



409-4IN

409-6IN

Large Display Indicator

Model 409-4IN and 409-6IN are the large display indicator which can be monitored up to distance of 160 feet (50m). 409-4IN has 100 mm Red LED display and 409-6IN has 150 mm P10 based red LED module display. Its large digit facilitates process value to be monitored across wider geographical area in plant. It has most advanced features for monitoring and communication of process status.

Model 409-4IN / 409-6IN accepts 21 different industry standard inputs with high accuracy of 0.1% to measure temperature, pressure and other process variables. It is easy to operate and configuration is user friendly. CJC compensation for thermocouple input is done through software for higher accuracy.

Model 409-4IN / 409-6IN can be interfaced with SCADA/PLC using optional RS-485 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.

Model 409-4IN utilizes its unique feature of LED brightness control which enables plant engineers/operators to adjust intensity of controllers' LED display in order to achieve comfort for eyes.

Model 409-6IN display has a high brightness for outdoor application

Model 409-4IN / 409-6IN is equipped with advanced functions like digital filtering, password setting, input and output protection and square root function for optimum process functionality.

Features

- 409-4IN: 4" (100mm) large red LED display
- 409-6IN: 6" (150mm) large P10 based red LED module
- 21 selectable input types (TC, RTD, mV, mA, V, Ω)
- Transmitter power supply
- RS485 serial communication (Optional)
- PV write facility via serial input
- Programmable retransmission output (Optional)
- Two programmable alarm outputs (Optional)
- Available with 19" Rack & IP65 wall mount enclosure
- Display brightness control
- Serial RS-485 Input (Modbus slave read/write)
- Input scalability for linear input type
- Square root extraction for linear input type.
- Selectable digital filter 0-60 sec.
- 409-6IN display has a high brightness for outdoor application

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				Isolation (Withstanding Voltage)						
Input Type	Thermocouple (E, J, K, T, B, R, S), RTD (Pt100), current, voltage, resistance			<ul style="list-style-type: none">Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minuteBetween primary terminals* and grounding terminal: At least 1500 V AC for 1 minuteBetween grounding terminal and secondary terminals**: At least 1500 V AC for 1 minuteBetween 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.						
Display Range	Table-1			Physical						
Accuracy	±0.1% of FS ± 1digit			409-4IN		409-6IN				
ADC Resolution	17 bits			Enclosure Protection	IP20	IP65	IP65			
Display Resolution	0.1°C/ 1 count			Mounting 19"	Rack / panel mount / Wall mount	Wall mount	Wall mount			
Sampling Rate	4 samples/sec.			Dimensions(in mm)	440(W)x175(H) x70(D)	500(W)x300(H) x120(D)	405(W)X250(H) X90(D)(with clamp)			
CJC Error	±2.0 °C			Panel Cutout (in mm)	444 (+0.8) x175 (+0.8)	NA	NA			
Sensor Ppen	All inputs except 0-5V, 0-10V, ± 10V, 0-20mA			Weight (Approx.)	3 Kg	8.3 Kg	5 Kg			
Sensor Burnout Current	0.5 uA (Approx.)			Enclosure Material	MS powder coated					
RTD Excitation Current	0.8 mA (Approx.)			Terminal Cable Size	2.5mm ²					
NMRR	> 40 dB			Standard Accessories	2 Nos. clamp, 2 handle for 19" rack / panel mount	4 Nos. wall mounting bracket, 3 nos. of PG16 gland (For cable entry).	3 Nos. PG16 gland			
CMRR	> 100 dB									
Temp-co	< 100ppm for Input to display < 150ppm for retransmission output			Environmental						
Input Impedance	> 1MΩ for TC, 0-2V, 0.4-2V, 0-75mV, ± 75mV > 840 kΩ for 0-5V, 1-5V, 0-10V, ±10V			Operating Temperature	0-55 °C					
Max Voltage	20VDC			Storage Temperature	0-80 °C					
Display & Keys				Humidity	20-95% RH non-condensing					
	409-4N	409-6IN		Table-1: Display Range						
Process Value	4" Four-digit seven segment Red LED	6" P10 based red-led high brightness module, (32X16 dots)		Thermocouples	Input Type	Range				
Status Indication	4 Red LED's for (Alarm and Tx/Rx)		E		-200 to 1000°C					
Keys	menu, enter, increase, decrease		J		-200 to 1200°C					
Output					K	-200 to 1350°C				
Alarm Output (Optional)					T	-200 to 400°C				
Relays	2 Nos.				B	450 to 1800°C				
Type	Single change over (C, NO, NC)			R	0 to 1750°C					
Rating	5A @ 230VAC / 30VDC			S	0 to 1750°C					
Retransmission Output (Optional)				RTD	Pt-100	-199.9 to 850.0°C				
Current	0/4-20mA @500Ω max.			Resistance	0 - 400Ω	-1999 to 9999				
Voltage	0/1-5V, 0-10V @2KΩ min.				0 - 6000Ω					
Accuracy	0.25% of FS			Linear	1-5V /4-20mA					
Communication (Optional)					0-5V/0-20mA					
Interface	RS-485 (2 Wire)				0-2V					
Protocol	Modbus-RTU				0.4-2V					
Baud Rate	4800, 9600, 19200, 38400				±10 V	-1999 to 9999				
Transmitter Power Supply	24VDC (±10%) @50mA				0 - 10 V					
Power Supply					-10-20mV					
Supply Voltage	85-265VAC/ 125-300VDC			±75 mV						
Power Consumption	409-4IN <10 VA 409-6IN <30 VA			0-75mV						
				Serial (RS-485)	PV write facility	1999 to 9999				
Ordering Code										
Model	Input Type		Communication		Relay		Retransmission O/P		Mounting (Protection)*	
409-4IN	X		X		X		X		X	
409-6IN	1	E	N	None	N	None	N	None	P0	19" Rack (IP20)
	2	J	Y	RS-485	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								
	H	0-2 V								
	I	0.4 – 2V								
	R	±75mV								
	U	0-75mV								
	V	0-400Ω								
	W	0-6000Ω								
	M	Serial RS485*								
	S	Special								
				*When serial input type is selected, RS-485 o/p needs to be selected						
				*406-6IN model available in IP65 Wall mount option only						