

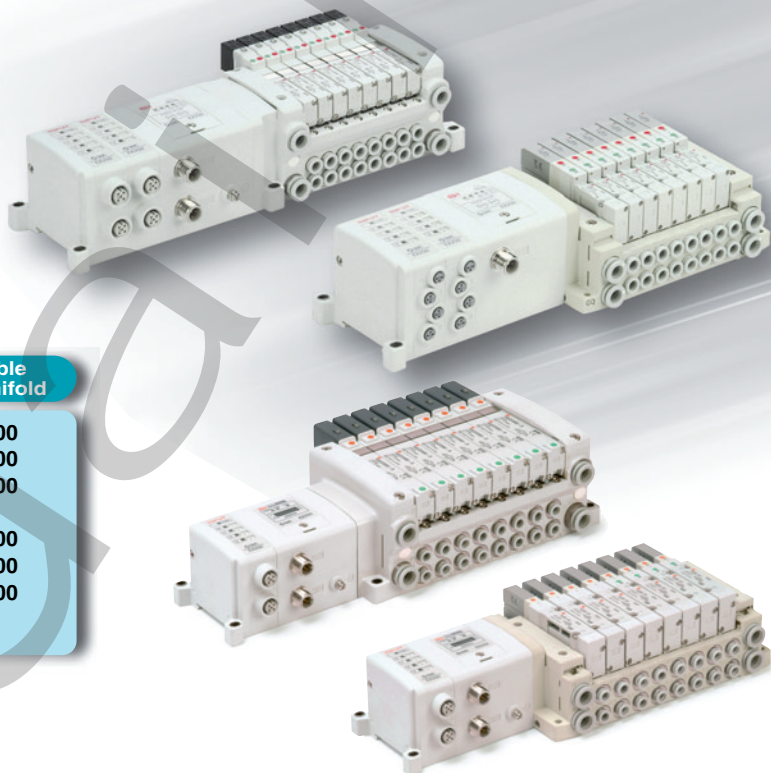
# Serial Transmission System

Serial Wiring with Input/Output Unit

## Series EX250

● CANopen compatible type is newly added.

Unit series	Applicable protocol	Applicable valve manifold
Serial Wiring with Input/Output Unit EX250	DeviceNet	SV1000 2000 3000
	PROFIBUS-DP	
	CC-Link	VQC1000 2000 4000
	AS-i	
	CANopen	



Decentralized Serial wiring

## Series EX500

Unit series	Applicable protocol	Applicable valve manifold
Decentralized Serial wiring EX500	Remote I/O (Rockwell Automation)	SV1000 2000 3000 4000
	DeviceNet	
	PROFIBUS-DP	VQC1000 2000 4000
	CC-Link	



# Decentralized Serial Wiring Series EX500



For details about certified products conforming to international standards, visit us at [www.poweraire.com](http://www.poweraire.com).

## How to Order

Gateway (GW) Unit



Input Unit Manifold



EX500 — G **DN1**

• Communication protocol

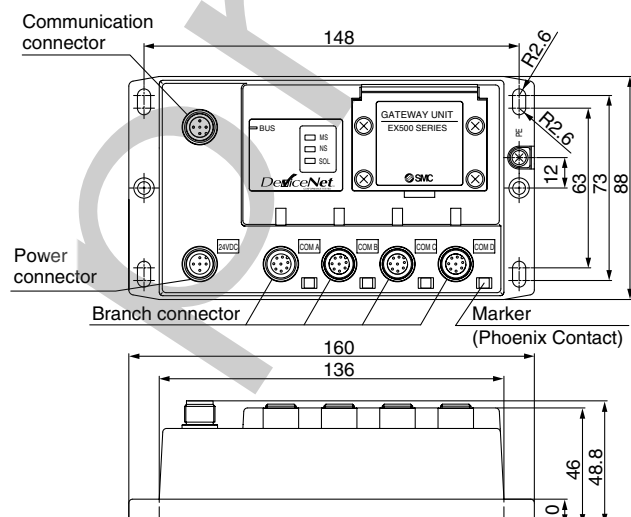
<b>DN1</b>	DeviceNet	<b>AB1-X1</b>	Remote I/O (RIO)
<b>PR1A</b>	PROFIBUS-DP	<b>MJ1</b>	CC-Link

## Gateway (GW) Unit Specifications

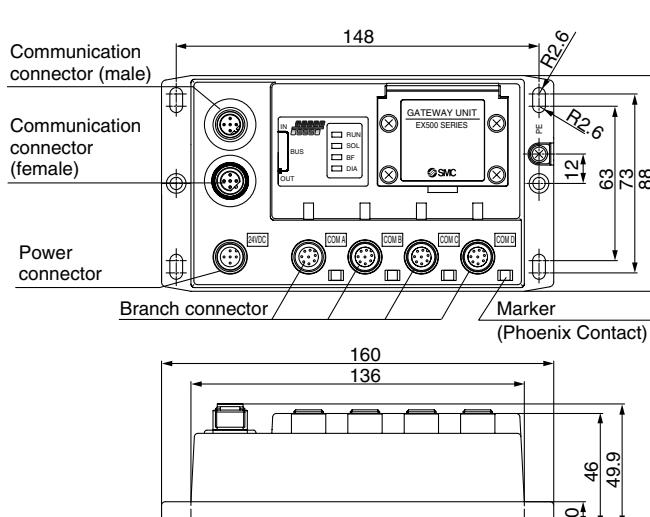
Model	EX500-GAB1-X1	EX500-GDN1	EX500-GPR1A	EX500-GMJ1
Applicable PLC/Communication protocol	Rockwell Automation PLC	DeviceNet Release 2.0	PROFIBUS-DP (EN50170)	CC-Link Ver. 1.10
Communication speed	57.6/115.2/230.4 kbit/sec	125/250/500 kbit/sec	9.6/19.2/45.45/93.75/187.5/500 kbit/sec 1.5/3/6/12 Mbit/sec	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			

## Dimensions (mm)

EX500-GDN1/DeviceNet

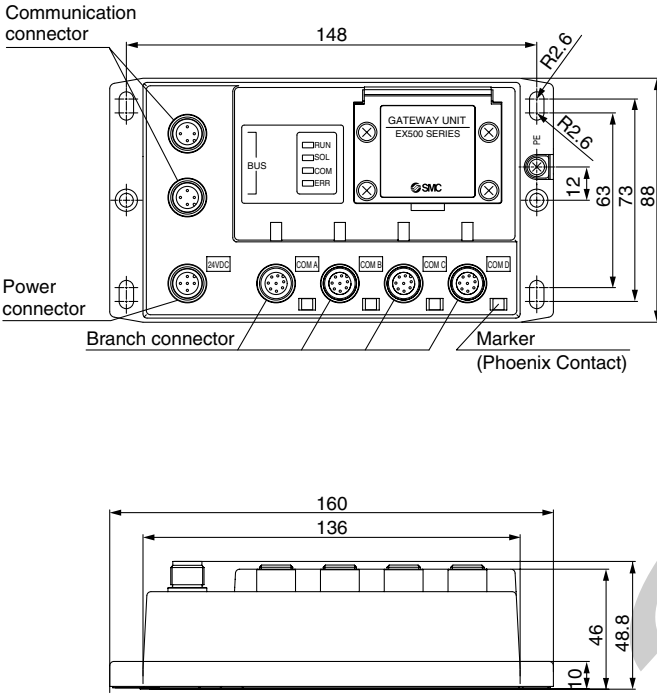


EX500-GPR1A /PROFIBUS-DP

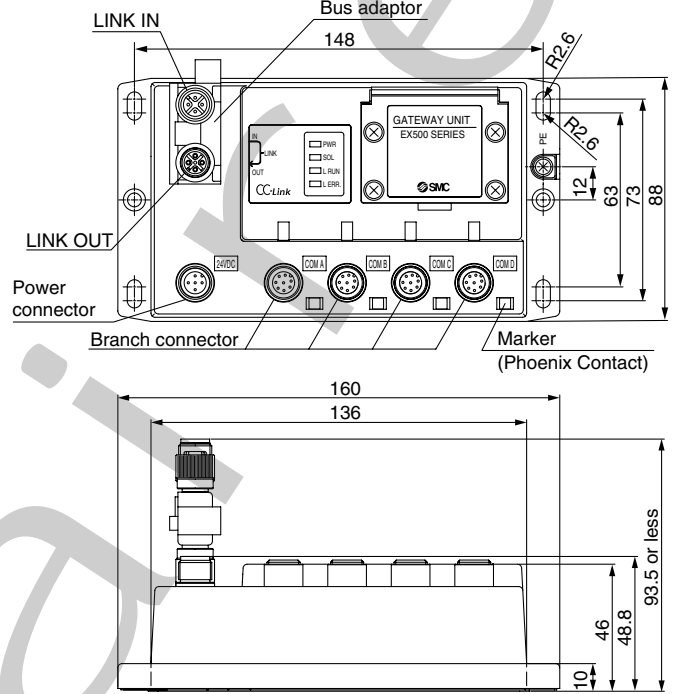


**Dimensions (mm)**

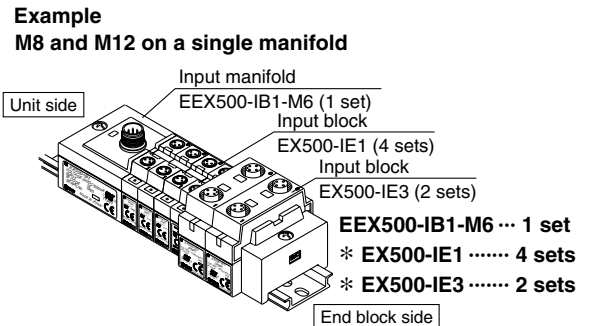
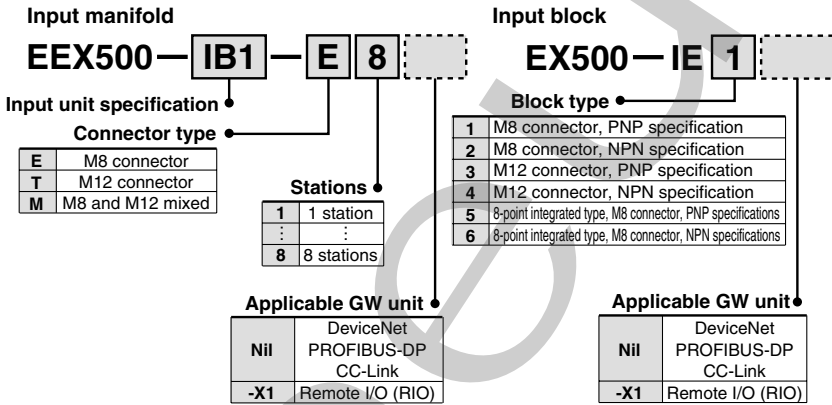
**EX500-GAB1-X1/Remote I/O (RIO)**



**EX500-GMJ1/CC-Link**



**How to Order**



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. Refer to How to Order below.

**Input Unit Specifications**

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

Note) Not including the DIN rail weight.

**Input Block Specifications**

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

For detailed information, refer to Best Pneumatics Vol. 1 and the technical instruction manual.

# For EX500 Decentralized Serial Wiring Series SV



For details about certified products conforming to international standards, visit us at [www.poweraire.com](http://www.poweraire.com).

## How to Order

**Series**

1	SV1000
2	SV2000
3	SV3000
4	SV4000

**Tie-rod base**  
SS5V 1 — W 10S A1W D — 05 U

**Cassette base**  
SS5V 1 — W 16S A1W D — 05 U

**Series**

1	SV1000
2	SV2000

**Enclosure IP67**

**SI unit specification**

A1W	For remote I/O DeviceNet
A2W	PROFIBUS-DP
0	Without SI unit

**Stations**

Symbol	Stations	Note
02	2 stations	Double wiring specifications <small>Note 1)</small>
⋮	⋮	
08	8 stations	Specified layout <small>Note 2)</small> (Up to 16 solenoids possible.)
02	2 stations	
⋮	⋮	
16	16 stations	

Note 1) Double wiring specification: Single, double, 3 position and 4 position solenoid valves can be used on all manifold stations. 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 a manifold specification sheet. (Note that double, 3 position and 4 position valves cannot be used where single solenoid wiring has been specified.)

**Ports 1, 3, 5 position**

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 16 stations)

**Supply/Exhaust block assembly specification**

Nil	Internal pilot specification
S <small>Note)</small>	Internal pilot/Built-in silencer
R	External pilot specification
RS <small>Note)</small>	External pilot/Built-in silencer

Note) When the built-in silencer type is used, keep the air outlet from direct contact with water.

**Ports 2, 4 size (metric)**

Symbol	Ports 2, 4	Ports 1, 3, 5	Applicable series
C3	ø3.2 One-touch fitting	ø8 One-touch fitting	SV1000
C4	ø4 One-touch fitting		
C6	ø6 One-touch fitting	ø10 One-touch fitting	SV2000
C4	ø4 One-touch fitting		
C6	ø6 One-touch fitting	ø12 One-touch fitting	SV3000
C8	ø8 One-touch fitting		
C10	ø10 One-touch fitting	ø12 One-touch fitting	SV4000
C8	ø8 One-touch fitting		
C10	ø10 One-touch fitting		
C12	ø12 One-touch fitting	Rc 3/8	SV4000
02	Rc 1/4		
03	Rc 3/8		
02F	G 1/4		
03F	G 3/8	G 3/8	SV4000
M	Ports 2, 4 mixed		

**Ports 2, 4 size (inch)**

Symbol	Ports 2, 4	Ports 1, 3, 5	Applicable series
N1	ø1/8" One-touch fitting	ø5/16" One-touch fitting	SV1000
N3	ø5/32" One-touch fitting		
N7	ø1/4" One-touch fitting	ø3/8" One-touch fitting	SV2000
N3	ø5/32" One-touch fitting		
N7	ø1/4" One-touch fitting	ø3/8" One-touch fitting	SV3000
N9	ø5/16" One-touch fitting		
N7	ø1/4" One-touch fitting	ø3/8" One-touch fitting	SV4000
N9	ø5/16" One-touch fitting		
N11	ø3/8" One-touch fitting		
N9	ø5/16" One-touch fitting	NPTF 3/8	SV4000
N11	ø3/8" One-touch fitting		
02N	NPT 1/4	NPTF 3/8	SV4000
03N	NPT 3/8		
02T	NPTF 1/4		
03T	NPTF 3/8		
M	Ports 2, 4 mixed		

**Mounting**

Nil	Direct mount	
D	DIN rail mount (with DIN rail)	
D0 <small>Note)</small>	DIN rail mount (without DIN rail)	
D3	For 3 stations	When a DIN rail longer than the specified stations is required. (Specify a rail longer than the standard length.)
⋮	⋮	
D16	For 16 stations	

Note) In case of D0, only DIN rail fittings are attached.

**DIN rail length specified**

Nil	Standard length	
3	For 3 stations	Specify a rail longer than the standard length.
⋮	⋮	
16	For 16 stations	

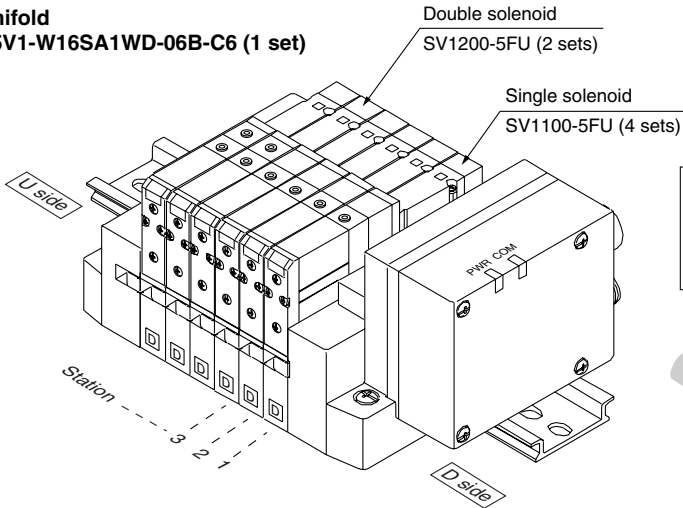
\* In case of mixed specification (M), indicate separately on a manifold specification sheet.  
 \* The port size of X and PE ports of the external pilot specification (R, RS) is ø4 (metric) or ø5/32" (inch) for Series SV1000 and 2000, and ø6 (metric) or ø1/4" (inch) for Series SV3000 and 4000.



**How to Order Valve Manifold Assembly (Example)**

**Example (SV1000)**

**Manifold**  
SS5V1-W16SA1WD-06B-C6 (1 set)



SS5V1-W16SA1WD-06B-C6 ..... 1 set (manifold part no.)  
 \* SV1100-5FU ..... 4 sets (single solenoid part no.)  
 \* SV1200-5FU ..... 2 sets (double solenoid part no.)

**How to Order Solenoid Valves**

SV 1 1 0 0 [ ] [ ] — 5 F [ ] [ ] [ ] (Note)

**Series**

1	SV1000
2	SV2000
3	SV3000
4	SV4000

**Type of actuation**

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	4 position dual 3 port valve: N.C./N.C.
B	4 position dual 3 port valve: N.O./N.O.
C	4 position dual 3 port valve: N.C./N.O.

\* 4 position dual 3 port valves are applicable to series SV1000 and SV2000 only.

**Pilot specification**

Nil	Internal pilot
R	External pilot

\* External pilot specification is not available for 4 position dual 3 port valves.

**Back pressure check valve**

Nil	None
K	Built-in

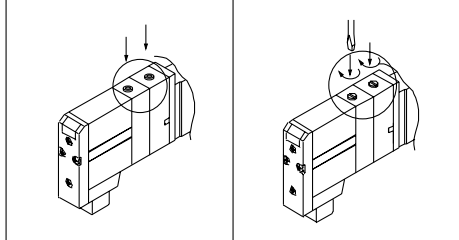
\* Built-in back pressure check valve type is applicable to series SV1000 only.  
 \* Back pressure check valve is not available for 3 position closed center and 3 position pressure center.



(Note) Available with manifold block for station addition. Refer to pages 77 and 81 of SV catalog (ES11-81A).

**Manual override indicator**

Nil: Non-locking push type    D: Slotted locking type



**Light and surge voltage suppressor**

U	With light and surge voltage suppressor
R	With surge voltage suppressor

**Rated voltage**

5	24 VDC
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• For solenoid valve specifications and dimensions, please refer to SV catalog (ES11-81).  
 • For details of the gateway unit and SI unit, please refer to the technical instruction manual.

# EX250 Serial Wiring with Input/Output Unit Series SV



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## How to Order

### Tie-rod base

SS5V 1 — W10S1 QW [ ] [ ] [ ] D — 05 U [ ] [ ] [ ]

**Series**

1	SV1000
2	SV2000
3	SV3000

**Enclosure**  
IP67

### Mounting

Nil	Direct mount
D	DIN rail mount (with DIN rail)
D0 <sup>Note)</sup>	DIN rail mount (without DIN rail)
D3	For 3 stations
:	:
D20	For 20 stations

When a DIN rail longer than the specified stations is required. (Specify a rail longer than the standard length.)



Note) In case of D0, only DIN rail fittings are attached.

### SI unit

QW	DeviceNet
NW	PROFIBUS-DP
VW	CC-Link
TAW	AS-i, 8 in/8 out, 31 slave modes, 2 power supply systems
TBW	AS-i, 4 in/4 out, 31 slave modes, 2 power supply systems
TCW	AS-i, 8 in/8 out, 31 slave modes, 1 power supply system
TDW	AS-i, 4 in/4 out, 31 slave modes, 1 power supply system
YW	CANopen
0	Without SI unit

### Input block stations

Nil	None
1	1 station
:	:
8	8 stations

Note) Without SI unit, the symbol is nil. When an AS-i compatible SI unit is used, there is a limit on the maximum number of stations. For details, please refer to page 14.

- Input blocks cannot be mounted without SI unit.
- When the DIN rail is included without SI unit, the DIN rail length will accommodate one SI unit and one input block.

Note) There is a limit on the current supplied from an SI unit of the TCW or TCD specification to an input block or valve. For details, refer to page 14.

### Input block type

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

Note) Without SI unit, the symbol is nil.

### Input block common specification

Nil	+COM
N	-COM

### Stations

Symbol	Stations	Note
02	2 stations	Double wiring specifications <sup>Note 1)</sup>
:	:	
16	16 stations	
02	2 stations	Specified layout <sup>Note 2)</sup> (Up to 32 solenoids possible.)
:	:	
20	20 stations	

- When an AS-i compatible SI unit is used, the maximum numbers of solenoids are as follows:  
TAW, TCW: Maximum 8 solenoids  
TBW, TDW: Maximum 4 solenoids

Note 1) Double wiring specification: Single, double, 3 position and 4 position solenoid valves can be used on all manifold stations. 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 a manifold specification sheet. (Note that double, 3 position and 4 position valves cannot be used where single solenoid wiring has been specified.)

### Ports 1, 3, 5 position

U	U side (2 to 10 stations)
D	D side (2 to 10 stations)
B	Both sides (2 to 20 stations)

### Supply/Exhaust block assembly specification

Nil	Internal pilot specification
S <sup>Note)</sup>	Internal pilot/Built-in silencer
R	External pilot specification
RS <sup>Note)</sup>	External pilot/Built-in silencer



Note) When the built-in silencer type is used, keep the air outlet from direct contact with water.

### Ports 2, 4 size (metric)

### Ports 2, 4 size (inch)

Symbol	Ports 2, 4	Ports 1, 3, 5	Applicable series
C3	ø3.2 One-touch fitting	ø8 One-touch fitting	SV1000
C4	ø4 One-touch fitting		
C6	ø6 One-touch fitting		
C4	ø4 One-touch fitting	ø10 One-touch fitting	SV2000
C6	ø6 One-touch fitting		
C8	ø8 One-touch fitting		
C6	ø6 One-touch fitting	ø12 One-touch fitting	SV3000
C8	ø8 One-touch fitting		
C10	ø10 One-touch fitting		
M	Ports 2, 4 mixed		

Symbol	Ports 2, 4	Ports 1, 3, 5	Applicable series
N1	ø1/8" One-touch fitting	ø5/16" One-touch fitting	SV1000
N3	ø5/32" One-touch fitting		
N7	ø1/4" One-touch fitting		
N3	ø5/32" One-touch fitting	ø3/8" One-touch fitting	SV2000
N7	ø1/4" One-touch fitting		
N9	ø5/16" One-touch fitting		
N7	ø1/4" One-touch fitting	ø3/8" One-touch fitting	SV3000
N9	ø5/16" One-touch fitting		
N11	ø3/8" One-touch fitting		
M	Ports 2, 4 mixed		

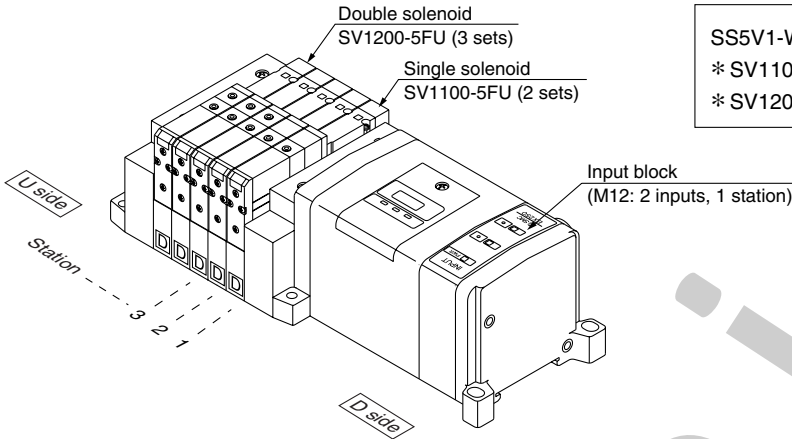
\* In case of mixed specification (M), indicate separately on a manifold specification sheet.

\* The port size of X and PE ports of the external pilot specification (R, RS) is ø4 (metric) or ø5/32" (inch) for Series SV1000 and 2000, and ø6 (metric) or ø1/4" (inch) for Series SV3000.

## How to Order Valve Manifold Assembly (Example)

### Example (SV1000)

Manifold  
SS5V1-W10S1QW11ND-05B-C6 (1 set)



SS5V1-W10S1QW11ND-05B-C6 ..... 1 set (manifold part no.)  
 \* SV1100-5FU ..... 2 sets (single solenoid part no.)  
 \* SV1200-5FU ..... 3 sets (double solenoid part no.)

## How to Order Solenoid Valves

SV 1 1 0 0 [ ] [ ] — 5 F [ ] [ ] [ ]

Series ●

1	SV1000
2	SV2000
3	SV3000

Type of actuation ●

1	2 position single solenoid
2	2 position double solenoid
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A	4 position dual 3 port valve: N.C./N.C.
B	4 position dual 3 port valve: N.O./N.O.
C	4 position dual 3 port valve: N.C./N.O.

\* 4 position dual 3 port valves are applicable to series SV1000 and SV2000 only.

Pilot specification ●

Nil	Internal pilot
R	External pilot

\* External pilot specification is not available for 4 position dual 3 port valves.

Back pressure check valve ●

Nil	None
K	Built-in

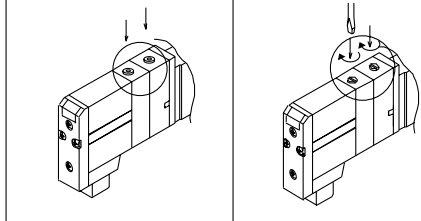
\* Built-in back pressure check valve type is applicable to series SV1000 only.  
 \* Back pressure check valve is not available for 3 position closed center and 3 position pressure center.



Note) Available with manifold block for station addition. Refer to page 81 of SV catalog (ES11-81A).

● Manual override indicator

Nil: Non-locking push type    D: Slotted locking type



● Light/Surge voltage suppressor

U	With light/surge voltage suppressor
R	With surge voltage suppressor

● Rated voltage

5	24 VDC
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- For solenoid valve specifications and dimensions, please refer to SV catalog (ES11-81).
- Please refer to page 13 for single SI unit dimensions.
- Please refer to the technical instruction manual.





How to Order Valve

VQC 1 1 0 0 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

Series  
1 VQC1000

Type of actuation

1	2 position single 	A <sup>Note</sup>	4 position dual 3 port valve (A) 
	2 position double (metal) 		B <sup>Note</sup>
2	2 position double (rubber) 	C <sup>Note</sup>	4 position dual 3 port valve (C) 
	3 position closed center 		3
4	3 position exhaust center 		3 position pressure center 
5	3 position pressure center 		

Note) For rubber seal type only.

Light/Surge voltage suppressor

Nil With

Coil voltage

5 24 VDC

Function <sup>Note 1)</sup>

Nil	Standard type (1 W)
K <sup>Note 2)</sup>	High voltage type (1.0 MPa)
N	Negative COM
R <sup>Note 3)</sup>	External pilot
Y <sup>Note 4)</sup>	Low wattage type (0.5 W)

Seal

0 Metal seal  
1 Rubber seal

Note 1) When specifying more than one option, enter symbols in alphabetical order.

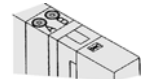
Note 2) For metal seal type only.

Note 3) Not applicable for dual 3-port valve.

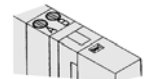
Note 4) If the valve is to operate continuously or if it is to have power applied to it for more than a total of 12 hours per day, choose the low wattage type.

Manual override

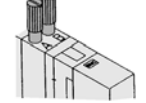
Nil: Non-locking push type (Slotted)



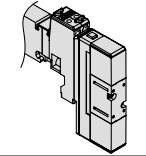
B: Locking type (Slotted)



C: Locking type (Manual)



D: Slide locking type (Manual)



Kit type

**S** Kit (Decentralized wiring type serial kit)

Serial unit: EX500 IP67 protection

Note) A separate gateway unit and communication cable are required.

SD0	Serial kit without SI unit	1 to 8 stations (16 stations)
SDA1	Serial kit for Remote I/O	
SDA2	Serial kit for DeviceNet/PROFIBUS-DP/CC-Link	

**S** Kit (I/O serial kit)

Serial unit: EX250 IP67 protection

SD0	Without SI unit	1 to 12 stations (24 stations)
SDQ	DeviceNet	
SDN	PROFIBUS-DP	
SDV	CC-Link	
SDTA	AS-i, 8 in/8 out, 31 slave modes, 2 power supply systems	1 to 4 stations (8 stations)
SDTB	AS-i, 4 in/4 out, 31 slave modes, 2 power supply systems	1 to 2 stations (4 stations)
SDTC <sup>Note)</sup>	AS-i, 8 in/8 out, 31 slave modes, 1 power supply system	1 to 4 stations (8 stations)
SDTD <sup>Note)</sup>	AS-i, 4 in/4 out, 31 slave modes, 1 power supply system	1 to 2 stations (4 stations)
SDY	CANopen	1 to 12 stations (24 stations)

Note) There is a limit on the current supplied from an SI unit of the SDTC or SDTD specification to an input block or valve. For details, refer to page 14.

- For the solenoid valve specifications and dimensions, please refer to VQC catalog (ES11-80).
- Please refer to page 13 for Series EX250 single SI unit dimensions.
- For details of the Series EX250 SI unit, please refer to the technical instruction manual.

# Series VQC2000

## Base mounted

# Plug-in Unit



For details about certified products conforming to international standards, visit us at [www.poweraire.com](http://www.poweraire.com).

### How to Order Manifold

VV5QC 2 1 — 08 C6 SDQ [ ] [ ] [ ] [ ] ← B ..... S kit

**Series**

2	VQC2000
---	---------

**Manifold**

1	Plug-in unit
---	--------------

**Stations**

01	1 station
⋮	⋮

The maximum number of stations differs depending on the electrical entry.

**Ports 2, 4 size (metric)**

Symbol	Ports 2, 4	Ports 1, 3, 5
C4	ø4 One-touch fitting	ø10 One-touch fitting
C6	ø6 One-touch fitting	
C8	ø8 One-touch fitting	
CM	Mixed size/with port plug	
L4	Top ported elbow ø4 One-touch fitting	
L6	Top ported elbow ø6 One-touch fitting	
L8	Top ported elbow ø8 One-touch fitting	
B4	Bottom ported elbow ø4 One-touch fitting	
B6	Bottom ported elbow ø6 One-touch fitting	ø3/8" One-touch fitting
B8	Bottom ported elbow ø8 One-touch fitting	
LM	Mixed size for elbow piping	

**Ports 2, 4 size (inch)**

Symbol	Ports 2, 4	Ports 1, 3, 5
N3	ø5/32" One-touch fitting	ø3/8" One-touch fitting
N7	ø1/4" One-touch fitting	
N9	ø5/16" One-touch fitting	
NM	Mixed	
LN3	Top ported elbow ø5/32" One-touch fitting	
LN7	Top ported elbow ø1/4" One-touch fitting	
LN9	Top ported elbow ø5/16" One-touch fitting	
BN3	Bottom ported elbow ø5/32" One-touch fitting	
BN7	Bottom ported elbow ø1/4" One-touch fitting	ø3/8" One-touch fitting
BN9	Bottom ported elbow ø5/16" One-touch fitting	
LNm	Mixed size for elbow piping	

Note) Indicate the size in the specification sheet in the case of CM, LM.

**Kit type**

(Refer to page 10 for details of the kit.)

**SI unit COM.**

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

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

**Option** <sup>Note 1)</sup>

Nil	None
B	All stations with back pressure check valve <sup>Note 2)</sup>
D	With DIN rail (rail length: standard)
D□	With DIN rail (rail length: special) <sup>Note 3)</sup>
K	Special wiring specifications (except for double wiring) <sup>Note 4)</sup>
N	With name plate
R	External pilot <sup>Note 5)</sup>
S	Built-in silencer, direct exhaust <sup>Note 6)</sup>
T	Branched U side P, R ports <sup>Note 7)</sup>

- Note 1) When specifying more than one option, enter symbols in alphabetical order. Example: -BRS  
 Note 2) 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 in the specification sheet.  
 Note 3) 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.  
 Indicate "-D0" for the option without DIN rail.  
 Note 4) Be sure to indicate the wiring specifications in the specification sheet.  
 Note 5) For external pilot option, "-R", indicate the external pilot specification "R" for the applicable valves as well.  
 Note 6) The built-in silencer type does not satisfy the IP67 standard.  
 Note 7) The supply and exhaust ports on U side are branched (to the cylinder port side and coil side). A One-touch fitting for ø12 is attached to each port.

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

Nil	PNP (+) or without SI unit/input block (SD0)
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-pin)

**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

Note) When an AS-i compatible S kit is used, there is a limit on the maximum number of stations.  
For details, please refer to page 14.

How to Order Valve

VQC 2 1 0 0 [ ] - 5 [ ] [ ]

Series  
2 VQC2000

Type of actuation

1	2 position single 	Note) A 4 position dual 3 port valve (A) 
	2 position double (metal) 	
2	2 position double (rubber) 	Note) C 4 position dual 3 port valve (C) 
	3 position closed center 	
3 position exhaust center 		
3 position pressure center 		

Light/Surge voltage suppressor  
Nil With

Coil voltage  
5 24 VDC

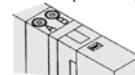
Function Note 1)

Nil	Standard type (1 W)
K Note 2)	High voltage type (1.0 MPa)
N	Negative COM
R Note 3)	External pilot
Y Note 4)	Low wattage type (0.5 W)

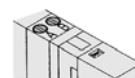
Seal  
0 Metal seal  
1 Rubber seal

Manual override

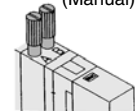
Nil: Non-locking push type (Slotted)



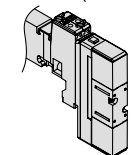
B: Locking type (Slotted)



C: Locking type (Manual)



D: Slide locking type (Manual)



Note 1) When specifying more than one option, enter symbols in alphabetical order.  
Note 2) For metal seal type only.  
Note 3) Not applicable for dual 3-port valve.  
Note 4) In case the total energized time in 24 hours is longer than the total de-energized time, please choose the low wattage type.

Kit type

**S** Kit (Decentralized wiring type serial kit)

Serial unit: EX500 IP67 protection

Note) A separate gateway unit and communication cable are required.

SD0	Serial kit without SI unit	1 to 8 stations (16 stations)
SDA1	Serial kit for Remote I/O	
SDA2	Serial kit for DeviceNet/PROFIBUS-DP/CC-Link	

**S** Kit (I/O serial kit)

Serial unit: EX250 IP67 protection

SD0	Without SI unit	1 to 12 stations (24 stations)
SDQ	DeviceNet	
SDN	PROFIBUS-DP	
SDV	CC-Link	
SDTA	AS-i, 8 in/8 out, 31 slave modes, 2 power supply systems	
SDTB	AS-i, 4 in/4 out, 31 slave modes, 2 power supply systems	
SDTC Note)	AS-i, 8 in/8 out, 31 slave modes, 1 power supply system	
SDTD Note)	AS-i, 4 in/4 out, 31 slave modes, 1 power supply system	
SDY	CANopen	1 to 12 stations (24 stations)

Note) There is a limit on the current supplied from an SI unit of the SDTC or SDTD specification to an input block or valve. For details, refer to page 14.

- For the solenoid valve specifications and dimensions, please refer to VQC catalog (ES11-80).
- Please refer to page 13 for Series EX250 single SI unit dimensions.
- For details of the Series EX250 SI unit, please refer to the technical instruction manual.

# Series VQC4000

## Base mounted

# Plug-in Unit



For details about certified products conforming to international standards, visit us at [www.poweraire.com](http://www.poweraire.com).

### How to Order Manifold

**VV5QC 4 1 - 16 03 SDQ S kit**

**Series**

4	VQC4000
---	---------

**Manifold**

1	Plug-in unit
---	--------------

**Stations**

01	1 station
⋮	⋮

The maximum number of stations differs depending on the electrical entry.

**Ports 2, 4 size (metric)**

Symbol	Ports 2, 4	Ports 1, 3, 5
C8	ø8 One-touch fitting	1: 1/2 3, 5: 3/4
C10	ø10 One-touch fitting	
C12	ø12 One-touch fitting	
02	1/4	
03	3/8	
B	Bottom ported Rc 1/4	
CM	Mixed	

**Ports 2, 4 size (inch)**

Symbol	Ports 2, 4	Ports 1, 3, 5
N7	ø1/4" One-touch fitting	1: 1/2 3, 5: 3/4
N9	ø5/16" One-touch fitting	
N11	ø3/8" One-touch fitting	
NM	Mixed	

Note) Indicate the size in the specification sheet in the case of CM.

**Thread type**

Nil	Rc
F	G
T	NPT/NPTF

**Option** Note 1)

Nil	None
K	Special wiring specifications (except for double wiring) <small>Note 2)</small>

Note 1) When specifying more than one option, enter symbols in alphabetical order. Example: -KN  
Note 2) Be sure to indicate the wiring specifications in the specification order sheet.

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

Nil	PNP (+) or without SI unit/input block(SD0)
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-pin)

**Input block**  
(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

Note) When an AS-i compatible S kit is used, there is a limit on the maximum number of stations. For details, please refer to page 14.

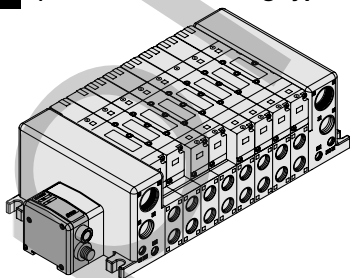
**SI unit COM.**

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

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

**Kit type**

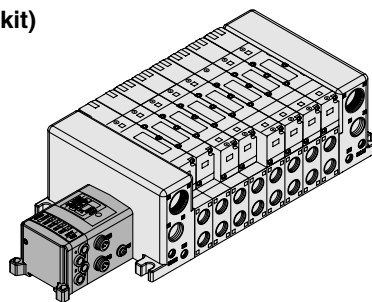
**S Kit**  
(Decentralized wiring type serial kit)



Serial unit: EX500

**IP67 protection**

**S Kit**  
(I/O serial kit)



Serial unit: EX250

**IP67 protection**

Symbol	Description	Stations	Symbol	Description	Stations	Symbol	Description	Stations
SD0A	Serial kit without SI unit	1 to 8 stations (16 stations)	SD0	Without SI unit	1 to 12 stations (24 stations)	SDTA	AS-i, 8 in/8 out, 31 slave modes, 2 power supply systems	1 to 4 stations (8 stations)
SDA1	Serial kit for Remote I/O		SDQ	DeviceNet		SDTB	AS-i, 4 in/4 out, 31 slave modes, 2 power supply systems	1 to 2 stations (4 stations)
SDA2	Serial kit for DeviceNet/PROFIBUS-DP/CC-Link		SDN	PROFIBUS-DP		SDTC <small>Note)</small>	AS-i, 8 in/8 out, 31 slave modes, 1 power supply system	1 to 4 stations (8 stations)
			SDV	CC-Link	SDTD <small>Note)</small>	AS-i, 4 in/4 out, 31 slave modes, 1 power supply system	1 to 2 stations (4 stations)	
			SDY	CANopen				

Note) There is a limit on the current supplied from an SI unit of the SDTC or SDTD specification to an input block or valve. For details, refer to page 14.

How to Order Valve

VQC 4 1 0 0 [ ] - 5 [ ] [ ]

Series

4	VQC4000
---	---------

Type of actuation

1	2 position single 
2	2 position double (metal) 
	2 position double (rubber) 
3	3 position closed center 
4	3 position exhaust center 
5	3 position pressure center 
6	3 position double check 

Light/Surge voltage suppressor

Nil	With
E	Without light/surge voltage suppressor

Coil voltage

5	24 VDC
---	--------

Function <sup>Note 1)</sup>

Nil	Standard type (1 W)
R	External pilot
Y <sup>Note 2)</sup>	Low wattage type (0.5 W)



Note 1) When specifying more than one option, enter symbols in alphabetical order.

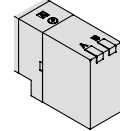
Note 2) In case the total energized time in 24 hours is longer than the total de-energized time, please choose the low wattage type.

Seal

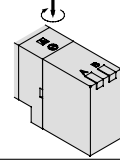
0	Metal seal
1	Rubber seal

Manual override

Nil: Non-locking push type (Slotted)



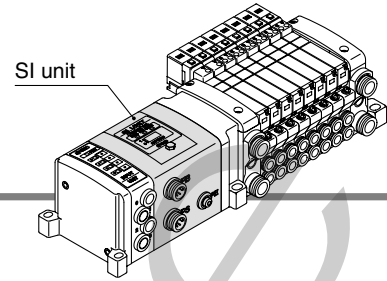
B: Locking type (Slotted)



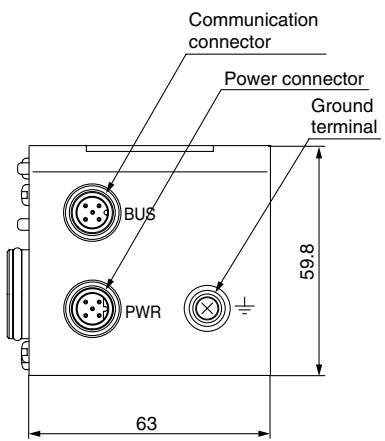
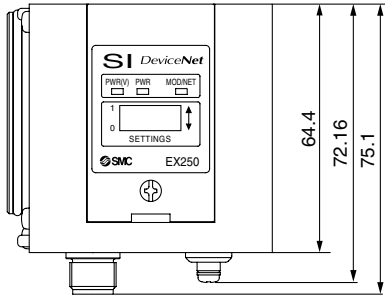
- For the solenoid valve specifications and dimensions, please refer to VQC catalog (ES11-80).
- Please refer to page 13 for Series EX250 single SI unit dimensions.
- For details of the Series EX250 SI unit, please refer to the technical instruction manual.



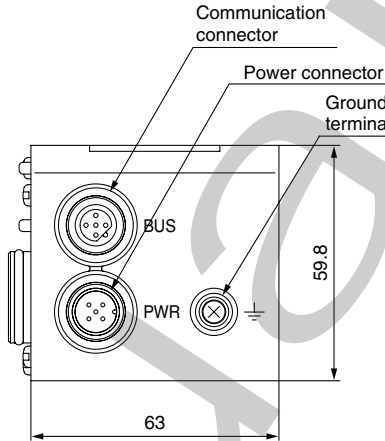
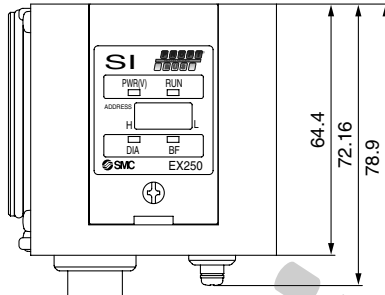
# Serial Unit (SI Unit) Dimensions/EX250



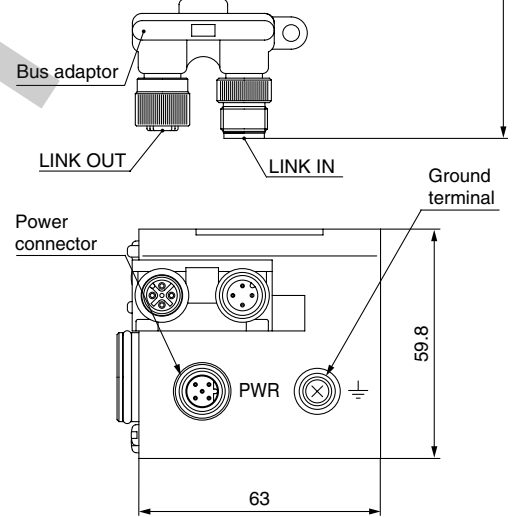
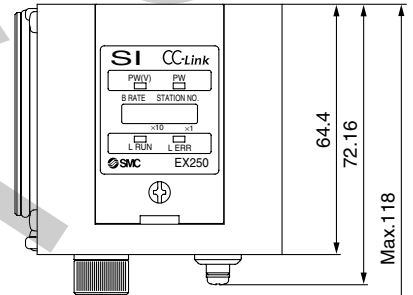
## DeviceNet



## PROFIBUS-DP

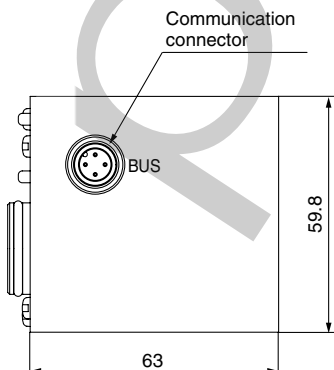
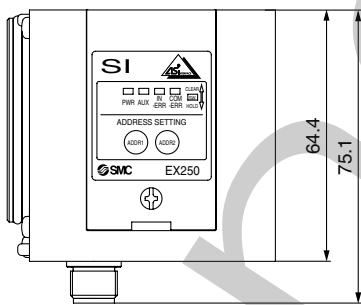


## CC-Link

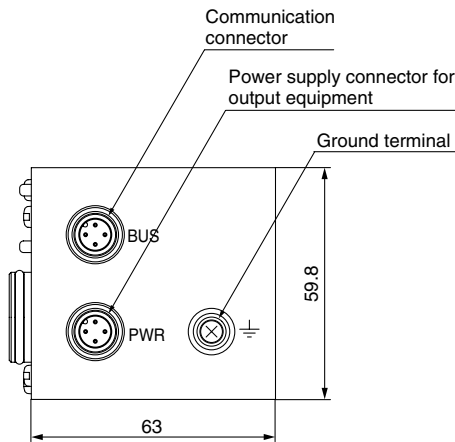
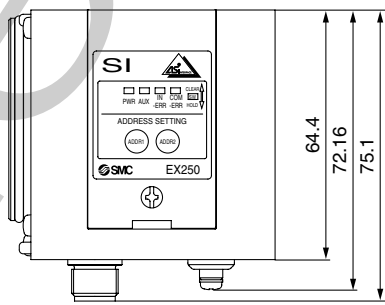


## AS-i

### 1 power supply system



### 2 power supply system



## CANopen

