



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 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.

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 RS485 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 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 			
Display Range	Table-1	* Primary terminals indicate power terminals and relay output terminals.			
Accuracy	±0.1% of FS ± 1Digit	** Secondary terminals indicate analog I/O signal and Communication O/P.			
ADC Resolution	17 bits	Insulation resistance: 20MΩ or more at 500 V DC between power terminals and grounding terminal.			
Display Resolution	0.1°C/ 1 Count	Physical			
Sampling Rate	4 Samples/Sec	409-4IN		409-6IN	
CJC Error	±2.0 °C	Enclosure Protection	IP20	IP65	IP65
Sensor open	All inputs except 0-5V, 0-10V, ± 10V, 0-20mA	Mounting 19"	Rack / Panel Mount / Wall Mount	Wall Mount	Wall Mount
Sensor Burnout current	0.5 uA (Approx.)	Dimensions(in mm)	440(W)x175(H) x70(D)	500(W)x300(H) x120(D)	405(W)x250(H) X90(D)(with clamp)
RTD excitation current	0.8 mA (Approx.)	Panel Cutout (in mm)	444 (+0.8) x175 (+0.8)	NA	NA
NMRR	> 40 dB	Weight (Approx.)	3 Kg	8.3 Kg	5 Kg
CMRR	> 100 dB	Enclosure material	MS Powder Coated		
Temp-co	< 100ppm for Input to Display < 150ppm for retransmission output	Terminal Cable Size	2.5mm ²		
Input Impedance	> 1MΩ for TC, 0-2V, 0.4-2V, 0-75mV, ± 75mV > 840 kΩ for 0-5V, 1-5V, 0-10V, ±10V	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
Max Voltage	20VDC	Environmental			
Display & Keys		Operating temperature	0-55 °C		
		Storage temperature	0-80 °C		
		Humidity	20-95% RH non-condensing		
		Table-1: Display Range			
		Input Type	Range		
		E	-200 to 1000°C		
		J	-200 to 1200°C		
		K	-200 to 1350°C		
		Thermocouples	T	-200 to 400°C	
			B	450 to 1800°C	
			R	0 to 1750°C	
			S	0 to 1750°C	
		RTD	Pt-100	-199.9 to 850.0°C	
		Resistance	0 - 400Ω	-1999 to 9999	
			0 - 6000Ω		
			1-5V /4-20mA		
			0-5V/0-20mA		
			0-2V		
			0.4-2V		
		Linear	±10 V	-1999 to 9999	
			0 - 10 V		
			-10-20mV		
			±75 mV		
			0-75mV		
		Serial (RS485)	PV write Facility	1999 to 9999	
Output		Communication			
Alarm Output (Optional)					
Relays	2 Nos.				
Type	Single Change over (C, NO, NC)				
Rating	5A @ 230VAC / 30VDC				
Retransmission Output (Optional)					
Current	0/4-20mA @500Ω Max.				
Voltage	0/1-5V, 0-10V @2KΩ Min.				
Accuracy	0.25% of FS				
Communication (Optional)					
Interface	RS485 (2 Wire)				
Protocol	Modbus-RTU				
Baud rate	4800, 9600, 19200, 38400				
Transmitter Power Supply	24VDC (±10%) @50mA				
Power Supply		ORDERING CODE			
Supply Voltage	85-265VAC/ 125-300VDC				
Power consumption	409-4IN <10 VA 409-6IN <30 VA				

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 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				
	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, RS485 o/p needs to be selected
*406-6IN model available in IP65 Wall mount option only