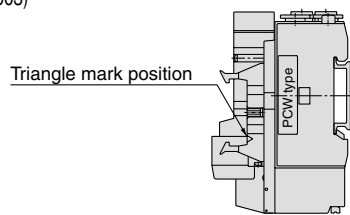
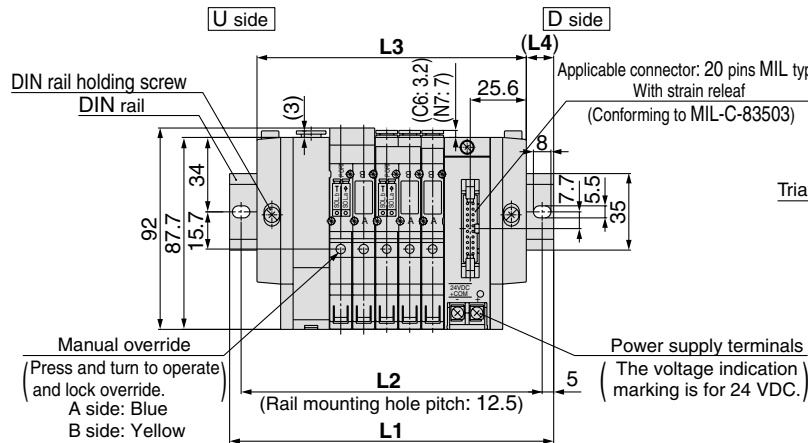
Stations n	11 stations	12	13	14	15	16 stations
L1	235.5	248	248	260.5	273	285.5
L2	225	237.5	237.5	250	262.5	275
L3	202.5	213	223.5	234	244.5	255
L4	16.5	17.5	12	13	14	15

SY3000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

SS5Y3-45GD- Stations U-^{C4, N3}_{C6, N7}

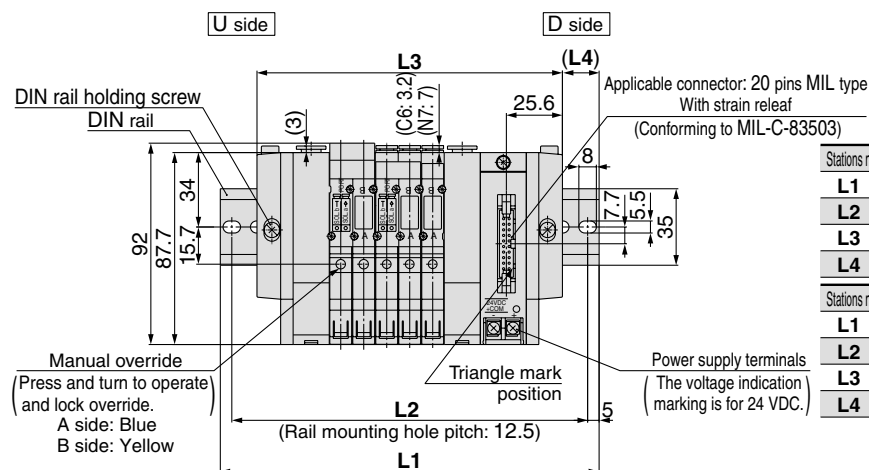
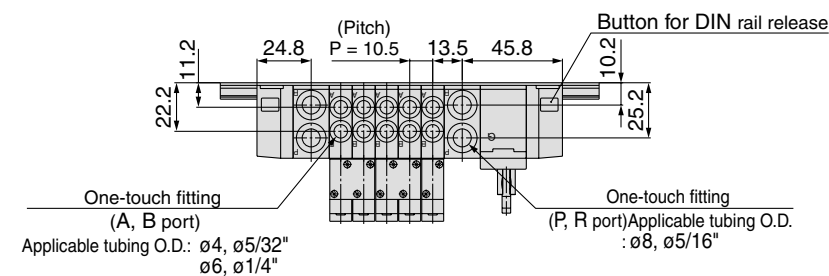


Note) The L1 to L4 dimensions of **SS5Y3-45GD- Stations D-^{C4, N3}_{C6, N7}** are identical to those of **SS5Y3-45GD- Stations U-^{C4, N3}_{C6, N7}**



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	123	135.5	148	148	160.5	173	185.5	198	210.5
L2	112.5	125	137.5	137.5	150	162.5	175	187.5	200
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	15.5	16.5	17.5	12.5	13.5	14.5	15.5	16.5	17.5

SS5Y3-45GD- Stations B-^{C4, N3}_{C6, N7}



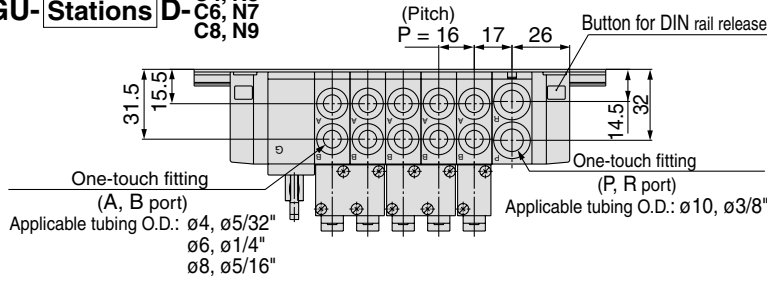
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	173	185.5	185.5	198	210.5	223
L2	125	137.5	150	162.5	175	175	187.5	200	212.5
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	13.5	14.5	15.5	16.5	17.5	12.5	13.5	14.5	15.5

Stations n	11 stations	12	13	14	15	16 stations
L1	235.5	248	248	260.5	273	285.5
L2	225	237.5	237.5	250	262.5	275
L3	202.5	213	223.5	234	244.5	255
L4	16.5	17.5	12	13	14	15

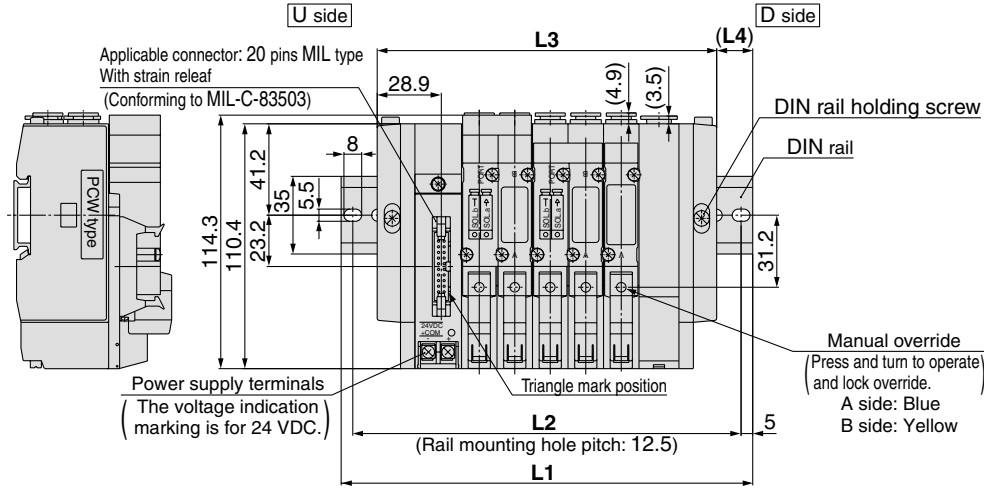
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY5000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

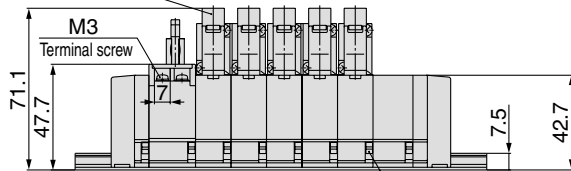
SS5Y5-45GU- Stations D- C4, N3
C6, N7
C8, N9



Note) The L1 to L4 dimensions of **SS5Y5-45GU- Stations U-** C4, N3
C6, N7
C8, N9 are identical to those of **SS5Y5-45GU- Stations D-** C4, N3
C6, N7
C8, N9.

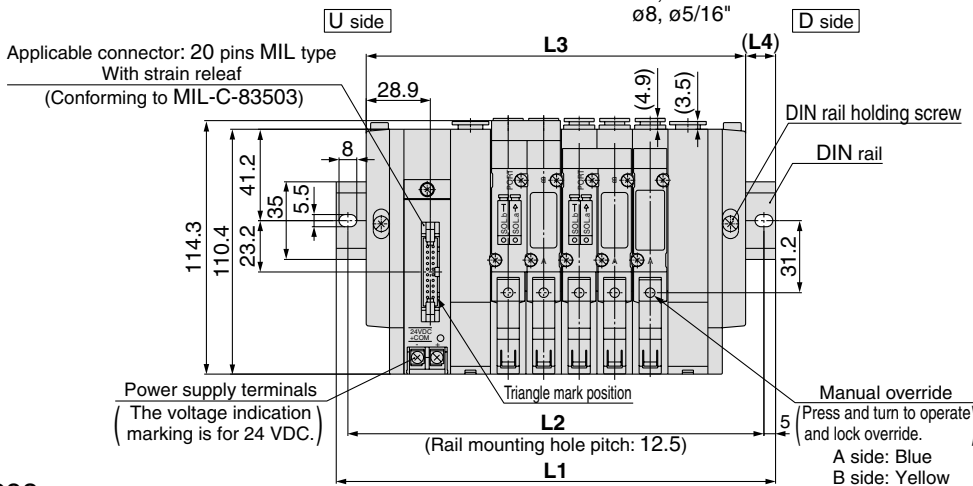
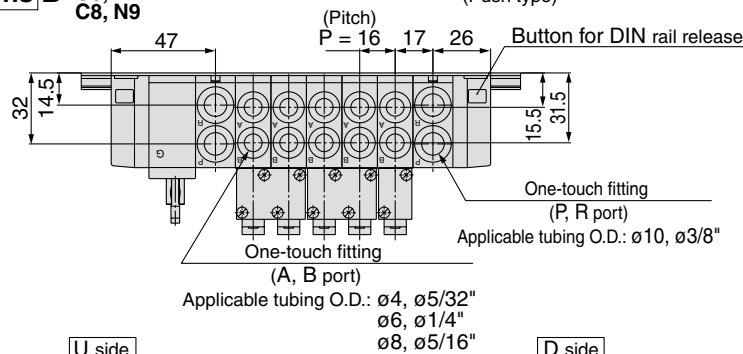


(Light/surge voltage suppressor) (Station n) ----- (Station 1)



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5Y5-45GU- Stations B- C4, N3
C6, N7
C8, N9

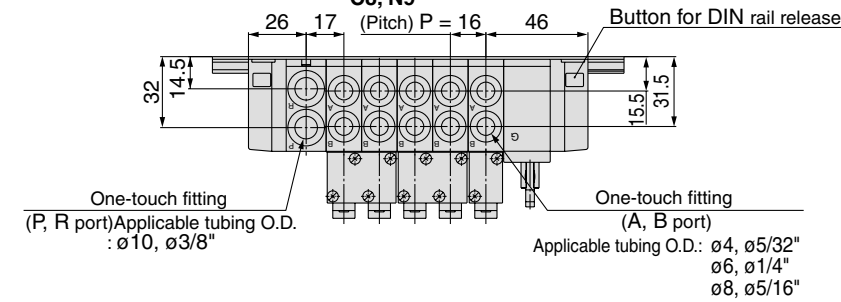


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16 stations
L1	298	310.5	323	348	360.5	373
L2	287.5	300	312.5	337.5	350	362.5
L3	267	283	299	315	331	347
L4	15.5	13.5	12	16.5	14.5	13

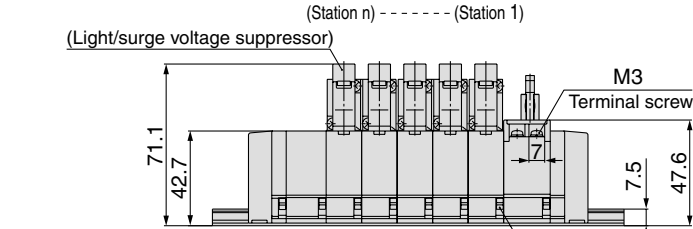
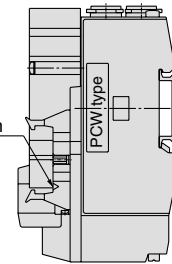
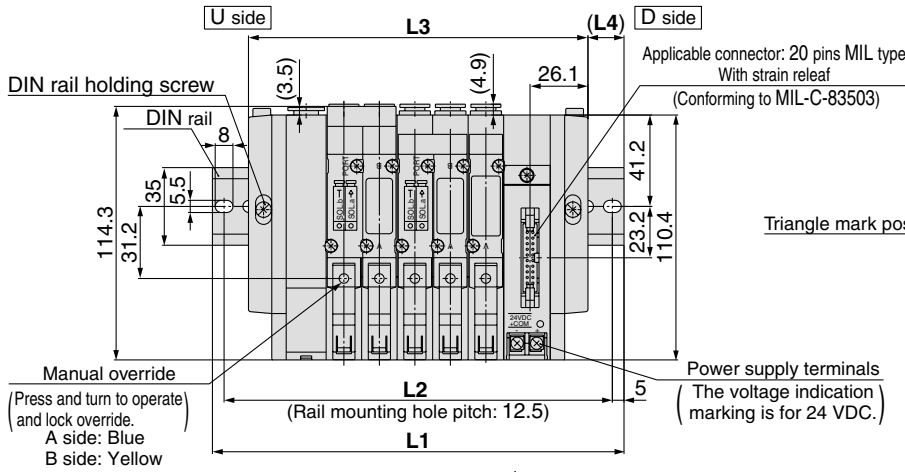
SY5000: PC Wiring System Compatible (Flat ribbon cable/Plug-in)

SS5Y5-45GD- Stations U- C4, N3
C6, N7
C8, N9



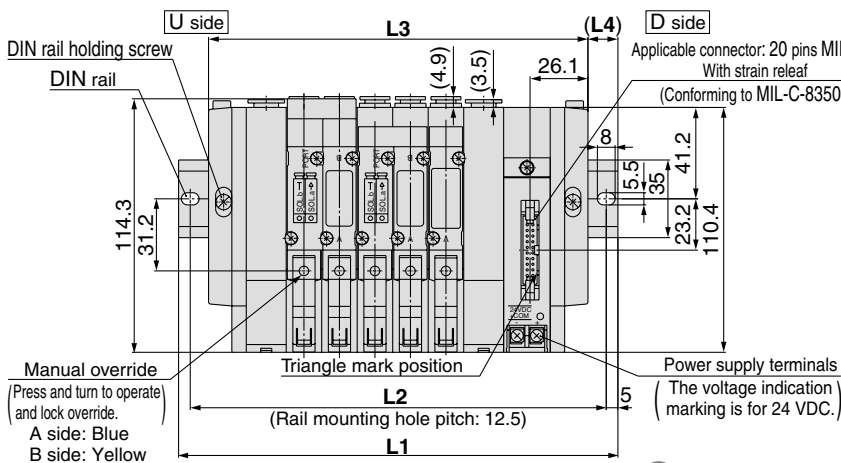
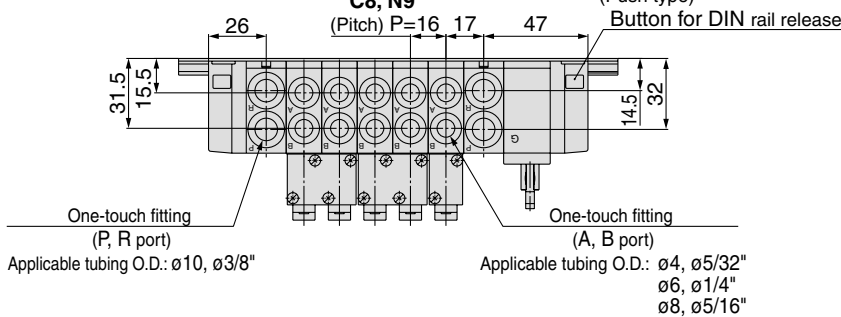
Note) The L1 to L4 dimensions of SS5Y5-45GD-

Stations D-^{C4, N3}_{C6, N7} are identical to those of SS5Y5-45GD-^{C4, N3}Stations U-_{C6, N7, C8, N9}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	135.5	148	160.5	185.5	198	210.5	235.5	248	260.5
L2	125	137.5	150	175	187.5	200	225	237.5	250
L3	105	121	137	153	169	185	201	217	233
L4	15	13.5	11.5	16	14.5	12.5	17	15.5	13.5

SS5Y5-45GD- Stations B- C4, N3
C6, N7
C8, N9



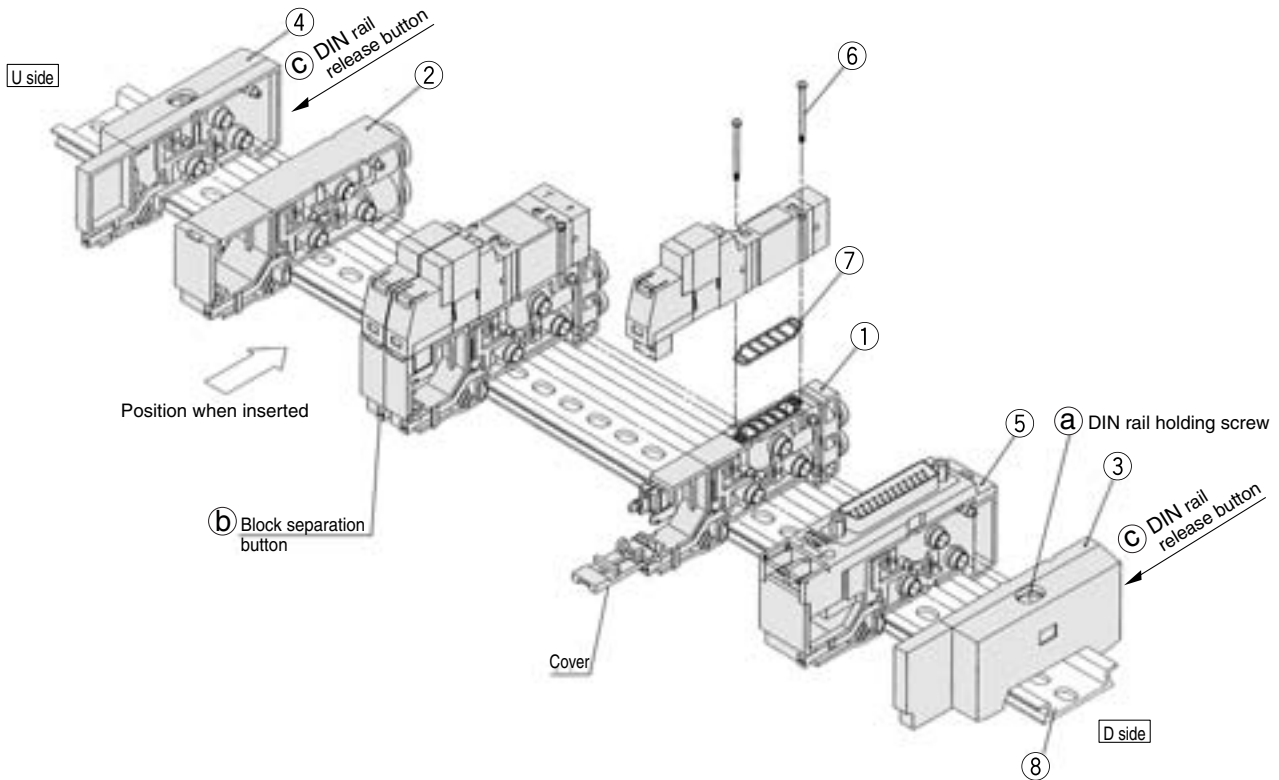
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	173	185.5	198	210.5	235.5	248	260.5	285.5
L2	137.5	162.5	175	187.5	200	225	237.5	250	275
L3	123	139	155	171	187	203	219	235	251
L4	12.5	17	15	13.5	11.5	16	14.5	12.5	17

Stations n	11 stations	12	13	14	15	16 stations
L1	298	310.5	323	348	360.5	373
L2	287.5	300	312.5	337.5	350	362.5
L3	267	283	299	315	331	347
L4	15.5	13.5	12	16.5	14.5	13

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

DIN Rail Manifold Exploded View

Type 45F (D-sub Connector) Manifold



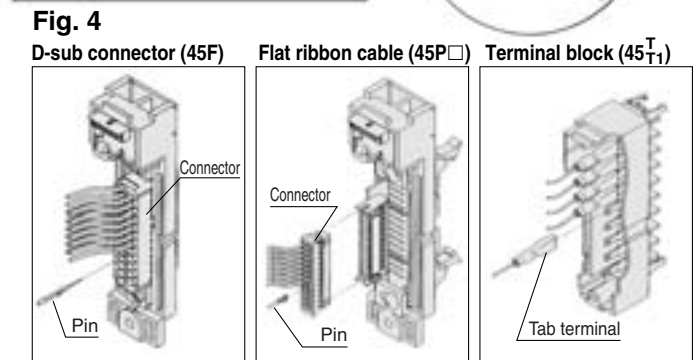
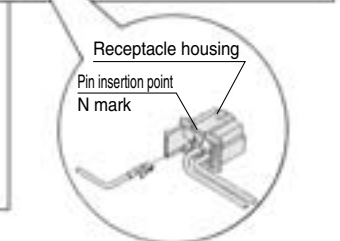
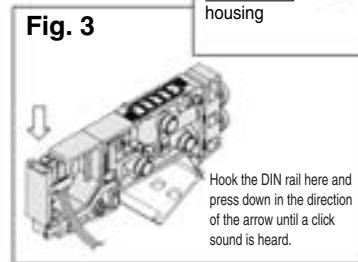
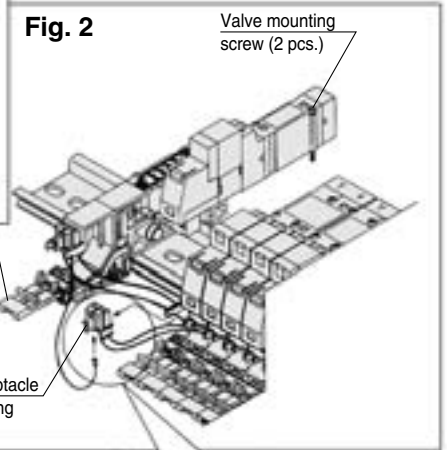
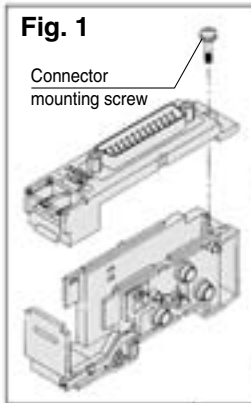
No.	Description	Part no.		Note
		SY3000	SY5000	
1	Manifold block assembly	Manifold block assembly part number differs according to an attached lead wire assembly based on the connector spec. Select an appropriate part number from the table of manifold block assembly part number shown below. (Gasket 7 is supplied as an accessory.)		
2	SUP/EXH block assembly	(Metric size) SX3000-51-2A (Inch size) SX3000-51-16A	(Metric size) SX3000-51-2A (Inch size) SX5000-51-16A	Metric size SY3000: P, R port with one-touch fitting for $\phi 8$ SY5000: P, R port with one-touch fitting for $\phi 10$ Inch size With one-touch fitting for $\phi \frac{5}{16}$ " With one-touch fitting for $\phi \frac{3}{8}$ "
3	End block assembly	SX3000-52-2A(-Q)	SX5000-52-2A(-Q)	For D side
4	End block assembly	SX3000-53-2A(-Q)	SX5000-53-2A(-Q)	For U side
5-1	Connector block assembly (for D-sub connector)	SX3000-64- ^{1A} _{1NA}	SX5000-64- ^{1A} _{1NA}	-1A: +COM -1NA: -COM
5-2	Connector block assembly (for 26 pins flat cable)	SX3000-64- ^{2A} _{2NA} -26	SX5000-64- ^{2A} _{2NA} -26	Note) For 24 VDC
5-3	Connector block assembly (for 20 pins flat cable)	SX3000-64- ^{2A} _{2NA} -20	SX5000-64- ^{2A} _{2NA} -20	
5-4	Connector block assembly (for 10 pins flat cable)	SX3000-64- ^{2A} _{2NA} -10	SX5000-64- ^{2A} _{2NA} -10	
5-5	Connector block assembly (for 2 to 8 stations (T, T1) terminal block)	SX3000-64-3A	SX5000-64-3A	In common between +COM and -COM.
5-6	Connector block assembly (for 9 to 17 stations (T1) terminal block)	SX3000-64-8A	SX5000-64-8A	
6	Round head combination screw	SY3000-23-4	M3 x 26, Matt nickel plated	
7	Gasket	SX3000-57-4	SX5000-57-6	
8	DIN rail	VZ1000-11-1-I□		Refer to page 276.

Note 1) The numbers 5-1 to 4 are for 24 VDC. For 12 VDC, suffix "-12V" to the end of parts number. (Example) SX3000-64-1A-12 V
 Note 2) Two manifold block assemblies are necessary for the double, 3 position (Dual body type).

Style of manifold	Manifold block assembly part no.	Note
For 45(N)F (D-sub connector)	SX ₅ ³ 000-50-3A-□□(-Q)	□□: AB port SY3000 (metric size) (inch size) C4: With one-touch fitting for $\phi 4$ C6: With one-touch fitting for $\phi 6$ N3: With one-touch fitting for $\phi \frac{5}{32}$ " N7: With one-touch fitting for $\phi \frac{1}{4}$ "
For 45(N) ^P _{PH} (Flat ribbon cable)	SX ₅ ³ 000-50-5A-□□(-Q)	
For 45G PC Wiring System compatible	SX ₅ ³ 000-50-5A-□□(-Q)	A, B port SY5000 (metric size) (inch size) C4: With one-touch fitting for $\phi 4$ C6: With one-touch fitting for $\phi 6$ C8: With one-touch fitting for $\phi 8$ N3: With one-touch fitting for $\phi \frac{5}{32}$ " N7: With one-touch fitting for $\phi \frac{1}{4}$ " N9: With one-touch fitting for $\phi \frac{5}{16}$ "
For 45 ^T _{T1} (Terminal block)	SX ₅ ³ 000-50-7A-□□(-Q)	

How to Increase Manifold Bases

- 1** Loosen DIN rail holding screw (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons (c), at two locations, separate the manifold base from the DIN rail.)
- 2** Additional bases are to be added to the U side. Press splitting button (b) of the manifold block assembly on the U side until button (b) locks, and then separate the block assemblies.
- 3** Separate the connector block assembly in the same manner as 2, and remove the connector mounting screw shown in Fig. 1.
- 4** Loosen the valve mounting screw on the U side, remove the valve, and take out the receptacle housing. (Refer to Fig. 2.)
- 5** Insert the common wire (red) of the manifold block assembly to be added into the pin insertion section (N mark) of the receptacle housing that was taken out in 4, mount it on the manifold block, and mount the removed valve.
- 6** As shown in Fig. 3, mount the additional manifold block assembly on the DIN rail on the U side. Refer to the circuit diagram, and insert the lead wire (black) as shown in Fig. 4.
- 7** Press the blocks against each other until a click sound is produced, place the lead wire in the manifold block, and close the lid without pinching the lead wire.
- 8** While lightly holding the blocks together so that there are no gaps between them, secure them to the DIN rail by tightening the DIN rail holding screws (a). (Tightening torque: 1.4 N·m)



Note) After inserting pins, lightly pull lead wire to check that pins are locked.

Note) Insert pins after removing the connector from the main unit. After inserting pins, lightly pull lead wires to check that the pins are locked.

Note) Insert tab terminals completely.

- ⚠ Caution**
1. Depending on the connector, there is a limit to the number of solenoids that can be used. Manifold bases that can be added cannot exceed the number of usable solenoids.
 2. The manifold block assembly mounting position for additional manifold bases is always on the U side, because wires are connected to respective connectors sequentially from the D side.
 3. When DIN rail holding screw (a) for the end block is not sufficiently tightened during reassembly, air leakage may result. Before supplying air, check that there is no gap between blocks and that the manifold block is firmly fixed to the DIN rail in order to ensure air supply without leakage.

- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

How to Change Fitting Assembly

Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly. After removing the valve, remove the clip with a screwdriver, etc. For mounting a new fitting assembly, insert it and then insert a clip until it will not come out of the manifold block.

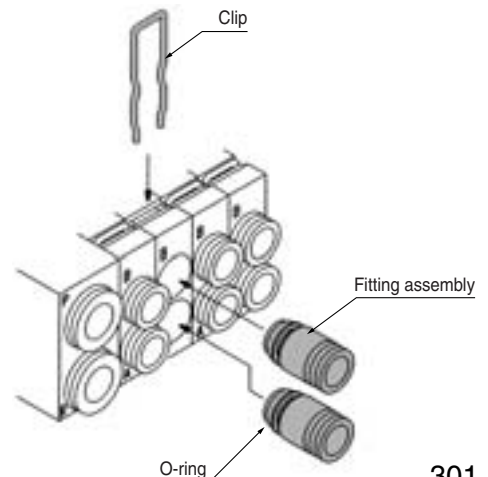
Fitting Assembly Part No.

Metric size

SY3000	One-touch fitting for ø4	VVQ1000-50A-C4
	One-touch fitting for ø6	VVQ1000-50A-C6
SY5000	One-touch fitting for ø4	VVQ1000-51A-C4
	One-touch fitting for ø6	VVQ1000-51A-C6
	One-touch fitting for ø8	VVQ1000-51A-C8

Inch size

SY3000	One-touch fitting for ø ⁵ / ₃₂ "	VVQ1000-50A-N3
	One-touch fitting for ø ¹ / ₄ "	VVQ1000-50A-N7
SY5000	One-touch fitting for ø ⁵ / ₃₂ "	VVQ1000-51A-N3
	One-touch fitting for ø ¹ / ₄ "	VVQ1000-51A-N7
	One-touch fitting for ø ⁵ / ₁₆ "	VVQ1000-51A-N9



- Note 1) P and R ports cannot be changed.
 Note 2) Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.

SY3000/5000 Base Mounted Manifold Stacking Type/DIN Rail Mounted EX122 Integrated Type (for Output) Serial Transmission System

Note) Refer to the SI unit part no. for the SI unit comparable with CE. [Option]



How to Order Manifold

SS5Y 3-45S V-05 U-C6

Series

3	SY3000
5	SY5000

SI unit specifications

Symbol	Protocol type
0	Without SI unit
F1	NKE Corp.: Fieldbus System
H	NKE Corp.: Fieldbus H System
J1	SUNX Corp.: S-LINK (16 outputs)
J2	SUNX Corp.: S-LINK (8 outputs)
Q	DeviceNet
R1	OMRON Corp.: CompoBus/S (16 outputs) compatible
R2	OMRON Corp.: CompoBus/S (8 outputs) compatible
V	CC-LINK
ZB	CompoNet™ (Positive common)
ZBN	CompoNet™ (Negative common)

* Even though when it is not equipped with SI unit, DIN rail length is long enough for future expectancy of mounting SI unit.

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
⋮	⋮	
16	16 stations	

* This also includes the number of blanking plate assemblies.
* Two stations are necessary for the double, 3 position (Dual body type).

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	(Both sides)	2 to 16 stations
M	Special specifications	

* For special specifications, indicate separately by the manifold specification sheet.

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	SY5000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø $\frac{5}{32}$ "	SY3000
N7	One-touch fitting for ø $\frac{1}{4}$ "	
M	Mixed	SY5000
N3	One-touch fitting for ø $\frac{5}{32}$ "	
N7	One-touch fitting for ø $\frac{1}{4}$ "	
N9	One-touch fitting for ø $\frac{5}{16}$ "	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

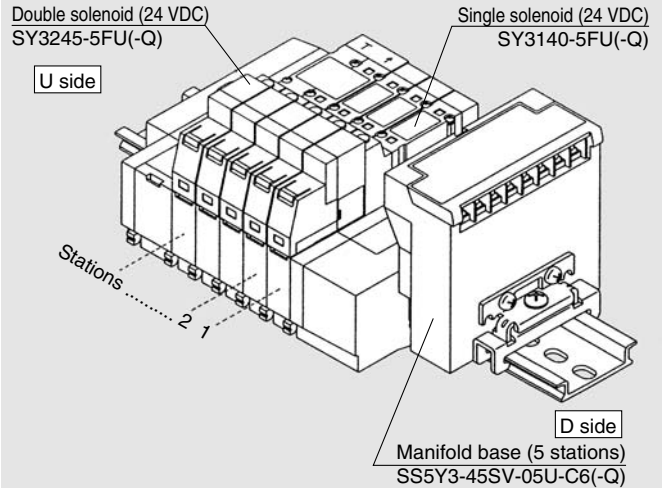
SI Unit Part No.

Symbol	Protocol type	SI unit No.	CE-compliant	Symbol	Protocol type	SI unit No.	CE-compliant
F1	NKE Corp.: Fieldbus System	EX122-SUW1	—	R1	OMRON Corp.: CompoBus/S (16 outputs) compatible	EX122-SCS1	○
H	NKE Corp.: Fieldbus H System	EX122-SUH1	—	R2	OMRON Corp.: CompoBus/S (8 outputs) compatible	EX122-SCS2	○
J1	SUNX Corp.: S-LINK (16 outputs)	EX122-SSL1	—	V	CC-LINK	EX122-SMJ1	○
J2	SUNX Corp.: S-LINK (8 outputs)	EX122-SSL2	—	ZB	CompoNet™ (Positive common)	EX122-SCM1	○
Q	DeviceNet	EX122-SDN1	○	ZBN	CompoNet™ (Negative common)	EX122-SCM3	○

Refer to pages 1650 to 1652 for the details of the EX122 integrated type (for output) serial transmission system.
* Refer to SMC Information (08-E543) for details on CompoNet™.

How to Order Manifold Assembly (Example)

Example



SS5Y3-45SV-05U-C6(-Q) 1 set (45S with SI unit 5-station manifold base part number)
* SY3140-5FU(-Q) 3 sets (Single solenoid part no.)
* SY3245-5FU(-Q) 1 set (Double solenoid part no.)
The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

* The valve arrangement is numbered as the 1st. station from D side.
* When ordering double solenoid valves/3 position (Dual body type), please keep in mind that they require two manifold stations.
* SI unit is available only for the D-side mounting type.

How to Order Valve

2 position single **SY 3 1 4 0 - 5 FU**

Double, 3 position **SY 3 2 4 5 - 5 FU**

Series

3	SY3000
5	SY5000

Type of actuation

2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Dual body type (Double, 3 position)

Rated voltage

5	24 VDC
---	--------

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Made to Order

Nil	—
X90	Main valve fluororubber (Refer to page 332.)

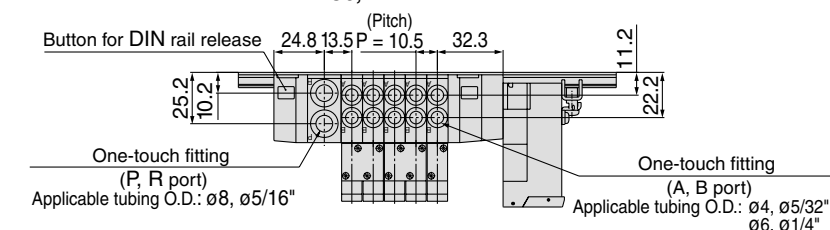
CE compliant

Nil	—
Q	CE compliant

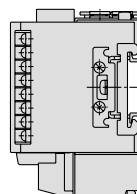
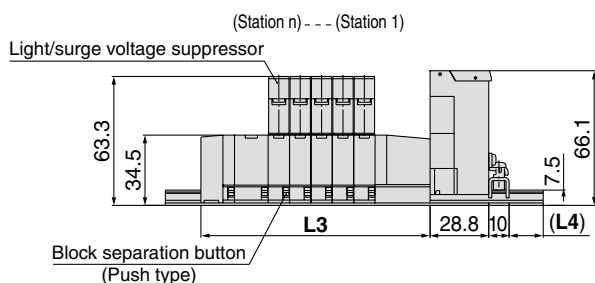
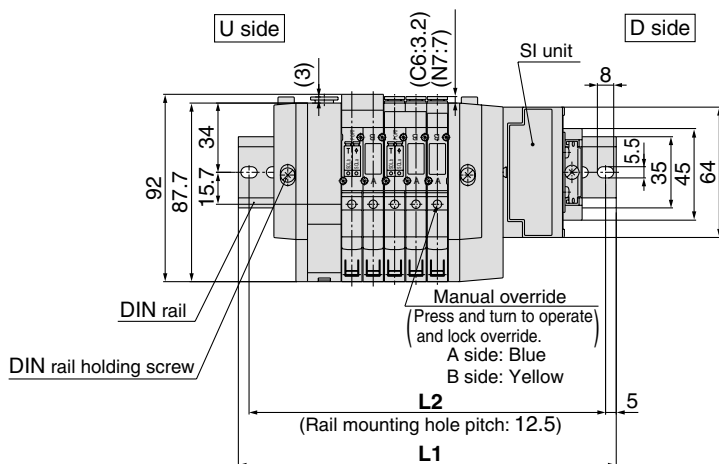
When ordering plug-in type valve as a single unit, gaskets are not included. Order them separately, if necessary. (Refer to page 300 for details.)

Series SY3000: EX122 Integrated Type (for Output) Serial Transmission System/Plug-in

SS5Y3-45S - Stations **U-C₄, N₃**
C₆, N₇

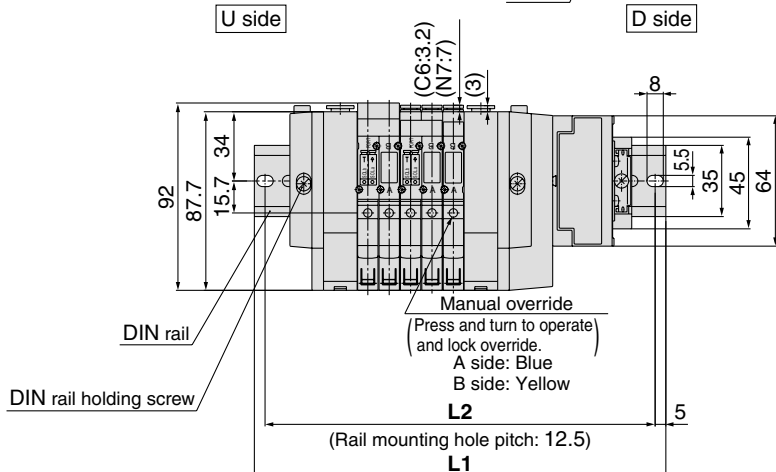
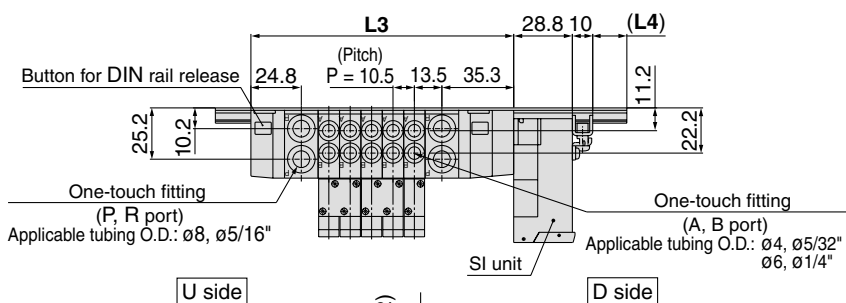


Note) The L1 to L4 dimensions of **SS5Y3-45S** - Stations **U-C₄, N₃** are identical to those of **SS5Y3-45S** - Stations **D-C₄, N₃**, **C₆, N₇**.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	148	160.5	173	185.5	185.5	198	210.5	223	235.5
L2	137.5	150	162.5	175	175	187.5	200	212.5	225
L3	81	91.5	102	112.5	123	133.5	144	154.5	165
L4	14.5	15.5	16.5	17.5	12	13	14	15	16

SS5Y3-45S - Stations **B-C₄, N₃**
C₆, N₇



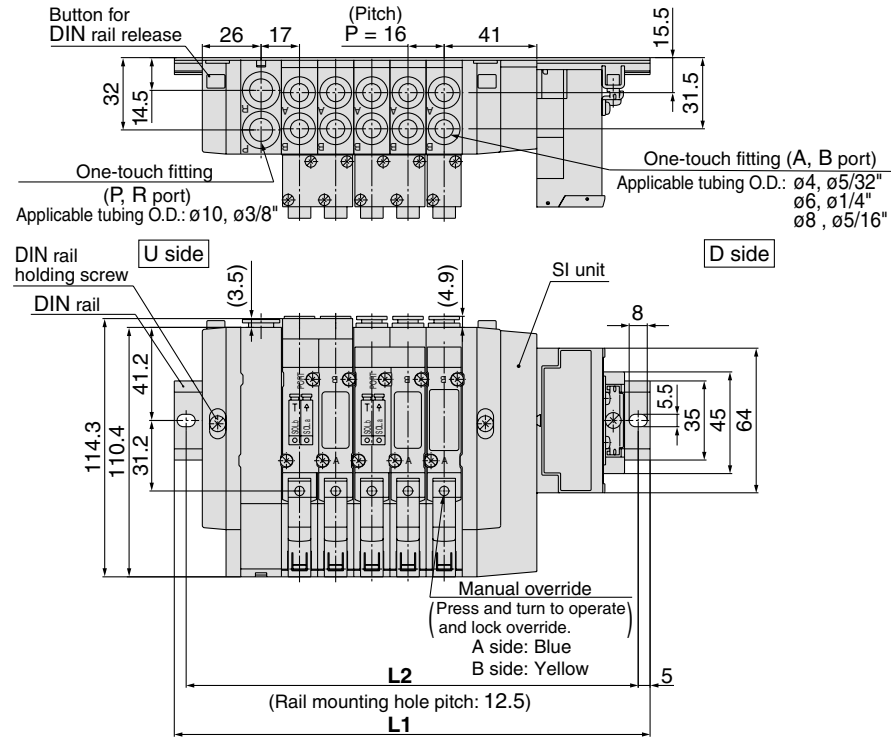
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	210.5	223	223	235.5	248
L2	150	162.5	175	187.5	200	212.5	212.5	225	237.5
L3	97.5	108	118.5	129	139.5	150	160.5	171	181.5
L4	12.5	13.5	14.5	15.5	16.5	17.5	12	13	14

Stations n	11 stations	12	13	14	15	16 stations
L1	260.5	273	285.5	285.5	298	310.5
L2	250	262.5	275	275	287.5	300
L3	192	202.5	213	223.5	234	244.5
L4	15	16	17	12	13	14

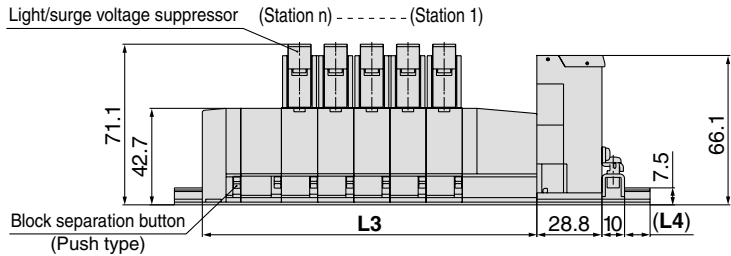
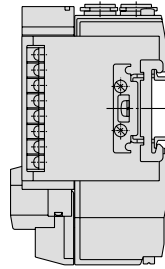
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

Series SY5000: EX122 Integrated Type (for Output) Serial Transmission System/Plug-in

SS5Y5-45S - Stations **U**-^{C4, N3}_{C6, N7}
_{C8, N9}

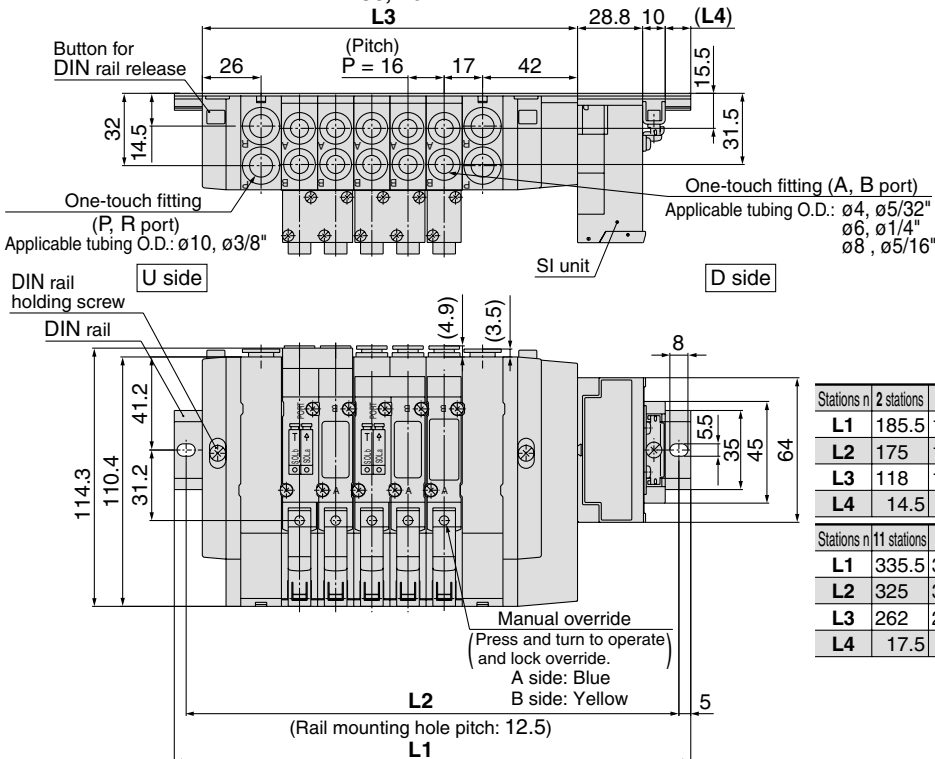


Note) The L1 to L4 dimensions of **SS5Y5-45S** - Stations **U**-^{C4, N3}_{C6, N7} are identical to those of **SS5Y5-45S** - Stations **D**-^{C4, N3}_{C6, N7}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	198	210.5	235.5	248	260.5	285.5	298
L2	162.5	175	187.5	200	225	237.5	250	275	287.5
L3	100	116	132	148	164	180	196	212	228
L4	17.5	15.5	14	12	16.5	15	13	17.5	16

SS5Y5-45S - Stations **B**-^{C4, N3}_{C6, N7}
_{C8, N9}



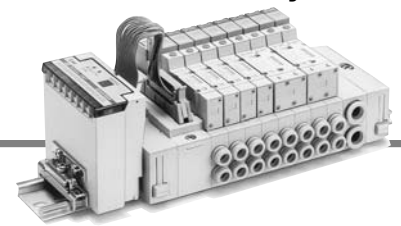
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	185.5	198	223	235.5	248	260.5	285.5	298	310.5
L2	175	187.5	212.5	225	237.5	250	275	287.5	300
L3	118	134	150	166	182	198	214	230	246
L4	14.5	13	17.5	15.5	14	12	16.5	15	13

Stations n	11 stations	12	13	14	15	16 stations
L1	335.5	348	360.5	373	398	410.5
L2	325	337.5	350	362.5	387.5	400
L3	262	278	294	310	326	342
L4	17.5	16	14	12.5	17	15

Type 45S1

SY3000/5000 Base Mounted Manifold Stacking Type/DIN Rail Mounted EX 121 Separate Type (for Output) Serial Transmission System

Note) Refer to the SI unit part no. for the SI unit comparable with CE. [Option]



How to Order Manifold

SS5Y **3** - 45S1 **V** **D** - **05** **U** - **C4** - [] - []

Series

3	SY3000
5	SY5000

SI unit specifications

Symbol	Protocol type
0	Without SI unit
F1	NKE Corp.: Fieldbus System
H	NKE Corp.: Fieldbus H System
J1	SUNX Corp.: S-LINK (16 outputs)
J2	SUNX Corp.: S-LINK (8 outputs)
Q	DeviceNet
R1	OMRON Corp.: CompoBus/S (16 outputs) compatible
R2	OMRON Corp.: CompoBus/S (8 outputs) compatible
V	CC-LINK
ZB	CompoNet™ (Positive common)
ZBN	CompoNet™ (Negative common)

• Even though when it is not equipped with SI unit, DIN rail length is long enough for future expectancy of mounting SI unit. When a shorter rail is required (same as type 45□), suffix "0" in the optional blank at the end of part number.

SI unit mounting position

Symbol	Mounting position
U	U side
D	D side

CE compliant

Nil	—
Q	CE compliant

Note) Refer to the SI unit part no. for the SI unit compatible with CE.

Option

When a longer DIN rail is desired than the specified stations, specify the station number to be required. (Max. 20 stations)

A, B port size

One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø 5/32"	SY3000
N7	One-touch fitting for ø 1/4"	
M	Mixed	
N3	One-touch fitting for ø 5/32"	SY5000
N7	One-touch fitting for ø 1/4"	
N9	One-touch fitting for ø 5/16"	
M	Mixed	

* In the case of mixed specifications, indicate separately on the manifold specification sheet.

SUP/EXH block assembly mounting position

Symbol	Mounting position	Stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	Both sides	2 to 16 stations
M	Special specifications	

* For special specifications, indicate separately by the manifold specification sheet.

Valve stations

Symbol	Stations	Note
02	2 stations	Single wiring spec. (Applicable up to 16 solenoid valves.)
⋮	⋮	
16	16 stations	

* This also includes the number of blanking plate assemblies.

* Two stations are necessary for the double, 3 position (Dual body type).

SI Unit Part No.

Symbol	Protocol type	SI unit No.	CE compliant	Symbol	Protocol type	SI unit No.	CE compliant
F1	NKE Corp.: Fieldbus System	EX121-SUW1	—	R1	OMRON Corp.: CompoBus/S (16 outputs) compatible	EX121-SCS1	●
H	NKE Corp.: Fieldbus H System	EX121-SUH1	—	R2	OMRON Corp.: CompoBus/S (8 outputs) compatible	EX121-SCS2	●
J1	SUNX Corp.: S-LINK (16 outputs)	EX121-SSL1	—	V	CC-LINK	EX121-SMJ1	●
J2	SUNX Corp.: S-LINK (8 outputs)	EX121-SSL2	—	ZB	Compo Net™ (Positive common)	EX121-SCM1	●
Q	DeviceNet	EX121-SDN1	●	ZBN	CompoNet™ (Negative common)	EX121-SCM3	●

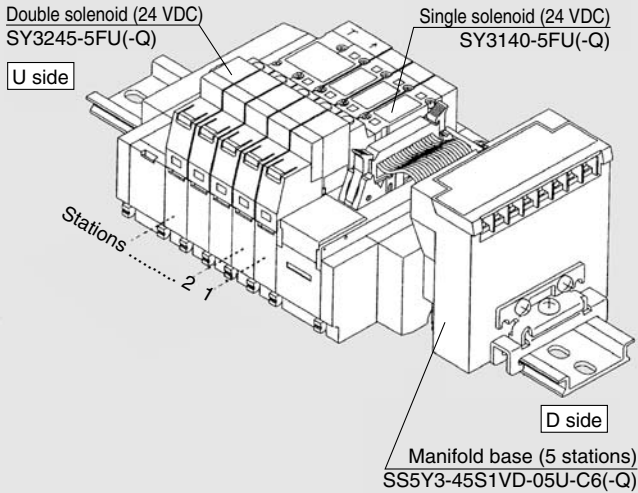
• For external pilot specifications and built-in silencer, refer to pages 324 to 328.

Refer to pages 1650 to 1652 for the details of the EX121 separate type (for output) serial transmission system.
* Refer to SMC Information (08-E543) for details on CompoNet™.

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

How to Order Valve Manifold Assembly (Example)

Example



SS5Y3-45S1VD-05U-C6 (-Q) ... 1 set (Type 45S1 with serial unit 5-station manifold base part no.)
 * SY3140-5FU (-Q) 3 sets (Single solenoid part no.)
 * SY3245-5FU (-Q) 1 set (Double solenoid part no.)

→The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

- The valve arrangement is numbered as the 1st. station from D side regardless of the mounting position of SI unit.
- When ordering double solenoid valves/3 position (Dual body type), please keep in mind that they require two manifold stations.

How to Order Valve

2 position single **SY 3 1 4 0-5 FU** -

Double, 3 position **SY 3 2 4 5-5 FU** -

Series

3	SY3000
5	SY5000

Type of actuation

2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Dual body type (Double, 3 position)

Rated voltage

5	24 VDC
---	--------

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

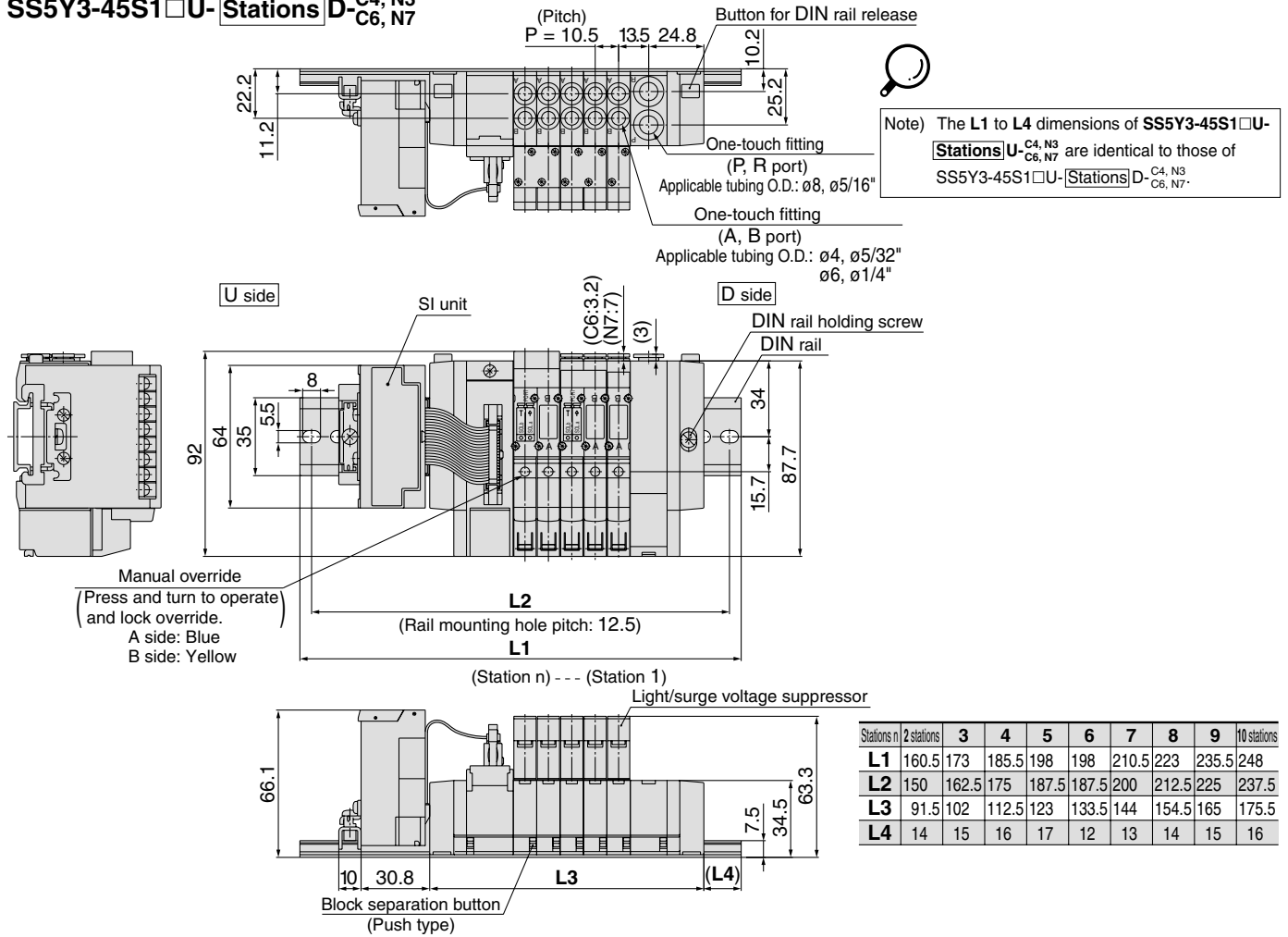
CE compliant

Nil	—
Q	CE compliant

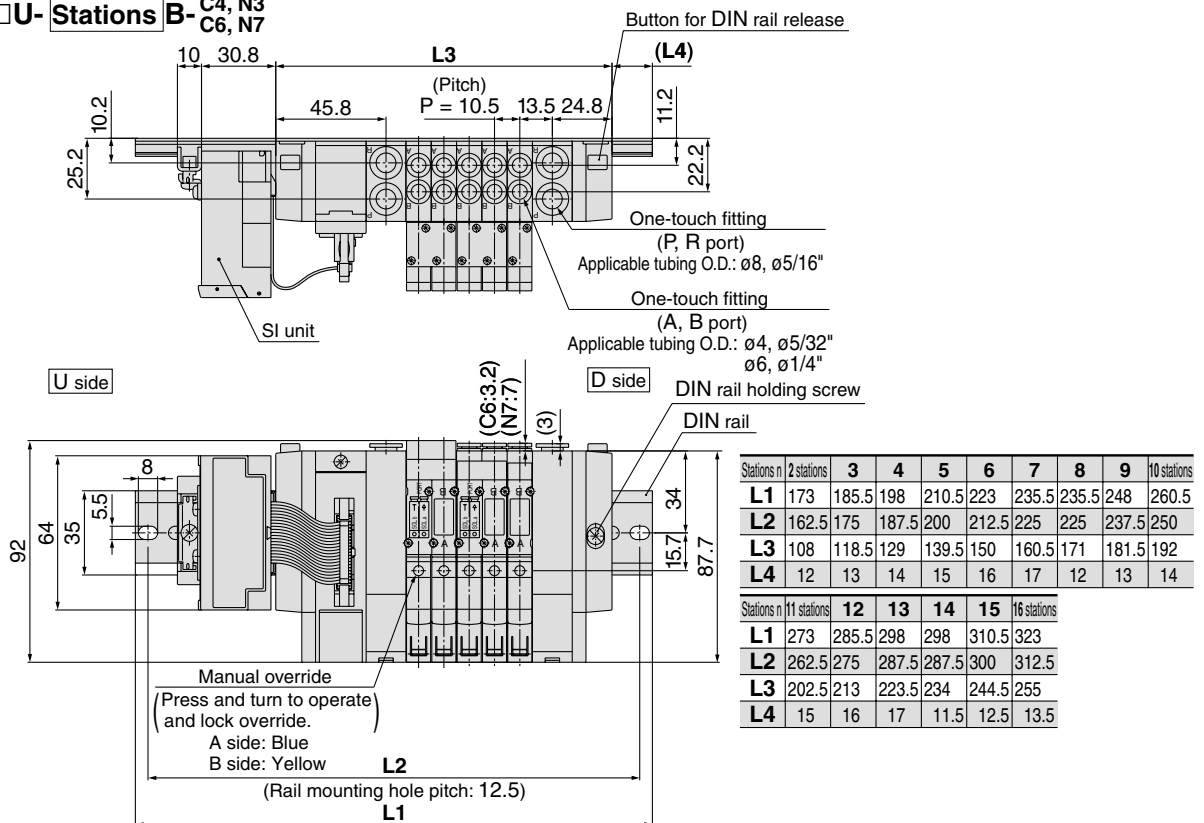
When ordering plug-in type valve as a single unit, gaskets are not included. Order them separately, if necessary. (Refer to page 300 for details.)

SY3000: EX121 Separate Type (for Output) Serial Transmission System/Plug-in

SS5Y3-45S1 □ U - Stations D^{C4, N3}_{C6, N7}



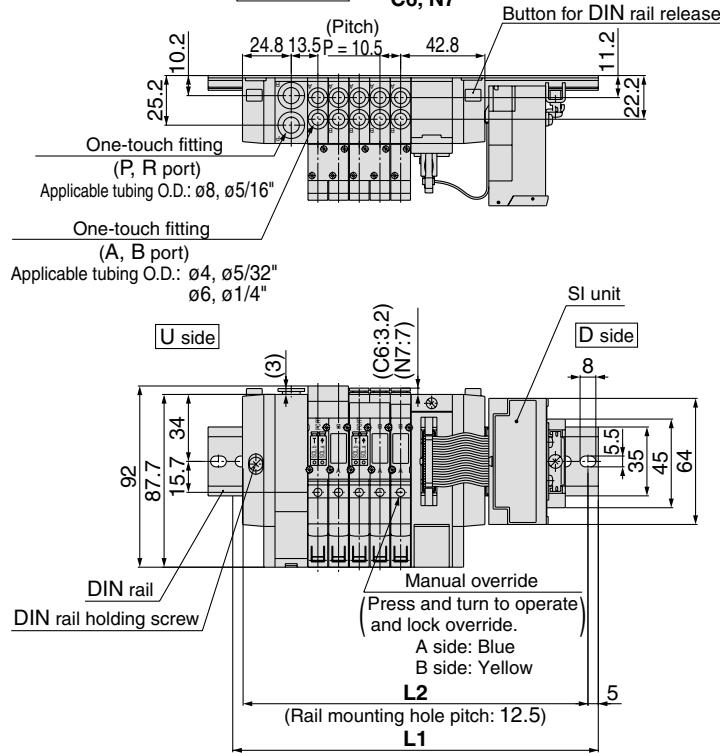
SS5Y3-45S1 □ U - Stations B^{C4, N3}_{C6, N7}



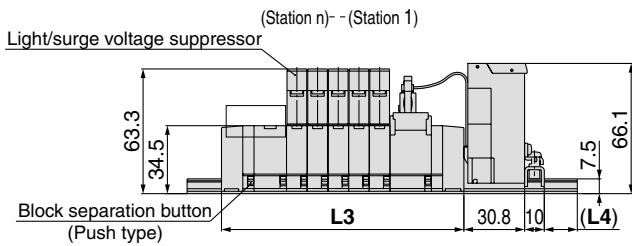
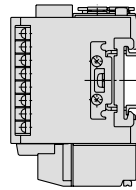
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY3000: EX121 Separate Type (for Output) Serial Transmission System/Plug-in

**SS5Y3-45S1 □D- Stations U- C4, N3
C6, N7**

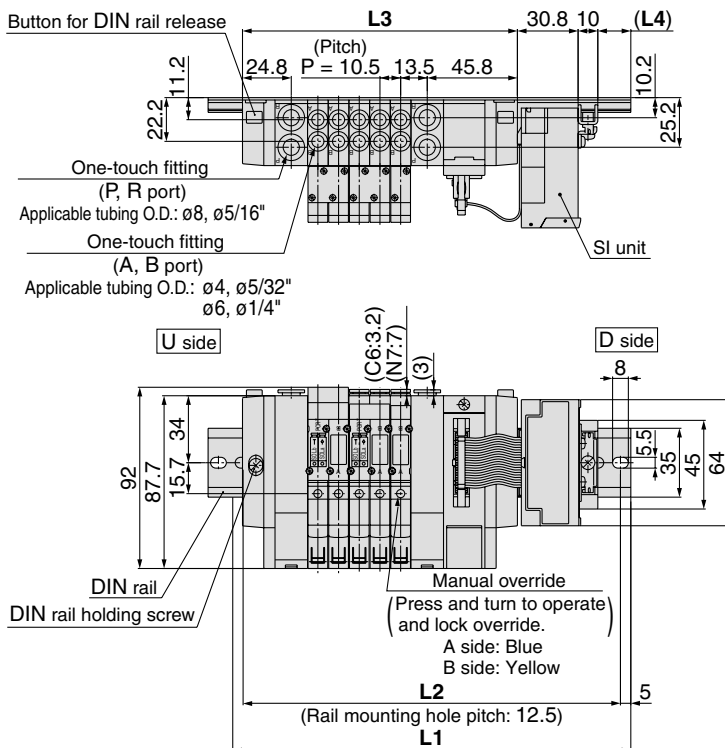


Note) The L1 to L4 dimensions of **SS5Y3-45S1 □D- Stations D- C4, N3 C6, N7** are identical to those of **SS5Y3-45S1 □D- Stations U- C4, N3 C6, N7**.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	160.5	173	185.5	198	198	210.5	223	235.5	248
L2	150	162.5	175	187.5	187.5	200	212.5	225	237.5
L3	91.5	102	112.5	123	133.5	144	154.5	165	175.5
L4	14	15	16	17	12	13	14	15	16

**SS5Y3-45S1 □D- Stations B- C4, N3
C6, N7**

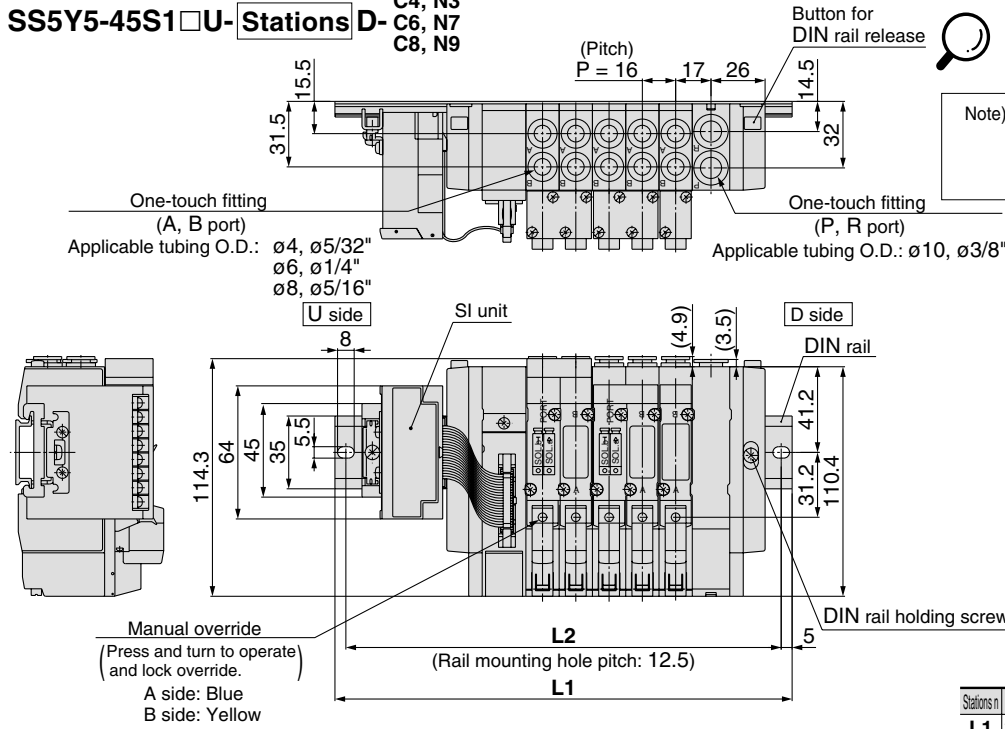


Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	198	210.5	223	235.5	235.5	248	260.5
L2	162.5	175	187.5	200	212.5	225	225	237.5	250
L3	108	118.5	129	139.5	150	160.5	171	181.5	192
L4	12	13	14	15	16	17	12	13	14

Stations n	11 stations	12	13	14	15	16 stations
L1	273	285.5	298	298	310.5	323
L2	262.5	275	287.5	287.5	300	312.5
L3	202.5	213	223.5	234	244.5	255
L4	15	16	17	11.5	12.5	13.5

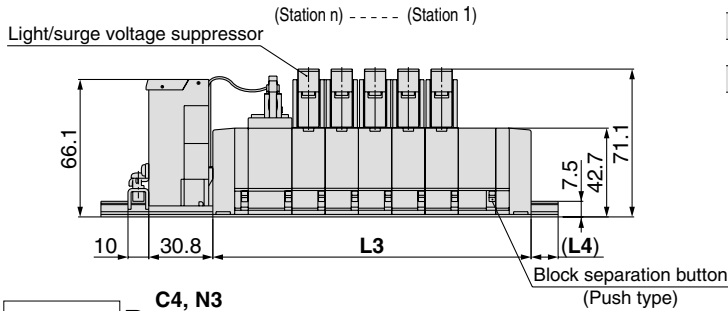
SY5000: EX121 Separate Type (for Output) Serial Transmission System/Plug-in

SS5Y5-45S1 □ U- Stations D- C4, N3
C6, N7
C8, N9

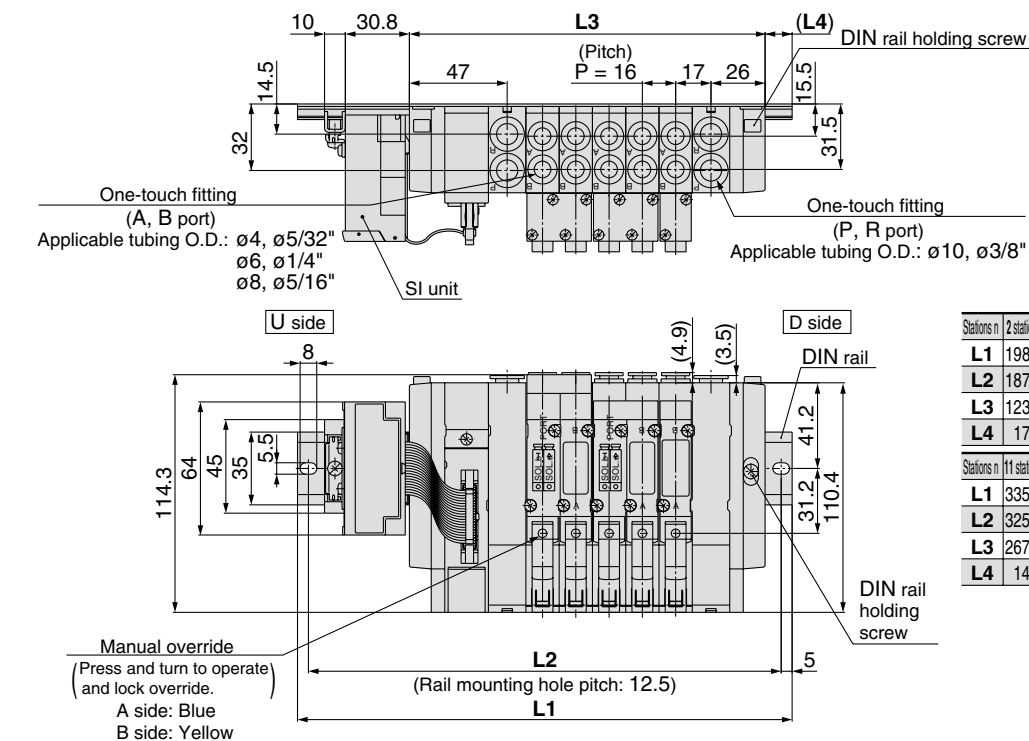


Note) The L1 to L4 dimensions of SS5Y5-45S1 □ U- Stations U-C4, N3 C6, N7 C8, N9 are identical to those of SS5Y5-45S1 □ U- Stations D-C4, N3 C6, N7 C8, N9

Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	210.5	223	235.5	260.5	273	285.5	298
L2	162.5	175	200	212.5	225	250	262.5	275	287.5
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12



SS5Y5-45S1 □ U- Stations B- C4, N3
C6, N7
C8, N9



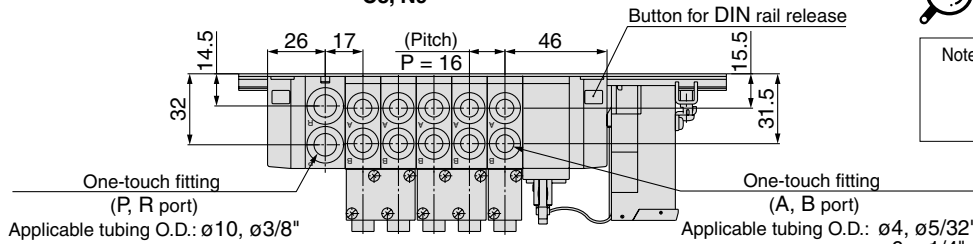
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	198	210.5	223	235.5	260.5	273	285.5	310.5	323
L2	187.5	200	212.5	225	250	262.5	275	300	312.5
L3	123	139	155	171	187	203	219	235	251
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

Stations n	11 stations	12	13	14	15	16 stations
L1	335.5	348	373	385.5	398	410.5
L2	325	337.5	362.5	375	387.5	400
L3	267	283	299	315	331	347
L4	14	12	16.5	15	13	11.5

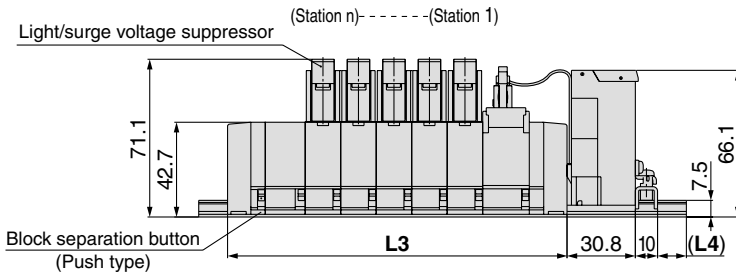
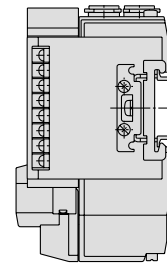
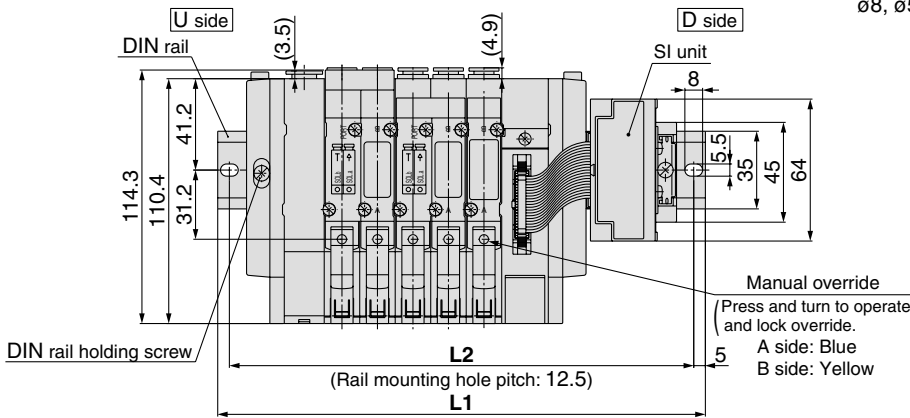
- SJ
- SY
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

SY5000: EX121 Separate Type (for Output) Serial Transmission System/Plug-in

SS5Y5-45S1 □ D- Stations U ^{C4, N3}
^{C6, N7}
^{C8, N9}

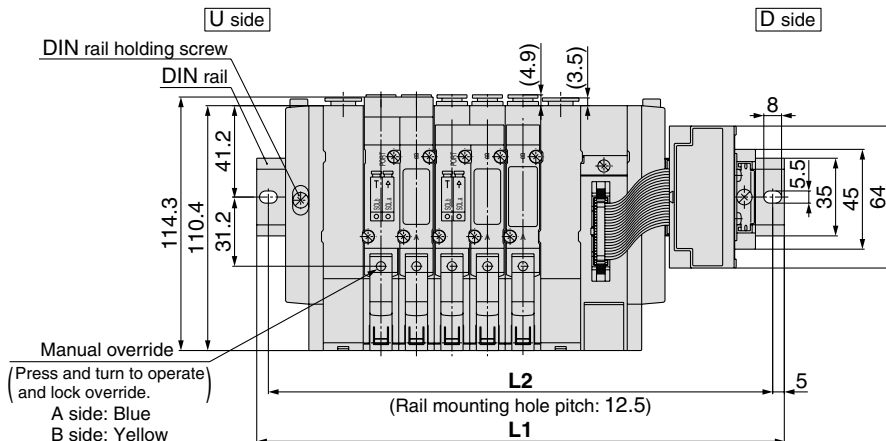
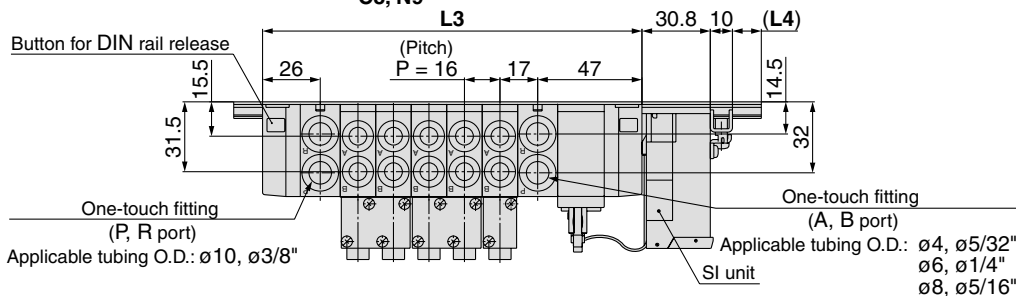


Note) The L1 to L4 dimensions of **SS5Y5-45S1 □ D- Stations U** ^{C4, N3}
^{C6, N7}
^{C8, N9} are identical to those of **SS5Y5-45S1 □ D- Stations U** ^{C4, N3}
^{C6, N7}
^{C8, N9}.



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	173	185.5	210.5	223	235.5	260.5	273	285.5	298
L2	162.5	175	200	212.5	225	250	262.5	275	287.5
L3	105	121	137	153	169	185	201	217	233
L4	13.5	12	16.5	14.5	13	17.5	15.5	14	12

SS5Y5-45S1 □ D- Stations B ^{C4, N3}
^{C6, N7}
^{C8, N9}



Stations n	2 stations	3	4	5	6	7	8	9	10 stations
L1	198	210.5	223	235.5	260.5	273	285.5	310.5	323
L2	187.5	200	212.5	225	250	262.5	275	300	312.5
L3	123	139	155	171	187	203	219	235	251
L4	17	15.5	13.5	12	16.5	14.5	13	17.5	15.5

Stations n	11 stations	12	13	14	15	16 stations
L1	335.5	348	373	385.5	398	410.5
L2	325	337.5	362.5	375	387.5	400
L3	267	283	299	315	331	347
L4	14	12	16.5	15	13	11.5

SJ
SY
SV
SYJ
SZ
VP4
S0700
VQ
VQ4
VQ5
VQC
VQZ
SQ
VFS
VFR
VQ7

EX510 Gateway System Serial Transmission System Base Mounted Manifold/Stacking Type/Plug-in Type [Option]

Series SY3000/5000



Type **45S6B**

How to Order Manifold

SS5Y 3 - 45S6B U - 02 U - C4 - - -

Manifold series

3	SY3000
5	SY5000

SI unit

Nil	NPN output (+COM.)
N	PNP output (-COM.)

SI unit mounting position

U	U side
D	D side

Valve stations

Symbol	Stations	Note
02	2 stations	Compatible with 16 solenoid valves
:	:	
16	16 stations	

*The number of the blanking plate assembly is also included.

SI unit part no.

Symbol	SI unit specifications	SI unit part no.	Page
Nil	NPN output (+COM.)	EX510-S002A	P.1715 to 1717
N	PNP output (-COM.)	EX510-S102A	

How to Order Manifold Assembly (Example)

Example

SS5Y3-45S6BD-05U-C6 (-Q) · 1 set (45S6B type 5-station manifold part no.)
 *SY3140-5FU (-Q) ······ 3 sets (Single solenoid part no.)
 *SY3245-5FU (-Q) ······ 1 set (Double solenoid part no.)

→ The asterisk denotes the symbol for assembly. Prefix to the part no. of the solenoid valve, etc.

- They will be assembled in the order listed starting at the first station at the D side whether the connector box is located at either end.
- When ordering double solenoid valves/3 position (dual body style), please keep in mind that they require two manifold stations.

CE compliant

Nil	—
Q	CE compliant

Option
When a DIN rail that is longer than the specified stations is desired, specify the required station number. (Max. 20 stations)

A, B port size
One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for ø4	SY3000
C6	One-touch fitting for ø6	
M	Mixed	
C4	One-touch fitting for ø4	SY5000
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
M	Mixed	

One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for ø5/32"	SY3000
N7	One-touch fitting for ø1/4"	
M	Mixed	
N3	One-touch fitting for ø5/32"	SY5000
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
M	Mixed	

• For the mixed specification, indicate separately on a manifold specification sheet.

Pilot specifications

Nil	Internal pilot
S	Internal pilot/built-in silencer
R	External pilot
RS	External pilot/built-in silencer

SUP/EXH block assembly mounting position

U	U side	2 to 10 stations
D	D side	
B	Both sides	2 to 16 stations
M	Special specifications*	

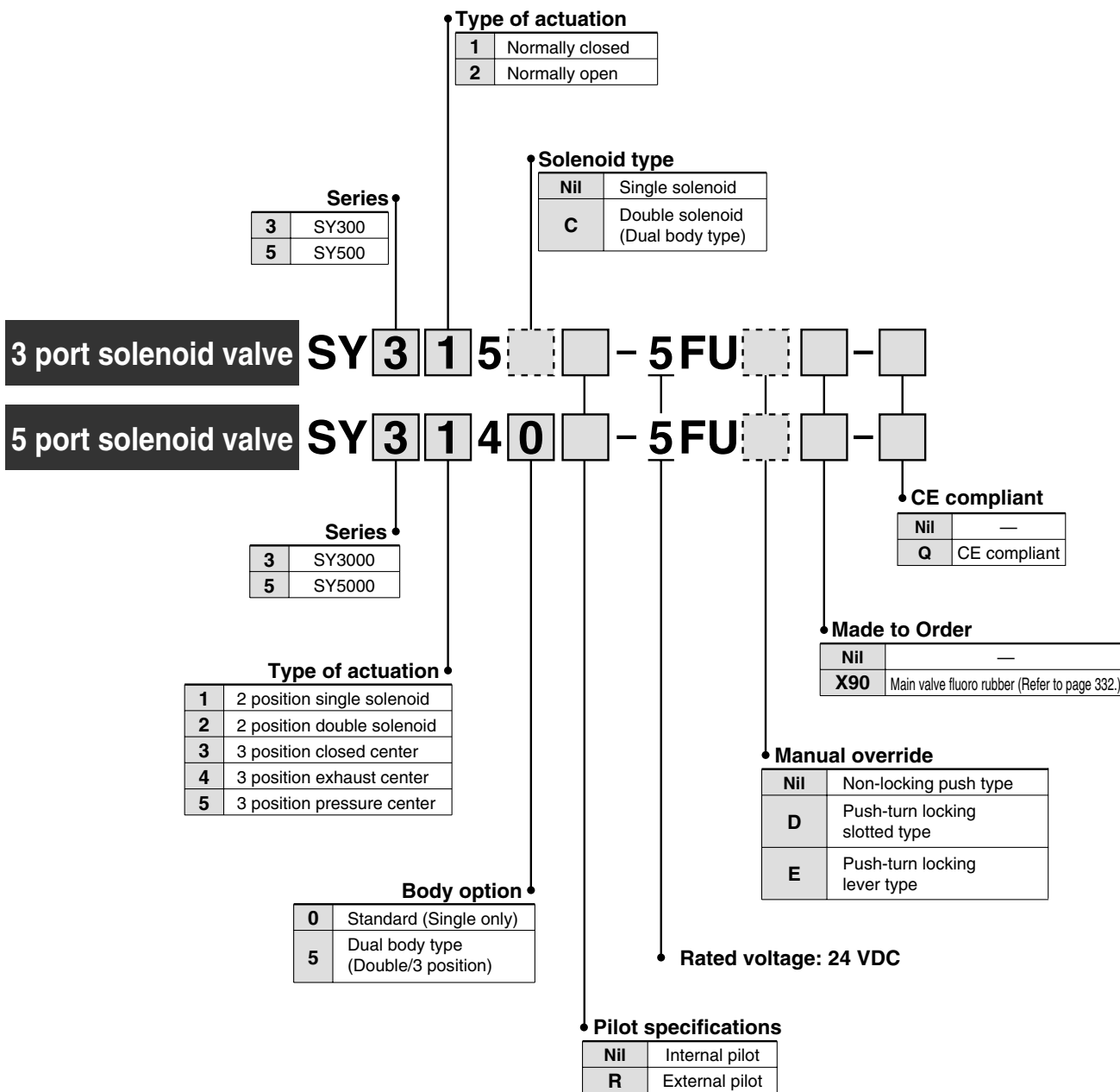
*For the special specifications, indicate separately on a manifold specification sheet.

For details of "Gateway System Serial Transmission System, Series EX510", refer to pages 1696 through to 1724.





How to Order Valves

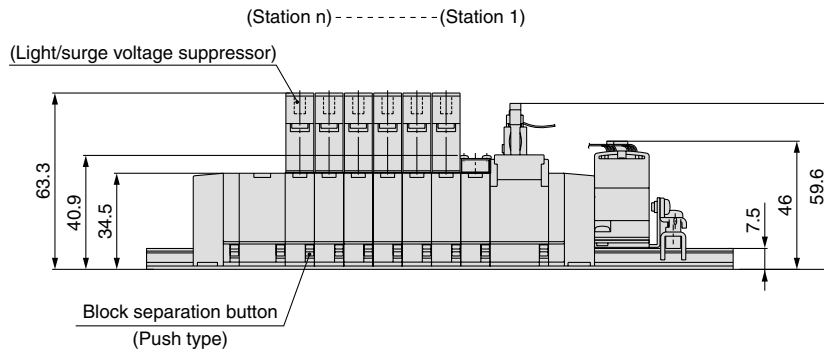
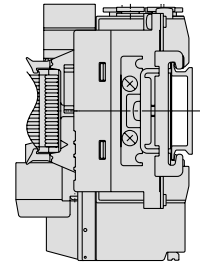
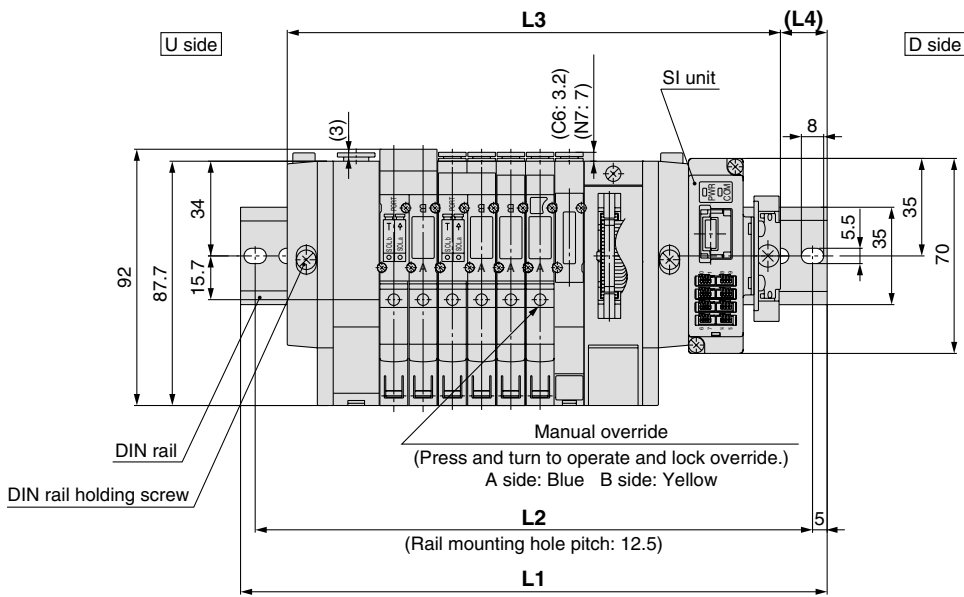
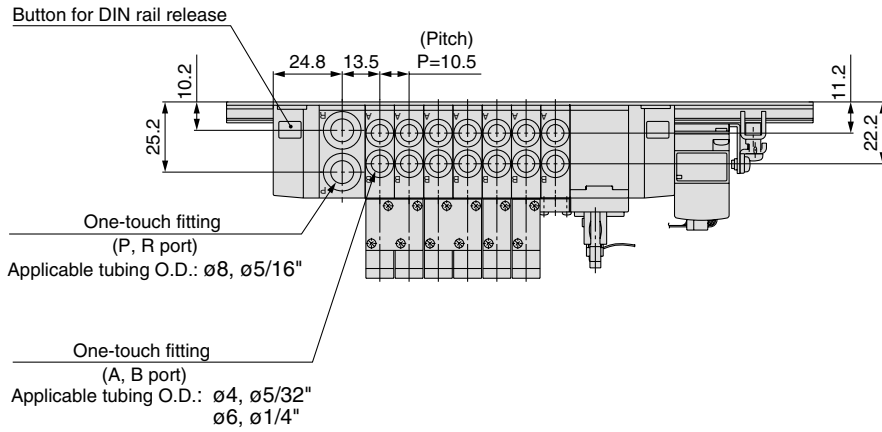


- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

When ordering plug-in type valve as a single unit, gaskets are not included. Order them separately, if necessary. (Refer to page 300 for details.)

Type **45S6B** Series **SY3000/5000**

SS5Y3-45S6B □ **D-Stations U-** C4, N3
C6, N7

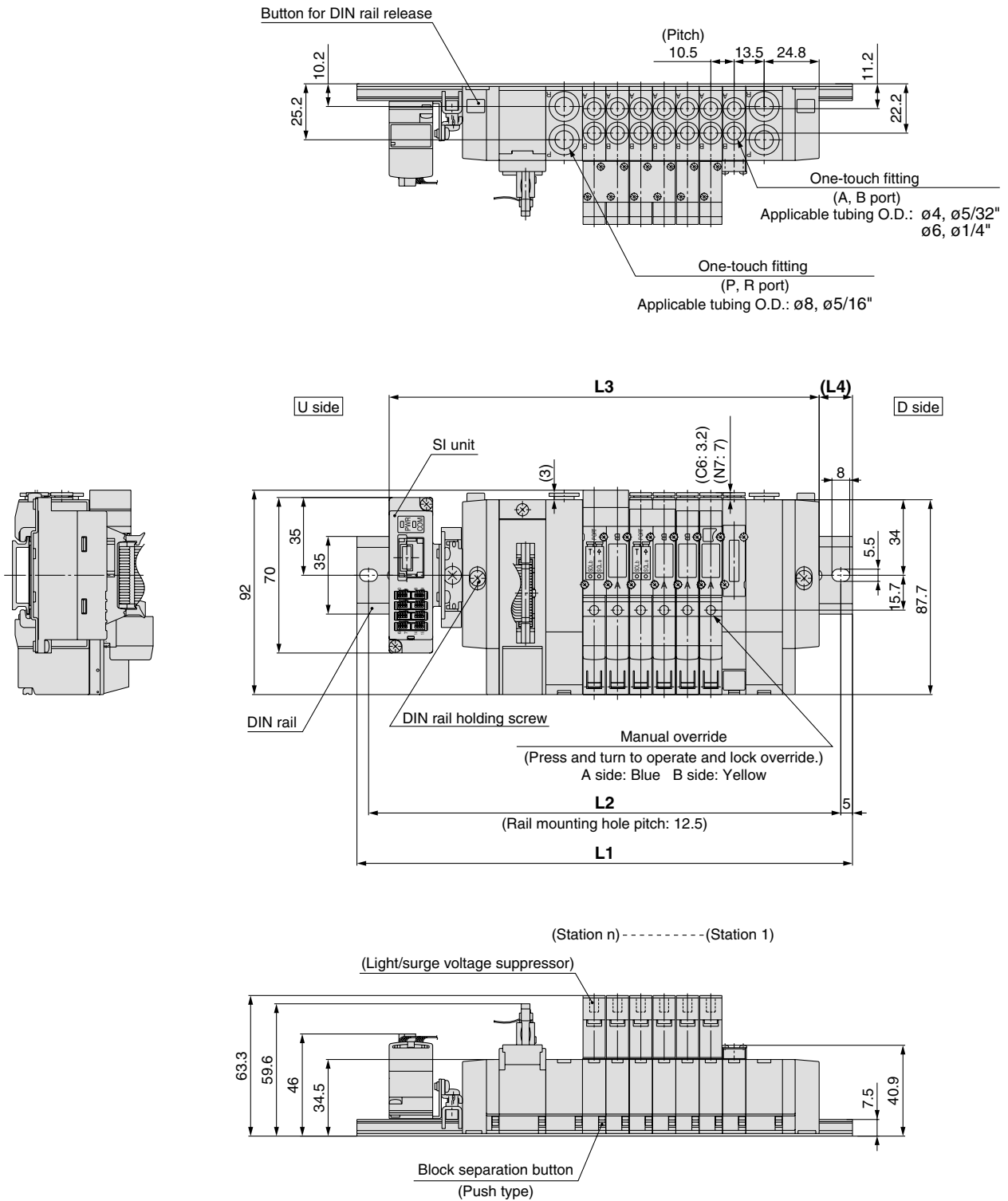


L: Dimensions

n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L1	148	160.5	173	185.5	198	210.5	223	223	235.5
L2	137.5	150	162.5	175	187.5	200	212.5	212.5	225
L3	124.5	135	145.5	156	166.5	177	187.5	198	208.5
L4	12	13	14	15	16	17	18	12.5	13.5

SS5Y3-45S6B U-Stations B- C4, N3
C6, N7



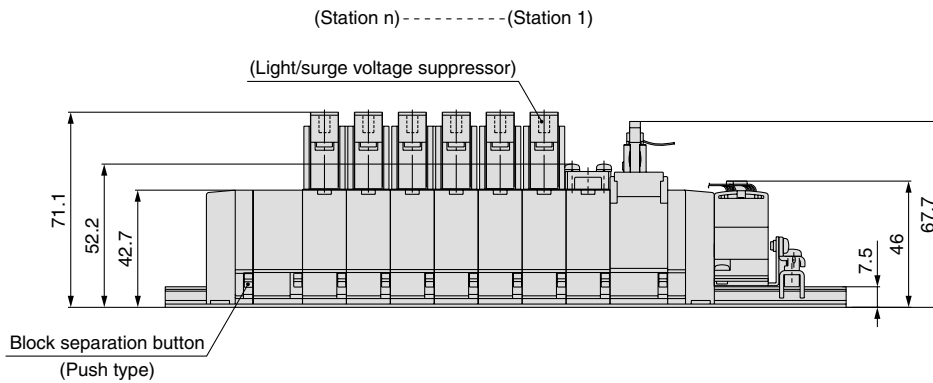
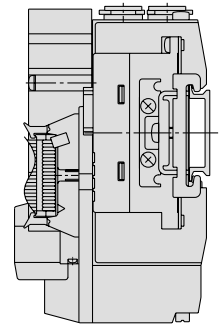
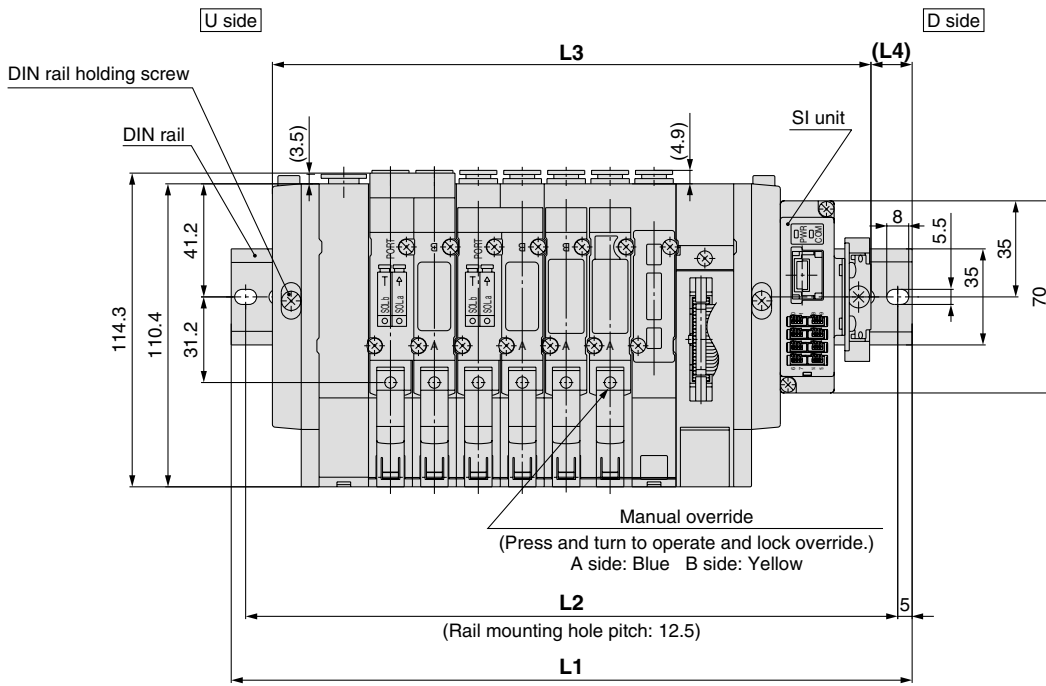
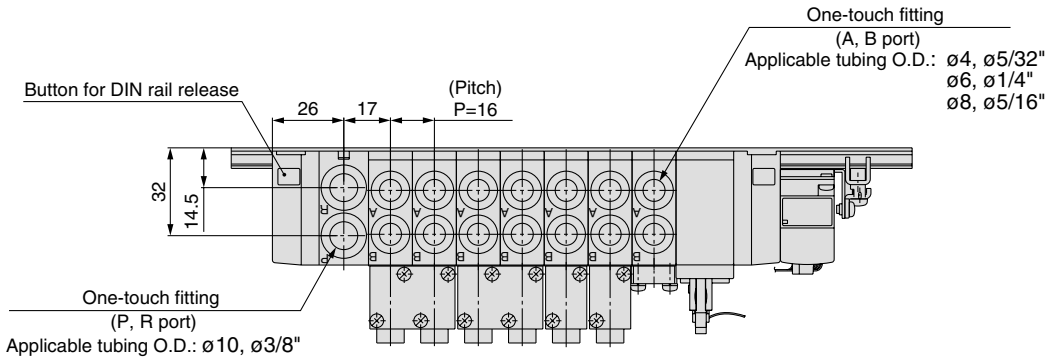
- SJ
- SY**
- SV
- SYJ
- SZ
- VP4
- S0700
- VQ
- VQ4
- VQ5
- VQC
- VQZ
- SQ
- VFS
- VFR
- VQ7

L: Dimensions

L \ n	n: Stations															
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
L1	173	185.5	198	198	210.5	223	235.5	248	260.5	273	273	285.5	298	310.5	323	
L2	162.5	175	187.5	187.5	200	212.5	225	237.5	250	262.5	262.5	275	287.5	300	312.5	
L3	141	151.5	162	172.5	183	193.5	204	214.5	225	235.5	246	256.5	267	277.5	288	
L4	16	17	18	13	14	15	16	17	18	19	13.5	14.5	15.5	16.5	17.5	

Type **45S6B** Series **SY3000/5000**

SS5Y5-45S6B **D- Stations** **U-** C4, N3
C6, N7
C8, N9



L: Dimensions

		n: Stations								
L \ n	2	3	4	5	6	7	8	9	10	
L1	173	185.5	198	210.5	235.5	248	260.5	285.5	298	
L2	162.5	175	187.5	200	225	237.5	250	275	287.5	
L3	138	154	170	186	202	218	234	250	266	
L4	17.5	16	14	12.5	17	15	13.5	18	16	