

# Fieldbus System (For Output)

## EX120/121/122 Series

### Compatible Protocols

DeviceNet™ CC-Link CompoBus/S  
 NKE Corp.: Fieldbus H System CompoNet™

Made to Order **S-Link V**



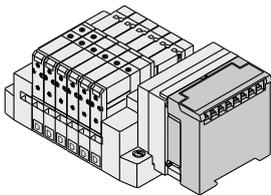
\* Some protocols are not CE-compliant. Refer to How to Order.

- ★ Small unit compatible with a maximum of 16 outputs
- ★ Compatible with a variety of communication networks

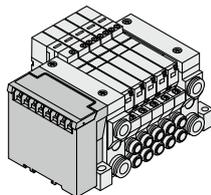
### Manifold Solenoid Valves

#### EX120 Series

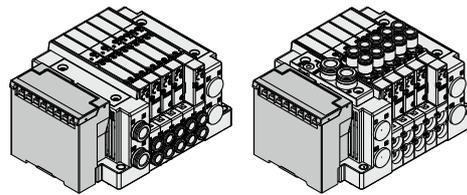
SV1000/2000/3000/4000



VQ1000/2000

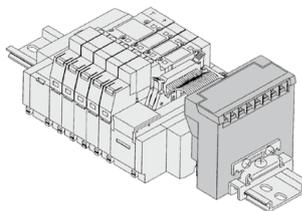


SY3000/5000/7000



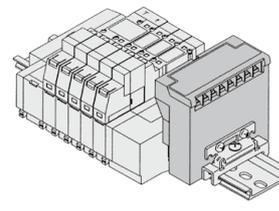
#### EX121 Series

SY3000/5000



#### EX122 Series

SY3000/5000



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Type 1	EX260
Type 2	EX500
Type 3	EX600
	EX245
	EX250
Type 1	EX120/121/122
	EX140
	EX180
Type 2	EX510
	M8/M12
	ATEX

# Fieldbus System For Output

# EX120/121/122 Series

\* Some protocols are not CE-compliant.

## How to Order SI Unit

EX12 **0** - S **DN1** -

### Valve interface

<b>0</b>	Plug-in
<b>1</b>	Flat ribbon cable DIN rail mounting
<b>2</b>	Plug-in DIN rail mounting

### Made to Order (Refer to page 179.)

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

Protocol		CE-compliant
<b>DN1</b>	DeviceNet™*1	●
<b>DN1-X26</b> *2	DeviceNet™*1	●
<b>MJ1</b>	CC-Link	●
<b>CS1</b>	OMRON Corp.: CompoBus/S (16 outputs)	●
<b>CS2</b>	OMRON Corp.: CompoBus/S (8 outputs)	●
<b>UH1</b>	NKE Corp.: Fieldbus H System	—
<b>CM1</b>	CompoNet™ NPN (Positive common)	●
<b>CM3</b>	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.

## 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		For valve 24 VDC +10%/–5%	15 to 30 VDC 14 to 26.4 VDC
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 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, <http://www.smcworld.com>

Model		EX12□-SUH1	EX12□-SCM1	EX12□-SCM3
Communication	Protocol	NKE Corp.: Fieldbus H System	CompoNet™	
	Communication speed	29.4 kbps	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	24 VDC ±10%	14 to 26.4 VDC	
	For valve	(Common power supply)	24 VDC +10%/–5%	
Output	Output type	Sink/NPN (Positive common)	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	CLEAR	HOLD/CLEAR (Setting via network)	
Standards	—	CE marking		
Weight	EX120: 110 g or less EX121: 140 g or less EX122: 130 g or less	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, <http://www.smcworld.com>

\*2 Communication connector (for the opposite side) is not provided.

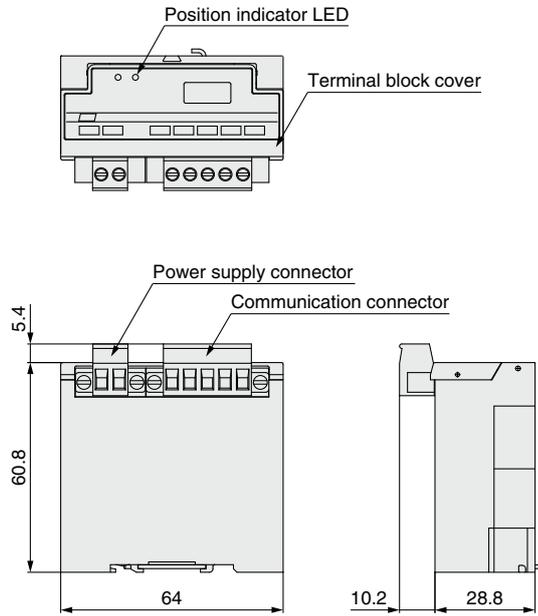
Type 1  
EX260  
EX123/124/126  
Type 2  
EX500  
EX600  
EX600  
Type 3  
EX245  
EX250  
EX250  
Type 1  
EX120/121/122  
EX140  
EX180  
Type 2  
EX510  
M8/M12  
ATEX

# EX120/121/122 Series

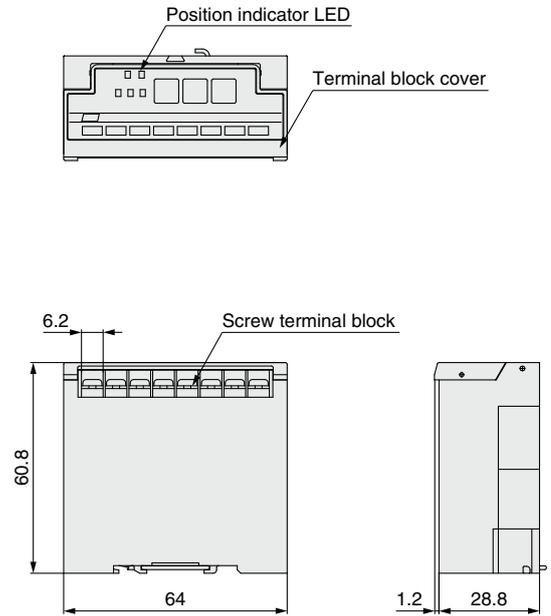
## Dimensions/Parts Description

### EX120

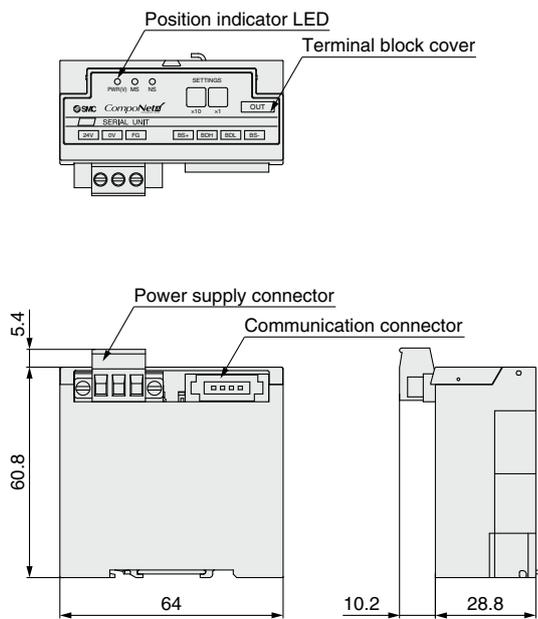
EX120-SDN1(-X26)



EX120-SMJ1, SCS□, SUH1



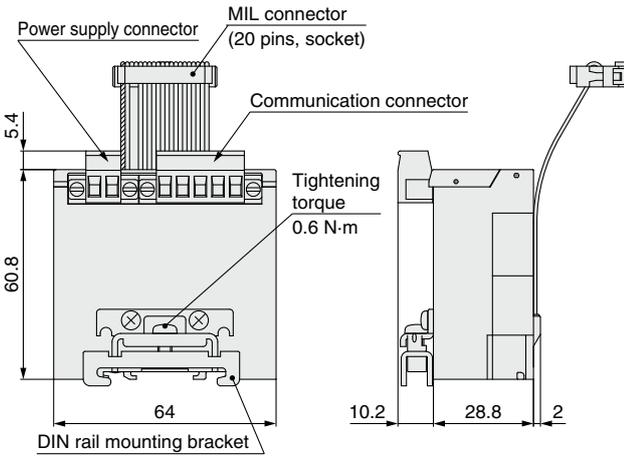
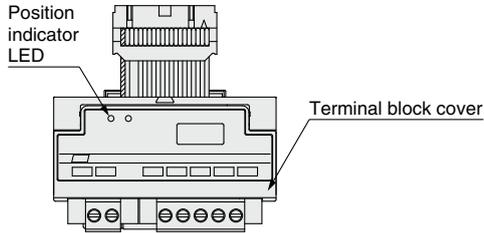
### EX120-SCM□



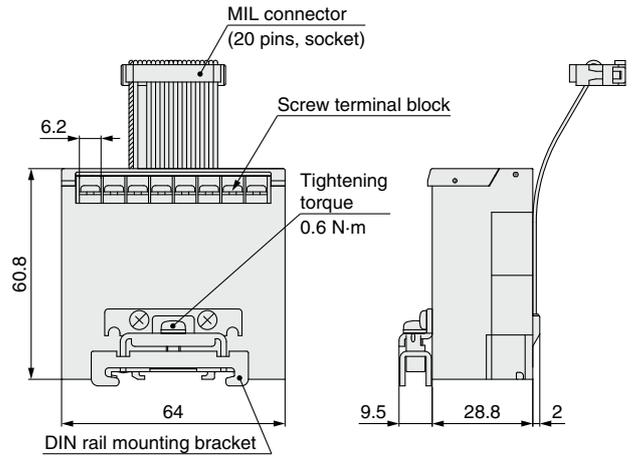
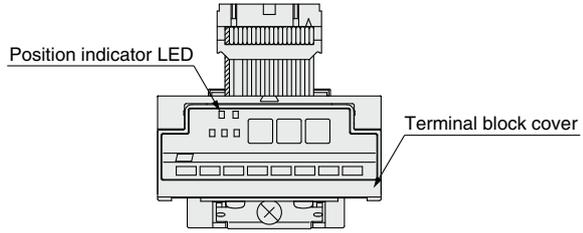
**Dimensions/Parts Description**

**EX121**

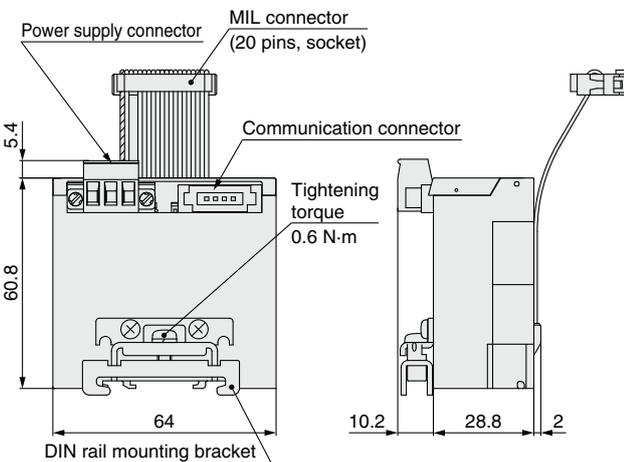
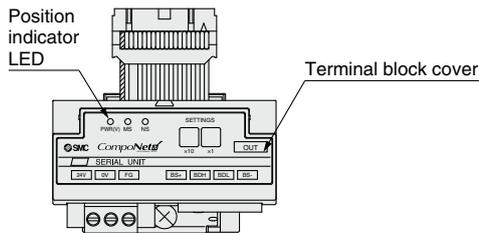
**EX121-SDN1(-X26)**



**EX121-SMJ1, SCS□, SUH1**



**EX121-SCM□**



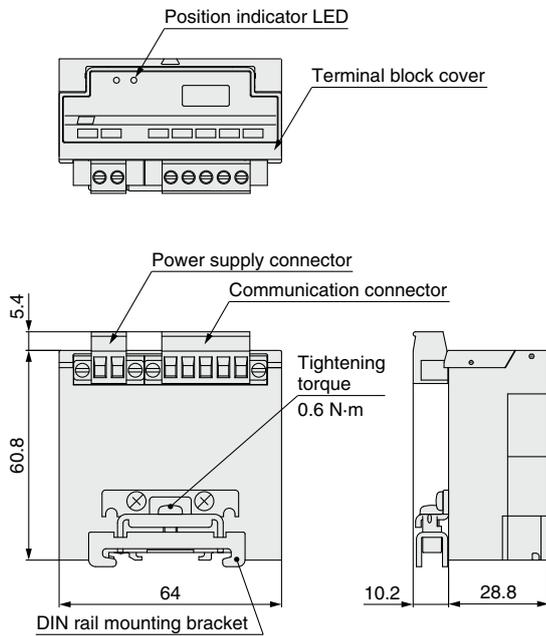
Type 1	EX260
Type 2	EX123/124/126
Type 3	EX500
	EX600
	EX245
	EX250
Type 1	EX120/121/122
	EX140
	EX180
Type 2	EX510
	M8/M12
	ATEX

# EX120/121/122 Series

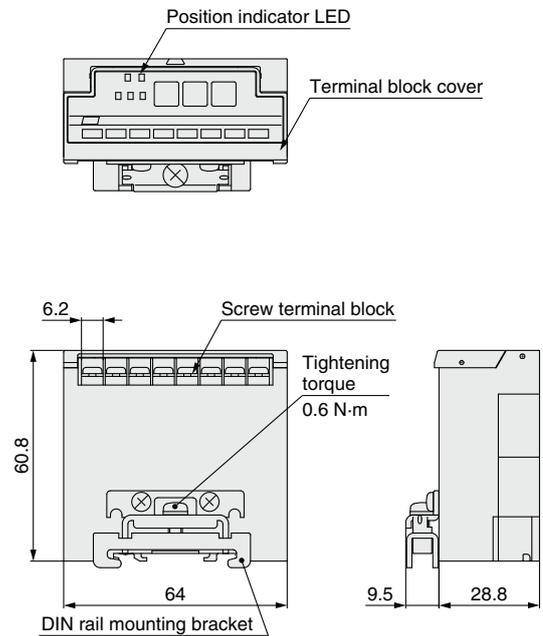
## Dimensions/Parts Description

### EX122

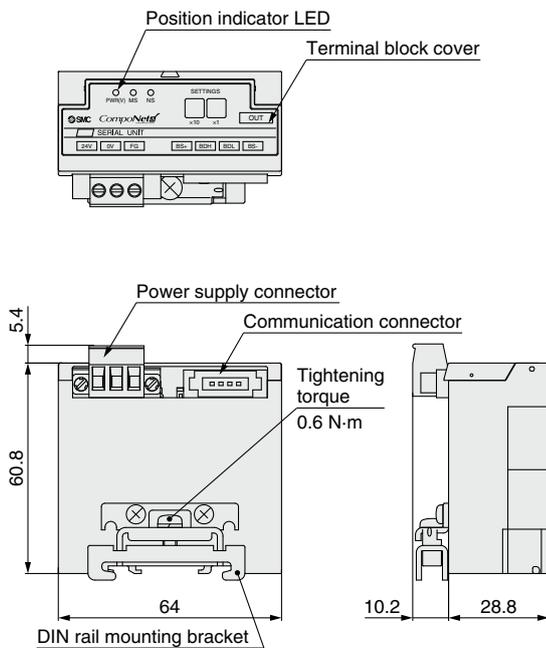
#### EX122-SDN1(-X26)



#### EX122-SMJ1, SCS□, SUH1

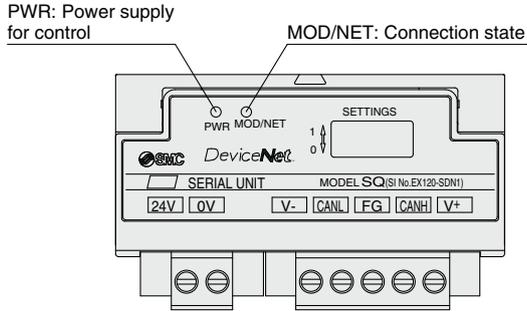


### EX122-SCM□

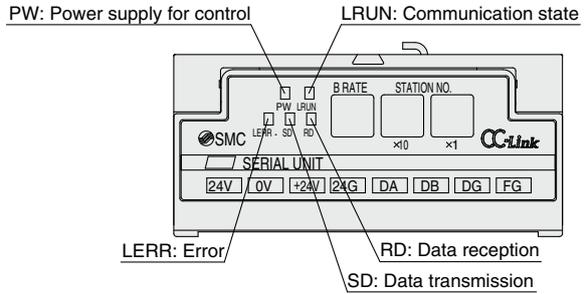


**LED Indicator**

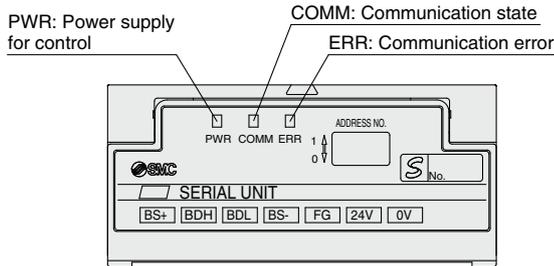
**EX12□-SDN1**



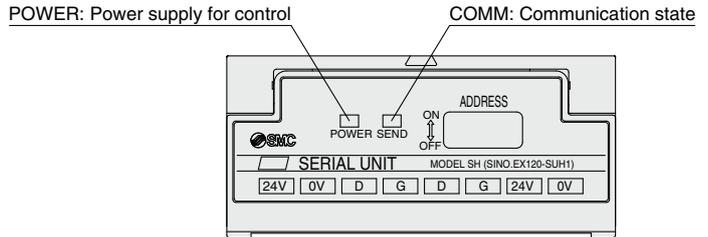
**EX12□-SMJ1**



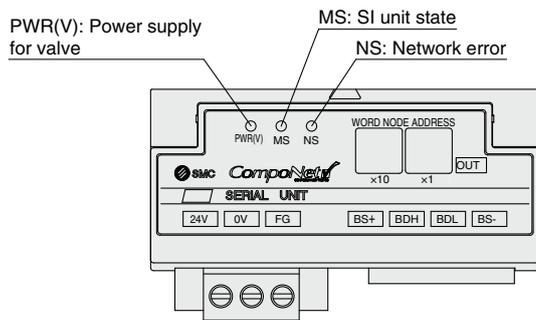
**EX12□-SCS□**



**EX12□-SUH1**



**EX12□-SCM□**



Type 1	EX260
Type 1	EX123/124/126
Type 2	EX500
Type 2	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 1	EX180
Type 2	EX510
Type 2	M8/M12
Type 2	ATEX

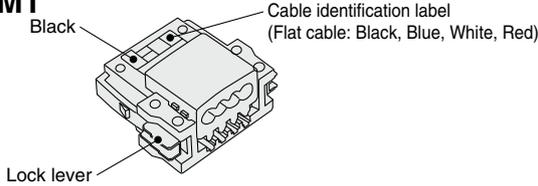
# EX120/121/122 Series

## Accessories (For EX12□-SCM□)

### ① Communication Connector

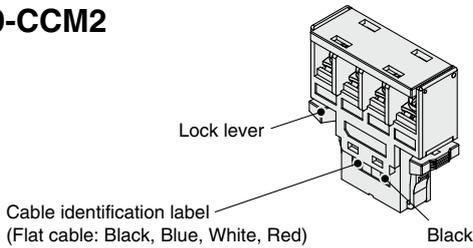
Press-in connector for flat cables  
Use this connector for the standard dedicated flat cable.  
The communication connector does not come with this product.

#### EX9-CCM1



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

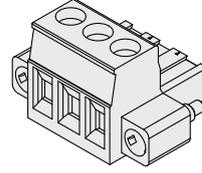
#### EX9-CCM2



### ② Power Supply Connector

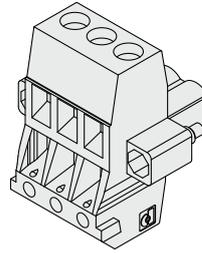
Straight type power supply connector  
This connector is supplied at the time of shipment.

#### 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□-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□-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 277 for safety instructions. For fieldbus system precautions, refer to pages 278 to 280 and the "Operation Manual" on the SMC website: <http://www.smcworld.com>

### 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 trademark of ODVA.  
CompoNet™ is a trademark of ODVA.

# Fieldbus System (For Output)

## EX123/124/126 Series

### Compatible Protocols

DeviceNet™ CC-Link CompoBus/S NKE Corp.: Fieldbus H System

Made to Order CompoNet™



\* Only the EX124 and EX126 series are CE-compliant.

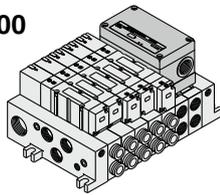
★Enclosure IP65 (EX123, EX124), IP67 (EX126)

★Maximum 16 outputs

### Manifold Solenoid Valves

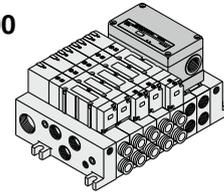
#### EX123 Series

VQ2000/4000/5000



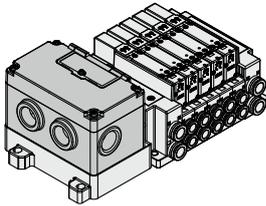
#### EX124 Series

VQ2000/4000/5000

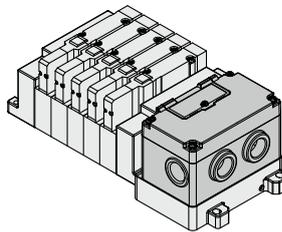


#### EX126 Series

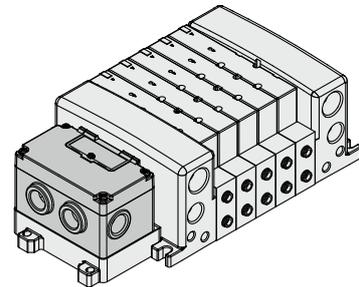
SY3000/5000/7000



SV1000/2000/3000



VQC1000/2000/4000/5000



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### Fieldbus System (For Output) EX123/124/126 Series

EX123



EX124



EX126



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Type 1	EX260
Type 1	EX123/124/126
Type 2	EX500
Type 3	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 2	EX180
Type 2	EX510
Type 2	M8/M12
Type 2	ATEX

# Fieldbus System For Output

# EX123/124/126 Series



\* Only the EX124 and EX126 series are CE-compliant.

## How to Order SI Unit

### EX123 U-S UH1

#### Unit specifications

<b>3</b>	Common power supply of control and valve Enclosure IP65 Compatible with the VQ valves
----------	---

#### Mounting specifications

<b>U</b>	Mount a unit to the U side of the manifold
<b>D</b>	Mount a unit to the D side of the manifold

#### Protocol

		CE-compliant
<b>UH1</b>	NKE Corp.: Fieldbus H System	—

### EX124 U-S DN1 -

#### Unit specifications

<b>4</b>	Separate power supply of control and valve Enclosure IP65 Compatible with the VQ valves
----------	---

#### Mounting specifications

<b>U</b>	Mount a unit to the U side of the manifold
<b>D</b>	Mount a unit to the D side of the manifold

#### Made to Order (Refer to page 53.)

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

#### Protocol

		CE-compliant
<b>DN1</b>	DeviceNet™*1	●
<b>DN1-X26</b>	DeviceNet™*1	●
<b>MJ1</b>	CC-Link	●
<b>CS1</b>	OMRON Corp.: CompoBus/S (16 outputs)	●
<b>CS2</b>	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.

### EX126 D-S MJ1

#### Unit specifications

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

#### Mounting specifications

<b>D</b>	Mount a unit to the D side of the manifold
----------	--

#### Protocol

		CE-compliant
<b>MJ1</b>	CC-Link	●

## 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			EX123□-SUH1	EX124□-SDN1	EX124□-SDN1-X26*3
Communication	Applicable system	Protocol	NKE Corp.: Fieldbus H System	DeviceNet™	DeviceNet™
		Version*1	—	Release 2.0	
	Communication speed	29.4 kbps	125 k/250 k/500 kbps		
	Configuration file*2		EDS file		
Power supply voltage	For control	24 VDC ±10%	11 to 25 VDC		
	For valve	(Common power supply)	24 VDC +10%/−5%		
Output	Number of outputs	16 points			
	Fail safe	CLEAR		HOLD/CLEAR (Switch setting)	
Environment	Enclosure	IP65			
Standards		—	CE 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	
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)		
Environment	Enclosure	IP65			
Standards		CE marking			

\*1 Please note that the version is subject to change.

\*2 The setting file can be downloaded from the SMC website, <http://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, <http://www.smcworld.com>

Type 1  
EX260  
EX123/124/126

Type 2  
EX500

Type 3  
EX600

EX245

EX250

Type 1  
EX140  
EX120/121/122

EX180

Type 2  
EX510

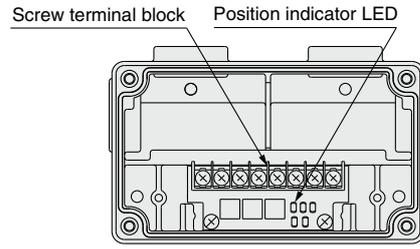
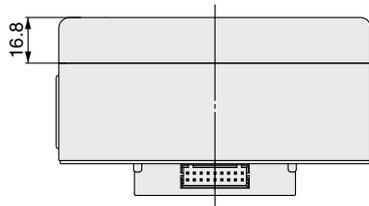
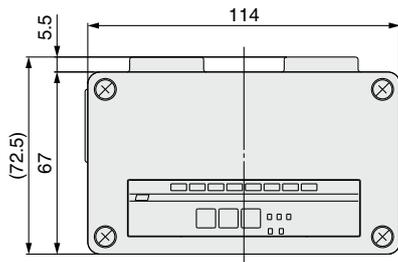
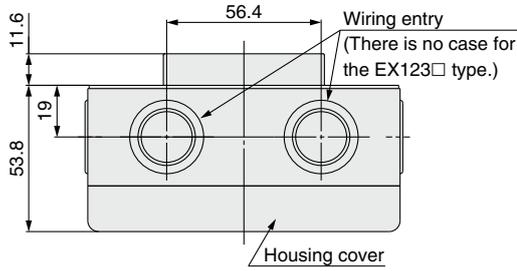
M8/M12

ATEX

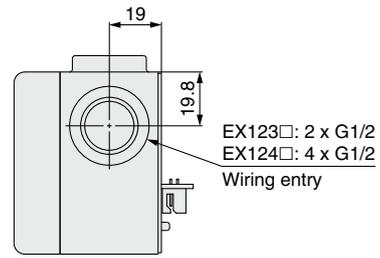
# EX123/124/126 Series

## Dimensions/Parts Description

EX123□-S□□□, EX124□-S□□□

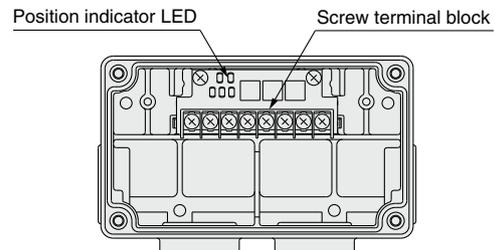
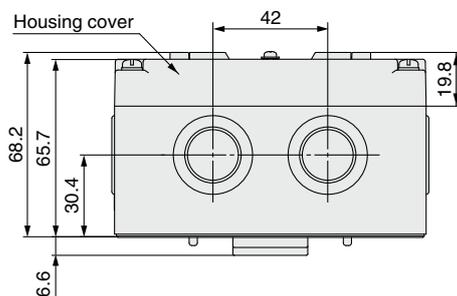
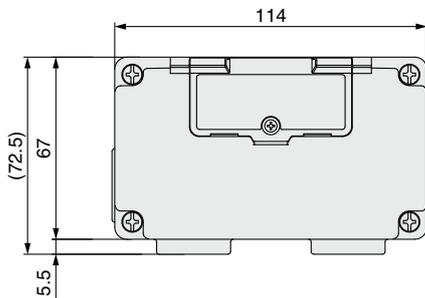
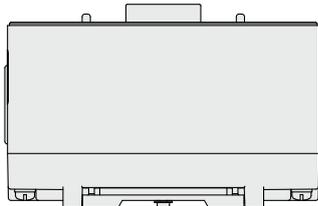


Housing cover diagram

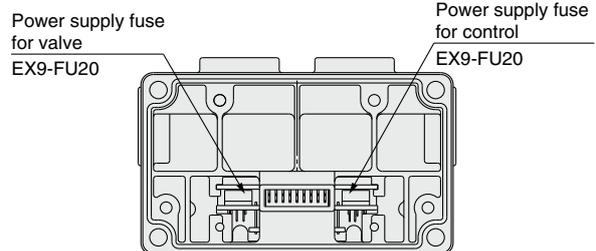
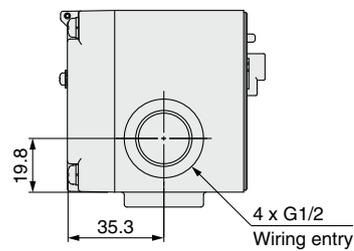


\* The housing cover of the EX124U/D-SMJ1 is the same as that of the EX126D-SMJ1.

## EX126D-SMJ1



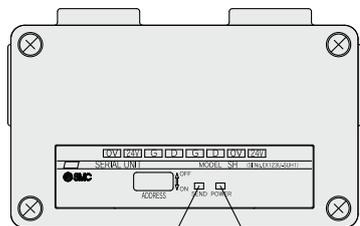
Housing cover diagram



Housing bottom diagram

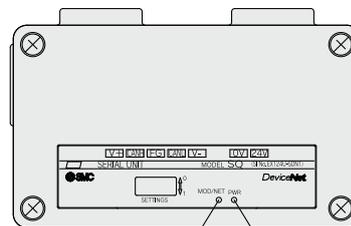
**LED Indicator**

**EX123□-SUH1**



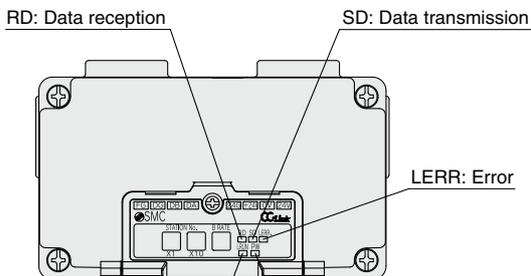
SEND: Transmission state      POWER: Power supply for control

**EX124□-SDN1**



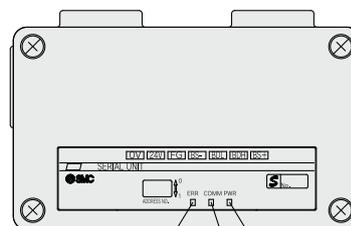
MOD/NET: Connection state      PWR: Power supply for control

**EX124□-SMJ1**



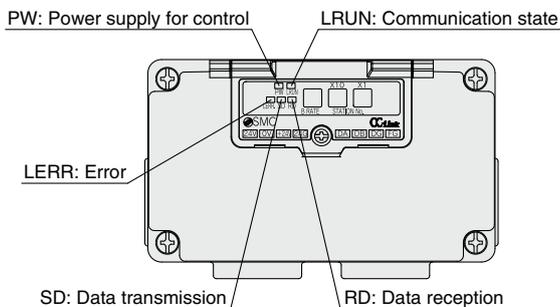
RD: Data reception      SD: Data transmission  
LERR: Error  
LRUN: Communication state      PW: Power supply for control

**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

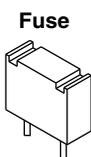
**Accessories**

**① 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**

Type 1	EX260
	EX123/124/126
Type 2	EX500
	EX600
Type 3	EX245
	EX250
Type 1	EX120/121/122
	EX140
	EX180
Type 2	EX510
	M8/M12
	ATEX

# EX123/124/126 Series

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

<b>U</b>	Mount a unit to the U side of the manifold
<b>D</b>	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

<b>U</b>	Mount a unit to the U side of the manifold
<b>D</b>	Mount a unit to the D side of the manifold

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

### ③ CompoNet™

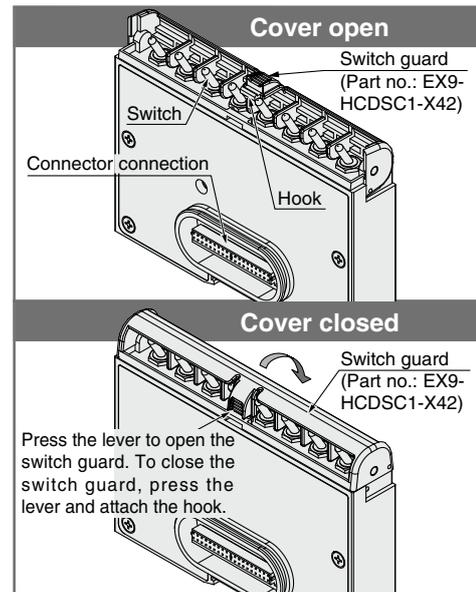
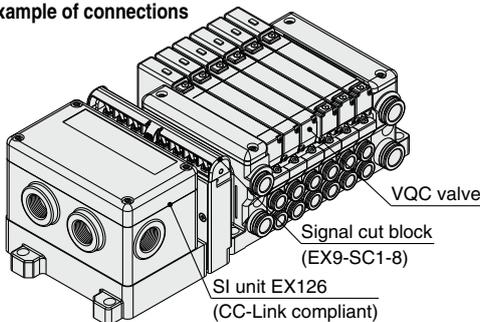
● Please contact SMC for details.

### 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



## ⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 277 for safety instructions. For fieldbus system precautions, refer to pages 278 to 280 and the "Operation Manual" on the SMC website: <http://www.smcworld.com>

##### ■ Trademark

DeviceNet™ is a trademark of ODVA.  
CompoNet™ is a trademark of ODVA.

## 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.

# Fieldbus System (For Output)

## EX140 Series

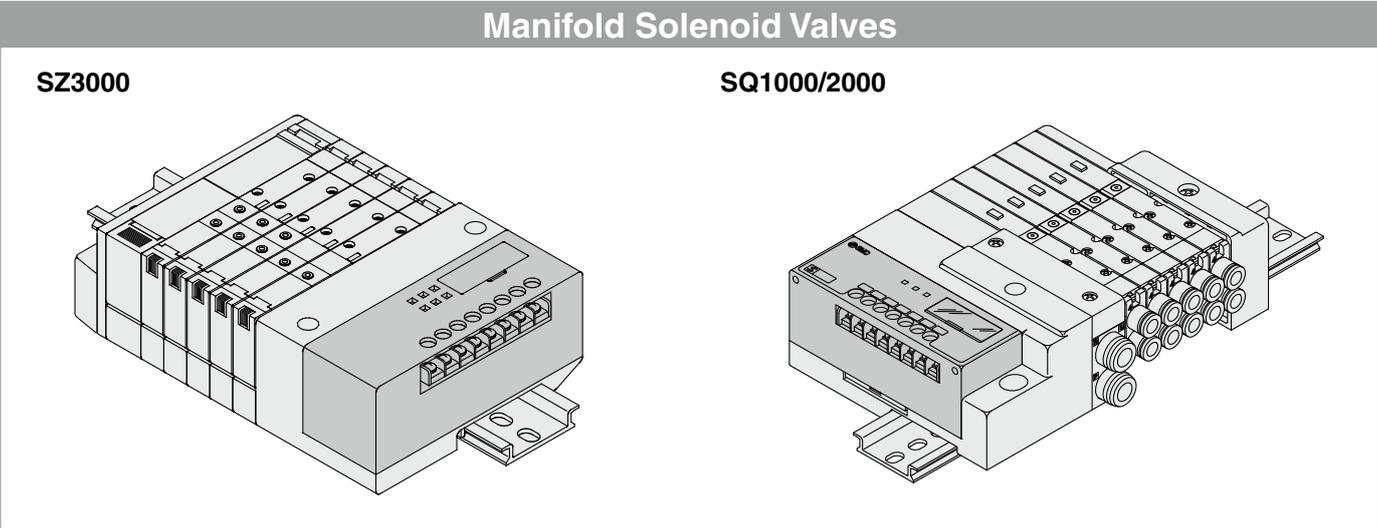
**Compatible Protocols**

DeviceNet CC-Link CompoBus/S  
 NKE Corp.: Fieldbus H System



\* Some protocols are not CE-compliant. Refer to How to Order.

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



# CONTENTS

**Type 1** Output type for solenoid valves  
 Fieldbus System (For Output)  
**EX140 Series**



How to Order SI Unit .....	p. 181
Specifications .....	p. 181
Dimensions/Parts Description .....	p. 182
LED Indicator .....	p. 183
<hr/>	
Specific Product Precautions .....	p. 183

Type 1	EX260
Type 1	EX123/124/126
Type 2	EX500
Type 3	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 1	EX180
Type 2	EX510
M8/M12	
ATEX	

# Fieldbus System For Output **EX140 Series**



\* Some protocols are not CE-compliant.

## How to Order SI Unit

# EX140-S DN1

● Protocol		CE-compliant
<b>DN1</b>	DeviceNet™	●
<b>MJ1</b>	CC-Link	●
<b>CS1</b>	OMRON Corp.: CompoBus/S (16 outputs)	●
<b>CS2</b>	OMRON Corp.: CompoBus/S (8 outputs)	●
<b>UH1</b>	NKE Corp.: Fieldbus H System	—

## Specifications

Model			EX140-SDN1	EX140-SMJ1	EX140-SCS1 EX140-SCS2	EX140-SUH1
Communication	Applicable system	Protocol	DeviceNet™	CC-Link	OMRON Corp.: CompoBus/S	NKE Corp.: Fieldbus H 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	750 kbps	29.4 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	0/16
Terminating resistor			Not provided			
Power supply voltage	For control		11 to 25 VDC	15 to 30 VDC	14 to 26.4 VDC	24 VDC ±10% (Common power supply)
	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	16 outputs
	Load		Solenoid valve with surge voltage suppressor 24 VDC, 2.1 W or less (SMC)			
	Fail safe		HOLD/CLEAR (Switch setting)			CLEAR
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 marking			—
Weight			80 g or less			
Accessory			Communication connector 1 pc., Power supply connector 1 pc.	—		

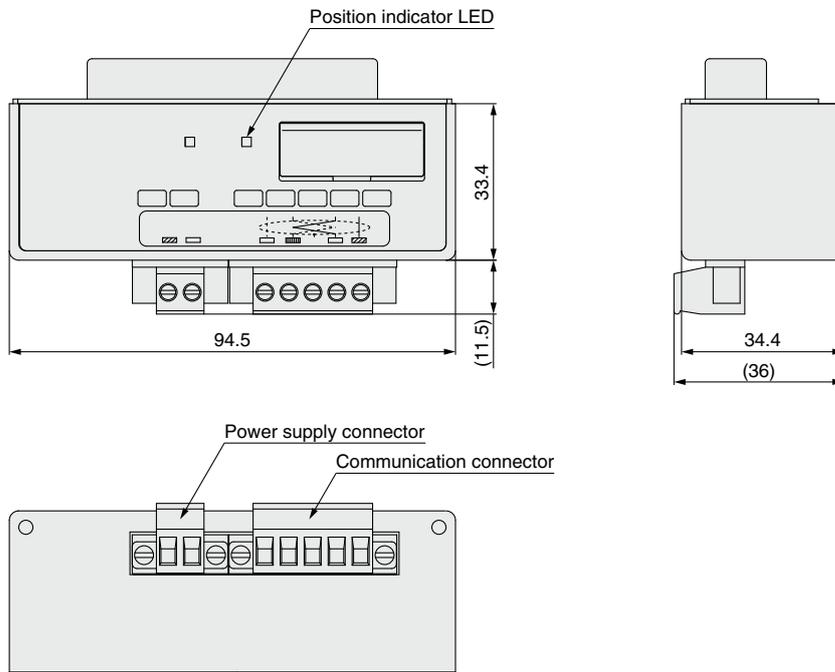
\*1 Please note that the version is subject to change.

\*2 The setting file can be downloaded from SMC website, <http://www.smcworld.com>

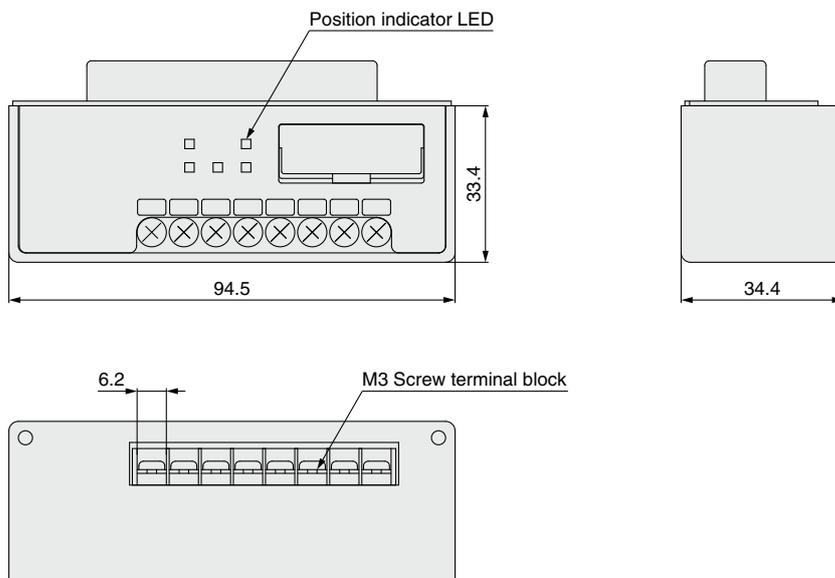
\* For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, <http://www.smcworld.com>

**Dimensions/Parts Description**

**EX140-SDN1**



**EX140-SMJ1, SCS□, SUH1**



Type 1	EX260
Type 2	EX123/124/126
Type 2	EX500
Type 3	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 1	EX180
Type 2	EX510
Type 2	M8/M12
Type 2	ATEX

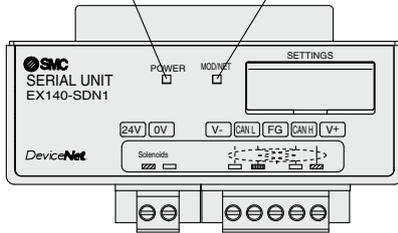
# EX140 Series

## LED Indicator

### EX140-SDN1

POWER: Power supply for control

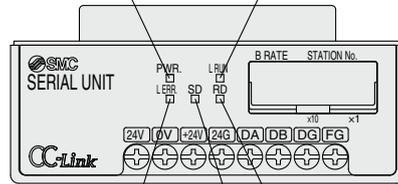
MOD/NET: Connection state



### EX140-SMJ1

PWR: Power supply for control

L RUN: Communication state



L ERR: Error

RD: Data reception

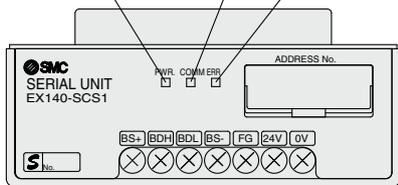
SD: Data transmission

### EX140-SCS1

PWR: Power supply for control

COMM: Communication state

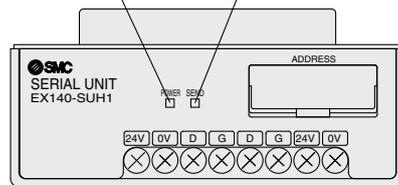
ERR: Communication error



### EX140-SUH1

POWER: Power supply for control

SEND: Communication state



## ⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 277 for safety instructions. For fieldbus system precautions, refer to pages 278 to 280 and the "Operation Manual" on the SMC website: <http://www.smcworld.com>

### Operating Environment

#### ⚠ Warning

- 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 trademark of ODVA.

Type 1 Output type for solenoid valves

# Fieldbus System (For Output)

## EX180 Series

### Compatible Protocols

DeviceNet CC-Link

Made to Order

EtherCAT

AnyWireASLINK



\* Excludes the S0700.

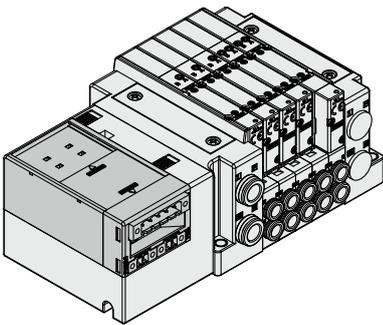


★Thinner unit with low height

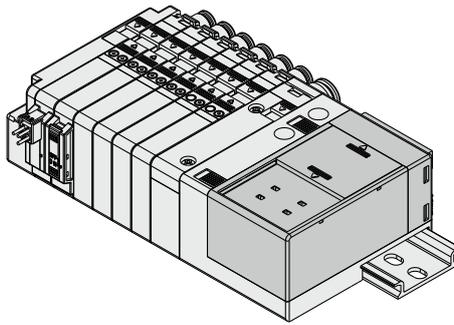
★Maximum 32 outputs

### Manifold Solenoid Valves

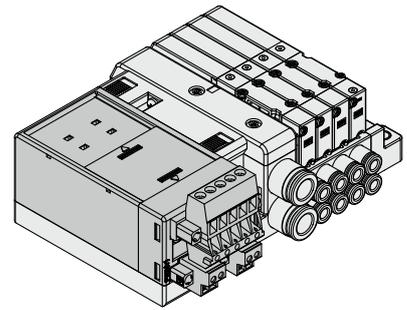
SY3000/5000/7000



SJ2000/3000



S0700

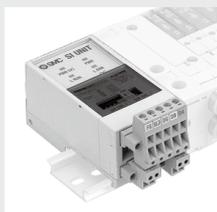


## CONTENTS

Type 1 Output type for solenoid valves

Fieldbus System (For Output)

## EX180 Series



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Dimensions/Parts Description .....	p. 186
LED Indicator .....	p. 187

### Accessories

① Communication Connector .....	p. 187
② Power Supply Connector .....	p. 187

### Made to Order

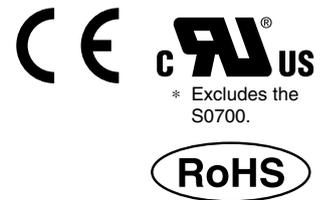
① EtherCAT PNP (Negative common), 32 outputs .....	p. 188
② AnyWireASLINK NPN (Positive common), 32 outputs .....	p. 188

Specific Product Precautions .....	p. 188
------------------------------------	--------

Type 1	EX260
Type 1	EX123/124/126
Type 2	EX500
Type 3	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 1	EX180
Type 2	EX510
Type 2	M8/M12
Type 2	ATEX

# Fieldbus System For Output

# EX180 Series



## How to Order SI Unit

EX180-S **DN3** □ - □

• **Protocol**

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

• **Made to Order** (Refer to page 188.)

Protocol
EtherCAT
AnyWireASLINK

• **Communication connector type**

<b>Nil</b>	T-branch type
<b>A</b>	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	DeviceNet™		CC-Link	
	Protocol 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 marking (EMC directive/RoHS directive), 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, <http://www.smcworld.com>

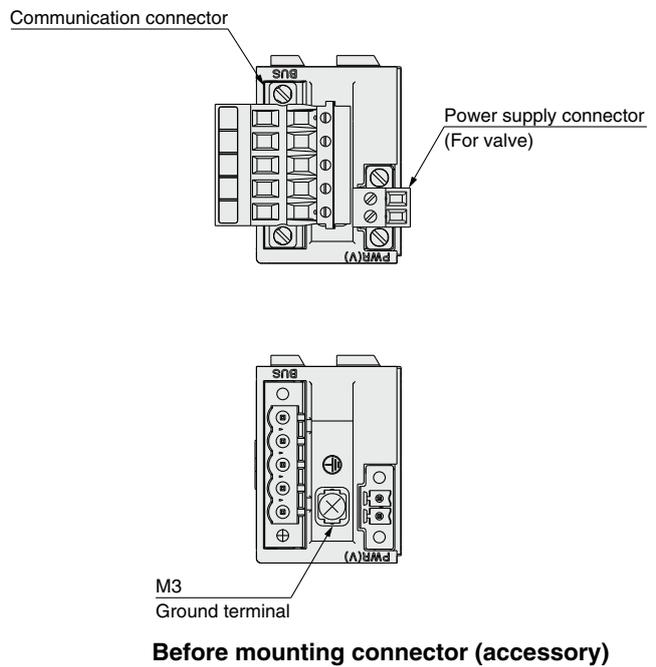
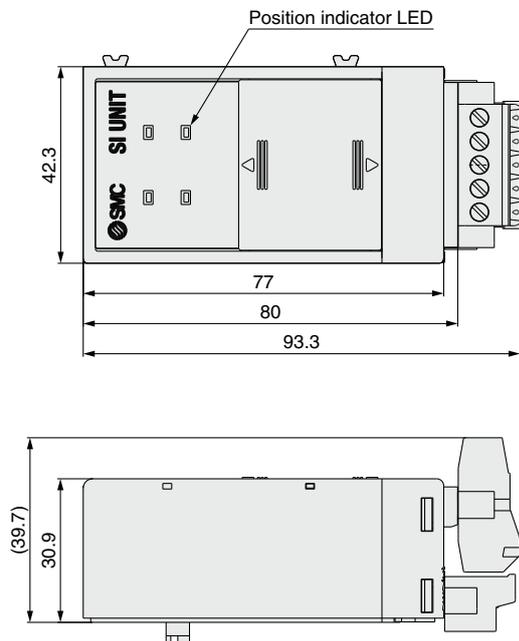
\* For detailed specifications other than the above, refer to the operation manual that can be downloaded from SMC website, <http://www.smcworld.com>

\* 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□.

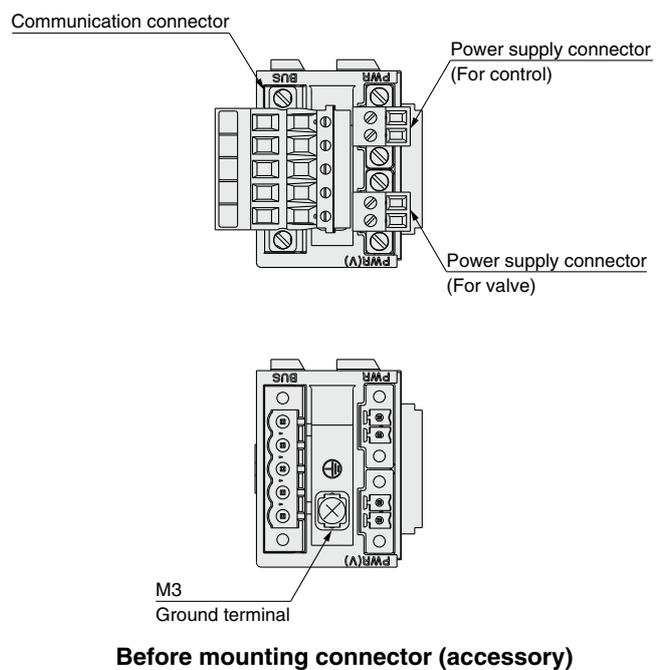
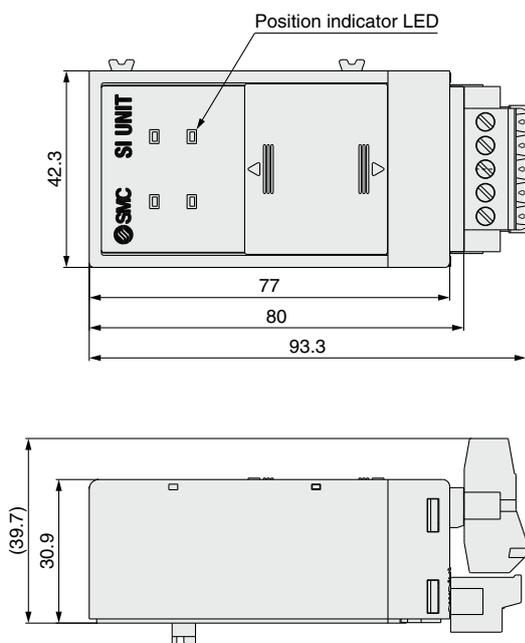
\* The EX180-SMJ1□ cannot be mounted on the manifold for the EX180-SMJ3□/5□. Additionally, the EX180-SMJ3□/5□ cannot be mounted on the manifold for the EX180-SMJ1□.

**Dimensions/Parts Description**

**EX180-SDN□**



**EX180-SMJ□**



Type 1	EX260
Type 1	EX123/124/126
Type 2	EX500
Type 3	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 1	EX180
Type 2	EX510
Type 2	M8/M12
Type 2	ATEX

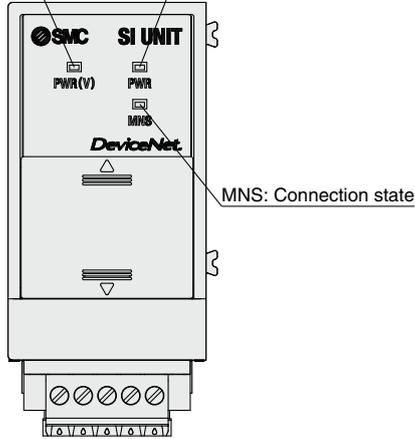
# EX180 Series

## LED Indicator

### EX180-SDN□

PWR(V): Power supply for valve

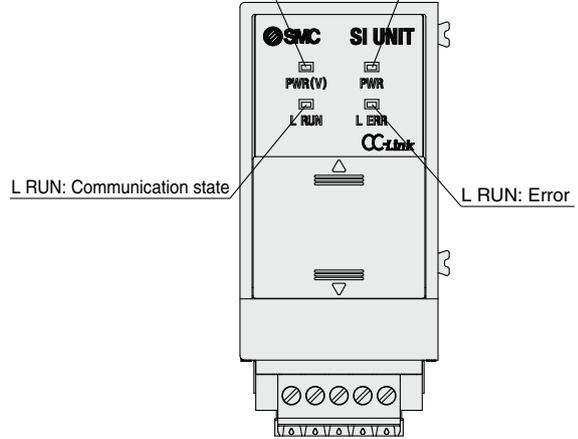
PWR: Power supply for control



### EX180-SMJ□

PWR(V): Power supply for valve

PWR: Power supply for control



## Accessories

### ① Communication Connector

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

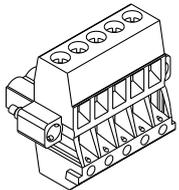
EX180-C **DN** | **1**

Communication protocol

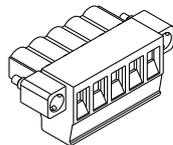
<b>DN</b>	For EX180-SDN□
<b>MJ</b>	For EX180-SMJ□

Communication connector type

<b>1</b>	T-branch type
<b>2</b>	Straight type



EX180-C□□1

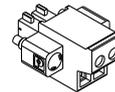


EX180-C□□2

### ② Power Supply Connector

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

EX180-CP1



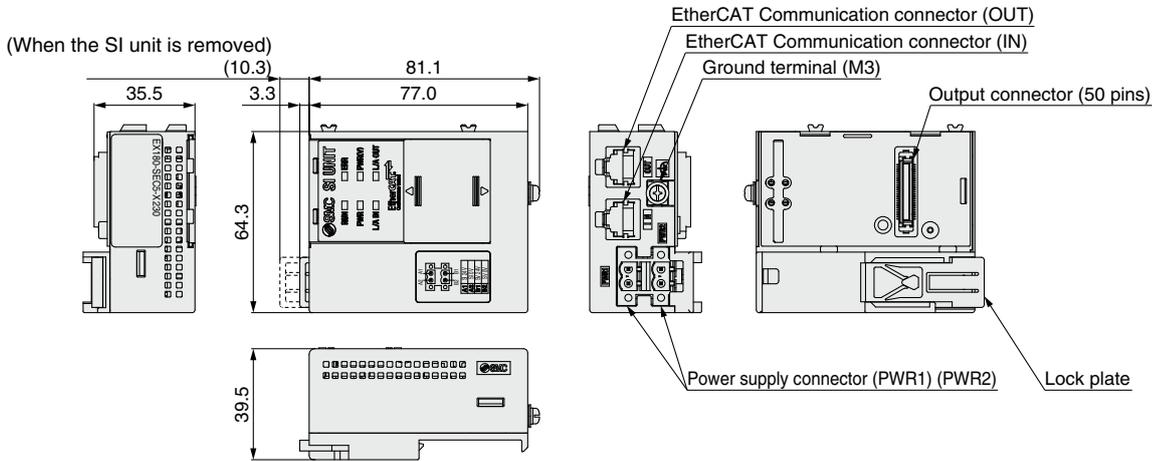
**Made to Order**

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 **EtherCAT PNP (Negative common), 32 outputs**

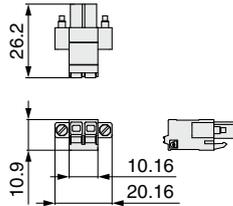
**EX180-SEC5-X230**

- The communication connector and power supply connector do not come with this product.



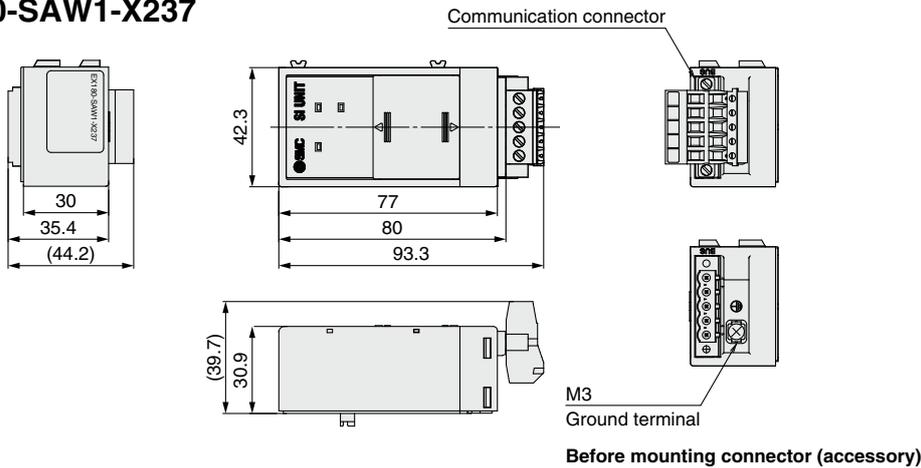
**EX9-CP6-X27**

- Power supply connector for the EX180-SEC5-X230
- This connector is not supplied at the time of shipment.
- The minimum ordering quantity of this product is one box (50 pcs. included).



② **AnyWireASLINK NPN (Positive common), 32 outputs**

**EX180-SAW1-X237**



**⚠ Specific Product Precautions**

Be sure to read this before handling the products. Refer to page 277 for safety instructions. For fieldbus system precautions, refer to pages 278 to 280 and the "Operation Manual" on the SMC website: <http://www.smcworld.com>

**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 trademark of ODVA.  
EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

Type 1	EX260
Type 1	EX123/124/126
Type 2	EX500
Type 2	EX600
Type 3	EX245
Type 3	EX250
Type 1	EX120/121/122
Type 1	EX140
Type 1	EX180
Type 2	EX510
Type 2	M8/M12
Type 2	ATEX