



405-4IN Large Display Indicator

Advanced Features with Large Display

405-4IN is the large display Indicator which can be monitored up to distance of 160 feet (50m). Its large digits facilitate process value to be monitored across wider geographical area in plant. It has most advanced features for monitoring and communication of process status.

This Indicator accepts 18 different industry standard inputs with high accuracy of 0.1% to measure temperature, pressure and other process variables. It can be interfaced with SCADA/PLC using optional RS485 communication and analog retransmission output for process automation. It has two-way communication facility allowing user to read and write PV over Modbus between any Master device and Indicator.

Alarm can be configured for two set points which are indicated on front Status LEDs. This Indicator has SMPS power supply for smooth and reliable performance. It is also equipped with transmitter power supply.

Features

- 4" (100mm) Large LED Display
- 18 selectable input types (TC, RTD, mV, mA, V, Ω)
- Transmitter Power Supply
- RS485 serial communication (optional)
- Two-way communication facility over Modbus
- Programmable retransmission output (optional)
- Two programmable alarm outputs (optional)
- Available in IP20 Panel & IP20/IP65 Wall mount option

Applications

- Temperature & process indication
- Pressure/ Level/ Flow Monitoring
- Plastics molding/extrusion temperature monitoring
- Heat treatment - furnace temperature monitoring
- Weighing platform
- Remote Process Supervision

Technical Specifications

Input	
Input Type	Thermocouple (E, J, K, T, B, R, S), RTD (Pt100), Current, Voltage, Resistance
Display Range	Table-1
Accuracy	±0.1% of FS (B, R, S, 0-6KΩ: ±0.15% of FS)
ADC Resolution	15 bits
Display Resolution	1°C/ 1 Count
Sampling Rate	4 Samples/Sec
CJC Error	±2.0 °C
Sensor open	All inputs except 0-5V
Sensor Burnout current	0.25uA
RTD excitation current	1mA (Approx.)
NMRR	> 50 dB
CMRR	> 100 dB
Temp-co	< 150ppm/°C
Input Impedance	> 1MΩ
Max Voltage	20VDC

Special function	Square root extraction
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Display & Keys	
Process Value	4" Four-digit Seven segment Red LED
Set Value	Same as PV Display
Status Indication	Red LEDs
Keys	Menu, Increase, Decrease

Output

Retransmission Output (Optional)	
Number of output	1 (one)
Output Signal	4-20mA/ 0-20mA/1-5VDC/ 0-10V DC
Load resistance	
For Current o/p	600Ω Max.
For Voltage o/p	2KΩ Min.
Output accuracy	±0.25% of span

Alarm Output (Optional)	
Relays	2 Nos.
Type	Single Change over (C, NO, NC)
Rating	2A @ 230VAC / 30VDC

Communication (Optional)	
Interface	RS485 (2 Wire)
Protocol	Modbus-RTU
Baud Rate	2400, 4800, 9600

Transmitter Power Supply	24VDC (±5%) @50mA
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Power Supply	
Supply Voltage	85-265VAC/ 125-300VDC
Power Consumption	<12VA

Isolation (Withstanding voltage)

- Between primary terminals* and secondary terminals**: **At least 1500 V AC for 1 minute**
- Between primary terminals* and grounding terminal: **At least 1500 V AC for 1 minute**
- Between grounding terminal and secondary terminals**: **At least 1500 V AC for 1 minute**
- Between secondary terminals**: **At least 500 V AC for 1 minute**

* Primary terminals indicate power terminals and relay output terminals.
** Secondary terminals indicate analog I/O signal and Communication O/P.

Insulation resistance: 20MΩ or more at 500 V DC between power terminals and grounding terminal

Physical		
Enclosure Protection	IP20	IP65
Mounting	19" Rack / Panel Mount / Wall Mount	Wall Mount
Enclosure Material	Aluminum	MS Powder Coated
Dimensions (in mm)	177(H) x 483(W) x 110(D)	300(H) x 500(W) x 120(D)
Weight	5 Kg (Approx.)	8.3 Kg (Approx.)
Wiring	2.5 Sq. mm Terminal	2.5 Sq. mm Terminal
Standard Accessories	Not Applicable	4 Nos. Wall Mounting Bracket. 3 Nos. of PG 13 Gland (For Cable entry).

Environmental	
Operating temperature	0 to 55 °C
Storage temperature	-40 to 85 °C
Humidity	20 to 95 % at 40 °C non-condensing

Table-1: Display Range		
Input Type		Range
Thermocouples	E	-200 to 1000°C
	J	-200 to 1200°C
	K	-200 to 1372°C
	T	-200 to 400°C
	B	450 to 1820°C
	R	0 to 1768°C
RTD	S	0 to 1768°C
	Pt-100	-199.9 to 850.0°C
Resistance	0-400Ω	-1999 to 9999
	0 - 6000Ω	
	1-5V	
Linear	0-5V	
	0-75mV	
	±75 mV	
	0-10 V	

Ordering code

Model	Input	Communication	Relay	Retransmission o/p	Mounting Protection					
405-4IN	1	E	N	None	N	None	P0	19" Rack (IP20)		
	2	J	Y	RS485	Y	2 Relays	C	4-20mA	W0	Wall (IP20)
	3	K					D	0-20mA	W1	Wall (IP65)
	4	T					E	1-5V		
	5	B					F	0-5V		
	6	R					G	0-10V		
	7	S								
	9	Pt-100								
	C	4-20mA								
	D	0-20mA								
	E	1-5V								
	F	0-5V								
	G	0-10V								
	R	±75mV								
	U	0-75mV								
	V	0-400Ω								
	W	0-6000Ω								