SMC Information

SMC Corporation
Akihabara UDX 15F,
4-14-1, Sotokanda, Chiyoda-ku,
Tokyo 101-0021, JAPAN
URL http://www.smcworld.com

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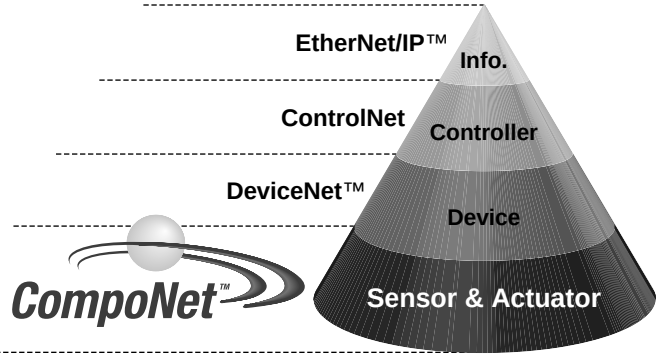
D-DN Printing NP 16400DN

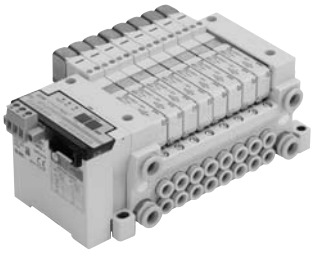
Fieldbus System Compatible with CompoNet™
Series EX120/121/122

■ **CompoNet™ is an open network for sensors and actuators to transmit data and messages at high-speed with a CIP** Note) **control protocol.**

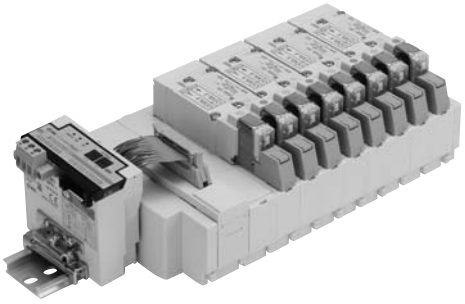
Note) CIP: Common Industrial Protocol

■ **Use of the same standard protocol as DeviceNet™ and EtherNet/IP™ enables transmission of value-added information of a manufacturing site over network layers.**
The CIP for CompoNet™ shares common specifications as DeviceNet™ and EtherNet/IP™, thus enabling application transplants between these CIP networks.

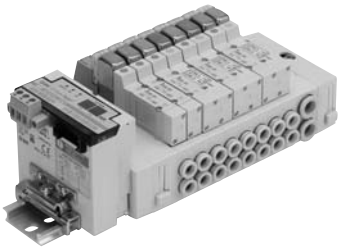




EX120-SCM1 + VQ1000



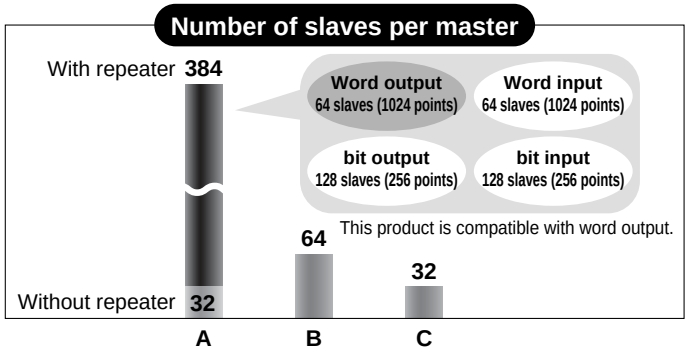
EX121-SCM1 + SY5000



EX122-SCM1 + SY3000

■ **Multiple points**

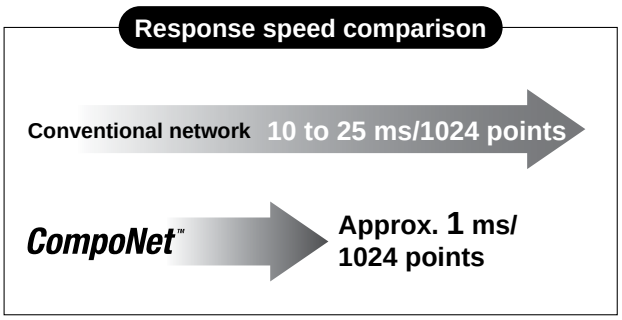
Compatible with 384 slaves by using a repeater



A: CompoNet™ **B**: DeviceNet™ **C**: CompoBus/S

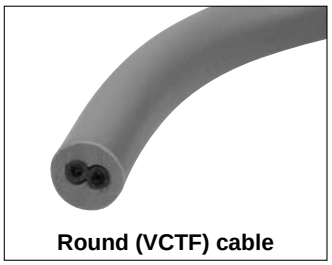
■ **High-speed response**

Realized high-speed data transmission of approx. **1** ms with **1024** points.
Networking of devices required for high-speed response has become possible, thus contributing to reduced takt time.

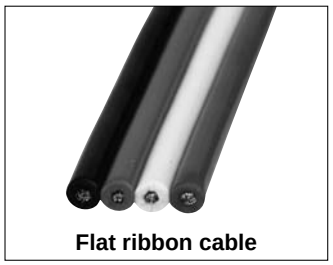


■ **2 types of communication cables**

Can use a round (VCTF) cable which is more available and inexpensive or a dedicated flat ribbon cable which is made by pressure welding and excels in workability, or both cables.

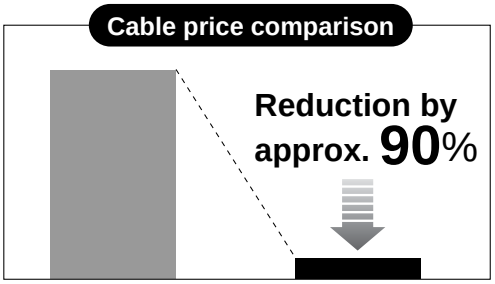


Round (VCTF) cable



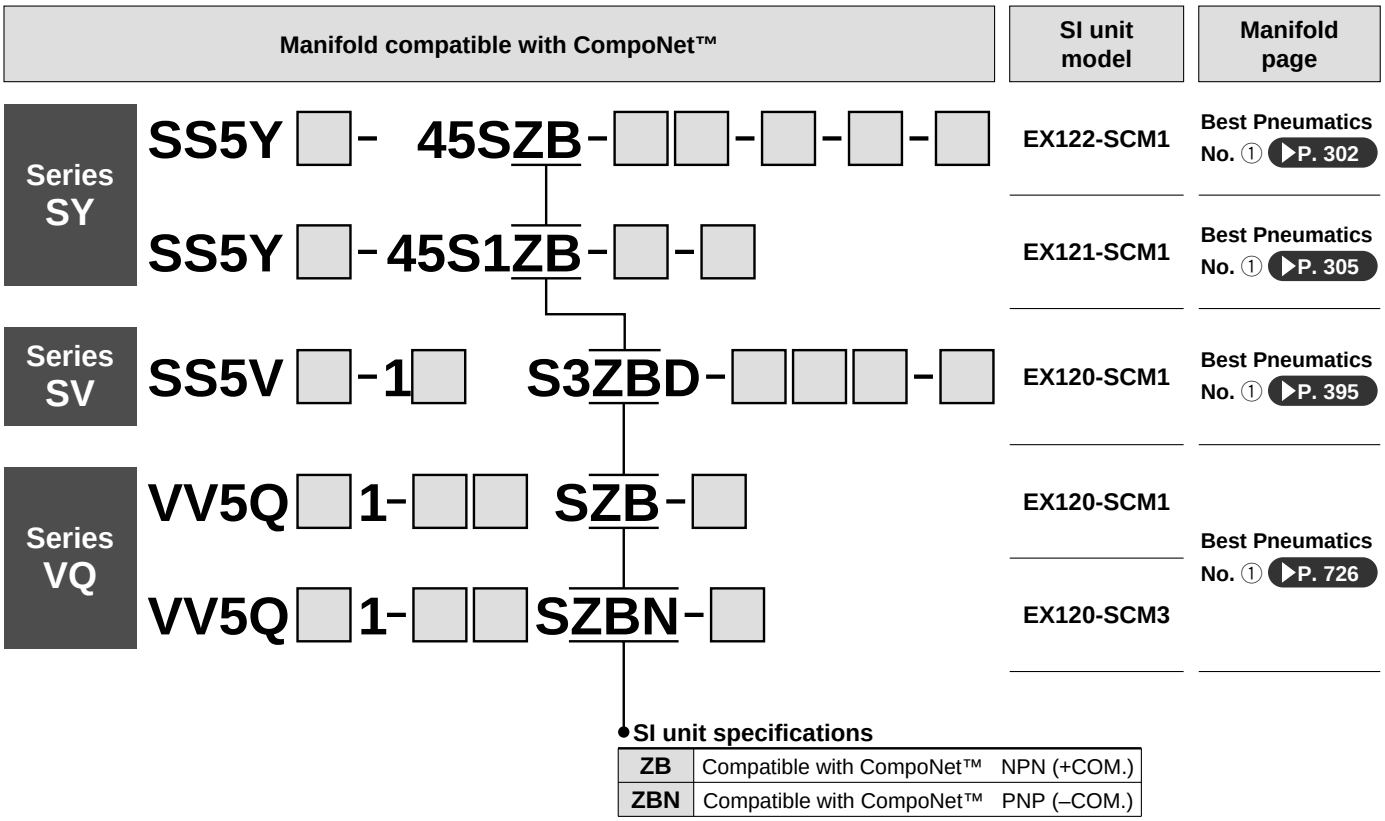
Flat ribbon cable

Use of 2 cable types depending on the application will lead to reduction of total cost.



Fieldbus System
Compatible with CompoNet™
Series EX120/121/122

How to Order



SI unit model EX12□-SCM□

Valve interface

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

Valve common polarity

1	NPN (+COM.)
3	PNP (–COM.)

Communication protocol

CM	CompoNet™

Accessories

Part No.	Option	Remarks
EX9-CCM1	Communication connector	For flat ribbon cable: Pressure welding connector
EX9-CCM2	Communication connector	For round cable: Terminal block type
EX9-CP2	Power supply connector	Straight type (provided with the product)

Communication Specifications

Protocol	CompoNet™
Transmission speed	93.75 kbps, 1.5 M/3 M/4 Mbps
Configuration file	EDS file (Please download it from our website.)
I/O occupation area (Inputs/Outputs)	0/16
Terminator	Not provided

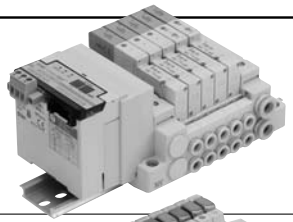
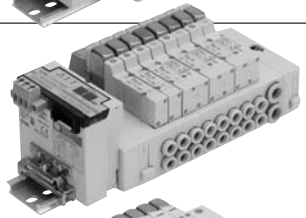
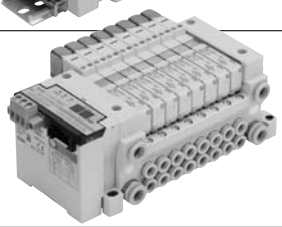
Note) Please confirm the details on transmission speed and settings by downloading the operation manual from our website.

Unit Specifications

Model		EX120-SCM1	EX121-SCM1	EX122-SCM1	EX120-SCM3	EX121-SCM3	EX122-SCM3
Power supply voltage	**For unit**	14 VDC to 26.4 VDC					
	For valve	24 VDC +10%/–5%					
Internal current consumption (Unit)		100 mA or less					
Output specifications	**Output type (Valve common polarity)**	NPN (+COM.)			PNP (–COM.)		
	Number of outputs	16 outputs					
	Load	Solenoid valve with light/surge voltage suppressor 24 VDC, 2.1 W or less (SMC)					
	Fail safe	HOLD/CLEAR (Setting via network)					
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 dew condensation)					
	Withstand voltage	1500 VAC for 1 minute between external terminals and housing					
	Insulation resistance	500 VDC, 2 MΩ or more between external terminals and housing					
	Vibration resistance	10 to 55 Hz with ampiltude of 0.5 mm for 2 hours in each X, Y, Z direction (During de-energizing)					
	Impact resistance	98 m/s^2 3 times in each direction of X, Y, Z direction (During de-energizing)					
Standard		CE marking					
Accessory		Power supply connector (EX9-CP2), 1 pc. Note)					

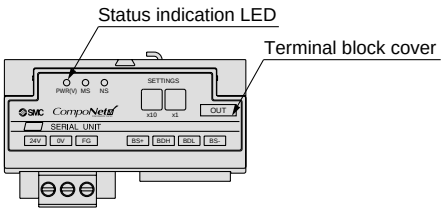
Note) Communication connector (on the customer side) is not provided.

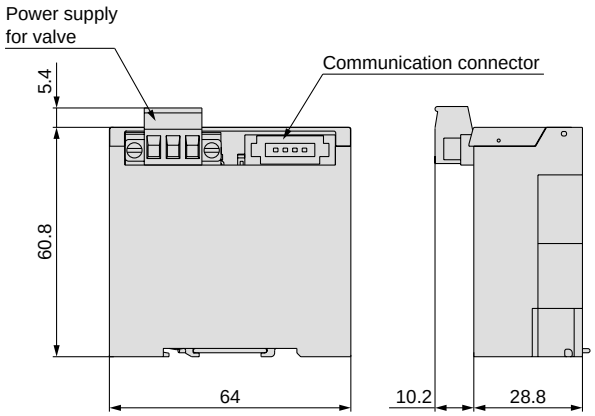
Applicable Solenoid Valve Series

		EX120	EX121	EX122
SV 	1000	●	—	—
	2000	●	—	—
	3000	●	—	—
	4000	●	—	—
SY 	3000	—	●	●
	5000	—	●	●
VQ 	1000	●	—	—
	2000	●	—	—

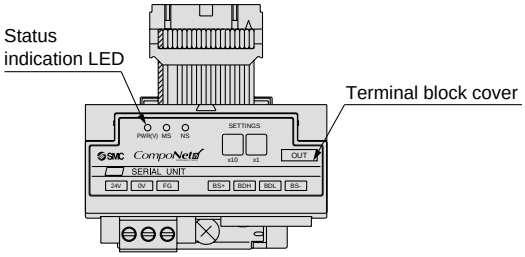
SI Unit Dimensions

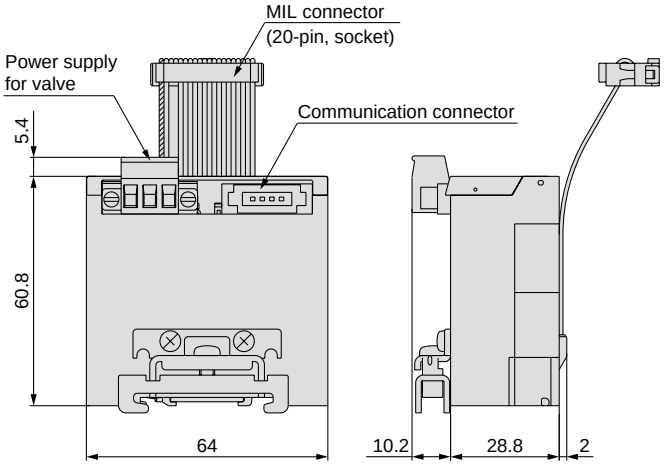
EX120-SCM□



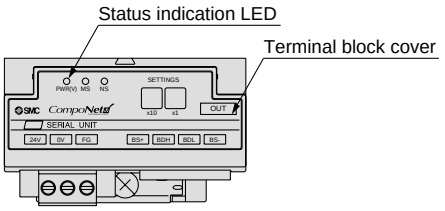


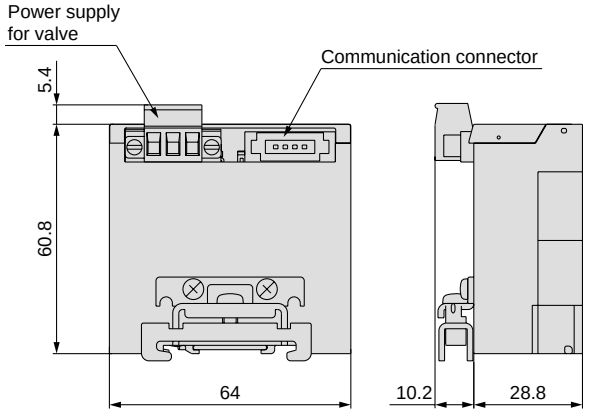
EX121-SCM□





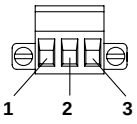
EX122-SCM□





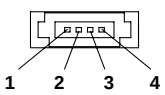
Wiring

● Power supply connector



No.	Terminal	Function
1	24 V	Power supply for solenoid valve, 24 VDC
2	0 V	Power supply for solenoid valve, 0 V
3	FG	Ground wire

● Communication connector Note)



No.	Terminal	Function
1	BS+	Communication power supply +end
2	BDH	Communication data High end
3	BDL	Communication data Low end
4	BS-	Communication power supply –end

Note) Only inner hook-type communication connectors are compatible.
Connector on the customer side is not provided.

	Communication connectors/Part No.		
	SMC	OMRON Corp.	Honda Tsushin Kogyo
Pressure welding connector for flat ribbon cable	EX9-CCM1	DCN4-BR4	—
Terminal block type for round cable	EX9-CCM2	—	HCN-TB4LMZG+