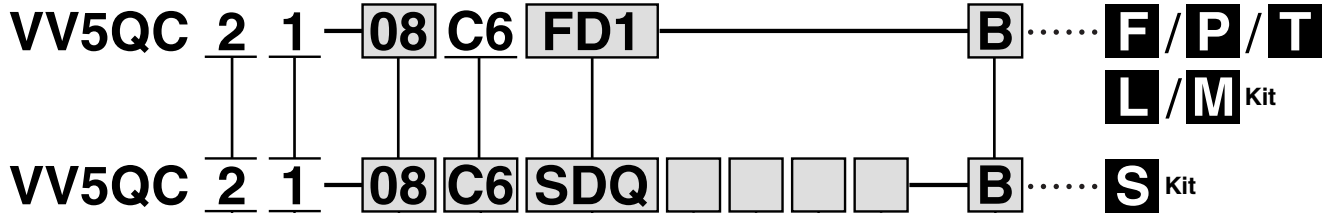


Series VQC2000 Base Mounted Plug-in Unit

How to Order Manifold



Series
2 VQC2000

Manifold model
1 Plug-in unit

Stations
01 1 station
: :
The maximum number of stations differs depending on the electrical entry.

Cylinder port size

C4	With ø4 One-touch fitting
C6	With ø6 One-touch fitting
C8	With ø8 One-touch fitting
CM	Mixed sizes and with port plug
L4	Top ported elbow With ø4 One-touch fitting
L6	Top ported elbow With ø6 One-touch fitting
L8	Top ported elbow With ø8 One-touch fitting
B4	Bottom ported elbow With ø4 One-touch fitting
B6	Bottom ported elbow With ø6 One-touch fitting
B8	Bottom ported elbow With ø8 One-touch fitting
LM	Elbow port, mixed sizes

Note 1) Indicate the size in the specification sheet in the case of "CM" and "LM".
Note 2) Symbols for inch sizes are as follows:
<For One-touch fittings>
N3: ø5/32"
N7: ø1/4"
N9: ø5/16"
NM: Mixed
The top ported elbow is LN□ and the bottom ported elbow is BN□.

Kit designation/Electrical entry/Cable length
(Refer to page 2-2-16 for detailed information on kits.)

SI unit COM.

SI unit COM	EX250					EX500				EX126
	DeviceNet	PROFIBUS-DP	CC-LINK	AS-i	CANopen	DeviceNet	PROFIBUS-DP	CC-LINK	Remote I/O	CC-LINK
Nil	+COM	—	—	○	—	○	○	○	○	○
N	-COM	○	○	—	○	○	○	○	○	—

Note) Leave the box blank for the SI unit COM without SI unit (SD0).

Number of input blocks (Fill out for I/O unit only)

Nil	Without SI unit/input block (SD0)
0	Without input block
1	With 1 input block
:	:
8	With 8 input blocks

Option

Nil	None
B	All stations with back pressure check valve Note 1)
D	With DIN rail (Rail length: Standard)
D□	With DIN rail (Rail length: Special) Note 2)
K	Special wiring specifications Note 3)
N	With name plate
R	External pilot Note 4)
S	Direct exhaust with built-in silencer Note 5)
T	Branched P and R ports on U side Note 6)

* When specifying more than one option, enter symbols in alphabetical order.
Example: -BRS

Note 1) When using the back pressure check valve for the necessary stations only, enter the back pressure check valve part no. and indicate the number of manifold stations on the specification sheet.

Note 2) For special DIN rail length, indicate "D□". (Enter the number of stations inside □.)
Example: -D08
In this case, stations will be mounted on a DIN rail for 8 stations regardless of the actual number of manifold stations. The specified number of stations must be larger than the number of stations on the manifold. Indicate "-D0" for the option without DIN rail.

Note 3) Be sure to indicate the wiring specifications on the specification sheet.

Note 4) For external pilot option, "-R", indicate the external pilot specification "R" for the applicable valves as well.

Note 5) The built-in silencer type does not satisfy the IP67 standard.

Note 6) The SUP and EXH ports on U side are branched (toward the cylinder port and coil) with ø12 one-touch fittings for connection.

Input block COM. (Fill out for I/O unit only)

Nil	PNP (+) or without SI unit/input block
N	NPN (-)

Input block type (Fill out for I/O unit only)

Nil	Without input block
1	M12, 2 inputs
2	M12, 4 inputs
3	M8, 4 inputs (3 pins)

- VQC
- SQ
- VQ0
- VQ4
- VQ5
- VQZ
- VQD

How to Order Valves

VQC 2 1 0 0 5

Series
2 VQC2000

Type of actuation

1	2 position single (A)(B) 4 2 5 1 3 (R1)(P)(R2)	A Note)	4 position dual 3 port valve (A) (A) (B) 4 4 2 5 1 3 (R1) 1 (R2) N.C (P) N.C
	2 position double (metal) (A)(B) 4 2 5 1 3 (R1)(P)(R2)	B Note)	4 position dual 3 port valve (B) (A) (B) 4 4 2 5 1 3 (R1) 1 (R2) N.O (P) N.O
2	2 position double (rubber) (A)(B) 4 2 5 1 3 (R1)(P)(R2)	C Note)	4 position dual 3 port valve (C) (A) (B) 4 4 2 5 1 3 (R1) 1 (R2) N.C (P) N.O
	3 position closed center (A)(B) 4 2 5 1 3 (R1)(P)(R2)	Note) For rubber seal type only.	
3	3 position exhaust center (A)(B) 4 2 5 1 3 (R1)(P)(R2)		
4	3 position pressure center (A)(B) 4 2 5 1 3 (R1)(P)(R2)		
5			

Manual override

Nil: Non-locking push type (Slotted)
B: Locking type (Slotted)
C: Locking type (Manual)
D: Slide locking type (Manual)

Light/Surge voltage suppressor

Nil	With
E	Without Note)

Note) Not applicable to S kit.

Coil voltage

5	24 VDC Note)
6	12 VDC

Note) S kit is only available for 24 VDC.

Function

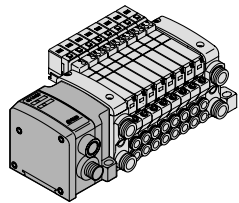
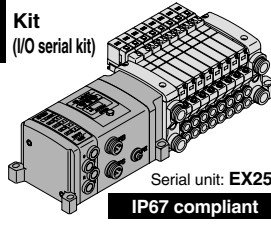
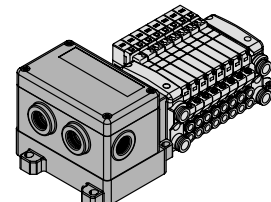
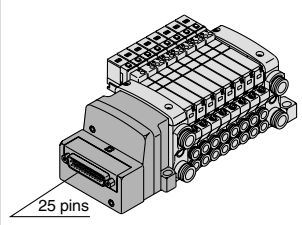
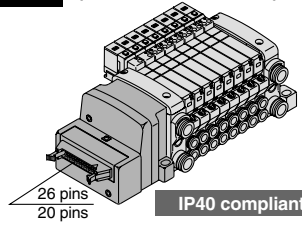
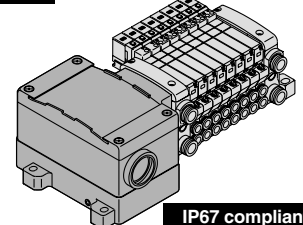
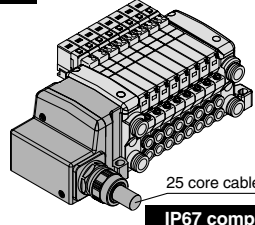
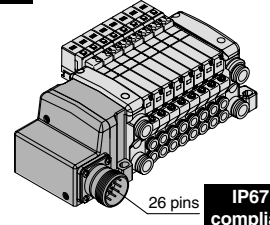
Nil	Standard type (1 W)
K Note 1)	High pressure type (1.0 MPa)
N	Negative COM
R Note 2)	External pilot
Y	Low wattage type (0.5 W)

* When specifying more than one option, enter symbols in alphabetical order.
Note 1) For metal seal type only.
Note 2) Not applicable for dual 3 port valve.

Seal type

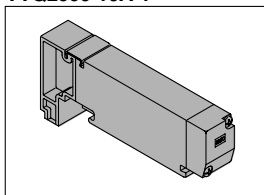
0	Metal seal
1	Rubber seal

Kit Designation/Electrical Entry/Cable Length

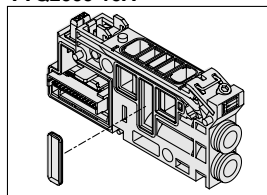
<p>S Kit (Decentralized wiring type serial kit)</p>  <p>Serial unit: EX500 IP67 compliant</p> <p>Note) A separate gateway unit and communication cable are required.</p> <table border="1"> <tr> <td>SD0</td> <td>Serial kit without SI unit</td> <td></td> </tr> <tr> <td>SDA1</td> <td>Serial kit for Remote I/O</td> <td>1 to 8 stations (16 stations)</td> </tr> <tr> <td>SDA2</td> <td>Serial kit for DeviceNet/PROFIBUS-DP/CC-LINK</td> <td></td> </tr> </table>	SD0	Serial kit without SI unit		SDA1	Serial kit for Remote I/O	1 to 8 stations (16 stations)	SDA2	Serial kit for DeviceNet/PROFIBUS-DP/CC-LINK		<p>S Kit (I/O serial kit)</p>  <p>Serial unit: EX250 IP67 compliant</p> <table border="1"> <tr> <td>SD0</td> <td>Serial kit without SI unit</td> <td></td> </tr> <tr> <td>SDY</td> <td>Serial kit for CANopen</td> <td></td> </tr> <tr> <td>SDQ</td> <td>Serial kit for DeviceNet</td> <td>1 to 12 stations (24 stations)</td> </tr> <tr> <td>SDN</td> <td>Serial kit for PROFIBUS-DP</td> <td></td> </tr> <tr> <td>SDV</td> <td>Serial kit for CC-LINK</td> <td></td> </tr> <tr> <td>SDTA</td> <td>AS-4, 8 in/out, 31 slave modes, 2 power supply systems</td> <td>1 to 4 stations (8 stations)</td> </tr> <tr> <td>SDTB</td> <td>AS-4, 4 in/out, 31 slave modes, 2 power supply systems</td> <td>1 to 2 stations (4 stations)</td> </tr> <tr> <td>SDTC</td> <td>AS-4, 8 in/out, 31 slave modes, 1 power supply systems</td> <td>1 to 4 stations (8 stations)</td> </tr> <tr> <td>SDTD</td> <td>AS-4, 4 in/out, 31 slave modes, 1 power supply systems</td> <td>1 to 2 stations (4 stations)</td> </tr> </table>	SD0	Serial kit without SI unit		SDY	Serial kit for CANopen		SDQ	Serial kit for DeviceNet	1 to 12 stations (24 stations)	SDN	Serial kit for PROFIBUS-DP		SDV	Serial kit for CC-LINK		SDTA	AS-4, 8 in/out, 31 slave modes, 2 power supply systems	1 to 4 stations (8 stations)	SDTB	AS-4, 4 in/out, 31 slave modes, 2 power supply systems	1 to 2 stations (4 stations)	SDTC	AS-4, 8 in/out, 31 slave modes, 1 power supply systems	1 to 4 stations (8 stations)	SDTD	AS-4, 4 in/out, 31 slave modes, 1 power supply systems	1 to 2 stations (4 stations)	<p>S Kit (Serial output kit)</p>  <p>Serial unit: EX126 IP67 compliant</p> <table border="1"> <tr> <td>SDVB</td> <td>Serial kit for CC-LINK</td> <td>1 to 8 stations (16 stations)</td> </tr> </table>	SDVB	Serial kit for CC-LINK	1 to 8 stations (16 stations)	<p>F Kit (D-sub connector kit)</p>  <p>25 pins</p> <p>IP40 compliant</p> <table border="1"> <tr> <td>FD0</td> <td>D-sub connector kit (25P) without cable</td> <td></td> </tr> <tr> <td>FD1</td> <td>D-sub connector kit (25P) with 1.5 m cable</td> <td>1 to 12 stations (24 stations)</td> </tr> <tr> <td>FD2</td> <td>D-sub connector kit (25P) with 3.0 m cable</td> <td></td> </tr> <tr> <td>FD3</td> <td>D-sub connector kit (25P) with 5.0 m cable</td> <td></td> </tr> </table>	FD0	D-sub connector kit (25P) without cable		FD1	D-sub connector kit (25P) with 1.5 m cable	1 to 12 stations (24 stations)	FD2	D-sub connector kit (25P) with 3.0 m cable		FD3	D-sub connector kit (25P) with 5.0 m cable	
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<p>P Kit (Flat ribbon cable kit)</p>  <p>26 pins 20 pins</p> <p>Note) For a 20P flat ribbon cable, the cable assembly must be ordered separately.</p> <table border="1"> <tr> <td>PD0</td> <td>Flat ribbon cable kit (26P) without cable</td> <td></td> </tr> <tr> <td>PD1</td> <td>Flat ribbon cable kit (26P) with 1.5 m cable</td> <td>1 to 12 stations (24 stations)</td> </tr> <tr> <td>PD2</td> <td>Flat ribbon cable kit (26P) with 3.0 m cable</td> <td></td> </tr> <tr> <td>PD3</td> <td>Flat ribbon cable kit (26P) with 5.0 m cable</td> <td></td> </tr> <tr> <td>PDC</td> <td>Flat ribbon cable kit (20P) without cable</td> <td>1 to 9 stations (18 stations)</td> </tr> </table>	PD0	Flat ribbon cable kit (26P) without cable		PD1	Flat ribbon cable kit (26P) with 1.5 m cable	1 to 12 stations (24 stations)	PD2	Flat ribbon cable kit (26P) with 3.0 m cable		PD3	Flat ribbon cable kit (26P) with 5.0 m cable		PDC	Flat ribbon cable kit (20P) without cable	1 to 9 stations (18 stations)	<p>T Kit (Terminal block box kit)</p>  <p>IP67 compliant</p> <table border="1"> <tr> <td>TD0</td> <td>Terminal block box kit</td> <td>1 to 10 stations (20 stations)</td> </tr> </table>	TD0	Terminal block box kit	1 to 10 stations (20 stations)	<p>L Kit (Lead wire kit)</p>  <p>25 core cable</p> <p>IP67 compliant</p> <table border="1"> <tr> <td>LD0</td> <td>Lead wire kit (25 core) 0.6 m lead wire</td> <td>1 to 12 stations (24 stations)</td> </tr> <tr> <td>LD1</td> <td>Lead wire kit (25 core) 1.5 m lead wire</td> <td></td> </tr> <tr> <td>LD2</td> <td>Lead wire kit (25 core) 3.0 m lead wire</td> <td></td> </tr> </table>	LD0	Lead wire kit (25 core) 0.6 m lead wire	1 to 12 stations (24 stations)	LD1	Lead wire kit (25 core) 1.5 m lead wire		LD2	Lead wire kit (25 core) 3.0 m lead wire		<p>M Kit (Multiple connector kit)</p>  <p>26 pins</p> <p>IP67 compliant</p> <table border="1"> <tr> <td>MD0</td> <td>Multiple connector kit (26P) without cable</td> <td></td> </tr> <tr> <td>MD1</td> <td>Multiple connector kit (26P) with 1.5 m cable</td> <td>1 to 12 stations (24 stations)</td> </tr> <tr> <td>MD2</td> <td>Multiple connector kit (26P) with 3.0 m cable</td> <td></td> </tr> <tr> <td>MD3</td> <td>Multiple connector kit (26P) with 5.0 m cable</td> <td></td> </tr> </table>	MD0	Multiple connector kit (26P) without cable		MD1	Multiple connector kit (26P) with 1.5 m cable	1 to 12 stations (24 stations)	MD2	Multiple connector kit (26P) with 3.0 m cable		MD3	Multiple connector kit (26P) with 5.0 m cable													
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Manifold Option

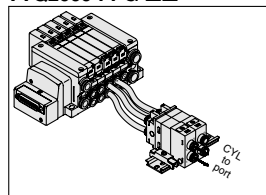
Blanking plate assembly
VVQ2000-10A-1



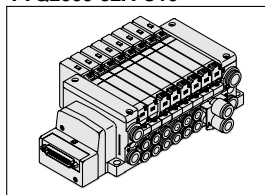
SUP block plate
VVQ2000-16A



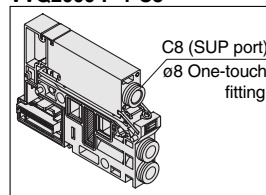
Perfect block
VVQ2000-FPG-□□



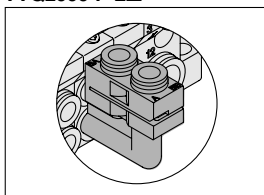
Dual flow fitting assembly
VVQ2000-52A-C10



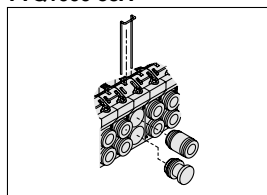
Individual SUP spacer
VVQ2000-P-1-C8



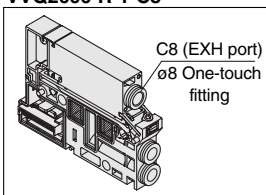
Elbow fitting assembly
VVQ2000-F-L□



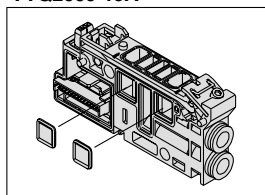
Port plug
VVQ1000-58A



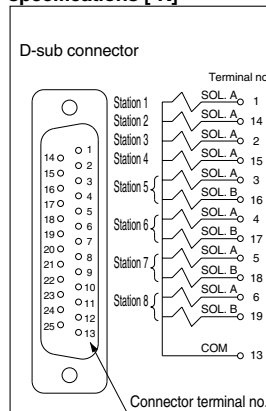
Individual EXH spacer
VVQ2000-R-1-C8



EXH block plate
VVQ2000-19A



Electrical wiring specifications [-K]



DIN rail mounting bracket [-D]
VVQ2000-57A

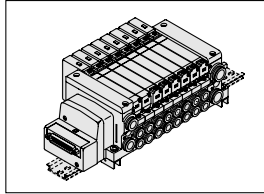
for (F, L, M, P, S (EX500) kit)

VVQ2000-57A-S

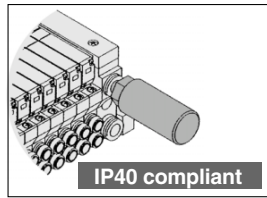
for (S (EX250) kit)

VVQ2000-57A-T

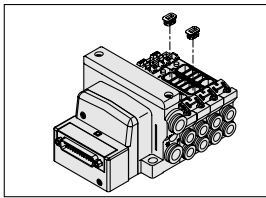
for (T, S (EX126) kit)



Silencer (for EXH port)
AN200-KM10

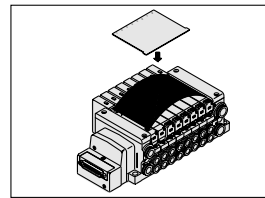


Back pressure check valve assembly [-B]
VVQ2000-18A

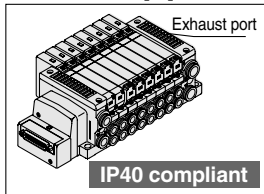


Name plate [-N]
VVQ2000-N-Stations

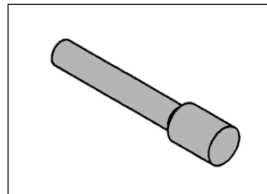
(1 to max. no. of stations)



Direct EXH outlet with built-in silencer [-S]



Blanking plug
KQ2P-□



VQC

SQ

VQ0

VQ4

VQ5

VQZ

VQD

Series VQC

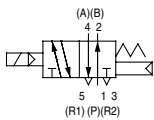
Base Mounted

Plug-in Unit

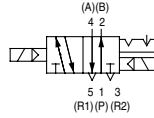


JIS Symbol

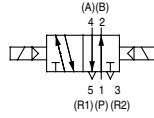
2 position single



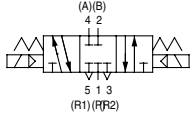
2 position double (metal)



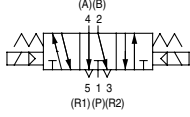
2 position double (rubber)



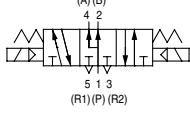
3 position closed center



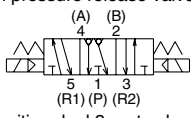
3 position exhaust center



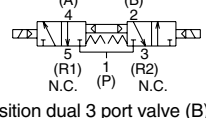
3 position pressure center



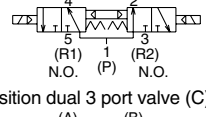
3 position exhaust center with pressure release valves



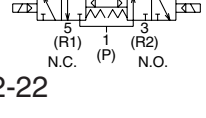
4 position dual 3 port valve (A)



4 position dual 3 port valve (B)



4 position dual 3 port valve (C)



Model

Series	No. of solenoids	Model	Flow characteristics						Response time (ms) ^{Note 2)}		Weight (g)			
			1 → 4, 2 (P → A, B)			4, 2 → 5, 3 (A, B → R1, R2)			Standard: 1 W	Low wattage				
			C [dm ³ /(s·bar)]	b	C _v	C [dm ³ /(s·bar)]	b	C _v						
VQC1000	2 position	Single	Metal seal	VQC1100	0.70	0.15	0.16	0.72	0.25	0.18	12 or less	15 or less	64	
			Rubber seal	VQC1101	0.85	0.20	0.21	1.0	0.30	0.25	15 or less	20 or less		
		Double	Metal seal	VQC1200	0.70	0.15	0.16	0.72	0.25	0.18	10 or less	13 or less		
			Rubber seal	VQC1201	0.85	0.20	0.21	1.0	0.30	0.25	15 or less	20 or less		
	3 position	Closed center	Metal seal	VQC1300	0.68	0.15	0.16	0.72	0.25	0.18	20 or less	26 or less		78
			Rubber seal	VQC1301	0.70	0.20	0.16	0.65	0.42	0.18	25 or less	33 or less		
		Exhaust center	Metal seal	VQC1400	0.68	0.15	0.16	0.72	0.25	0.18	20 or less	26 or less		
			Rubber seal	VQC1401	0.70	0.20	0.16	1.0	0.30	0.25	25 or less	33 or less		
		Pressure center	Metal seal	VQC1500	0.70	0.15	0.16	0.72	0.25	0.18	20 or less	26 or less		
			Rubber seal	VQC1501	0.85	0.20	0.21	0.65	0.42	0.18	25 or less	33 or less		
4 position	Dual 3 port valve	Rubber seal	VQC1 ^A _C 01	0.70	0.20	0.16	0.70	0.20	0.16	25 or less	33 or less			
VQC2000	2 position	Single	Metal seal	VQC2100	2.0	0.15	0.46	2.6	0.15	0.60	22 or less	29 or less	90	
			Rubber seal	VQC2101	2.2	0.28	0.55	3.2	0.30	0.80	24 or less	31 or less		
		Double	Metal seal	VQC2200	2.0	0.15	0.46	2.6	0.15	0.60	15 or less	20 or less		
			Rubber seal	VQC2201	2.2	0.28	0.55	3.2	0.30	0.80	20 or less	26 or less		
	3 position	Closed center	Metal seal	VQC2300	2.0	0.15	0.46	2.0	0.18	0.46	29 or less	38 or less		110
			Rubber seal	VQC2301	2.0	0.28	0.49	2.2	0.31	0.60	34 or less	44 or less		
		Exhaust center	Metal seal	VQC2400	2.0	0.15	0.46	2.6	0.15	0.60	29 or less	38 or less		
			Rubber seal	VQC2401	2.0	0.28	0.49	3.2	0.30	0.80	34 or less	44 or less		
		Pressure center	Metal seal	VQC2500	2.4	0.17	0.57	2.0	0.18	0.46	29 or less	38 or less		
			Rubber seal	VQC2501	3.2	0.28	0.80	2.2	0.31	0.60	34 or less	44 or less		
4 position	Dual 3 port valve	Rubber seal	VQC2 ^A _C 01	1.8	0.28	0.46	1.8	0.28	0.46	34 or less	44 or less			
VQC4000	2 position	Single	Metal seal	VQC4100	6.2	0.19	1.5	6.9	0.17	1.7	20 or less	22 or less	230	
			Rubber seal	VQC4101	7.2	0.43	2.1	7.3	0.38	2.0	25 or less	27 or less		
		Double	Metal seal	VQC4200	6.2	0.19	1.5	6.9	0.17	1.7	12 or less	12 or less		
			Rubber seal	VQC4201	7.2	0.43	2.1	7.3	0.38	2.0	15 or less	15 or less		
	3 position	Closed center	Metal seal	VQC4300	5.9	0.23	1.5	6.3	0.18	1.6	45 or less	47 or less	280	
			Rubber seal	VQC4301	7.0	0.34	1.9	6.4	0.42	1.9	50 or less	52 or less		
		Exhaust center	Metal seal	VQC4400	6.2	0.18	1.5	6.9	0.17	1.7	45 or less	47 or less		
			Rubber seal	VQC4401	7.0	0.38	1.9	7.3	0.38	2.0	50 or less	52 or less		
		Pressure center	Metal seal	VQC4500	6.2	0.18	1.9	6.4	0.18	1.6	45 or less	47 or less		
			Rubber seal	VQC4501	7.0	0.38	1.9	7.1	0.38	2.0	50 or less	52 or less		
Perfect	Metal seal	VQC4600	2.7	—	—	3.7	—	—	55 or less	57 or less	500			
	Rubber seal	VQC4601	2.8	—	—	3.9	—	—	62 or less	64 or less				



Note 1) Values represented in this column are in the following conditions:

- VQC1000: Cylinder port size C6 without a back pressure check valve
- VQC2000: Cylinder port size C8 without a back pressure check valve
- VQC4000: Cylinder port size Rc 3/8

Note 2) Values represented in this column are based on JIS B 8375-1981 (operating with clean air and a supply pressure of 0.5 MPa. Equipped with light/surge voltage suppressor. Values vary depending on the pressure as well as the air quality.) Values for double types are when the switch is ON.

Standard Specifications

Valve Configuration		Metal seal		Rubber seal		
		Air/Inert gas				
Valve specifications	VQC1000/2000	Max. operating pressure		0.7 MPa (High pressure type: 1.0 MPa) ^{Note 4)}		
		Min. operating pressure	Single	0.1 MPa	0.15 MPa	
			Double	0.1 MPa		
			3 position	0.1 MPa	0.2 MPa	
			4 position	—	0.15 MPa	
	VQC4000	Max. operating pressure ^{Note 3)}		1.0 MPa (0.7 MPa)		
		Min. operating pressure	Single	0.15 MPa	0.2 MPa	
			Double	0.15 MPa		
	3 position	0.15 MPa	0.2 MPa			
	Proof pressure		1.5 MPa			
Ambient and fluid temperature		-10 to 50°C ^{Note 1)}				
Lubrication		Not required				
Manual override		Push type/Locking type (tool required)/Locking type (Manual override) ^{Note 5)} /Slide locking type ^{Note 5)}				
Impact resistance/Vibration resistance		150/30 m/s ² ^{Note 2)}				
Enclosure		Dust proof (IP67 compliant)				
Electrical specifications	Rated coil voltage		24 VDC			
	Allowable voltage fluctuation		±10% of rated voltage			
	Coil insulation type		Equivalent to B type			
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA)			
		12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA)			

- VQC
- SQ
- VQ0
- VQ4
- VQ5
- VQZ
- VQD

Note 1) Use dry air to prevent condensation at low temperatures.
 Note 2) **Impact resistance:** No malfunction resulted from the impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve and armature, for both energized and de-energized states.
Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000Hz. Test was performed in the axial and right angle directions of the main valve and armature for both energized and de-energized states.
 Note 3) Values in () are for the low wattage (0.5 W) specification.
 Note 4) Metal seal type only.
 Note 5) Only for VQC1000/2000.



Manifold Specifications

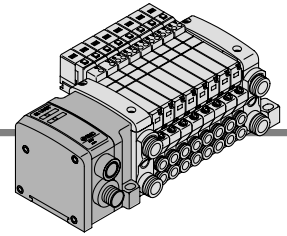
Series	Base model	Connection type	Piping specifications		Applicable stations ^{Note 2)}	Applicable solenoid valves	5 station weight (g)
			Port direction	Port size ^{Note 1)}			
VQC1000	VV5QC11-□□□	<ul style="list-style-type: none"> ■ F Kit: D-sub connector ■ P Kit: Flat cable ■ T Kit: Terminal block box ■ S Kit: Serial transmission ■ L Kit: Lead wire ■ M Kit: Multiple connector 	Side	C8 (For ø8) Options Direct outlet with built-in silencer C3 (For ø3.2) C4 (For ø4) C6 (For ø6) M5 (M5 threads)	(F, L, M and P kits) 1 to 12 stations T kit 1 to 10 stations S kit 1 to 8 stations: EX500 1 to 12 stations: EX250 1 to 8 stations: EX126	VQC1□00-5 VQC1□01-5	628 (Single) 759 (Double, 3P)
VQC2000	VV5QC21-□□□		Side	C10 (For ø10) Options Direct outlet with built-in silencer Branch type C12 (for ø12) C4 (For ø4) C6 (For ø6) C8 (For ø8)	1 to 8 stations: EX500 1 to 12 stations: EX250 1 to 8 stations: EX126	VQC2□00-5 VQC2□01-5	1051 (Single) 1144 (Double, 3P)
VQC4000	VV5QC41-□□□		Side Bottom	C8 (For ø8) C10 (For ø10) C12 (For ø12) Rc 1/4 Rc 3/8 Rc 1/4	(F, L, M and P kits) 1 to 12 stations T kit 1 to 10 stations S kit 1 to 12 stations: EX240, EX250 1 to 8 stations: EX500 1 to 8 stations: EX126	VQC4□00-5 VQC4□01-5	4150 • S kit (without unit) • Solenoid weight is not included.

Note 1) One-touch fittings in inch sizes are also available.
 Note 2) An optional specification for special wiring is available to increase the maximum number of stations.



Series VQC

S VQC1000/2000/4000 Kit (Serial transmission kit) Decentralized Serial Wiring



Gateway type serial transmission system

• Since wiring is "prepackaged" into one multi-connector type cable, wiring work is not only made easier, but much more accurate.

S kit can be used by connecting to gateway unit.

Gateway (GW) Unit IP65 compliant



How to Order

EX500 — G DN1

Communication protocol

DN1	DeviceNet	AB1-X1	Remote I/O (RIO)
PR1A	PROFIBUS-DP	MJ1	CC-LINK

Specifications

Model	EX500-GAB1-X1	EX500-GDN1	EX500-GPR1A	EX500-GMJ1
Applicable PLC/Communication protocol	Rockwell Automation PLC	DeviceNet Release 2.0	PROFIBUS-DP (EN50170)	CC-LINK Ver. 1.10
Communication speed	57.6/115.2/230.4 kbit/sec	125/250/500 kbit/sec	9.6/19.2/45.45/93.75/187.5/500 kbit/sec 1.5/3/6/12 Mbit/sec	156/625 kbit/sec 2.5/5/10 Mbit/sec
Rated voltage	24 VDC			
Power supply voltage range	Input and control unit power supply: 24 VDC ± 10% Solenoid valve power supply: 24 VDC + 10%/–5% (with power drop warning at approx. 20 V)			
	—	Communication power supply for DeviceNet 11 to 25 VDC	—	—
Current consumption	200 mA or less (Single GW unit)			
	—	Communication power supply for DeviceNet 50 mA or less	—	—
Number of inputs/outputs	Maximum 64 inputs/64 outputs			
Number of input/output branches	4 branches (16 inputs/16 outputs per branch)			
Branch cable	8 core heavy duty cable			
Branch cable length	5 m or less (total extension 10 m or less)			
Communication connector	M12 connector (8 pins, socket)			
Power connector	M12 connector (5 pins, plug)			
Ambient operating temperature/humidity	+5 to +45°C at 35% to 85% RH (No condensation)			
Enclosure	IP65			
Applicable standard	UL, CSA, CE			
Weight (g)	470			

Input Block IP67 compliant

How to Order Input Manifold

EEX500 — IB1 — E 8

Input unit specifications

Connector type	
E	M8 connector
T	M12 connector
M	M8 and M12 mixed

Stations	
1	1 station
...	...
8	8 stations

Applicable GW unit

Nil	DeviceNet
	PROFIBUS-DP
-X1	Remote I/O (RIO)



Note) When ordering an input block manifold, enter the [Input manifold part no.] + [Input block part no.] together. The input block, end block and DIN rail are included in the input manifold.

How to Order Input Block

EX500 — IE 1

Block type

1	M8 connector, PNP specifications
2	M8 connector, NPN specifications
3	M12 connector, PNP specifications
4	M12 connector, NPN specifications
5	8-point integrated type, M8 connector, PNP specifications
6	8-point integrated type, M8 connector, NPN specifications

Applicable GW unit

Nil	DeviceNet
	PROFIBUS-DP
-X1	Remote I/O (RIO)

* With waterproof cap

Input Unit Specifications

Connection block	Current source type input block (PNP input block) or Current sink type input block (NPN input block)
Communication connector	M12 connector (8 pins, plug)
Number of connection blocks	Maximum 8 blocks
Block supply voltage	24 VDC
Block supply current	0.65 A maximum
Current consumption	100 mA or less (at rated voltage)
Short circuit protection	Operates at 1A Typ. (power supply cut) GW unit reset by turning power OFF and back ON.
Enclosure	IP65
Weight (g) <small>Note)</small>	100 (Input unit + end block)

Note) Not including the DIN rail weight.

Input Block Specifications

Applicable sensor	Current source type (PNP output) or Current sink type (NPN output)
Sensor connector	M8 connector (3 pins) or, M12 connector (4 pins)
Number of inputs	2 inputs/8 inputs (M8 only)
Rated voltage	24 VDC
Indication	Green LED
Insulation	None
Sensor supply current	Maximum 30 mA/Sensor
Enclosure	IP65
Weight (g)	[For M8: 20] [For M12: 40] [8 point integrated type, for M8: 55]



SI Unit

How to Order

EX500 – Q001

• Applicable GW unit

Nil	DeviceNet PROFIBUS-DP
-X1	Remote I/O (RIO)

VQC

SQ

VQ0

VQ4

VQ5

VQZ

VQD

Specifications

Connection block	Solenoid valve (single, double) Relay output module (1 output, 2 outputs)
Communication connector	M12 connector (8 pins, plug, socket)
Number of connection block stations	Double solenoid valve Relay output module (2 points): Maximum 8 stations Single solenoid valve Relay output module (1 point): Maximum 16 stations
Block supply voltage	24 VDC
Block supply current	0.65 A maximum
Current consumption	100 mA or less (at rated voltage)
Weight (g)	115

Cable

How to Order Cable with M12 Connector

EX500 – AC 030 – SSPS



Cable length

003	0.3 m
005	0.5 m
010	1 m
030	3 m
050	5 m

Connector specifications

SSPS	Socket side: Straight Plug side: Straight
SAPA	Socket side: Angle Plug side: Angle

How to Order Power Cable with Connector

EX500 – AP 050 – S

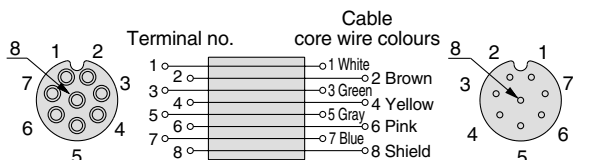


Cable length

010	1 m
050	5 m

Connector specifications

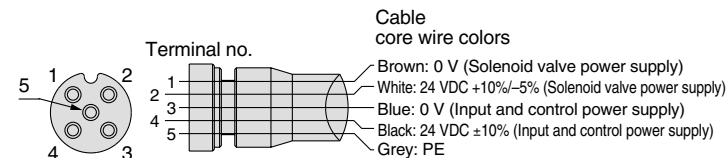
S	Straight
A	Angle



Socket connector pin arrangement

Connections

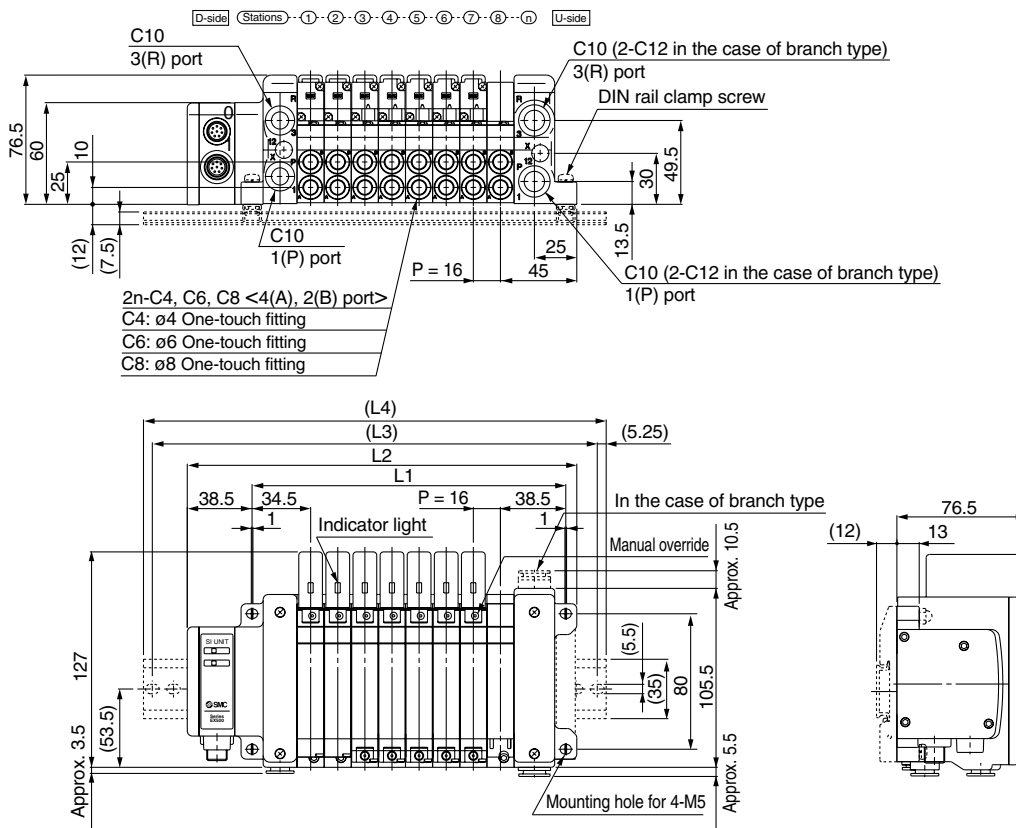
Plug connector pin arrangement



Socket connector pin arrangement

Connections

VV5QC21
SA1 Kit
(Serial transmission kit: EX500)



- VQC
- SQ
- VQ0
- VQ4
- VQ5
- VQZ
- VQD

Formulas
L1 = 16n + 57 (Maximum 16 single wiring stations)

n: Stations

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	73	89	105	121	137	153	169	185	201	217	233	249	265	281	297	313
L2	118	134	150	166	182	198	214	230	246	262	278	294	310	326	342	358
L3	137.5	150	175	187.5	200	212.5	237.5	250	262.5	287.5	300	312.5	337.5	350	362.5	375
L4	148	160.5	185.5	198	210.5	223	248	260.5	273	298	310.5	323	348	360.5	373	385.5

* With signal cut block, L4 is obtained by adding approximately 30 mm to L2.