Fieldbus System (For Output)

EX120/121/122 Series

Compatible Protocols

DeviceNet CC-Link Compo/Vet

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		EX122 Series	
SY3000/5000		SY3000/5000	
313000/3000		313000/3000	
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Type 1 Output type for solenoid valves

Fieldbus System (For Output) EX120/121/122 Series







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Accessories

① Communication Connector ·····p.	1294
2 Power Supply Connector p.	1294

Made to Order

1) DeviceNet® PNP (Negative common) output,	
Occupied points: 16 inputs/16 outputs ·····p.	129
② DeviceNet® PNP (Negative common) output,	

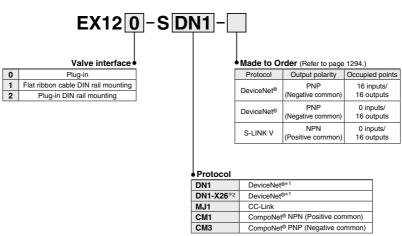
Occupied points: 0 inputs/16 outputsp. 1294 3 S-LINK V compatible NPN (Positive common) 16 outputs

Specific Product Precautionsp. 1294



Fieldbus System For Output EX120/121/122 Series C € ☐

How to Order SI Unit



- *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.

Fieldbus System For Output EX120/121/122 Series

Specifications

Common Specifications

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

	Model	EX12□-SDN1	EX12□-SDN1-X26	EX12□-SMJ1
	Protocol	DeviceNet®		CC-Link
	Version*1	Relea	Release 2.0	
Communication	Communication speed	125 k/250 k/500 kbps		156 k/625 kbps 2.5 M/5 M/10 Mbps
	Configuration file*2	EDS	S file	CSP+ file
I/O occupation are (Inputs/Outputs)		16/16	0/16	32/32 (1 station, remote I/O stations)
Power supply	For control	11 to 25 VDC		15 to 30 VDC
voltage For valve				
	Output type	Sink/NPN (Positive common)		
	Number of outputs			
Output	Load	Solenoid valve with sur	C, 2.1 W or less (SMC)	
Fail safe		CLEAR HOLD/CLEAR (Switch setting)		CLEAR
Standards		CE/UKCA marking		
Weight		EX120: 110 g or less, EX121: 140 g or less, EX		(122: 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		
	Protocol	CompoNet®			
	Communication speed	93.75 kbps/1.5 M/3 M/4 Mbps			
Communication	Configuration file	EDS file*1			
	I/O occupation area (Inputs/Outputs)	0/16			
Power supply	For control	14 to 26	6.4 VDC		
voltage For valve		24 VDC +10%/-5%			
	Output type	Sink/NPN (Positive common)	Source/PNP (Negative common)		
Output	Number of outputs	16 points			
Output	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	A marking		
		EX120: 100 g or less			
Weight		EX121: 120 g or less			
		EX122: 110 g or less (including accessory)			
Accessory Power supply connector (EX9-CP2) 1 pc.*2			tor (EX9-CP2) 1 pc.*2		

^{*1} The setting file can be downloaded from the SMC website, https://www.smcworld.com

SMC

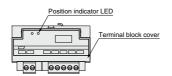
^{*2} Communication connector (for the opposite side) is not provided.

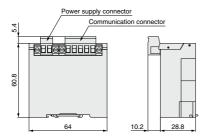
EX120/121/122 Series

Dimensions/Parts Description

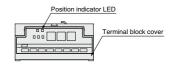
EX120

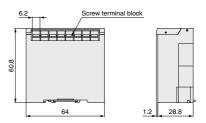
EX120-SDN1(-X26)



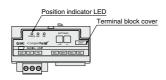


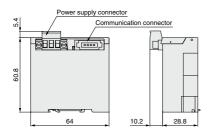
EX120-SMJ1





EX120-SCM□



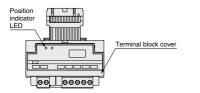


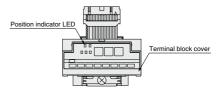
Dimensions/Parts Description

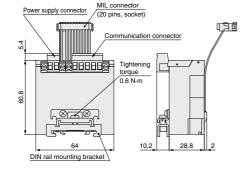
EX121

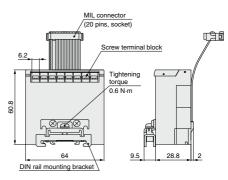
EX121-SDN1(-X26)

EX121-SMJ1

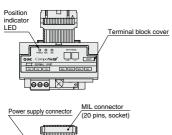


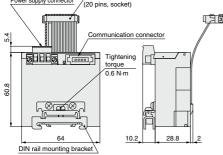






EX121-SCM□



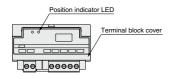


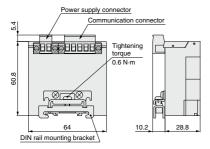
EX120/121/122 Series

Dimensions/Parts Description

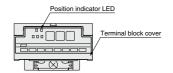
EX122

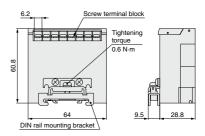
EX122-SDN1(-X26)



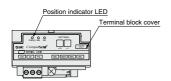


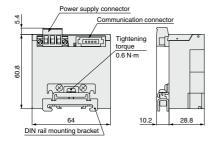
EX122-SMJ1





EX122-SCM□

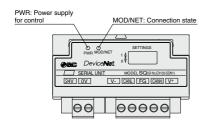


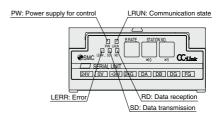


LED Indicator

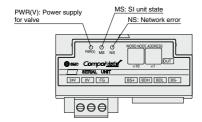
EX12□-SDN1

EX12□-SMJ1





EX12□-SCM□



EX120/121/122 Series

Accessories (For EX12□-SCM□)

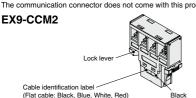
Communication Connector

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



Terminal block connector for round cables (VCTF) Use this connector for the VCTF cable.

The communication connector does not come with this product.



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 Plug-in Flat ribbon cable DIN rail mounting 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 I I fieldbus system precautions.

Operating Environment

∆Warning

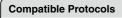
1. Do not use this product in the presence of dust, particles, water, chemicals, and oil. Use around such materials is likely to cause a malfunction or breakage.

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Fieldbus System (For Output)

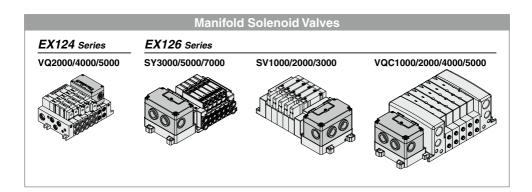
EX124/126 Series



DeviceNet CC-Link



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



CONTENTS

Type 1 Output type for solenoid valves

Fieldbus System (For Output) EX124/126 Series



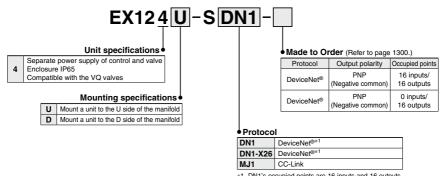


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Accessories ① Replacement Fuse ② Drip Proof Plug Assembly
Made to Order ① DeviceNet® PNP (Negative common), Occupied points: 16 inputs/16 outputs
 Specific Product Precautions

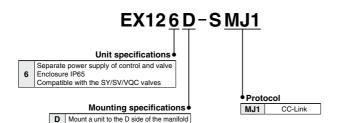


Fieldbus System For Output EX124/126 Series (EX

How to Order SI Unit



^{*1} DN1's occupied points are 16 inputs and 16 outputs, while DN1-X26 has 0 inputs and 16 outputs.



Specifications

Common Specifications

Communication Terminating resistor		Not provided	
Internal current consumption (Unit)		100 mA or less	
Output type		Sink/NPN (Positive common)	
Output	Load	Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)	
	Operating temperature		
F1	range	0 to 50°C (Valve 16 points ON)	
Environmental resistance	Operating humidity range	35 to 85%RH (No condensation)	
resistance	Withstand voltage	1500 VAC for 1 minute between whole external terminal and enclosure	
Insulation resistance 2 MΩ or more (500 VDC) between whole external		$2~M\Omega$ or more (500 VDC) between whole external terminal and enclosure	
Weight 240 g or less		240 g or less	
Accessor	Accessory 4 unit mounting screws (M4 x 10)		

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

	Model		EX124□-SMJ1	EX126D-SMJ1	
Applicable Protocol		Protocol	CC-Link		
	system Version*1 Communication speed Configuration file*2 I/O occupation area (Inputs/Outputs)		Ver.	1.10	
Communication			156 k/625 kbps 2.5 M/5 M/10 Mbps		
			CSP+ file		
			32/32 (1 station, remote I/O stations)		
Power supply	For contro	ol	15 to 30 VDC		
voltage	For valve		24 VDC +10%/-5%		
Output	Number of outputs		16 points		
Fail safe			CLEAR		
Environment Enclosure)	IP65 IP67		
Standards	3		CE/UKCA marking		

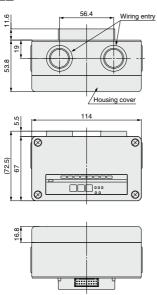
- *1 Please note that the version is subject to change.
- *2 The setting file can be downloaded from the SMC website, https://www.smcworld.com
- *3 Since this is a special product, a manifold part number is not specified. Please consult SMC for the manifold integrated type.
- * For detailed specifications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

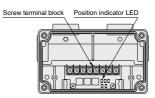
SMC

EX124/126 Series

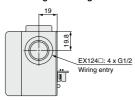
Dimensions/Parts Description

EX124□-S□□□



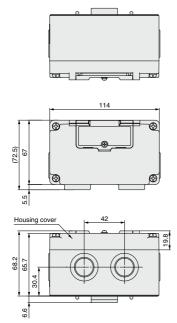


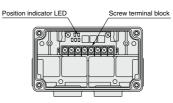
Housing cover diagram



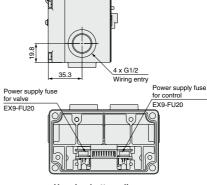
 The housing cover of the EX124U/D-SMJ1 is the same as that of the EX126D-SMJ1.

EX126D-SMJ1





Housing cover diagram

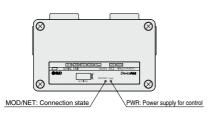


Housing bottom diagram

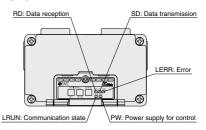


LED Indicator

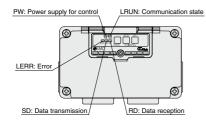
EX124□-SDN1



EX124□-SMJ1



EX126D-SMJ1



Accessories

Replacement Fuse

A replacement fuse for the EX126D-SMJ1

EX9-FU20

Applicable model	EX126D-SMJ1		
Rated current	2.0 A		



2 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.



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 Mount a unit to the D 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

	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.

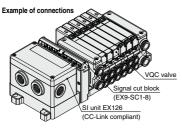
③ CompoNet®

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



Cover open Switch guard (Part no.: EX9HCOSC1-X42) Connector connection Hook Switch guard (Part no.: EX9HCOSC1-X42) Press the lever to open 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.

Caution

 Select the proper type of enclosure according to the operating environment.

IP65/67 is achieved when the following conditions are met.

Operating Environment

- 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

1300

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Fieldbus System (For Output)

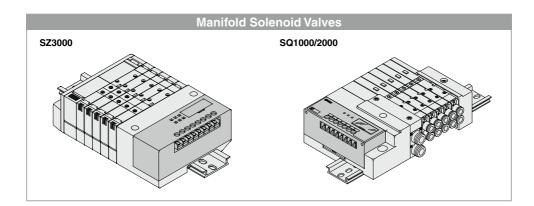
EX140 Series

Compatible Protocols

DeviceNet CC-Link



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



CONTENTS

Type 1 Output type for solenoid valves

Fieldbus System (For Output) EX140 Series

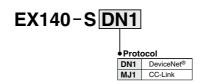


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Dimensions/Parts Descriptionp. 13	03
LED Indicatorp. 13	04
Specific Product Precautionsp. 13	04



Fieldbus System For Output EX140 Series (CA

How to Order SI Unit



Specifications

Model			EX140-SDN1	EX140-SMJ1	
Applicable Protocol		Protocol	DeviceNet®	CC-Link	
Communication	system	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	
E	Configuration file*2		EDS file	CSP+ file	
Com	I/O occupation area (Inputs/Outputs)		0/16	32/32 (1 station, remote I/O stations)	
	Terminating resistor		Not provided		
Power supply	For control		11 to 25 VDC	15 to 30 VDC	
voltage For valve			24 VDC +10%/-5%		
Internal current consumption (Unit)			100 mA	or less	
	Output type	!	Sink/NPN (Positive common)		
=	Number of outputs		16 outputs		
Output	Load		Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)		
ő	Fail safe		HOLD/CLEAR (Switch setting)		
_	Enclosure		IP20		
Operating temperature range Operating humidity ra Withstand voltage		emperature	0 to 55°C (Valve 8 points ON) 0 to 50°C (Valve 16 points ON)		
l or is	Operating humidity range		35 to 85%RH (No condensation)		
<u> </u>	Withstand v	oltage	1500 VAC for 1 minute between whole external terminal and enclosure		
	Insulation resistance		2 $M\Omega$ 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.	_	

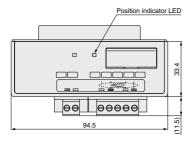
^{*1} Please note that the version is subject to change.

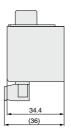
^{*2} The setting file can be downloaded from SMC website, https://www.smcworld.com

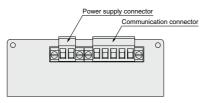
^{*} For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, https://www.smcworld.com

Dimensions/Parts Description

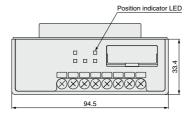
EX140-SDN1



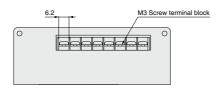




EX140-SMJ1



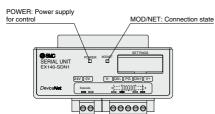




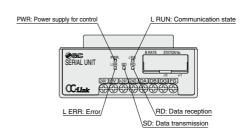
EX140 Series

LED Indicator

EX140-SDN1



EX140-SMJ1



⚠ Specific Product Precautions

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

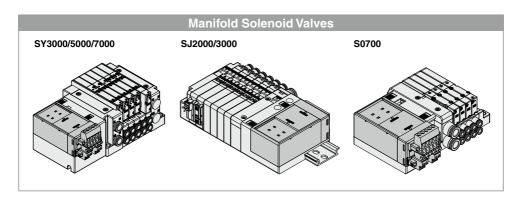
Compatible Protocols

DeviceNet CC-Link

Made to Order AnyWireASLINK



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



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Type 1 Output type for solenoid valves

Fieldbus System (For Output) EX180 Series



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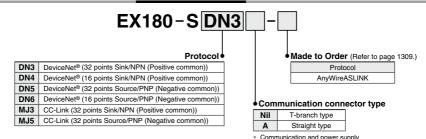


Fieldbus System For Output EX180 Series





How to Order SI Unit



Communication and power supply connectors are included.

Specifications

Model			EX180-SDN3 EX180-SDN4	EX180-SDN5 EX180-SDN6	EX180-SMJ3	EX180-SMJ5
	Applicable	Protocol	DeviceNet®		CC-Link	
Communication	system	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	
<u> </u>	Configuration file*2		EDS file		CSP+ file	
Comm	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	For control		11 to 2	5 VDC	24 VDC ±10%	
voltage For valve			24 VDC ±10%/-5%			
Internal current consumption (Unit)			0.1 A or less			
	Output type		Sink/NPN (Positive common)	Source/PNP (Negative common)	n) Sink/NPN (Positive common) Source/PNP (Negative common	
5	Number of outputs		SDN3: 32 outputs SDN4: 16 outputs	SDN5: 32 outputs SDN6: 16 outputs	32 outputs	
Output	Load		SY3000/5000/7000, SJ2000/3000, S0700 series manifold valves			
	Fail safe		HOLD/CLEAR (Switch setting)			
<u> </u>	Enclosure		IP20			
l en	Operating tem	perature range	−10 to 50°C			
Sta	Operating hun	nidity range		35 to 85%RH (N	o condensation)	
Environmental	Withstand vol	tage	500 VAC for 1 minute between whole external terminal and FG			d FG
_ modulation rootetanee			10 $M\Omega$ 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 Power supply of		Communication connector 1 pc., Power supply connector 2 pcs.	

^{*1} Please note that the version is subject to change.

^{*} 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□.



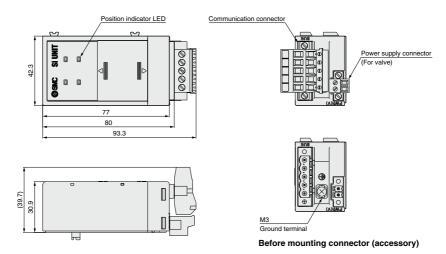
^{*2} The setting file can be downloaded from SMC website, https://www.smcworld.com

^{*} For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, https://www.smcworld.com

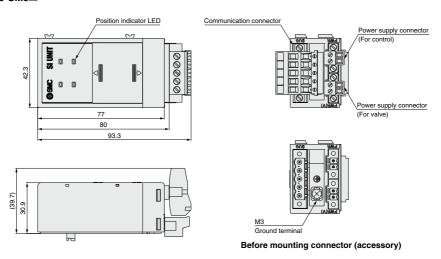
^{*} The EX180-SDN1□/2□ cannot be mounted on the manifold for the EX180-SDN3□/4□/5□/6□. Additionally, the EX180-SDN3□/4□/5□/6□ cannot be mounted on the manifold for the EX180-SDN1□/2□.

Dimensions/Parts Description

EX180-SDN□



EX180-SMJ□



EX180 Series

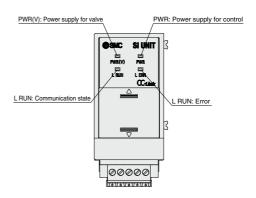
LED Indicator

PWR(V): Power supply for valve PWR: Power supply for control PWR: Power supply for control AMNS: Connection state

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VOVOVOVOVOV

EX180-SMJ□



Accessories

1 Communication Connector

Connector for the network cable

Communication

EX180-C DN 1

protocol

This connector is supplied at the time of shipment.



EX180-C□□1



T-branch type

Straight type

Communication connector type

2

2 Power Supply Connector

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

EX180-CP1



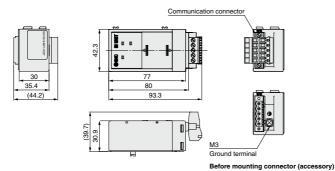
Made to Order

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



▲ Specific Product Precautions

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

Operating Environment

<u>↑</u> 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

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