



## 405-4IN

### Large Display Indicator

Largest Display with Advanced Features

405-4IN is the largest 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 RS485 communication and analog retransmission output for process automation. It has Full-duplex communication facility allowing user to monitor desired parameter of a server on Indicator display.

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,  $\Omega$ )
- Transmitter Power Supply
- RS485 serial communication
- *Modbus Slave* (Full duplex communication for remote display)
- Programmable retransmission output
- Two programmable alarm outputs
- Available in 19" Rack mount enclosure
- Also available with Wall mount IP65 enclosure



## 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

### Display & Keys

Process Value	4" Four-digit Seven segment Red LED
Set Value	Same PV display
Status Indication	Red LED's
Keys	Menu, Increase, Decrease

### Output

Sensor/Transmitter Supply	24VDC (±5%) @50mA
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### Retransmission Output

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

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

### Communication

Standard	RS485
Protocol	Modbus-RTU
Baud rate	2400, 4800, 9600

### Power Supply

Supply Voltage	85-265VAC/ 125-300VDC
Power consumption	<12 VA

### 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

Mounting	19" Rack Mount	Wall Mount
Enclosure Protection	IP20	IP65
Enclosure material	Aluminum	MS Powder Coated
Dimensions (mm)	483(W)x 177(H)x 110(D)	500(W) x 300(H) x 120(D)
Weight	5 Kg (Approx.)	8.3 Kg (Approx.)
Wiring	2.5 Sq. mm Terminal	2.5 Sq. mm Terminal
Standard Accessories	2 mounting clamps	NA

### Environmental

Operating temperature	0-55 °C
Storage temperature	0-80 °C
Humidity	20-95 %RH non-condensing

**Special function:** Square root extraction: Available

**Table-1: Display Range**

Input Type	Range	
<b>Thermocouples</b>	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
<b>RTD</b>	S	0 to 1768°C
	Pt-100	-199.9 to 850.0°C
<b>Resistance</b>		0 - 400Ω
		0 - 6000Ω
<b>DC Voltage</b>	1-5V	-1999 to 9999
	0-5V	-1999 to 9999
	0-75mV	-1999 to 9999
	±75 mV	-1999 to 9999
	0 to 10 V	-1999 to 9999

### Ordering Code

Model	Input	Mounting (Protection)
<b>405-4IN</b>	1	E P0 19" Rack (IP20)
	2	J W0 Wall (IP65)
	3	K
	4	T
	5	B
	6	R
	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	

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All specifications are subject to change without notice due to continuous improvements.  
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