



## LC5296-DC

### Dual Channel Indicator cum Controller

LC-5296-DC Dual channel Indicator cum controller with enhanced hardware capabilities available in compact enclosure is accurate & provides reliable control of various process and monitoring applications.

LC-5296-DC is available with dual 0.56" Red 7 segment LED display for process value.

It accepts RTD/ mA/ Volt input and provides two relay outputs to perform various control and alarm functions. Intuitive configurations with four front tactile keys ensure easy programming.

Process value can also be retransmitted to remote devices as standard current/voltage signals. Data acquisition can be done on SCADA/PLC applications through RS485 for further process automation.

Designed using proven micro-controller technology, this controller has been validated to perform accurate and reliable performance in harsh field environments.

#### Features

- Input (RTD, Volts, mA)
- Fail-safe Design protecting the process in case of system malfunctioning
- Bright Red seven segment LED Display
- Display brightness control
- Status Indication LEDs
- Relay Output (optional)
- Retransmission output (optional)
- RS485 Modbus Communication (optional)
- Transmitter Power Supply
- Relay/ retransmission output mapping with respect to input no

#### Applications

- Condition Monitoring
- Heat treatment furnaces
- Water heating boilers
- Chillers
- Oven control

# TECHNICAL SPECIFICATIONS

Input		Power Supply		
Input Type	RTD (Pt100), Current, Voltage	Standard	85-265VAC/ 125-300VDC	
Display Range	Refer Table-1	Optional	18-36VDC	
Accuracy	±0.25% of FS ±1 degree for RTD input ±0.1% of FS ±1 count for linear input	Power Consumption	<10VA	
ADC Resolution	16 bits	<b>Isolation (Withstanding voltage)</b> Between primary terminals* and secondary terminals**: <b>At least 1500 V AC for 1 minute</b> Between primary terminals* and grounding terminal: <b>At least 1500 V AC for 1 minute</b> Between grounding terminal and secondary terminals**: <b>At least 1500 V AC for 1 minute</b> Between secondary terminals**: <b>At least 500 V AC for 1 minute</b> * Primary terminals indicate power terminals and relay output terminals. ** Secondary terminals indicate analog I/O signal and Communication O/P. <b>Insulation resistance:</b> 50MΩ or more @ 500 VDC between power terminals and grounding terminal		
Display Resolution	0.1 / 1.0 °C	Physical		
Sampling Rate	2 Samples/Sec	Dimensions (mm)	96(H) x 96(W) x 75(D)	
Sensor open	All inputs except 0-5V	Front Bezel (mm)	96(H) x 96(W)	
Sensor Burnout current	0.25uA	Panel Cutout (in mm)	92 x 92	
RTD excitation current	0.166mA (Approx)	Depth behind Panel (in mm)	65	
NMRR	> 40dB	Weight	300g approx.	
CMRR	> 120dB	Enclosure Material	Molded ABS	
Temp-co	< 150ppm/°C	Enclosure Protection	IP20	
Input Impedance	> 1MΩ	Terminal Cable Size	2.5mm <sup>2</sup>	
Max Voltage	20VDC	Environmental		
Display and Keys		Operating temperature	0-55 °C	
Process Value 1 & 2	0.56", 7 segment, Red LED, 4 digits	Storage temperature	0-80 °C	
Status LEDs	Relay & Communication	Humidity	20-95 %RH non-condensing	
Keys	SET1, SET2, Increase, Decrease	Table 1: Display Range		
Output		Input	Input Type	Range
<b>Control Output</b>		RTD	PT-100 (3 wire)	-200 to 850 °C, -199.0 to 850.0 °C
Relays	2 Nos.	Linear	1-5V/0-5V/ 0-10V DC* 0/4-20mA (Ext 250 Ω)	-1999 to 9999
Type	Single Change over (C, NO, NC)			
Rating	5A @ 230VAC / 30VDC			
<b>Retransmission Output (Optional)</b>				
Current	0/4-20mA @500Ω Max			
Voltage	0/1-5V, 0-10V @2KΩ Min			
Accuracy	0.25% of FS			
<b>Communication Output (Optional in lieu of 2nd Retransmission o/p)</b>				
Interface	RS485			
Protocol	Modbus-RTU			
Baud Rate	9600, 19200, 38400			
<b>Transmitter Supply*</b>	24VDC (±10%) @60mA			

## Ordering Code

Model	Input-1*		Input-2		Auxiliary Power Supply		Options				Relay o/p	
	X		X		X		Output-1		Output-2			
LC5296-DC	X		X		X		X		X		X	
	9	Pt-100	9	Pt-100	U1	85-265VAC / 125-300VDC	N	None	N	None	N	None
	C	4-20mA	C	4-20mA	U2	18-36VDC	1	4-20mA	1	4-20mA	Y	Yes
	D	0-20mA	D	0-20mA			2	0-20mA	2	0-20mA		
	E	1-5V	E	1-5V			3	1-5V	3	1-5V		
	F	0-5V	F	0-5V			4	0-5V	4	0-5V		
	G	0-10V*					5	0-10V	5	0-10V		
									6	RS485		

### Accessories: Two numbers mounting clamps

\*Transmitter Power Supply not possible for RTD input type

# Possible for Channel-1 only.