Type 2 Gateway type

Fieldbus System (128 Points/64 Points)

EX500 Series

Decent	\sim			(€	VK * Only the SY and SV valves are UL-compliant.	RoHS	EX260
Valves	can be	e inst	alled		GW unit (Gateway unit)		
Reduced piping space and piping materials	Reduced wiring space	address valve mar	to set the s for the hifolds and units				
Description	Compatible protocol	Number of inputs/outputs	Number of valve manifold and input unit connections	Branch cable length	New function		EX600
Gateway Decentralized System 2 Page 61	EtherNet/IP	128 inputs/ 128 outputs	Max. 16 units	Max. 20 m	Web server function • Valve operation test • Connection diagnostic • Short-circuit diagnostic Page 56	Type 3	EX245
Gateway Decentralized System Page 75	<u>pppp</u> Boos	64 inputs/ 64 outputs	Max. 8 units	Max. 10 m	-		EX250 E
	Input unit (M12 connector typ			Input unit (M8 connector ty (M8 connector ty)) (M8 connector ty (M8 connector ty)) (M8 co			D EX180
			61	Bartin and			ATEX

54 @

EX500 Series Fieldbus System Gateway Decentralized System 2 (128 Points)

Number of branch ports: 4

Number of inputs/outputs 128 inputs/128 outputs

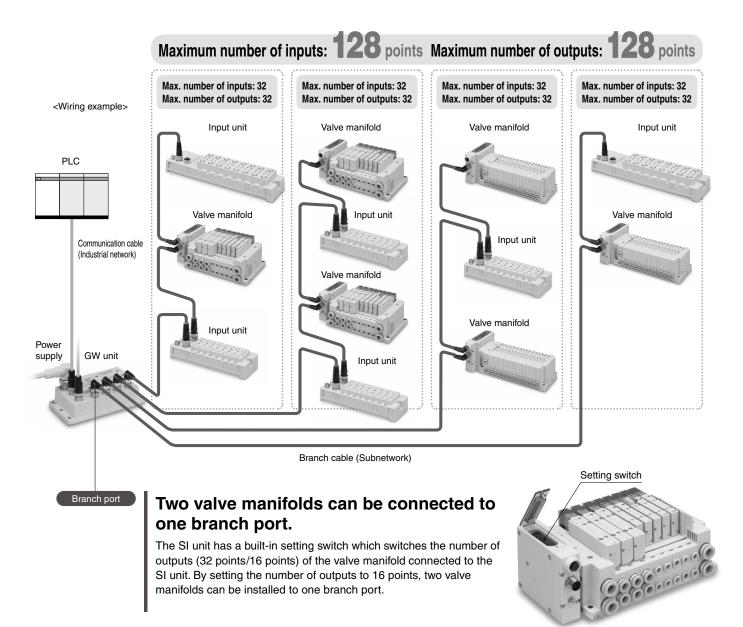
Number of inputs/outputs per branch: Max. 32 inputs/32 outputs

Number of valve manifold connections Max. 8 units*1 Number of input unit connections Max. 8 units

• Number of valve manifold connections per branch: Max. 2 units *1 • Number of input unit connections per branch: Max. 2 units

Total cable length per branch Max. 20 m

*1 When the number of outputs is set to "16 outputs" using the built-in setting switch of the SI unit



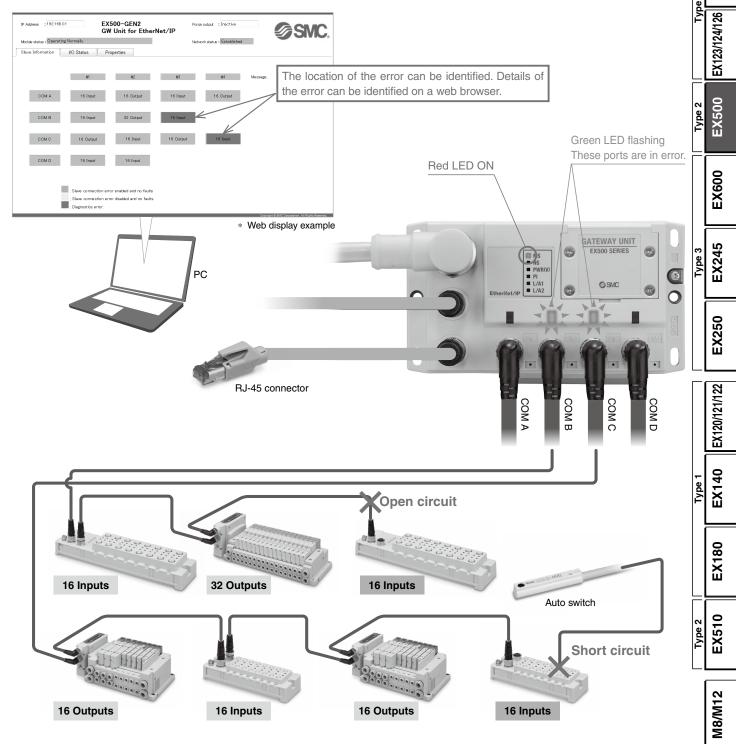
∕∂SMC



Web server function

A valve operation test (ON/OFF), a connection diagnostic between the valve manifolds and the input units, and a short-circuit diagnostic of input devices can be performed on a web browser.

A password can be used for the valve operation test (ON/OFF) for security.



No need to set the address

I/O mapping for the SI unit and input unit is set by the gateway unit automatically. The unit installation order is not specified.

(The upper limit of the inputs/outputs is 32 points for one branch port.)

ATEX

EX260

EX500 Series Fieldbus System Gateway Decentralized System 2 (128 Points)

Reduced wiring

The amount of communication and power supply wiring for the I/O device can be reduced.

Reduction in number of communication nodes

By reducing the number of communication nodes, the load on the network is reduced.

Accessories can be ordered together.

Page **67** Page **84**

Accessories including cables and connectors can be ordered together from SMC. Parts selection and ordering times as well as delivery management can be reduced.

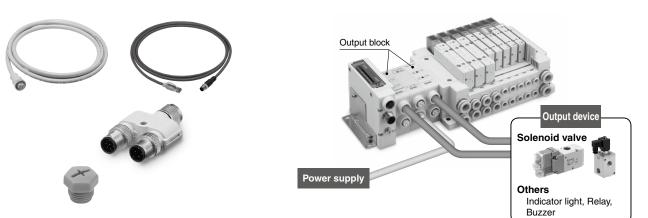
Flexibly copes with changes in the protocol

Previously, it was necessary to change the part number of the I/O unit, return the I/O unit, and make arrangements once again to obtain a new unit (additional quotation, delivery management).

Now, only the GW unit needs to be changed.

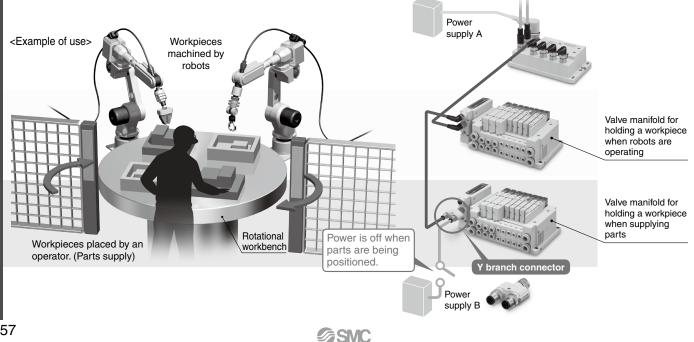
Applicable to output devices Page 71 other than valve manifolds

By using an output block, lights and buzzers can be operated.



Specified valve manifolds can be controlled by supplying power from a different system. Page 69

By using a Y branch connector, power from a different system can be supplied to the SI unit (valve manifold).



			-	
System Comparison Table	9			EX260
	Gateway Decentralized System 2	Gateway Decentralized System (Existing model)		
Protocol	PROFO [®] EtherNet/IP [®]	₽₽₽₽ ₿ŬŜ Ŏ		EX123/124/126
Number of inputs/outputs (Number of inputs/outputs per branch)	128 inputs/128 outputs (32 inputs/32 outputs)	64 inputs/64 outputs (16 inputs/16 outputs)		
Number of valve manifold connections (Number of connections per branch)	Max. 8 units ^{*1} (Max. 2 units)	Max. 4 units (1 unit)	Tvbe 2	EX500
Number of input unit connections (Number of connections per branch)	Max. 8 units (Max. 2 units)	Max. 4 units (1 unit)][-
Branch cable length	Max. 20 m	Max. 10 m		EX600
Enclosure	GW unit: IP65 SI unit: IP67 Input unit: IP67	GW unit: IP65 SI unit: IP67 Input unit: IP65	Vbe 3	EX245
Function	Web server function (Valve operation test, Connection diagnostic, Short-circuit diagnostic)	_		
Page	61	75]	EX250

Applicable Valve/Vacuum Unit

Applicable Valve	/Vacuu	ım Unit								EX120/121/122
Applicable valve		Flow rate characteris	stics (4/2→5/3)	Maximum number of	Power consumption	Enclosure	Standards	Daga		EX1
Applicable valve		C [dm³/(s·bar)]	b	solenoids	[W]	Enclosure	Standards	Page		
	SY3000	1.6	0.19		0.35 (Standard)			Best	Type 1	EX140
Coleman C	SY5000	3.6	0.17	32	0.1 (With power- saving circuit)	IP67	C E R	Pneumatics	Ţ	Ш
·	SY7000	5.9	0.20		[Inrush 0.4, Holding 0.1	1]		No. 1-1		
	VQC1000	1.0 *1	0.30 *1		0.4 (Standard)			Best Pneumatics		0
a delater	VQC2000	3.2 *1	0.30 *1	24		IP67	C € ₽Ŕ			EX180
	VQC4000	7.3 *1	0.38 *1	24 0.95 (Standard)			No. 1-2		ш	
	VQC5000	17.0 *1	0.31 *1		0.4 (Low-wattage type)	e)				
	S0700	0.37	0.39	32	0.35	IP40	C E CK	Best Pneumatics No. 1-1	Type 2	EX510
A PERSONAL COLOR	SV1000	1.1	0.35			IP67		Best	Typ	Ж
	SV2000	2.4	0.18	32	0.6			Pneumatics		
	SV3000	4.3	0.21				c Ru s	No. 1-2		
Applicable vacuum un	it	Nozzle dia [mm]		Max. number o solenoids		Enclosure	Standards	Page		M8/M12
		0.7								
	ZK2⊡A	1.0		16	6 0.4 IP40 C E ĽK	IP40		CAT.ES100-129		
G 0000		1.2		10		C C CA	GAT.E3100-129	.00-129 X	АТЕХ	
PRAL BRACK		1.5								₽

SMC

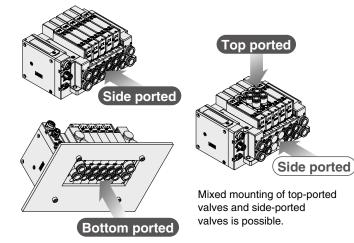
SY3000/5000/7000 Series

Piping on the top or the bottom allows for a reduced footprint and increased space saving.



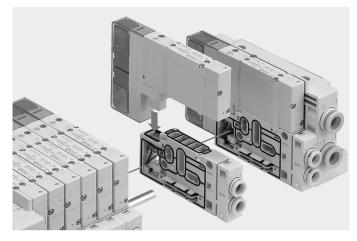
Valve piping direction variations

Piping is possible from 3 directions.



Max. 24 stations are connectable.

It is possible to connect only the number of valves required, from 1 to 24 stations, to suit the application. (Maximum number of solenoids: 32)

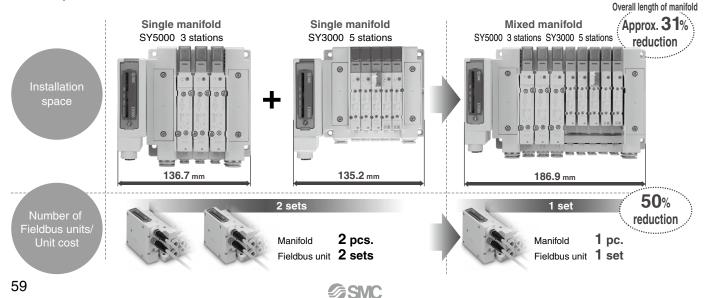


Mixed valve sizes manifold

It is also possible to install a combination of different-sized valves on the same manifold. (SY3000 and SY5000, or SY5000 and SY7000)

This facilitates a reduction in the installation space and number of units/cables.

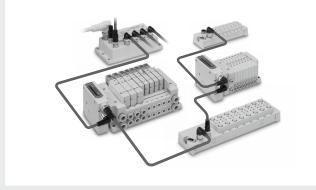
Example: For the SY5000 and SY3000



CONTENTS

Type 2 Gateway type

Fieldbus System (128 Points/64 Points) *EX500 Series*

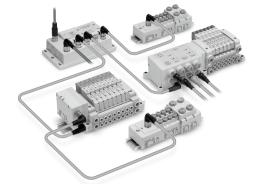


Gateway Decentralized System 2 (128 Points) ---- p. 61

GW Unit

Accessories

Power Supply Cable p. 67
Communication Cable p. 68
S Field-wireable Communication Connector
Branch Cable
5 Y Branch Connector p. 69
G Cable for Power Supply from a Different System ··· p. 70
DIN Rail Bracket (2 pcs.) p. 70
3 Marker (1 sheet, 88 pcs.)p. 70
9 Seal Cap (10 pcs.) p. 70
Output Block ·······p. 71
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Power Supply Cable (For power block)
Connector for Output Block Wiring
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	ρ.		
GW Unit How to Order ····· Specifications ····· Dimensions/Parts Description ····· SI Unit (For SV) How to Order ····· Specifications ···· Dimensions/Parts Description ·····	•p. •p. •p.	76 76 77 77	Tvpe 3
SI Unit (For SY/VQC/S0700)			_
How to Order	· p. · p. · p. · p. · p. · p.	78 78 79 79 80 81 82	Tvne 1
Accessories Communication Cable ·····			
 2 Field-wireable Communication Connector	~р. •р. •р. •р.	86 87 87 87	Tvbe 2

Made to Order

Communication Cable	
Precautions on Mixed Usage of Gateway Decentralized System 2 (128 Points) and Gateway Decentralized System (64 Points) p	. 74
Specific Product Precautions p	. 92

SMC

EX260

EX123/124/126

Type 2 EX500

EX600

EX245

EX250

EX120/121/122

EX140

EX180

EX510

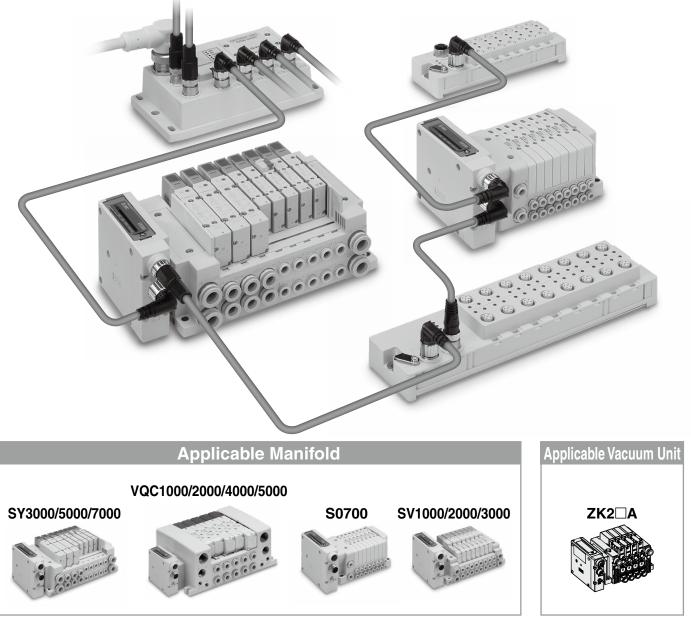
M8/M12

АТЕХ

Fieldbus System Gateway Decentralized System 2 (128 Points) **EX500 Series** (E LA CONSTRUCTION OF CONTRACT OF CONTR



- **★** Valve manifolds and input units can be connected around the GW (Gateway) unit.
- \star Compatible with other protocols by replacing the GW unit
- ***** Number of inputs/outputs = 128 points/128 points
 - The number of outputs (solenoids) per branch is 32 points.
- ★ Number of valve manifold connections = Max. 8 units, Number of input unit connections = Max. 8 units, Branch cable length = Max. 20 m
- ★ Web server function (Valve operation test, Connection diagnostic of units, Short-circuit diagnostic of input devices)
- \star No need to set the address for the valve manifolds or input units



EX500 Series Gateway Decentralized System 2 (128 Points) GW Unit C C UK * Only the SY and SY values are UL-compliant.



How to Order

RoHS

EX260

EX123/124/126

Type 2 EX500

EX600

Type 3 EX245

EX250

EX120/121/122

Type 1 EX140

EX180

Type 2 EX510

M8/M12

Type

EX500-GEN2

EN2	EtherNet/IP™ (Input/Output = 128 points/128 points)
PN2	DDOEINET

Specifications

	Model	EX500-GEN2	EX500-GPN2			
	Protocol	EtherNet/IP™*1	PROFINET IO			
	Version* ²	Volume 1 (Edition 3.14) Volume 2 (Edition 1.15)	PROFINET Specification Version 2.2			
	Media	100BASE-TX	100BASE-TX			
	Communication speed	10/100 Mbps (Automatic)	100 Mbps			
	Communication method	Full duplex/Half duplex (Automatic)	Full duplex			
	Number of inputs/ outputs (I/O occupation area)	128 inputs/128 outputs (20 bytes/20 bytes)	128 inputs/128 outputs (18 bytes/16 bytes)			
Communication	Configuration file*3	EDS file	GSDML			
	IP address setting range	Switch settings: 192.168.0.1 to 254 or 192.168.1.1 to 254, Through DHCP server: Optional address	Optional address			
	Device information	Vendor ID: 7 (SMC Corporation) Product type: 12 (Communication Adapter), Product code: 198	_			
	Applicable function	DLR QuickConnect™ Web server	MRP Fast Start Up Web server			
Power supply	For input and control	24 VDC ±10%				
voltage	For valve	24 VDC +10%, -5%				
Current consumption	For input and control	6.2 A or less (Max. 1.5 A per branch x 4 branches + GW unit internal current consumption: 0.2 A or less)				
consumption	For output (valve)	4 A or less (Max. 1 A per branch x 4 branches)				
	Number of branch ports	4 ports				
Branch port	Number of inputs and outputs	32 inputs/32 outputs per branch				
	Branch cable length	20 m or less per branch				
	Enclosure	IP	65			
Environmental resistance	Operating temperature range	Operating: -10 to +50°C, Stored: -20 to +60°C (No condensation)				
10010100	Operating humidity range	Operating, Store (No cond				
Standards		CE/UKCA marking (EMC directive/ RoHS directive), UL (CSA)				
Weight		550 g				
Enclosed parts		Seal cap (for M12 connector socket) 5 pcs.				

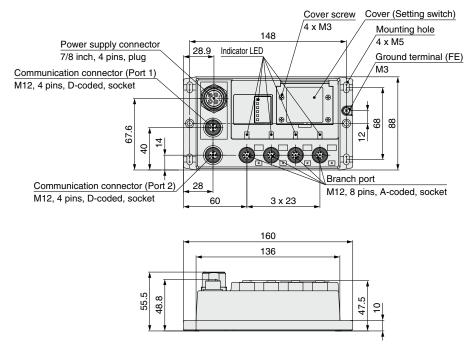
*1 Use a CAT5 or higher communication cable.

*2 Please note that the version is subject to change.

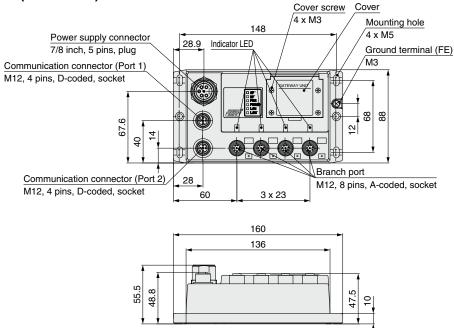
*3 The setting file can be downloaded from SMC website, http://www.smcworld.com

Dimensions/Parts Description

EX500-GEN2 (EtherNet/IP™)



EX500-GPN2 (PROFINET)



EX500 Series Gateway Decentralized System 2 (128 Points) SI Unit

Output unit for valve manifold connection

How to Order



EX260

EX123/124/126

Type 2 EX500

EX600

EX245

EX250

EX120/121/122

EX140

EX180

EX510

M8/M12

ATEX

Type 2

Type.

Fvbe



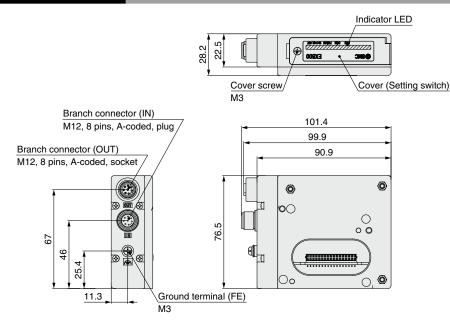
EX500-S103

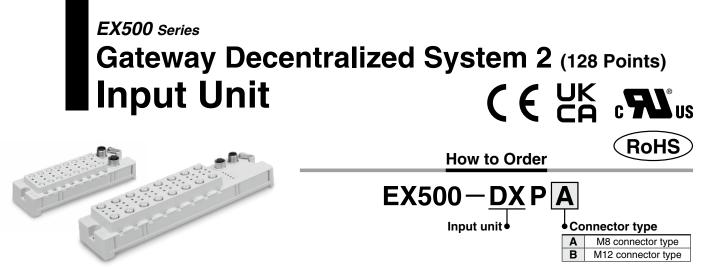
Specifications

	Model	EX500-S103	
Applicable valve/Vacuum unit		SY, VQC, S0700, SV, ZK2⊡A	
	Number of outputs	16/32 outputs (Switched by built-in setting switch)	
	Output type	Source/PNP (Negative common)	
Output	Rated voltage	24 VDC	
	Supply current	With power supplied to GW unit: Max. 1.0 A With external power∗1 supplied: Max. 1.5 A	
Internal current consumption		50 mA or less	
	Enclosure	IP67	
Environmental resistance	Operating temperature range	Operating: -10 to +50°C, Stored: -20 to +60°C (No condensation)	
resistance	Operating humidity range	Operating, Stored: 35 to 85%RH (No condensation)	
Standards Weight		CE/UKCA marking, UL (CSA), RoHS compliant	
		200 g	
Enclosed parts		Seal cap (for M12 connector socket) 1 pc.	
Enclosed parts	5	Valve manifold mounting screw (M3 x 30) 2 pcs.	

*1 When an accessory, Y branch connector, is used.

Dimensions/Parts Description





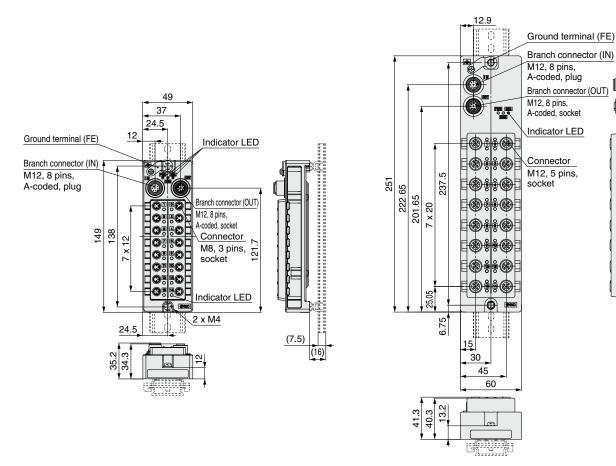
Specifications

	Model	EX500-DXPA	EX500-DXPB		
Connector type		M8 connector	M12 connector		
	Number of inputs	16 inputs			
	Input type	PNP sensor input			
	Rated voltage	24 VDC			
Input	Supply current	Max. 1.3 A/Unit Total of 8 connectors of even number must be Max. 0.65 A, 8 connectors of odd number must be Max. 0.65 A			
	Input ON voltage/Input ON current	11 V or more/Typ. 7 mA (at 24 VDC)			
	Input OFF voltage/Input OFF current	5 V or less/1.5 mA or less			
Internal cu	rrent consumption	200 mA or less (when the input signal is ON)			
	Enclosure	IP67			
Environmental resistance	Operating temperature range	Operating: -10 to +50°C, Stored: -20 to +60°C (No condensation)			
resistance	Operating humidity range	Operating, Stored: 35 to 85%RH (No condensation)			
Standards		CE/UKCA marking, UL (CSA), RoHS compliant			
Weight		250 g	450 g		
Enclosed parts		Seal cap (for M8 connector socket) 16 pcs.	Soci con (for M10 connector) 17 per		
		Seal cap (for M12 connector socket) 1 pc.	Seal cap (for M12 connector) 17 pcs.		

Dimensions/Parts Description

EX500-DXPA

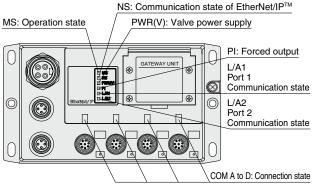
EX500-DXPB



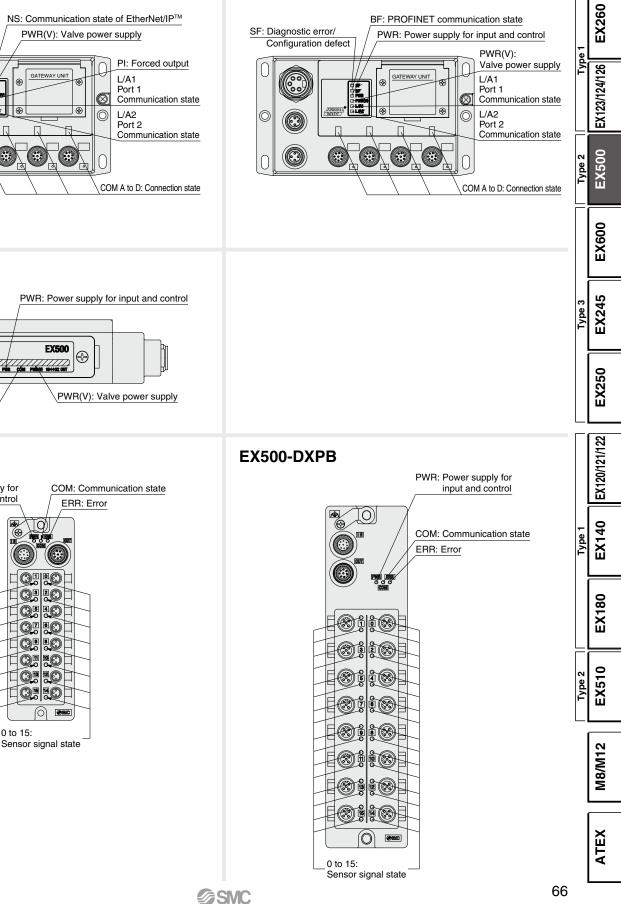
Gateway Decentralized System 2 (128 Points) Input Unit **EX500 Series**

LED Indicator

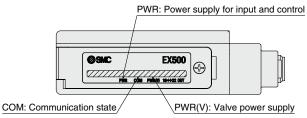




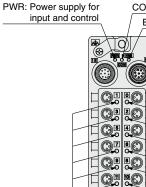
EX500-GPN2



EX500-S103



EX500-DXPA



0 to 15:

@600

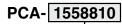
COM: Communication state

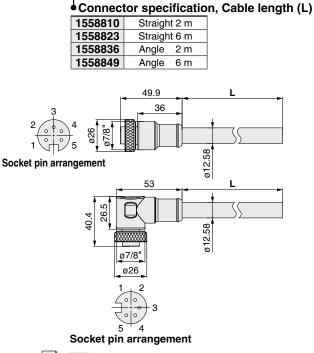
EX500 Series Gateway Decentralized System 2 (128 Points) Accessories

Power Supply Cable

Supplies power to the GW unit.

For PROFINET





- 2
 - 3

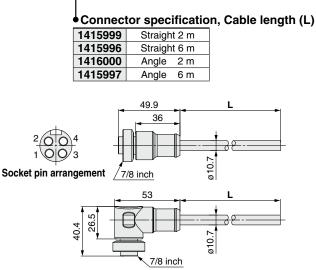
---- Red/White: 0 V (For valve) Red: 0 V (For control and input) ---- Green: FE Red/Orange: 24 VDC±10% (For control and input) ---- Red/Black: 24 VDC +10%/-5% (For valve)

Connections

Item	Specifications
Cable O.D.	ø12.58 mm
Conductor nominal cross section	1.5 mm ² /AWG16
Wire O.D. (Including insulator)	2.35 mm
Min. bending radius (Fixed)	110 mm

For EtherNet/IP™

PCA- 1416000





Socket pin arrangement

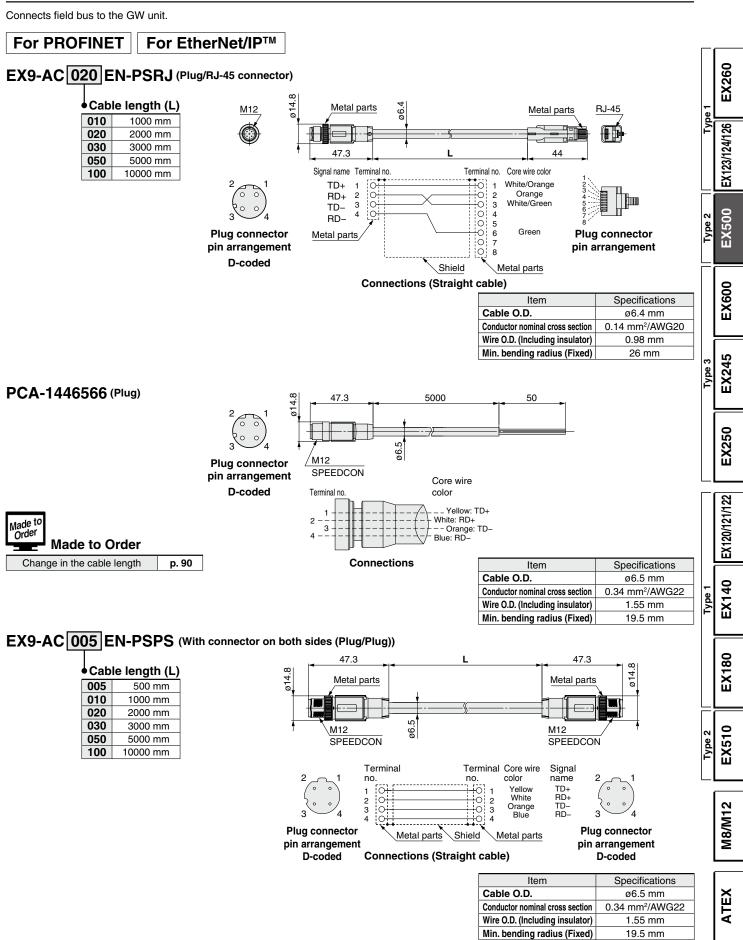


Connections

Item	Specifications
Cable O.D.	ø10.7 mm
Conductor nominal cross section	1.5 mm ² /AWG16
Min. bending radius (Fixed)	94 mm

Gateway Decentralized System 2 (128 Points) Accessories **EX500 Series**

2 Communication Cable

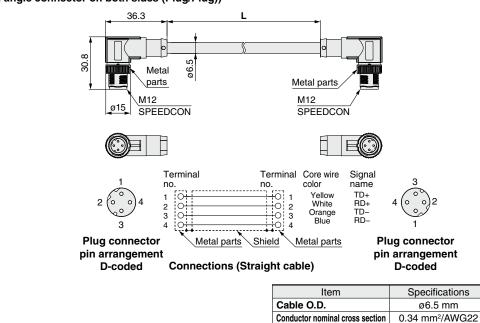


OCommunication Cable

For PROFINET For EtherNet/IP™

EX9-AC 005 EN-PAPA (With angle connector on both sides (Plug/Plug))

• Cab	• Cable length (L)		
005	500 mm		
010	1000 mm		
020	2000 mm		
030	3000 mm		
050	5000 mm		
100	10000 mm		



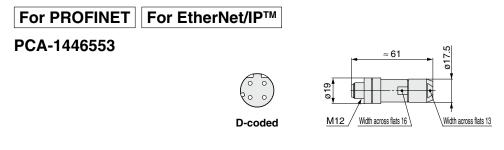
Wire O.D.(Including insulator)

Min. bending radius (Fixed)

1.55 mm

19.5 mm

SField-wireable Communication Connector



Applicable Cable

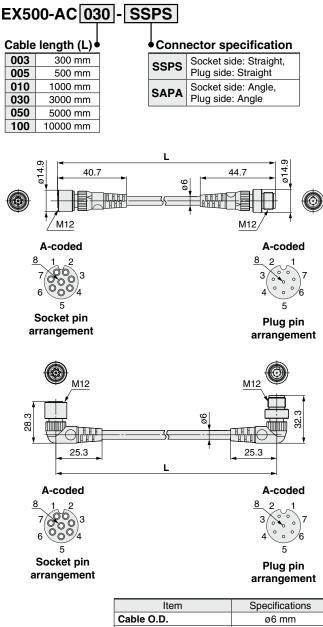
Item	Specifications
Cable O.D.	4.0 to 8.0 mm
Wire gauge (Stranded wire cross section)	0.14 to 0.34 mm ² /AWG26 to 22

* The table above shows the specifications for the applicable cable. Adaptation for the connector may vary on account of the conductor construction of the electric wire.

SMC

4 Branch Cable

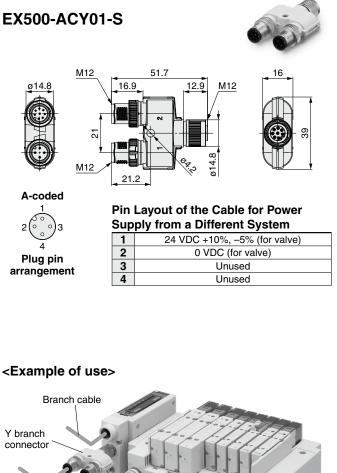
Connects the GW unit and SI unit or input unit.



	opoollioaaloillo
Cable O.D.	ø6 mm
Conductor nominal cross section	0.25 mm ²
Wire O.D. (Including insulator)	1.27 mm
Min. bending radius (Fixed)	40 mm

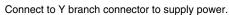
O Y Branch Connector

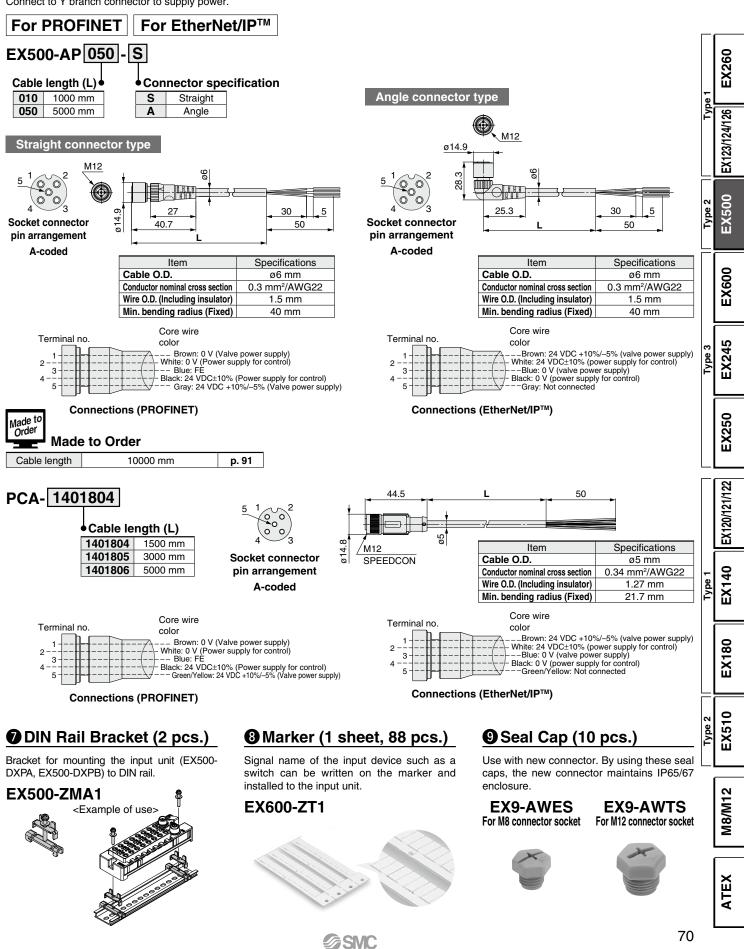
Supplies separate power to valve manifold when it is connected to the SI unit.

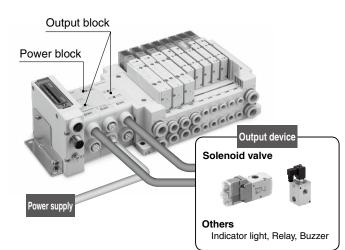


Y branch connector Branch cable Cable for power supply from a different system

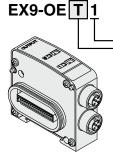
G Cable for Power Supply from a Different System







Output Block





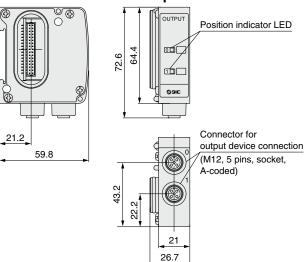
Power supply type

 T
 Internal power supply method (for low-wattage load)

 P
 Integrated power supply method (for high-wattage load) *1

*1 Required to connect with a power block

Dimensions/Parts Description



Specifications

	Model	EX9-OET1	EX9-OEP1	
Internal cui	rrent consumption	40 mA or less		
Output type		Source/PNP (Ne	egative common)	
	Number of outputs	2 ou	tputs	
Output	Power supply method	Internal power supply method	Integrated power supply method (Power block: supplied from EX9-PE1)	
	Output device supply voltage	24 VDC		
	Output device supply current	Max. 42 mA/point (1.0 W/point)	Max. 0.5 A/point (12 W/point)	
Enclosure		IP67		
Environmental resistance Operating temperature range		-10 to 50°C		
TESISIANCE	Operating humidity range	35 to 85%RH (No condensation)		
Standards		CE/UKCA marking, UL (CSA), RoHS compliant		
Weight		120 g		

- Output devices other than valve manifold can be operated.
- By using the power block and output block for high watt load, operation up to 0.5 A/point can be performed.
- Possible to mount the output block and power block additionally between the SI unit and the valve (The surplus I/O points are used).
- 2 point outputs per output block (M12 connector)

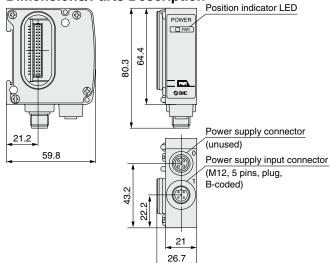
You are requested to connect it to an SI unit and a valve manifold. For detailed specifications, refer to the operation manual that can be downloaded from SMC website, http://www.smcworld.com

Power Block

EX9-PE1



Dimensions/Parts Description



Specifications

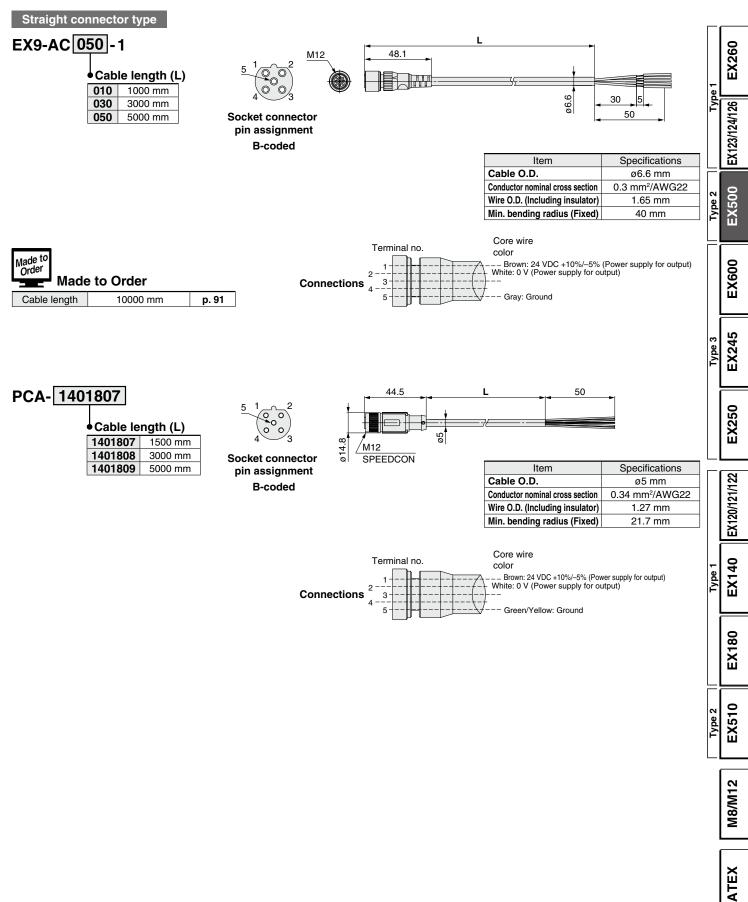
Model		EX9-PE1	
Connection I	block	Output block for high wattage load	
Connection block stations		Output block: Max. 8 stations	
Power supply for output	Power supply voltage	22.8 to 26.4 VDC	
and internal control	Internal current consumption	20 mA or less	
Supply current		Max. 3.1 A*1	
Environmental resistance	Enclosure	IP67	
	Operating temperature range	–10 to 50°C	
	Operating humidity range	35 to 85%RH (No condensation)	
Standards		CE/UKCA marking, UL (CSA), RoHS compliant	
Weight		120 g	
Enclosed parts		Seal cap (for M12 connector) 1 pc.	

 $*1\,$ When using with 3.0 to 3.1 A, the ambient temperature should not exceed 40°C, and do not bundle the cable.



Power Supply Cable (For power block)

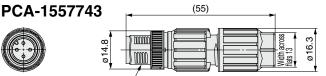
Supplies power to the power block.



Connector for Output Block Wiring

Field-wireable connector for connecting an output device to an output block





M12 SPEEDCON

Applicable Cable

Item	Specifications	
Cable O.D.	3.5 to 6.0 mm	
Wire gauge (Stranded wire cross section)	0.14 to 0.34 mm ² /AWG26 to 22	
Core wire diameter (Including insulating material)	0.7 to 1.3 mm	



Plug pin arrangement

A-coded 2

> 0 0

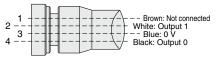
> > С

Plug pin

arrangement

З

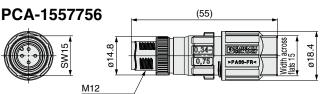
C



Brown: Not connected
 White: Output 1
 Blue: 0 V
 Black: Output 0

Connections

Connections



SPEEDCON

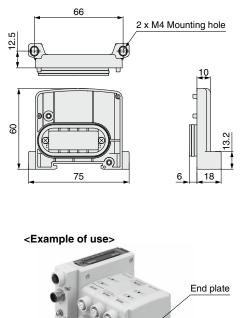
Applicable Cable

Item	Specifications	
Cable O.D.	4.0 to 8.0 mm	
Wire gauge (Stranded wire cross section)	0.34 to 0.75 mm ² /AWG22 to 18	
Core wire diameter (Including insulating material)	1.3 to 2.5 mm	

End Plate

Use when an output block is not being used and a valve manifold is not connected.

EX9-EA03



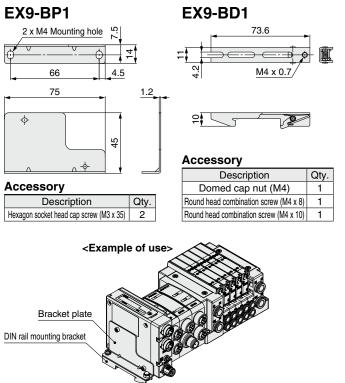
Bracket Plate/DIN Rail Mounting Bracket

2

3

A reinforcing brace used to mount an output block or power block onto an SI unit

To prevent connection failure between products due to deflection, use this bracket plate whenever an output block or power block is mounted.





Precautions on Mixed Usage of Gateway Decentralized System 2 (128 Points) and Gateway Decentralized System (64 Points)

				_	
		GW	Unit		0
		Gateway Decentralized System 2 (128 points) • EX500-GEN2	Gateway Decentralized System (64 points)	pe 1	EX260
		• EX500-GEN2	• EX500-GPR1A	Ty	24/126
	Gateway Decentralized System 2 (128 points) • EX500-S103	Usable	Usable Same functions of Gateway Decentralized System (64 points)		EX123/124/126
SI Unit Input Unit	• EX500-DX			Type 2	
	EX500-S001 EX500-Q001/002 EX500-Q101/102 EEX500-IB1-□ (EX500-IB1)	Usable Same functions of Gateway Decentralized System (64 points)	Usable		EX600



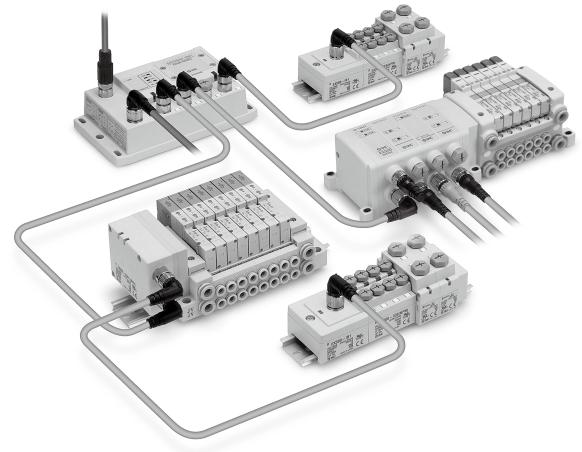
Type 1

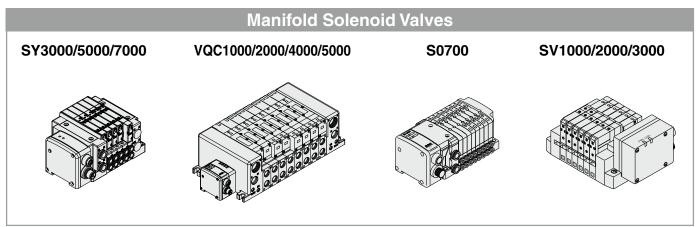
Type 2 EX510

M8/M12

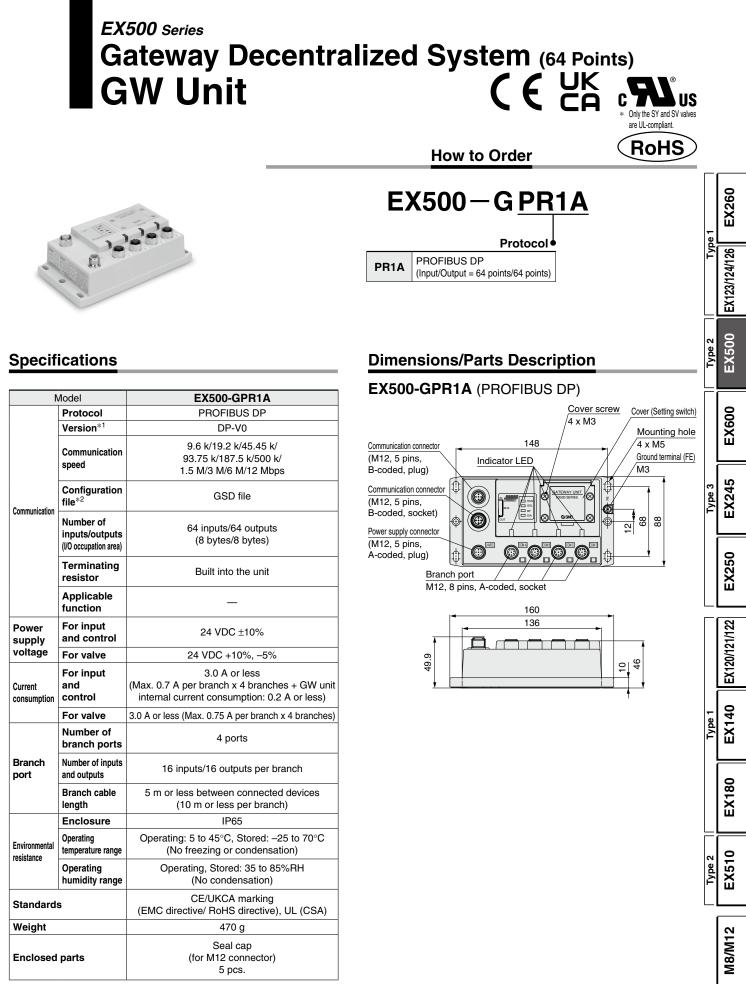


- \star Valve manifolds and input units can be connected around the GW (Gateway) unit.
- \star Compatible with other protocols by replacing the GW unit
- ***** Number of inputs/outputs = 64 points/64 points. The number of outputs (solenoids) per branch is 16 points.
- ★ Number of valve manifold connections = Max. 4 units, Number of input unit connections = Max. 4 units, Cable length = Max. 10 m
- \star No need to set the address for the valve manifolds or input units





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

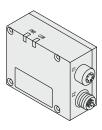
*2 The setting file can be downloaded from SMC website, http://www.smcworld.com

76 ©

ATEX

Output unit for valve manifold connection

For SV1000/2000/3000/4000



How to Order



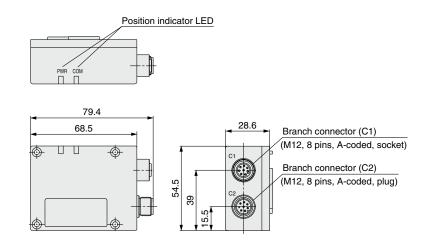
EX500-<u>S</u>001

Specifications

	Model	EX500-S001	
	Number of outputs	16 outputs	
0	Output type	Sink/NPN (Positive common)	
Output	Supply current	Max. 0.65 A	
	Rated voltage	24 V	
Internal curren	ernal current consumption 100 mA or less		
	Enclosure	IP67	
Environmental resistance	Operating temperature range	Operating: 5 to 45°C, Stored: –25 to 70°C (No freezing or condensation)	
resistance	Operating humidity range	Operating, Stored: 35 to 85%RH (No condensation)	
Standards		CE/UKCA marking, UL (CSA), RoHS compliant	
Weight 115 g		115 g	
Enclosed parts Seal cap (for M12 connector socket) 1 pc.		Seal cap (for M12 connector socket) 1 pc.	

Dimensions/Parts Description

EX500-S001



Gateway Decentralized System (64 Points) SI Unit **EX500 Series**

 For SY3000/5000/7000, y0C100/2000/4000/5000, 20700

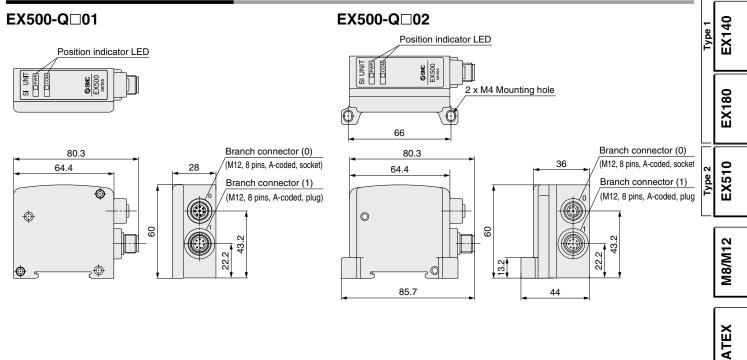
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Specifications

	Model	EX500-Q001 EX500-Q101 EX500-Q002 EX500-Q1		EX500-Q102	
	Number of outputs		16 ou	itputs	
0	Output type	Sink/NPN (Positive common)	Source/PNP (Negative common)	Sink/NPN (Positive common)	Source/PNP (Negative common)
Output	Rated voltage		24 \	/DC	
	Supply current		Max. 0.75 A		
Internal curren	t consumption	nsumption 100 mA or less			
	Enclosure	IP67			
Environmental resistance	Operating temperature range	ge Operating: 5 to 45°C, Stored: -25 to 70°C (No freezing or condensation)		ensation)	
resistance	Operating humidity range	Operating, Stored: 35 to 85%RH (No condensation)			
Standards		CE/UKCA marking, RoHS compliant			
Weight		105 g			
Enclosed parts	5	Seal cap (for M12 connector socket) 1 pc.			

Dimensions/Parts Description



EX260

EX123/124/126

Type 2 EX500

EX600

EX245

EX250

EX120/121/122

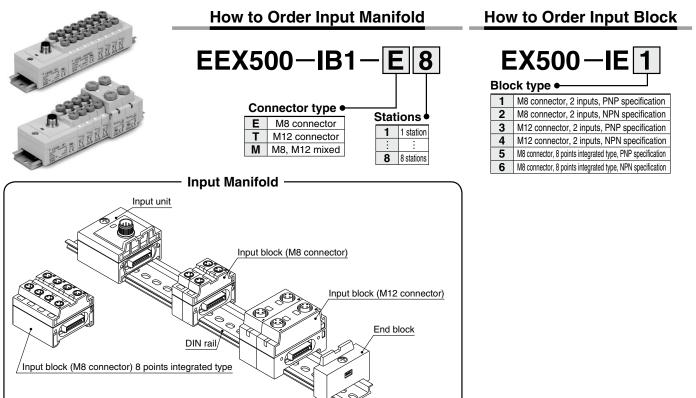
The EX500-IE5/6 input block (M8 connector, 8 points integrated type) as well as input manifolds including the EX500-IE5/6, such as the EEX500-IB1-E and EEX500-IB1-MD, are to be discontinued as of November 2021.

• PNP input (M8 connector)

Please consider ordering the EX500-IE1 (2-point input) or the EX500-DXPA*1 (16-point input) as a substitute. *1 These are not interchangeable products.

NPN input (M8 connector)

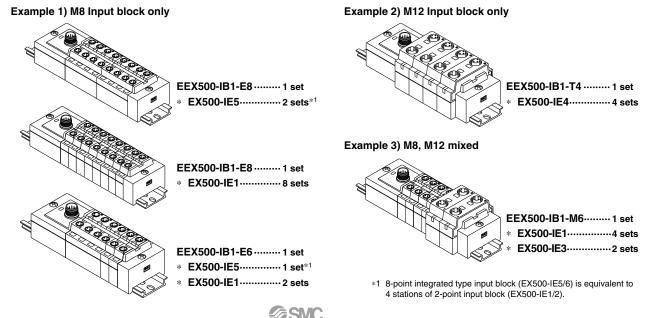
Please consider ordering the EX500-IE2 (2 points) as a substitute.



How to Order Input Manifold [Ordering Example]

When ordering an input unit manifold, enter the Input manifold part number + Input block part number. Please mention the connected input block part numbers in order from the input unit side under the input manifold part number. When an input block layout becomes complicated, indicate in the input unit manifold specification sheet.

* The Input unit, End block and DIN rail are included in the input manifold.



Gateway Decentralized System (64 Points) Input Manifold **EX500 Series**

Specifications (Input Unit)

Model		EX500-IB1	
	Number of inputs	16 inputs	
Input	Connection block	EX500-IE□ (Mixed combination is possible.)	
input	Connection block stations	2-input, input block: Max. 8 stations 8-input, input block: Max. 2 stations	
Internal current con	sumption	100 mA or less	
Enclosure		IP65	
Environmental resistance	Operating temperature range	Operating: 5 to 45°C, Stored: -25 to 70°C (No freezing or condensation)	
resistance	Operating humidity range	Operating, Stored: 35 to 85%RH (No condensation)	
Standards		CE/UKCA marking, UL (CSA), RoHS compliant	
Weight		100 g (Input unit + End block)	

Specifications (Input Block)

	Model	EX500-IE1	EX500-IE2	EX500-IE3	EX500-IE4	EX500-IE5	EX500-IE6	
	Connector type	M8 (3	pins)	M12 (4	4 pins)	M8 (3 pins)		
	Input type	PNP sensor input	NPN sensor input	PNP sensor input	NPN sensor input	PNP sensor input	NPN sensor input	
Innut	Number of inputs 2 ir		2 in	puts		8 inputs		
Input	Input device supply voltage	24 VDC						
	Input device supply current	Max. 480 mA/Input unit manifold						
	Rated input current	Approx. 5 mA						Type
	Enclosure IP65						Ł	
Environmental resistance	Operating temperature range	Operating: 5 to 45°C, Stored: -25 to 70°C (No freezing and condensation)						
resistance	Operating humidity range	Operating, Stored: 35 to 85%RH (No condensation)						
Standards		CE/UKCA marking, UL (CSA), RoHS compliant						
Weight		20) g	40) g	55	5 g	
Enclosed parts		Seal cap (for M8	connector) 2 pcs.	Seal cap (for M12	connector) 2 pcs.	Seal cap (for M8	connector) 8 pcs.	

 Type 2
 Type 1

 M8/M12
 EX510
 EX180
 EX140
 EX120/121/122
 EX250

EX260

EX123/124/126

Type 2 EX500

EX600

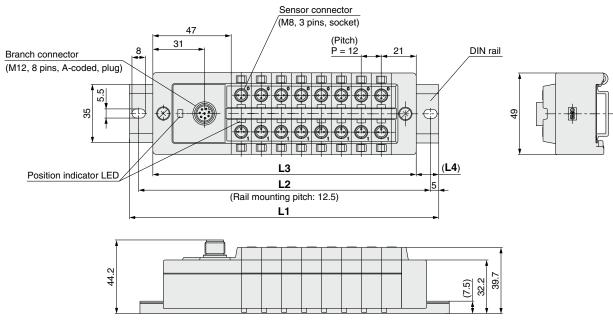
EX245

Lvbe



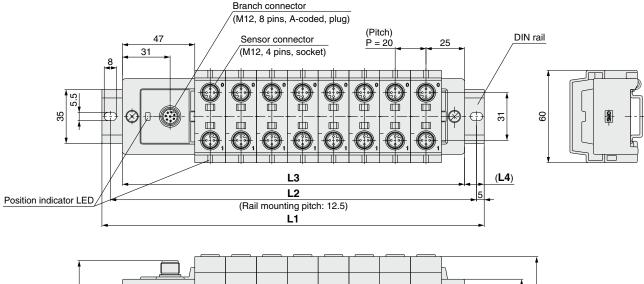
Dimensions/Parts Description

Input block (M8) only



								[mm]
Stations	1	2	3	4	5	6	7	8
Rail length L1	98	110.5	123	135.5	148	160.5	173	185.5
Mounting pitch L2	87.5	100	112.5	125	137.5	150	162.5	175
Manifold length L3	74	86	98	110	122	134	146	158
L4	12	12	12.5	12.5	13	13	13.5	13.5

Input block (M12) only



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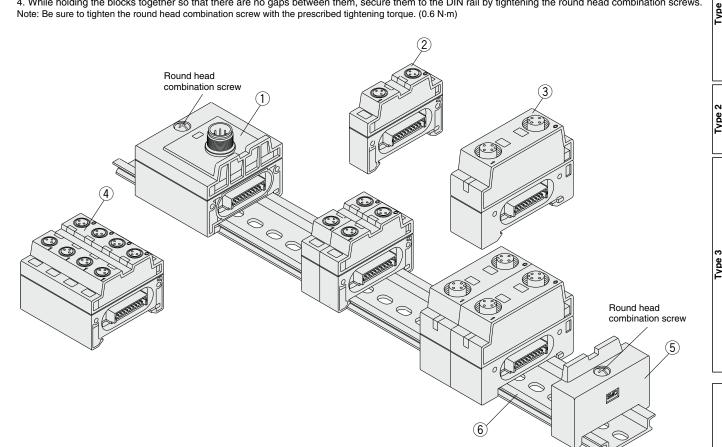
								[mm]
Stations	1	2	3	4	5	6	7	8
Rail length L1	110.5	123	148	173	185.5	210.5	223	248
Mounting pitch L2	100	112.5	137.5	162.5	175	200	212.5	237.5
Manifold length L3	82	102	122	142	162	182	202	222
L4	12	12	12.5	12.5	13	13	13.5	13.5

How to Add Input Block Stations

How to add input block stations

- 1. Loosen the round head combination screws (2 places) that hold the end block.
- 2. Separate the blocks at the locations where stations are to be added.
- 3. Attach the additional blocks to the DIN rail, and connect the blocks so that they fit together securely.

4. While holding the blocks together so that there are no gaps between them, secure them to the DIN rail by tightening the round head combination screws. Note: Be sure to tighten the round head combination screw with the prescribed tightening torque. (0.6 N·m)



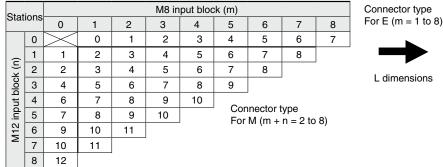
Parts List

No.	Description	Part number	Note		
INO.	Description	For standard	nole		
1	Input unit	EX500-IB1			
2	Input block (M8 connector)	EX500-IE	PNP Specification…□: 1, NPN Specification…□: 2		
3	Input block (M12 connector)	EX500-IE	PNP Specification…□: 3, NPN Specification…□: 4		
4	Input block (M8 connector) 8 points integrated type	EX500-IE	PNP Specification…□: 5, NPN Specification…□: 6		
5	End block	EX500-EB1			
6	DIN rail	VZ1000-11-1-□	: Number based on L dimension (Refer to the table below.)		

SMC

DIN Rail L Dimensions [mm]

Connector type For T (n = 1 to 8)



)	No.	L dimension	No.	L dimension	
	0	98	7	185.5	
	1	110.5	8	198	
	2	123	9	210.5	
	3	135.5	10	223	
	4	148	11	235.5	
	5	160.5	12	248	
	6	173			

EX260

EX123/124/126

EX500

EX600

EX245

EX250

EX120/121/122

EX140 Type.

EX180

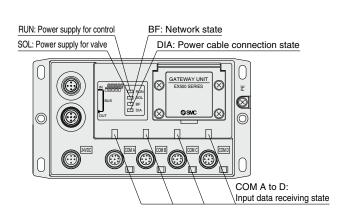
EX510 Type 2

M8/M12

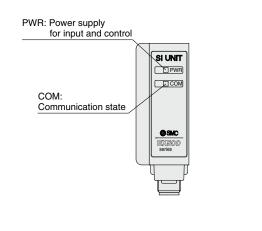
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LED Indicator

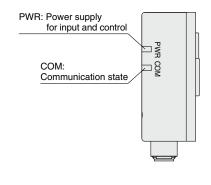
EX500-GPR1A



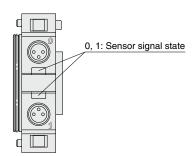
EX500-Q00

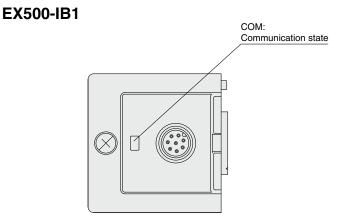


EX500-S001



EX500-IE

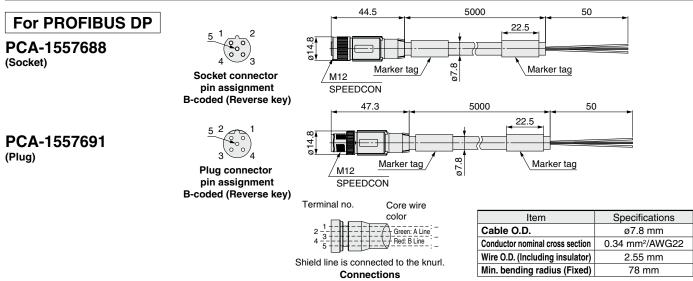




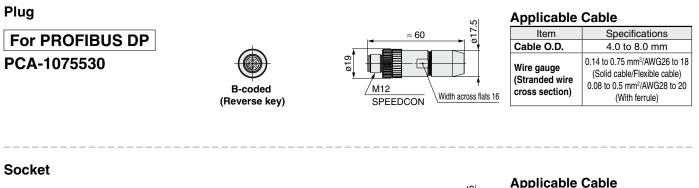
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EX500 Series Gateway Decentralized System (64 Points) Accessories

Communication Cable



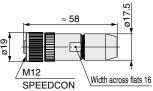
Pield-wireable Communication Connector



For PROFIBUS DP

PCA-1075531

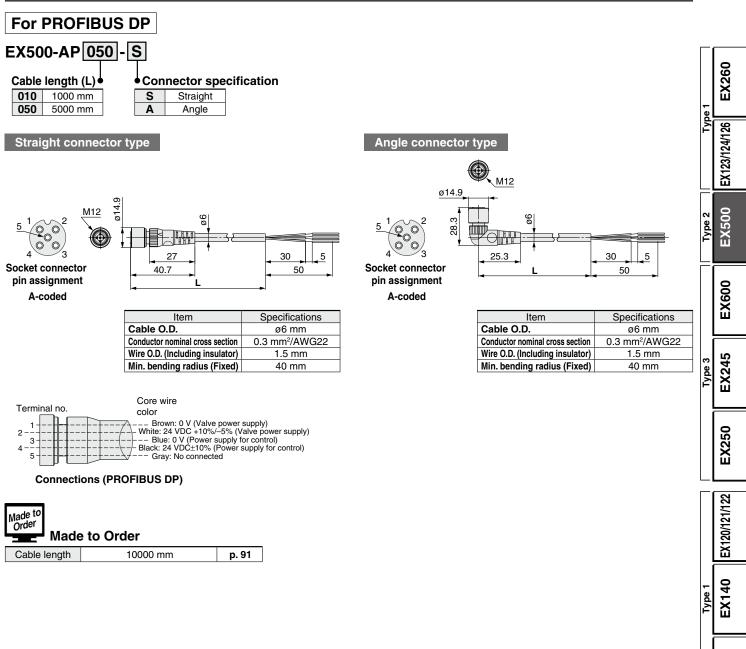




Applicable Cable

Item	Specifications
Cable O.D.	4.0 to 8.0 mm
Wire gauge (Stranded wire cross section)	0.14 to 0.75 mm ² /AWG26 to 18 (Solid cable/Flexible cable) 0.08 to 0.5 mm ² /AWG28 to 20 (With ferrule)

O Power Supply Cable



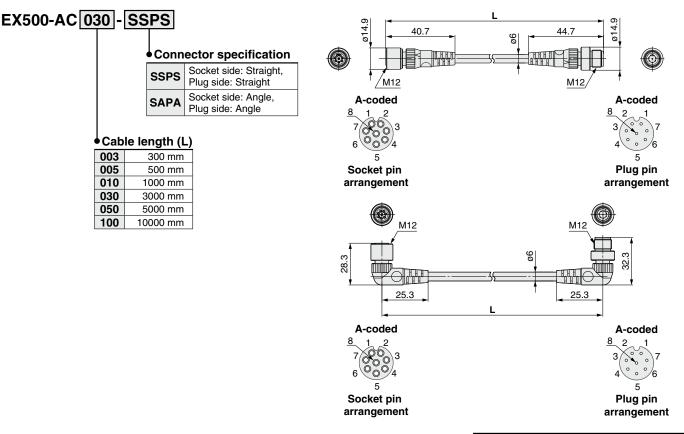
EX180

Type 2 EX510

M8/M12

Branch Cable

Connects the GW unit and SI unit or input unit.

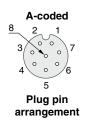


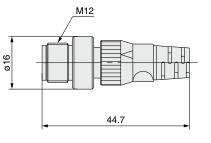
Item	Specifications		
Cable O.D.	ø6 mm		
Conductor nominal cross section	0.25 mm ²		
Wire O.D. (Including insulator)	1.27 mm		
Min. bending radius (Fixed)	40 mm		

5 Terminal Plug

Use this where an input unit manifold is not being used. (If a terminal plug is not used, the GW unit's COM LED will not light up.)

EX500-AC000-S

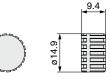




6 Seal Cap (1 pc.)

Use with new connector (plug). By using these seal caps, the new connector maintains IP65/67 enclosure.

EX500-AWTP



Seal Cap (10 pcs.)

Use with new connector. By using these seal caps, the new connector maintains IP65/67 enclosure.

EX9-AWES EX9-AWTS For M8 connector socket For M12 connector socket



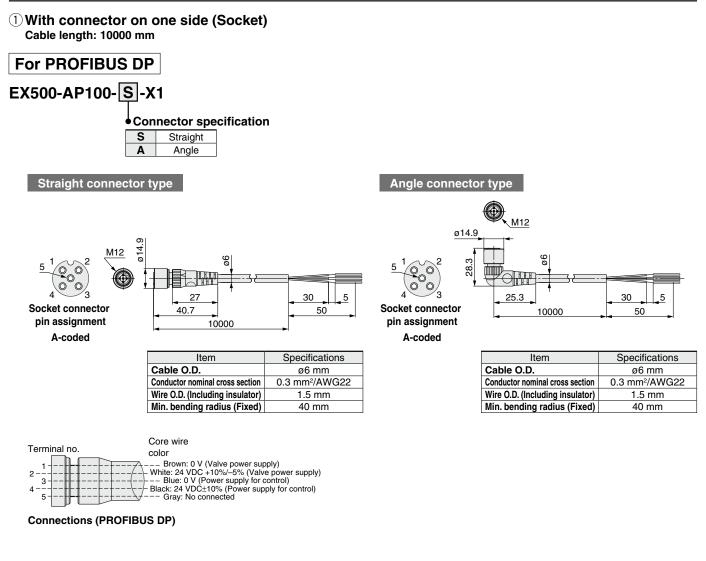
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• Refer to page 71 for details about output block and power block.

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Power Supply Cable

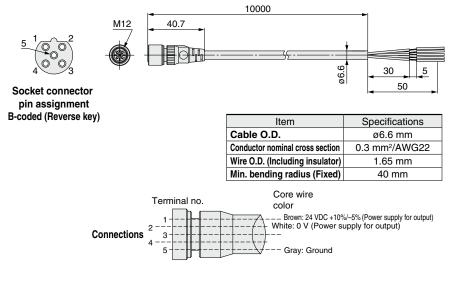


2 With connector on one side (Socket) Cable length: 10000 mm

For Power block

Straight connector type

EX9-AC100-1-X16







EX500 Series **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

\land 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 the products using electrical wiring cables, communication connectors and cables with M12 connectors.
- 2) Suitable mounting of the product and valve manifold.
- 3) Be sure to mount a seal cap on any unused connectors.

If using in an environment that is exposed to water splashes, please take measures such as using a cover.

Adjustment / Operation

▲ Warning

Trademark

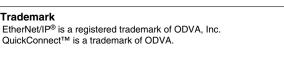
<Web server function>

1. The valve operation test is a function which forcibly changes the signal status. Please check safety of the ambient environment and the device before using this function.

This may cause injuries or equipment damage.

2. If the communication line and PC are shut down during a valve operation test, the valve output status will be held (It remains in the output status before the communication line and/or PC was shut down). Please check safety of the ambient environment and the device when performing this function.

This may cause injuries or equipment damage.



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