Fieldbus System (For Output)

EX120/121/122 Series

CE UK CA

Compatible Protocols
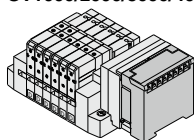
DeviceNet CC-Link CompoBus/S
CompoNet
Made to Order ▶ S-Link V

★**Small unit compatible with a maximum of 16 outputs**
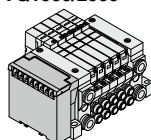★**Compatible with a variety of communication networks**
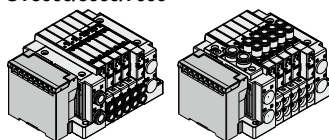
Manifold Solenoid Valves
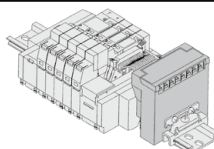
EX120 Series

SV1000/2000/3000/4000 VQ1000/2000 SY3000/5000/7000

EX121 Series

SY3000/5000

EX122 Series

SY3000/5000

CONTENTS

Fieldbus System
For Output
EX120/121/122 Series $C \epsilon$ UK CA

How to Order SI Unit

EX12[0]-S[DN1]-[ ]

Valve interface

0	Plug-in
1	Flat ribbon cable DIN rail mounting
2	Plug-in DIN rail mounting

Made to Order (Refer to page 1294.)

Protocol	Output polarity	Occupied points
DeviceNet®	PNP (Negative common)	16 inputs/ 16 outputs
DeviceNet®	PNP (Negative common)	0 inputs/ 16 outputs
S-LINK V	NPN (Positive common)	0 inputs/ 16 outputs

Protocol

DN1	DeviceNet®[1]
DN1-X26[2]	DeviceNet®[1]
MJ1	CC-Link
CS1	OMRON Corp.: CompoBus/S (16 outputs)
CS2	OMRON Corp.: CompoBus/S (8 outputs)
CM1	CompoNet® NPN (Positive common)
CM3	CompoNet® PNP (Negative common)

∗1 DN1's occupied points are 16 inputs and 16 outputs, while DN1-X26 has 0 inputs and 16 outputs.

∗2 A manifold part number is not specified for this model. Please contact SMC for the manifold integrated type.

⊗SMC

Specifications

Common Specifications

Communication	Terminating resistor	Not provided
	Internal current consumption (Unit)	100 mA or less
Environment	Enclosure	IP20
	Operating temperature range	0 to 55°C (Valve 8 points ON) 0 to 50°C (Valve 16 points ON)
	Operating humidity range	35 to 85%RH (No condensation)
	Withstand voltage	1500 VAC for 1 minute between whole external terminal and enclosure
	Insulation resistance	2 MΩ or more (500 VDC) between whole external terminal and enclosure

	Model	EX12□-SDN1	EX12□-SDN1-X26	EX12□-SMJ1	EX12□-SCS1 EX12□-SCS2
Communication	Protocol	DeviceNet®		CC-Link	OMRON Corp.: CompoBus/S
	Version*1	Release 2.0		Ver. 1.10	—
	Communication speed	125 k/250 k/500 kbps		156 k/625 kbps 2.5 M/5 M/10 Mbps	750 kbps
	Configuration file*2	EDS file		CSP+ file	—
	I/O occupation area (Inputs/Outputs)	16/16	0/16	32/32 (1 station, remote I/O stations)	SCS1: 0/16 SCS2: 0/8
Power supply voltage	For control	11 to 25 VDC		15 to 30 VDC	14 to 26.4 VDC
	For valve	24 VDC +10%/−5%			
Output	Output type	Sink/NPN (Positive common)			
	Number of outputs	16 points			SCS1: 16 points SCS2: 8 points
	Load	Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)			
	Fail safe	CLEAR	HOLD/CLEAR (Switch setting)	CLEAR	HOLD/CLEAR (Switch setting)
Standards		CE/UKCA marking			
Weight		EX120: 110 g or less, EX121: 140 g or less, EX122: 130 g or less			
Accessory		Communication connector 1 pc., Power supply connector 1 pc.			—

*1 Please note that the version is subject to change.
*2 The setting file can be downloaded from the SMC website, https://www.smcworld.com

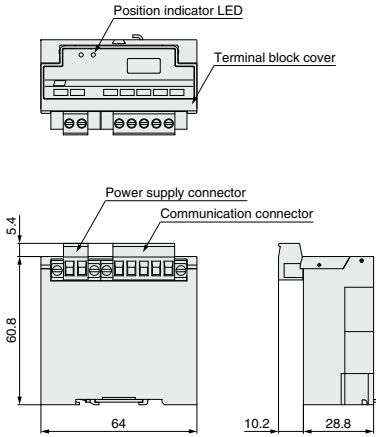|	Model	EX12□-SCM1	EX12□-SCM3
Communication	Protocol	CompoNet®	
	Communication speed	93.75 kbps/1.5 M/3 M/4 Mbps	
	Configuration file	EDS file*1	
	I/O occupation area (Inputs/Outputs)	0/16	
Power supply voltage	For control	14 to 26.4 VDC	
	For valve	24 VDC +10%/−5%	
Output	Output type	Sink/NPN (Positive common)	Source/PNP (Negative common)
	Number of outputs	16 points	
	Load	Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)	
	Fail safe	HOLD/CLEAR (Setting via network)	
Standards		CE/UKCA marking	
Weight		EX120: 100 g or less EX121: 120 g or less EX122: 110 g or less (including accessory)	
Accessory		Power supply connector (EX9-CP2) 1 pc.*2	

*1 The setting file can be downloaded from the SMC website, https://www.smcworld.com
*2 Communication connector (for the opposite side) is not provided.

EX120/121/122 *Series*

Dimensions/Parts Description

EX120
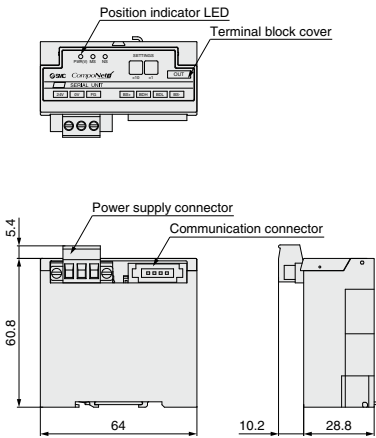#### EX120-SDN1(-X26)

Position indicator LED

Terminal block cover

Power supply connector
Communication connector

5.4

60.8

64   10.2   28.8

EX120-SMJ1, SCS□

Position indicator LED

Terminal block cover

6.2   Screw terminal block

60.8

64   1.2   28.8

EX120-SCM□

Position indicator LED

Terminal block cover

Power supply connector
Communication connector

5.4

60.8

64   10.2   28.8

SMC
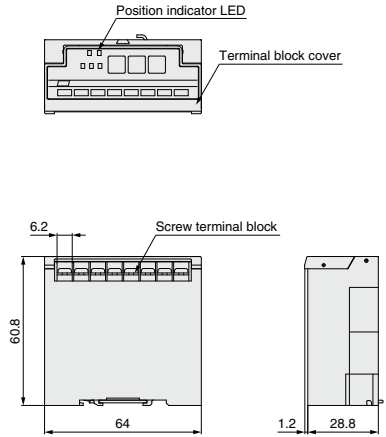
Dimensions/Parts Description

EX121

EX121-SDN1(-X26)

Position indicator LED

Terminal block cover

Power supply connector

MIL connector (20 pins, socket)

Communication connector

5.4

60.8

Tightening torque 0.6 N·m

64

10.2   28.8   2

DIN rail mounting bracket

EX121-SMJ1, SCS□

Position indicator LED

Terminal block cover

MIL connector (20 pins, socket)

6.2

Screw terminal block

60.8

Tightening torque 0.6 N·m

64

9.5   28.8   2

DIN rail mounting bracket

EX121-SCM□

Position indicator LED

Terminal block cover

SMC CompoNet
SERIAL UNIT

Power supply connector

MIL connector (20 pins, socket)

5.4

Communication connector

60.8

Tightening torque 0.6 N·m

64

10.2   28.8   2

DIN rail mounting bracket

EX120/121/122 *Series*

Dimensions/Parts Description

EX122

EX122-SDN1(-X26)

- Position indicator LED
- Terminal block cover

- Power supply connector
- Communication connector
- Tightening torque 0.6 N·m
- DIN rail mounting bracket

5.4
60.8
64
10.2
28.8

EX122-SMJ1, SCS□

- Position indicator LED
- Terminal block cover

- Screw terminal block
- Tightening torque 0.6 N·m
- DIN rail mounting bracket

6.2
60.8
64
9.5
28.8

EX122-SCM□

- Position indicator LED
- Terminal block cover

SMC CompoNet
SERIAL UNIT

- Power supply connector
- Communication connector
- Tightening torque 0.6 N·m
- DIN rail mounting bracket

5.4
60.8
64
10.2
28.8

SMC

LED Indicator

EX12□-SDN1

PWR: Power supply for control

MOD/NET: Connection state

PWR MOD/NET

SETTINGS

DeviceNet

SERIAL UNIT MODEL SQ(SI No.EX120-SDN1)

24V | 0V | V- | CANL | FG | CANH | V+

EX12□-SMJ1

PW: Power supply for control

LRUN: Communication state

PW LRUN
LERR · SD · RD

B RATE STATION NO.

×10 ×1

CC-Link

SERIAL UNIT

24V | 0V | +24V | 24G | DA | DB | DG | FG

LERR: Error

RD: Data reception

SD: Data transmission

EX12□-SCS□

PWR: Power supply for control

COMM: Communication state

ERR: Communication error

PWR COMM ERR

ADDRESS NO.

S No.

SERIAL UNIT

BS+ | BDH | BDL | BS- | FG | 24V | 0V

EX12□-SCM□

PWR(V): Power supply for valve

MS: SI unit state

NS: Network error

PWR(V) MS NS

WORD NODE ADDRESS

×10 ×1

OUT

CompoNet

SERIAL UNIT

24V | 0V | FG | BS+ | BDH | BDL | BS-
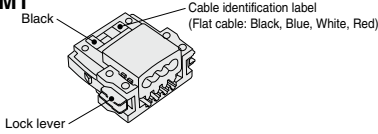
EX120/121/122 *Series*

Accessories (For EX12☐-SCM☐)

❶ Communication Connector

Press-in connector for flat cables
Use this connector for the standard dedicated flat cable.
The communication connector does not come with this product.

EX9-CCM1

Black
Cable identification label
(Flat cable: Black, Blue, White, Red)
Lock lever

Terminal block connector for round cables (VCTF)
Use this connector for the VCTF cable.
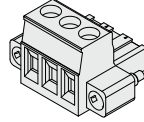The communication connector does not come with this product.

EX9-CCM2

Lock lever
Cable identification label
(Flat cable: Black, Blue, White, Red)
Black
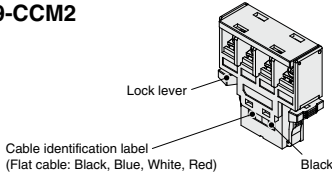
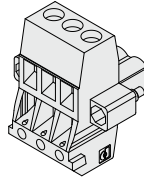### ❷ Power Supply Connector

Straight type power supply connector
This connector is supplied at the time of shipment.

EX9-CP2

T-branch type power supply connector
This connector is not supplied at the time of shipment.

EX9-CP3

Made to Order

Please contact SMC for detailed specifications and lead times.
Prepare the SI unit and manifold valve (without SI unit) separately, and combine them before use.

① DeviceNet® PNP (Negative common) output, Occupied points: 16 inputs/16 outputs

EX12 0 -SDN1-X2

● Valve interface

0	Plug-in
1	Flat ribbon cable DIN rail mounting
2	Plug-in DIN rail mounting

● Dimensions are the same as those of the standard type.

② DeviceNet® PNP (Negative common) output, Occupied points: 0 inputs/16 outputs

EX12 0 -SDN1-X77

● Valve interface

0	Plug-in
1	Flat ribbon cable DIN rail mounting
2	Plug-in DIN rail mounting

● Dimensions are the same as those of the standard type.

③ S-LINK V compatible NPN (Positive common) 16 outputs

EX120-SSL1-X99

● Dimensions are the same as those of the CC-Link (EX120-SMJ1).

⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 7 for safety instructions and pages 15 to 17 for fieldbus system precautions.

Operating Environment

⚠Warning

1. **Do not use this product in the presence of dust, particles, water, chemicals, and oil. Use around such materials is likely to cause a malfunction or breakage.**

SMC

Fieldbus System (For Output)

EX124/126 Series

CE UK CA

Compatible Protocols

DeviceNet CC-Link **CompoBus/S**

Made to Order CompoNet

★**Enclosure IP65 (EX124), IP67 (EX126)**
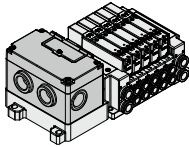★**Maximum 16 outputs**

Manifold Solenoid Valves

EX124 Series	*EX126 Series*		
VQ2000/4000/5000	SY3000/5000/7000	SV1000/2000/3000	VQC1000/2000/4000/5000
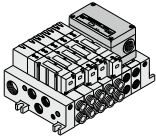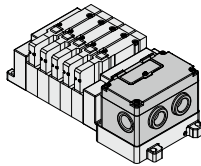
CONTENTS

Fieldbus System
For Output
EX124/126 *Series* CE UK CA

How to Order SI Unit

EX12 4 U – S DN1 – ☐

Unit specifications

4	Separate power supply of control and valve Enclosure IP65 Compatible with the VQ valves

Mounting specifications

U	Mount a unit to the U side of the manifold
D	Mount a unit to the D side of the manifold

Made to Order (Refer to page 1300.)

Protocol	Output polarity	Occupied points
DeviceNet®	PNP (Negative common)	16 inputs/ 16 outputs
DeviceNet®	PNP (Negative common)	0 inputs/ 16 outputs

Protocol

DN1	DeviceNet®[1]
DN1-X26	DeviceNet®[1]
MJ1	CC-Link
CS1	OMRON Corp.: CompoBus/S (16 outputs)
CS2	OMRON Corp.: CompoBus/S (8 outputs)

[1] DN1's occupied points are 16 inputs and 16 outputs,
while DN1-X26 has 0 inputs and 16 outputs.

EX12 6 D – S MJ1

Unit specifications

6	Separate power supply of control and valve Enclosure IP65 Compatible with the SY/SV/VQC valves

Mounting specifications

D	Mount a unit to the D side of the manifold

Protocol

MJ1	CC-Link

SMC

Specifications

Common Specifications

Communication	Terminating resistor	Not provided
	Internal current consumption (Unit)	100 mA or less
Output	Output type	Sink/NPN (Positive common)
	Load	Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)
Environmental resistance	Operating temperature range	0 to 55°C (Valve 8 points ON) 0 to 50°C (Valve 16 points ON)
	Operating humidity range	35 to 85%RH (No condensation)
	Withstand voltage	1500 VAC for 1 minute between whole external terminal and enclosure
	Insulation resistance	2 MΩ or more (500 VDC) between whole external terminal and enclosure
Weight		240 g or less
Accessory		4 unit mounting screws (M4 x 10)

	Model		EX124□-SDN1	EX124□-SDN1-X26*3
Communication	Applicable system	Protocol	DeviceNet®	DeviceNet®
		Version*1	Release 2.0	
	Communication speed		125 k/250 k/500 kbps	
	Configuration file*2		EDS file	
	I/O occupation area (Inputs/Outputs)		16/16	0/16
Power supply voltage	For control		11 to 25 VDC	
	For valve		24 VDC +10%/−5%	
Output	Number of outputs		16 points	
	Fail safe		CLEAR	HOLD/CLEAR (Switch setting)
Environment	Enclosure		IP65	
Standards			CE/UKCA marking	

	Model		EX124□-SMJ1	EX124□-SCS1 EX124□-SCS2	EX126D-SMJ1
Communication	Applicable system	Protocol	CC-Link	OMRON Corp.: CompoBus/S	CC-Link
		Version*1	Ver. 1.10	—	Ver. 1.10
	Communication speed		156 k/625 kbps 2.5 M/5 M/10 Mbps	750 kbps	156 k/625 kbps 2.5 M/5 M/10 Mbps
	Configuration file*2		CSP+ file	—	CSP+ file
	I/O occupation area (Inputs/Outputs)		32/32 (1 station, remote I/O stations)	SCS1: 0/16 SCS2: 0/8	32/32 (1 station, remote I/O stations)
Power supply voltage	For control		15 to 30 VDC	14 to 26.4 VDC	15 to 30 VDC
	For valve		24 VDC +10%/−5%		
Output	Number of outputs		16 points	SCS1: 16 points SCS2: 8 points	16 points
	Fail safe		CLEAR	HOLD/CLEAR (Switch setting)	CLEAR
Environment	Enclosure		IP65		IP67
Standards			CE/UKCA marking		

*1 Please note that the version is subject to change.
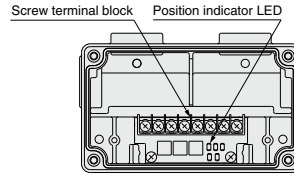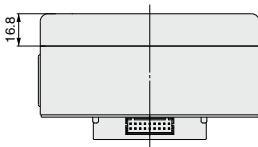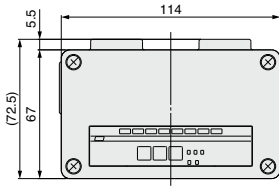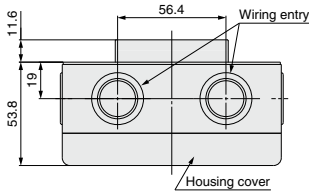*2 The setting file can be downloaded from the SMC website, https://www.smcworld.com
*3 Since this is a special product, a manifold part number is not specified. Please consult SMC for the manifold integrated type.
* For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, https://www.smcworld.com
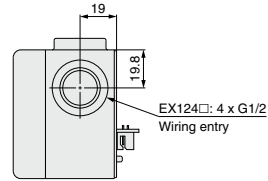
EX124/126 *Series*

Dimensions/Parts Description

EX124□-S□□□

56.4
11.6
19
53.8
Wiring entry
Housing cover

5.5
114
(72.5)
67

16.8

Screw terminal block   Position indicator LED

Housing cover diagram

19
19.8
EX124□: 4 x G1/2
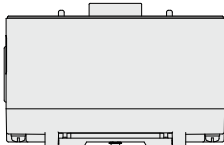Wiring entry
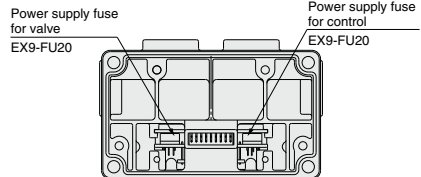
∗ The housing cover of the EX124U/D-SMJ1 is the same as that of the EX126D-SMJ1.

EX126D-SMJ1

114
(72.5)
67
5.5

Housing cover   42
68.2
65.7
30.4
19.8
6.6

Position indicator LED   Screw terminal block

Housing cover diagram

19.8
35.3
4 x G1/2
Wiring entry

Power supply fuse for valve
EX9-FU20

Power supply fuse for control
EX9-FU20
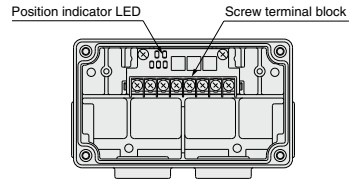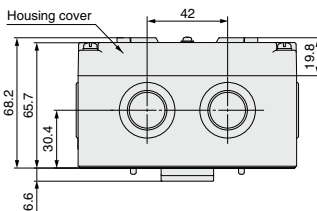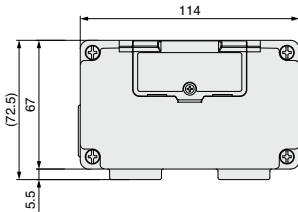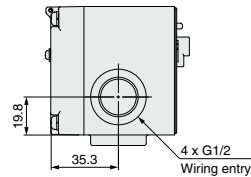
Housing bottom diagram

SMC

LED Indicator

EX124□-SDN1

MOD/NET: Connection state   PWR: Power supply for control

EX124□-SMJ1

RD: Data reception   SD: Data transmission

LERR: Error

LRUN: Communication state   PW: Power supply for control

EX124□-SCS□

ERR: Communication error   PWR: Power supply for control
COMM: Communication state

EX126D-SMJ1

PW: Power supply for control   LRUN: Communication state

LERR: Error

SD: Data transmission   RD: Data reception
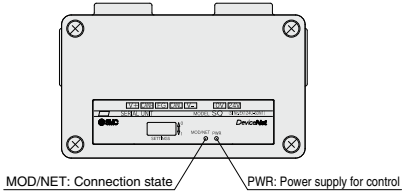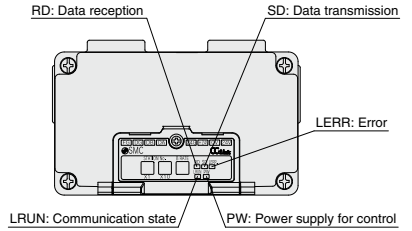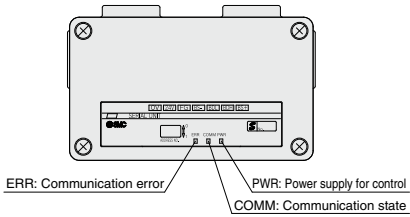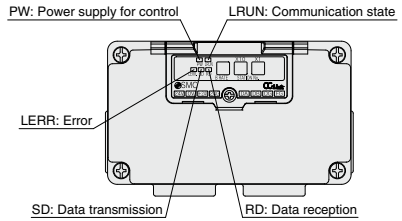
Accessories

❶ Replacement Fuse

A replacement fuse for the EX126D-SMJ1

EX9-FU20

Fuse

Applicable model	EX126D-SMJ1
Rated current	2.0 A
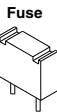
❷ Drip Proof Plug Assembly

Use when the wiring entry (G1/2) is not being used.
Incorrect handling of the wiring entry may allow foreign matter to enter the SI unit, which will lead to a malfunction and damage to the SI unit.

AXT100-B04A

EX124/126 Series

Made to Order

Please contact SMC for detailed specifications and lead times.
Prepare the SI unit, signal cut block, and manifold valve (without SI unit) separately, and combine them before use.

Made to Order

① DeviceNet® PNP (Negative common), Occupied points: 16 inputs[*1] /16 outputs

EX124 U -SDN1-X2

●**Mounting specifications**

U	Mount a unit to the U side of the manifold
D	Mount a unit to the D side of the manifold

● Dimensions are the same as those of the standard type.

[*1] The SI unit cannot be connected to an input device but occupies memory areas of 16 input points (2 bytes) as a mirror function of output data.
The mirror function is used to transmit output data received by the SI unit as input data exactly as it is.

② DeviceNet® PNP (Negative common), Occupied points: 0 inputs/16 outputs

EX124 U -SDN1-X77

●**Mounting specifications**

U	Mount a unit to the U side of the manifold
D	Mount a unit to the D side of the manifold

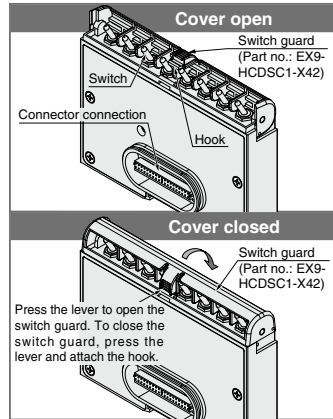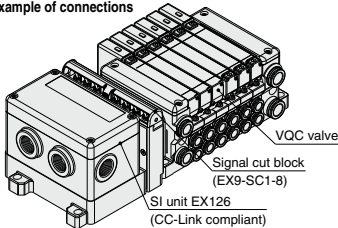● Dimensions are the same as those of the standard type.

③ CompoNet®

● Please contact SMC for details.

④ Signal cut block

EX9-SC1-8

● A switch unit that forcibly turns OFF the output signal to the valve by means of a toggle switch operation in double 1-station units
● Open the switch guard to prevent misoperation, and then carry out the operation.
● It comes with a safety mechanism which returns the switch to the normal position (AUTO) after the switch guard is closed.
● Enclosure: IP67

Example of connections

VQC valve
Signal cut block (EX9-SC1-8)
SI unit EX126 (CC-Link compliant)

Cover open
Switch guard (Part no.: EX9-HCDSC1-X42)
Switch
Connector connection
Hook

Cover closed
Switch guard (Part no.: EX9-HCDSC1-X42)
Press the lever to open the switch guard. To close the switch guard, press the lever and attach the hook.

⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 7 for safety instructions and pages 15 to 17 for fieldbus system precautions.

Operating Environment

⚠Caution

1. Select the proper type of enclosure according to the operating environment.
IP65/67 is achieved when the following conditions are met.
1) Provide appropriate wiring between all units using electrical wiring cables and communication connectors cables.
2) For wiring, use a G1/2 cable gland.
3) Appropriately mount each unit and valve manifold.
4) Be sure to install a drip proof plug assembly (AXT100-B04A) on each unused connector. This is to prevent the risk of the SI unit malfunctioning or breaking down.
If using in an environment that is exposed to water splashes, please take measures such as using a cover.

■**Trademark**
DeviceNet® is a registered trademark of ODVA, Inc.
CompoNet® is a registered trademark of ODVA, Inc.

SMC

Type 1 | **Output type for solenoid valves**

Fieldbus System (For Output)

EX140 Series

$\mathsf{C} \mathsf{E}$ UK CA

Compatible Protocols

DeviceNet $\mathcal{CC}$-Link **CompoBus/S**

★**Thinner unit with low height**
★**Maximum 16 outputs**

Manifold Solenoid Valves

SZ3000

SQ1000/2000
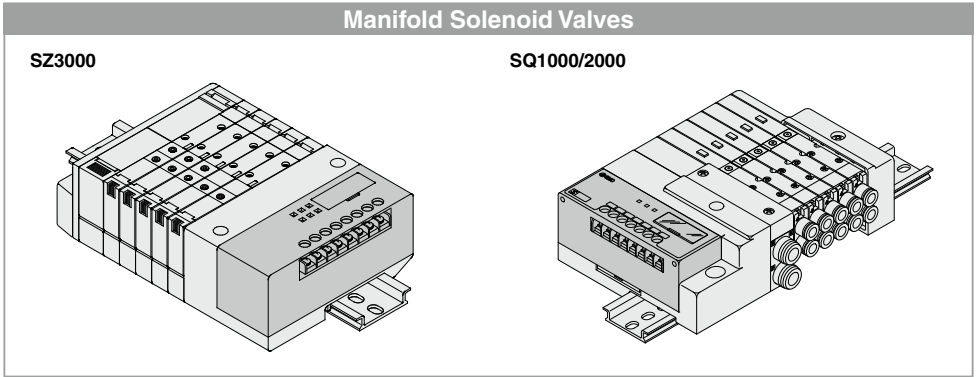
CONTENTS

Type 1 | **Output type for solenoid valves**

Fieldbus System (For Output)
EX140 Series

Fieldbus System
For Output
EX140 Series

CE UK CA

How to Order SI Unit

EX140-S DN1

● **Protocol**

DN1	DeviceNet®
MJ1	CC-Link
CS1	OMRON Corp.: CompoBus/S (16 outputs)
CS2	OMRON Corp.: CompoBus/S (8 outputs)

Specifications

	Model		EX140-SDN1	EX140-SMJ1	EX140-SCS1 EX140-SCS2
Communication	Applicable system	Protocol	DeviceNet®	CC-Link	OMRON Corp.: CompoBus/S
		Version*1	Release 2.0	Ver. 1.10	—
	Communication speed		125 k/250 k/500 kbps	156 k/625 kbps 2.5 M/5 M/10 Mbps	750 kbps
	Configuration file*2		EDS file	CSP+ file	—
	I/O occupation area (Inputs/Outputs)		0/16	32/32 (1 station, remote I/O stations)	SCS1: 0/16 SCS2: 0/8
	Terminating resistor		Not provided		
Power supply voltage	For control		11 to 25 VDC	15 to 30 VDC	14 to 26.4 VDC
	For valve		24 VDC +10%/–5%		
Internal current consumption (Unit)			100 mA or less		
Output	Output type		Sink/NPN (Positive common)		
	Number of outputs		16 outputs		SCS1: 16 outputs SCS2: 8 outputs
	Load		Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)		
	Fail safe		HOLD/CLEAR (Switch setting)		
Environmental resistance	Enclosure		IP20		
	Operating temperature range		0 to 55°C (Valve 8 points ON) 0 to 50°C (Valve 16 points ON)		
	Operating humidity range		35 to 85%RH (No condensation)		
	Withstand voltage		1500 VAC for 1 minute between whole external terminal and enclosure		
	Insulation resistance		2 MΩ or more (500 VDC) between whole external terminal and enclosure		
Standards			CE/UKCA marking		
Weight			80 g or less		
Accessory			Communication connector 1 pc., Power supply connector 1 pc.	—	

∗1 Please note that the version is subject to change.
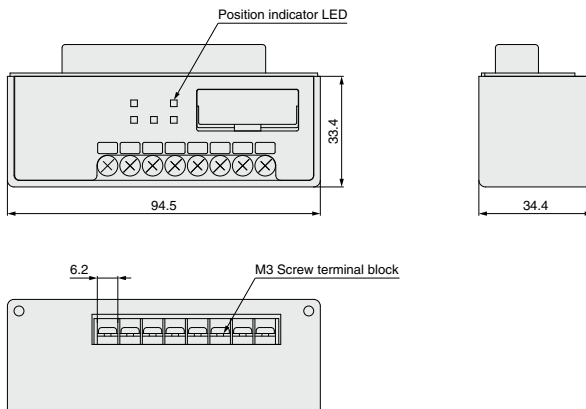∗2 The setting file can be downloaded from SMC website, https://www.smcworld.com
∗ For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, https://www.smcworld.com

SMC

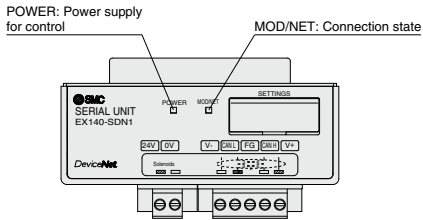## Dimensions/Parts Description

EX140-SDN1

Position indicator LED

33.4

94.5

(11.5)

34.4

(36)

Power supply connector

Communication connector

EX140-SMJ1, SCS□

Position indicator LED

33.4

94.5

34.4

6.2

M3 Screw terminal block
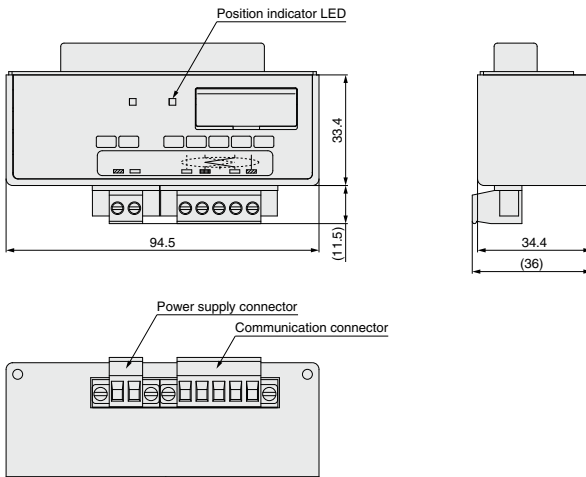
EX140 Series

LED Indicator

EX140-SDN1
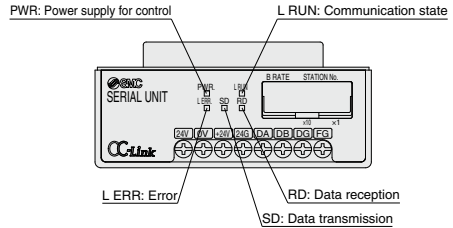
POWER: Power supply
for control

MOD/NET: Connection state

| SMC |
| SERIAL UNIT |
| EX140-SDN1 |

POWER MODNET   SETTINGS

24V | 0V   V- | CANL | FG | CANH | V+

DeviceNet   Solenoids

EX140-SMJ1

PWR: Power supply for control

L RUN: Communication state

| SMC |
| SERIAL UNIT |

PWR L RUN   B RATE   STATION No.
L ERR SD RD

CC-Link   24V | 0V | 24G | 24G | DA | DB | DG | FG

×10   ×1

L ERR: Error

RD: Data reception

SD: Data transmission

EX140-SCS□

PWR: Power supply
for control

COMM: Communication state
ERR: Communication error

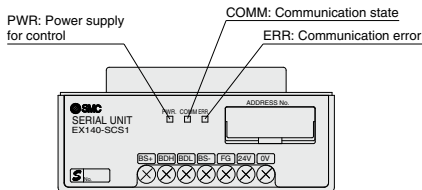| SMC |
| SERIAL UNIT |
| EX140-SCS1 |

PWR COMM ERR   ADDRESS No.

S Inc.   BS+ | BDH | BDL | BS- | FG | 24V | 0V

⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 7 for safety instructions and pages 15 to 17 for fieldbus system precautions.

Operating Environment

⚠Warning

1. **Do not use this product in the presence of dust, particles, water, chemicals, and oil. Use around such materials is likely to cause a malfunction or breakage.**

■ **Trademark**
DeviceNet® is a registered trademark of ODVA, Inc.

Fieldbus System (For Output)

EX180 Series

Compatible Protocols

DeviceNet™ CC-Link

Made to Order **AnyWireASLINK**

C€ UK CA c(UL)us RoHS
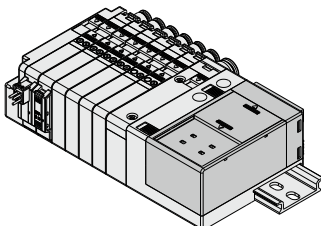∗ Excludes the S0700.

★**Thinner unit with low height**
★**Maximum 32 outputs**

Manifold Solenoid Valves

SY3000/5000/7000   SJ2000/3000   S0700

CONTENTS

Fieldbus System
For Output
EX180 Series

CE UKCA

c®UL us

∗ Excludes the S0700.

RoHS

How to Order SI Unit

EX180−S DN3 □ − □

Protocol

DN3	DeviceNet® (32 points Sink/NPN (Positive common))
DN4	DeviceNet® (16 points Sink/NPN (Positive common))
DN5	DeviceNet® (32 points Source/PNP (Negative common))
DN6	DeviceNet® (16 points Source/PNP (Negative common))
MJ3	CC-Link (32 points Sink/NPN (Positive common))
MJ5	CC-Link (32 points Source/PNP (Negative common))

Made to Order (Refer to page 1309.)

Protocol	
AnyWireASLINK	

Communication connector type

Nil	T-branch type
A	Straight type

∗ Communication and power supply connectors are included.

Specifications

Model			EX180-SDN3 EX180-SDN4	EX180-SDN5 EX180-SDN6	EX180-SMJ3	EX180-SMJ5
Communication	Applicable system	Protocol	DeviceNet®		CC-Link	
		Version∗1	Release 2.0		Ver. 1.10	
	Communication speed		125 k/250 k/500 kbps		156 k/625 kbps 2.5 M/5 M/10 Mbps	
	Configuration file∗2		EDS file		CSP+ file	
	I/O occupation area (Inputs/Outputs)		SDN3: 0/32 SDN4: 0/16	SDN5: 0/32 SDN6: 0/16	32/32 (1 station)	
	Terminating resistor		Not provided		Built into the unit (Switch setting, 110 Ω)	
Power supply voltage	For control		11 to 25 VDC		24 VDC ±10%	
	For valve		24 VDC ±10%/−5%			
Internal current consumption (Unit)			0.1 A or less			
Output	Output type		Sink/NPN (Positive common)	Source/PNP (Negative common)	Sink/NPN (Positive common)	Source/PNP (Negative common)
	Number of outputs		SDN3: 32 outputs SDN4: 16 outputs	SDN5: 32 outputs SDN6: 16 outputs	32 outputs	
	Load		SY3000/5000/7000, SJ2000/3000, S0700 series manifold valves			
	Fail safe		HOLD/CLEAR (Switch setting)			
Environmental resistance	Enclosure		IP20			
	Operating temperature range		−10 to 50°C			
	Operating humidity range		35 to 85%RH (No condensation)			
	Withstand voltage		500 VAC for 1 minute between whole external terminal and FG			
	Insulation resistance		10 MΩ or more (500 VDC) between whole external terminal and FG			
Standards			CE/UKCA marking, UL (CSA)			
Weight			110 g or less (including accessory)			
Accessory			Communication connector 1 pc., Power supply connector 1 pc.		Communication connector 1 pc., Power supply connector 2 pcs.	

∗1 Please note that the version is subject to change.
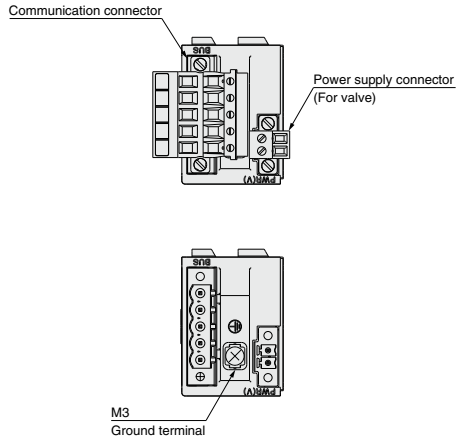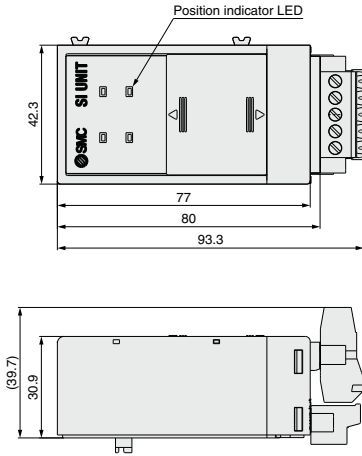∗2 The setting file can be downloaded from SMC website, https://www.smcworld.com
∗ For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, https://www.smcworld.com
∗ The EX180-SDN1□/2□ cannot be mounted on the manifold for the EX180-SDN3□/4□/5□/6□. Additionally, the EX180-SDN3□/4□/5□/6□ cannot be mounted on the manifold for the EX180-SDN1□/2□.
∗ The EX180-SMJ1□ cannot be mounted on the manifold for the EX180-SMJ3□/5□. Additionally, the EX180-SMJ3□/5□ cannot be mounted on the manifold for the EX180-SMJ1□.
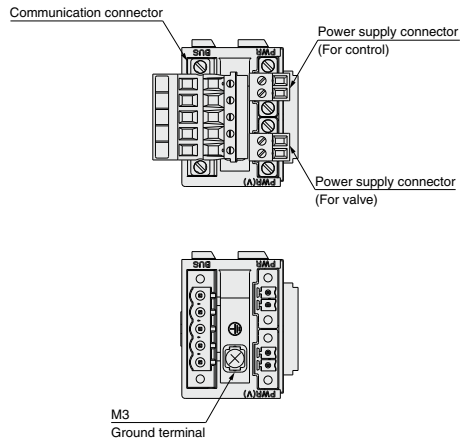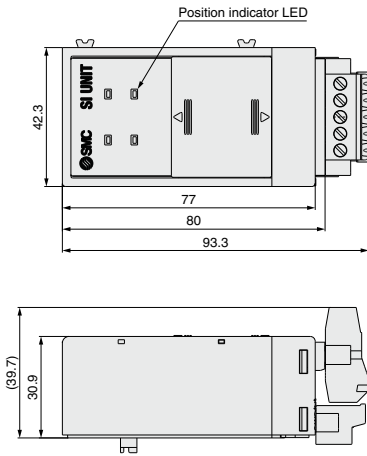
SMC

Dimensions/Parts Description

EX180-SDN□

Position indicator LED

Communication connector

Power supply connector
(For valve)

42.3

77

80

93.3

(39.7)

30.9

M3
Ground terminal

Before mounting connector (accessory)

EX180-SMJ□

Position indicator LED

Communication connector

Power supply connector
(For control)

42.3

77

80

93.3

Power supply connector
(For valve)

(39.7)

30.9

M3
Ground terminal

Before mounting connector (accessory)

EX180 *Series*

LED Indicator

EX180-SDN☐

PWR(V): Power supply for valve

PWR: Power supply for control

● SMC SI UNIT

PWR(V) PWR

MNS

DeviceNet.

MNS: Connection state
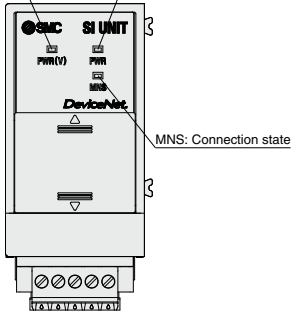
EX180-SMJ☐

PWR(V): Power supply for valve

PWR: Power supply for control

● SMC SI UNIT

PWR(V) PWR

L RUN L ERR

CC-Link

L RUN: Communication state

L RUN: Error
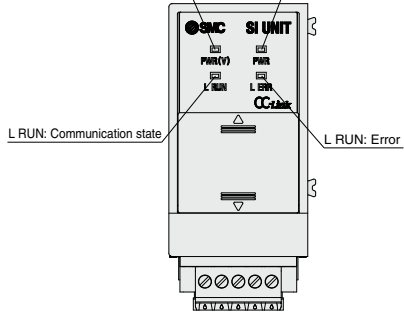
Accessories

❶ Communication Connector

Connector for the network cable
This connector is supplied at the time of shipment.

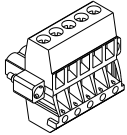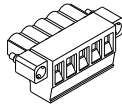**EX180-C** **DN** **1**

Communication protocol

DN	For EX180-SDN☐
MJ	For EX180-SMJ☐

Communication connector type

1	T-branch type
2	Straight type

EX180-C☐☐1

EX180-C☐☐2

❷ Power Supply Connector

Connector for power supply
This connector is supplied at the time of shipment.
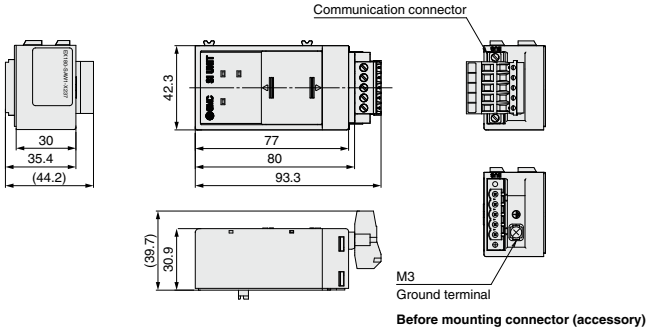
EX180-CP1

● SMC

Made to Order

Please contact SMC for detailed specifications and lead times.
Prepare the SI unit and manifold valve (without SI unit) separately, and combine them before use.

① **AnyWireASLINK NPN (Positive common), 32 outputs**

EX180-SAW1-X237

Communication connector

42.3

30
35.4
(44.2)

77
80
93.3

(39.7)
30.9

M3
Ground terminal

Before mounting connector (accessory)

⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 7 for safety instructions and pages 15 to 17 for fieldbus system precautions.

Operating Environment

⚠**Warning**

1. Do not use this product in the presence of dust, particles, water, chemicals, and oil. Use around such materials is likely to cause a malfunction or breakage.

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