



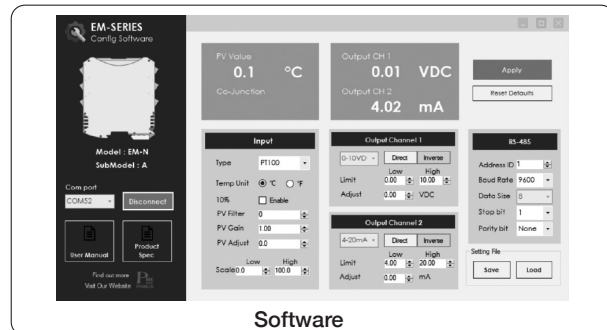
Description

- Programmable Signal Transmitter EM-XN-Series : A device for converting electrical signals into standard analog signals.
- Input Type and Range can be programmed within a single unit.
- Supports input types: AC/DC Current, AC/DC Voltage, Resistance, and Multi Input for Thermocouple, PT100 (RTD).
- Standard analog output: 4-20 mA, 0-10 VDC.
- Input and Output are independent of each other (Isolation and Linearity).
- Maximum of 2 outputs.
- Capable of communicating with a computer via RS-485 Modbus RTU Protocol.
- DIN RAIL Mounting.
- LED indicator for power supply status.

Operation

EM-XN-Series functions by converting input signals into standard linearity analog signals (4-20mA or 0-10VDC), with isolation between the Input and Output grounds.

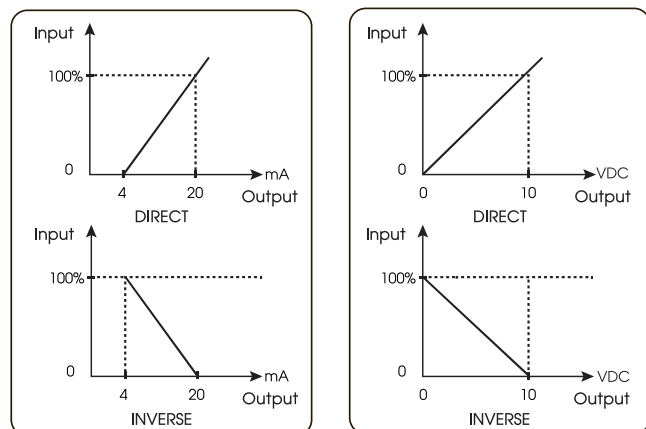
The output signals can be connected to various measuring instruments. Additionally, users can program the range for each Input and Output to operate in either Direct or Inverse mode within the same unit via the EM-SERIES Config Software.



Software

The output signal can be programmed to operate in both Direct and Inverse modes: Direct is when the Input is directly proportional to the Output. Inverse is when the Input is proportional to the Output (in an inverse manner). As shown in graph (1).

Output Graph Operation



Input 4-20 mA

Pic (1)

Input 0-10 VDC

Specification

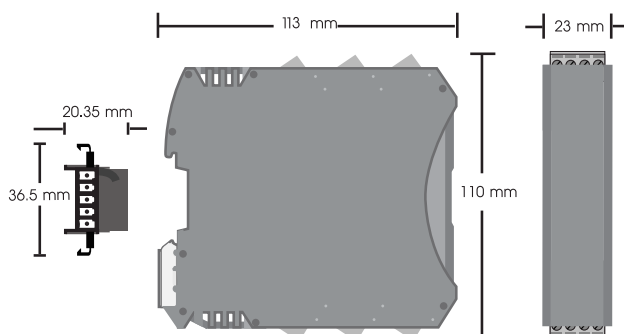
Power Supply		100-250VAC 50-60Hz
		12-24VDC
Power Consumption		4VA Max.
Input	Channel	1 Input Channel
	Thermocouple	Type K, J, R, T, N, S, E
	RTD	PT100
	Resistance	0-100Ω, 0-1kΩ, 0-10kΩ, 0-100kΩ
	DC Current	0-20mA, 4-20mA, 0-100mA
	AC Current	5 A
	DC Voltage	0-75mV, 0-150mV, 0-1V, 0-10V, 0-500V
	AC Voltage	500V
Sampling Time		250mS
Output	Channel	2 Output Max.
	Analog Output	4-20 mA Maximum 500 Ω
		0-10 VDC Minimum 1 kΩ
	Accuracy	± 0.2% F.S
Communication	Protocol	Modbus RTU, RS-485
	Baud Rate	4800, 9600, 19200, 38400, 57600
	Stop Bits	1, 2
	Parity Bits	None, Even, Odd
	Support Node	255 Max.
Ambient Operation	Temperature	-10 °C to 60 °C
	Humidity	<85 % RH Non-Condensing
Ambient Storage	Temperature	-20 °C to 80 °C
	Humidity	<85 % RH Non-Condensing
Protection Degree		IP20
Installation		DIN RAIL
Material		ABS-V0
Size (mm.)		23 x 113 x 110
Weight (kg.)		150

Graph 1 [Input Table]

Code 2	Input Type	Instrument Input Range	PV/Setting Range	Prescale
A	Thermocouple Type K	-200 to 1372 °C	-2000 to 13720	10
	Thermocouple Type J	-200 to 1200 °C	-2000 to 12000	10
	Thermocouple Type R	-50 to 1680 °C	-500 to 16800	10
	Thermocouple Type T	-200 to 400 °C	-2000 to 4000	10
	Thermocouple Type N	-200 to 1300 °C	-2000 to 1300	10
	Thermocouple Type S	-50 to 1768 °C	-500 to 17680	10
	Thermocouple Type E	-200 to 1000 °C	-2000 to 10000	10
	PT100	-200 to 680 °C	-2000 to 6800	10
	0-20mA	0 to 20mA	0 to 20000	1000
	4-20mA	4 to 20mA	4 to 20000	1000
	0-100mA	0 to 100mA	0 to 10000	100
	0-75mVDC	0 to 75mVDC	0 to 7500	100
	0-150mVDC	0 to 150mVDC	0 to 15000	100
	0-1VDC	0 to 1VDC	0 to 10000	1000
	0-10VDC	0 to 10VDC	0 to 10000	1000
B	0-500VDC	0 to 500VDC		
C	0-500VAC	0 to 500VAC		
D	0-5A.AC	0 to 5A.AC		
E	0-100Ω	0 to 100Ω		
	0-1 kΩ	0 to 1 kΩ		
G	0-10 kΩ	0 to 10 kΩ		
	0-100 kΩ	0 to 100 kΩ		

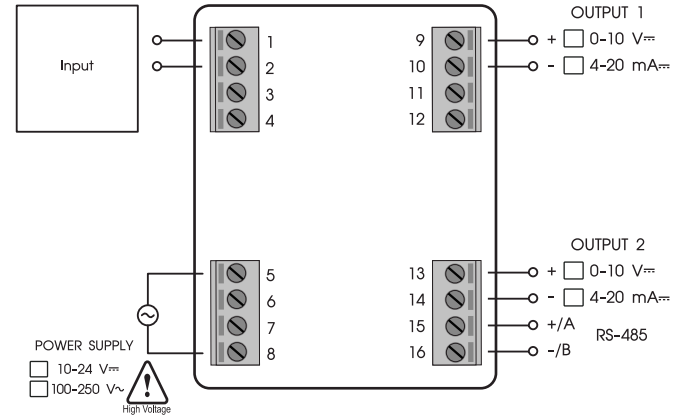
Dimension

• EM-XN-SERIES

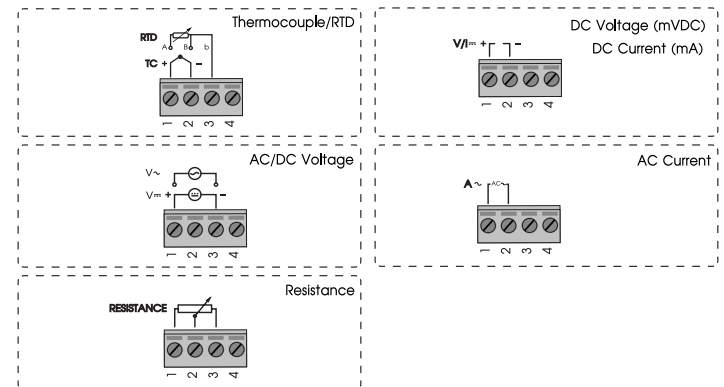


Wiring Diagram

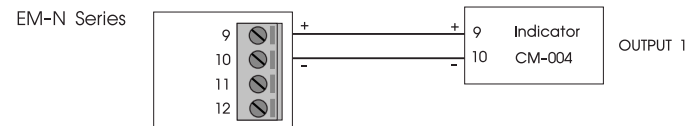
Input Diagram



Input Diagram



Output Diagram (Example)



Ordering Code

EM- N - - - - - Range Input on Request

Input	
X	For Programmable Input Select Order Code2. From Table1. ***สามารถตั้งค่า Inverse Output ได้จากการโปรแกรม

Option	
0	NONE
M	RS-485

Power Supply	
220	100-250VAC
24	12-24VDC

Output 1	
0	NONE
G	0-10VDC
I	4-20mA
V	10-0VDC (Inverse)
C	20-4mA (Inverse)

Output 2	
0	NONE
G	0-10VDC
I	4-20mA
V	10-0VDC (Inverse)
C	20-4mA (Inverse)