



Description

- Digital Signal Transmitter: IM-Series is a device that converts electrical signals into standard analog signals using a digital system, featuring a display for easy operation.
- Input and Output: Users can select input types and adjust High-Low limits via push buttons, allowing for customizable signal conversion ranges.
- Supports input types of AC/DC Current, AC/DC Voltage, Frequency, RPM, and Multi-Input for Thermocouple and PT100 (RTD).
- 2 Standard Analog Outputs:
 - Current: 4-20mA
 - Voltage: 0-10VDC
- Input and Output are isolated from each other.
- Programmable Output: Can be set to either Direct or Inverse signals.
- Peak Hold Function displays the maximum measured value.
- Lock Key Function to reverts unauthorized changes to settings via the button switches.
- DIN RAIL Mounting Installation.
- Communicating with computers via RS-485 Modbus RTU Protocol.
- 1-row, 4-digit 7-Segment digital display, capable of showing both input and output signal values.
- 4 Alarm Functions.

Operation

IM-SERIES convert input signals into standard analog signals of 4-20mA or 0-10VDC, with electrical isolation between the input and output grounds(Isolation).

The output signal can be connected to various measuring instruments. Additionally, users can program the output signal behavior as follows:

- Direct: The input and output vary proportionally (in the same direction) - Inverse: The input and output vary inversely (in opposite directions), as shown in Picture (1).

Output options are available in multiple formats, including 4-20mA, 0-10VDC, Relay, and RS-485, depending on the order code.

Specification

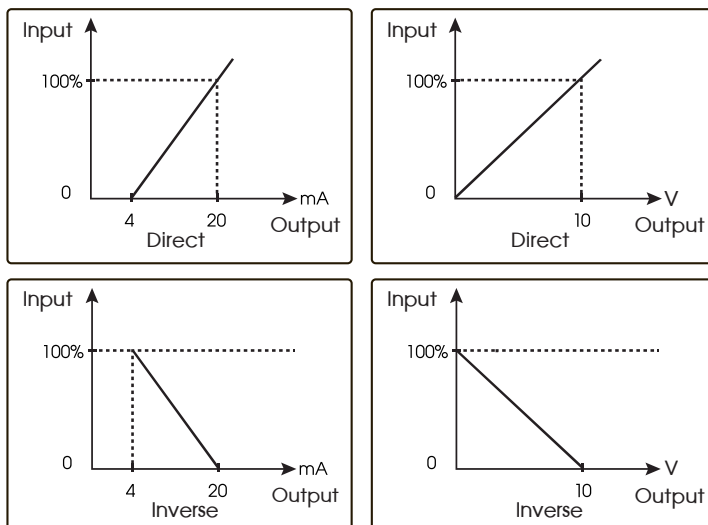
Model.		IM-A	IM-B	IM-C	IM-D	IM-F
Power Supply		90-240VAC 50-60Hz				
		24VAC/VDC				
Power Consumption		3.5VA				
Display		7-Segment size 0.4 inch 4 Digit				
Input	Thermocouple	Type : K, J, R, T, N, S, E	-	-	-	-
	RTD	PT100	-	-	-	-
	DC Current	0-20mA, 4-20mA	-	-	-	-
	AC Current	-	-	-	0-5A.AC	-
	DC Voltage	0-75mVDC, 0-150mVDC, 0-1VDC, 0-5VDC, 1-5VDC, 0-10VDC	0-500VDC	-	-	-
Input	AC Voltage	-	-	0-500VAC	-	-
	Freequency	-	-	-	-	0-10kHz
	RPM	-	-	-	-	0-9999 RPM
	Accuracy	±0.25% FS @ 25 °C				
	Sampling Time	250 mSec				

Specification (Continue)

Model.		IM-A	IM-B	IM-C	IM-D	IM-F
Output	Max	2 Output				
	Alarm Relay	Relay contact, 250VAC/5A				
	Current	4-20mA DC				
	Voltage	0-10VDC				
	Impedance	Maximum Load 500Ω for 4-20mA Output				
		Minimum Load 1kΩ for 0-10VDC Output				
	Accuracy	4-20mA ±0.05% FS				
		0-10VDC ±0.05% FS				
Communi- cation	Protocol	MODBUS RTU				
	Baud Rate	2400, 4800, 9600, 19200, 38400, 57600 bps				
	Parity	None, Even, Odd				
	Data Bit	8 Bit				
	Stop Bit	1,2				
	Support Device Node	128				
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	Case Protection Rating	IP30				
Installation		DIN RAIL Mounting				
Material		ABS-V0				
Size (mm.)		36 x 100 x 90				
Weight (kg.)		225				

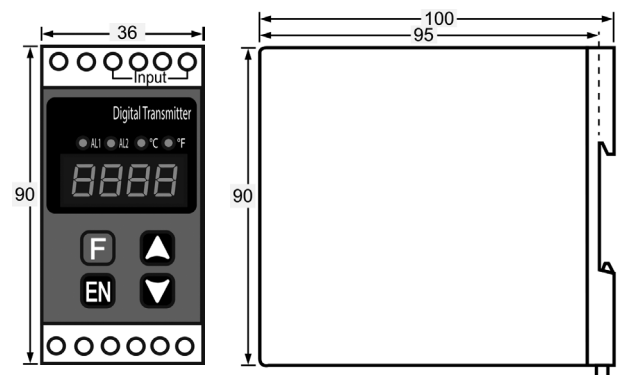
Output signal graph

Picture (1)



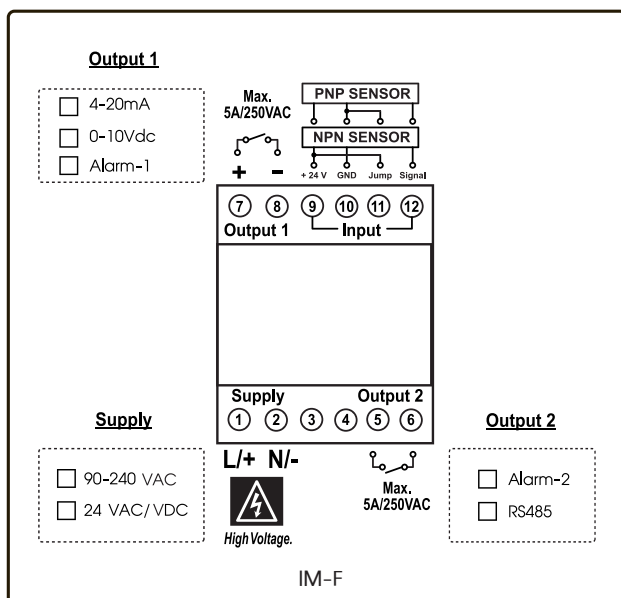
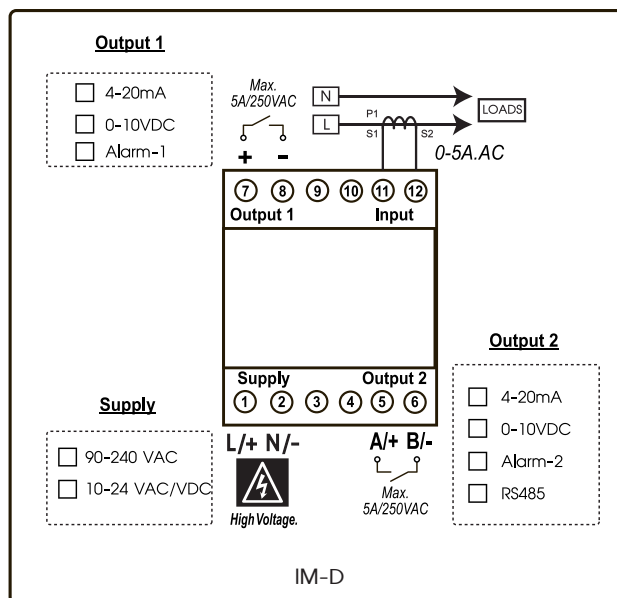
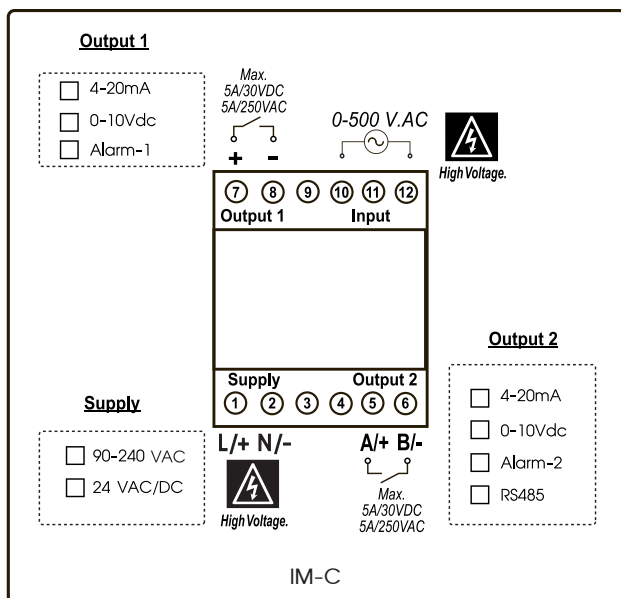
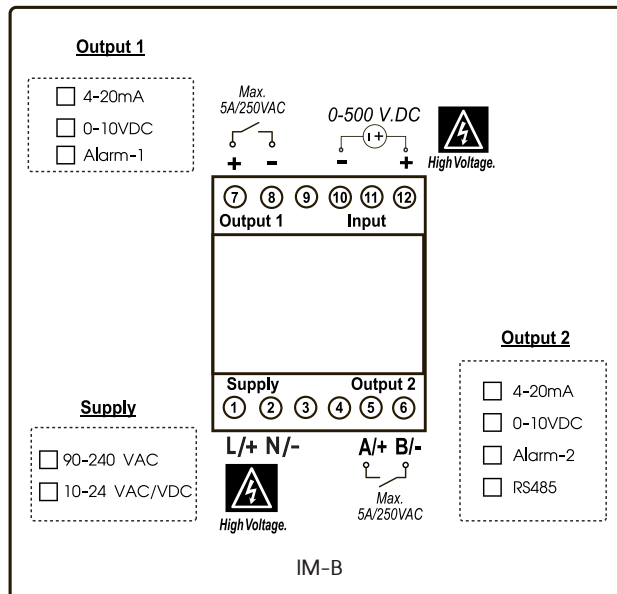
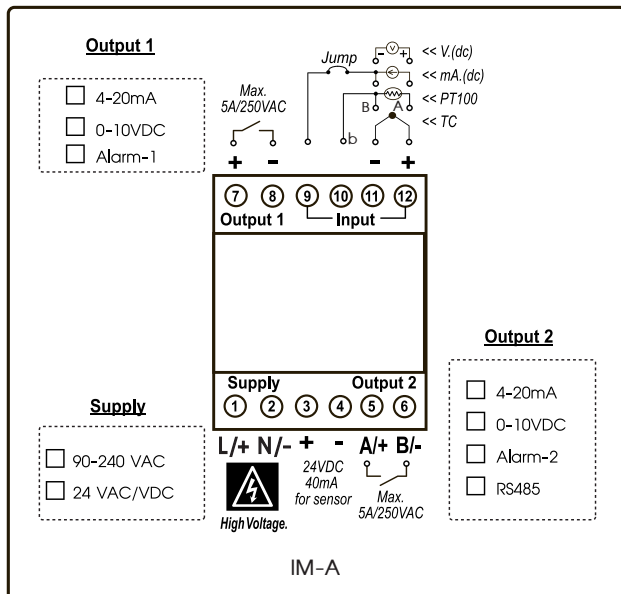
Dimension

IM-SERIES



Unit : mm.

Wiring Diagram



WARNING

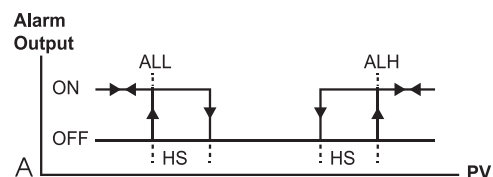
- Make sure the correct wiring connection before turning on electricity. Mis-wiring may cause malfunction of the unit and fire.
- Never modify the unit to prevent damage or incident such as malfunction and fire etc.

Table 1 [Input Table]

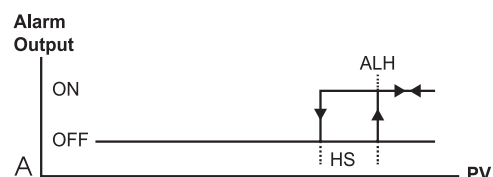
Order code	Input Type	Range
A	Thermocouple Type K	- 200 to 1372°C
	Thermocouple Type J	-200 to 1200°C
	Thermocouple Type R	-50 to 1768°C
	Thermocouple Type T	-200 to 400°C
	Thermocouple Type N	-200 to 1300°C
	Thermocouple Type S	-50 to 1768°C
	Thermocouple Type E	-200 to 1000°C
	Pt100	-200 to 850°C
	0-20 mA	0 to 20 mA
	4-20 mA	4 to 20 mA
	0-75 mVDC	0 to 75 mVDC
	0-150 mVDC	0 to 150 mVDC
	0-1 VDC	0 to 1 VDC
	0-5 VDC	0 to 5 VDC
	1-5 VDC	1 to 5 VDC
	0-10 VDC	0 to 10 VDC
B	0-500 VDC	0 to 500 VDC
C	0-500 VAC	0 to 500 VAC
D	0-5 AAC	0 to 5 AAC
F	Frequency	0-10 kHz
	RPM	0-9999 RPM

ALARM OUTPUT

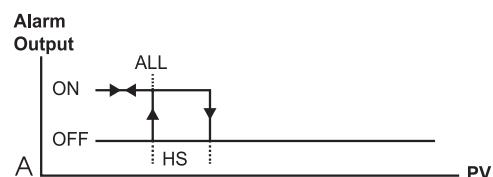
1. Absolute value High Low Band Alarm



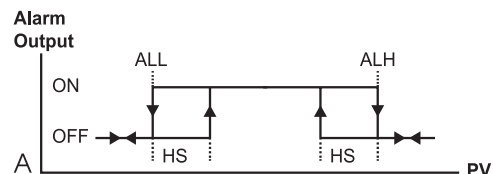
2. Absolute value High Alarm



3. Absolute value Low Alarm



4. Absolute value High Low Range Alarm



Ordering Code

Input		Output 1		Output 2		Power Supply		Special Range
A	Thermocouple, PT100, mV, mA	0	NONE	0	NONE	220	90-240VAC	Requested Input Range
B	0-500VDC	G	0-10VDC	G	0-10VDC	24	24VAC/DC	
C	0-500VAC	I	4-20mA	I	4-20mA			
D	0-5A	R1	Relay	R2	Relay			
F	Frequency, RPM			M	RS-485			
S	Special Input							

*Remark: Reference table 1 (Input table)

Example : IM-A-R1-I-220

• IM model Input is Thermocouple Type K, Out1 is Alarm Relay (R1), Out 2 is 4-20mA (I), Supply 100-240VAC