masibus®

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

Input Type	RTD (Pt100), Current, Voltage
Display Range	Refer Table-1
Accuracy	±0.25% of FS ±1 degree for RTD input ±0.1% of FS ±1 count for linear input
ADC Resolution	16 bits
Display Resolution	0.1 / 1.0 °C
Sampling Rate	2 Samples/Sec
Sensor open	All inputs except 0-5V
Sensor Burnout current	0.25uA
RTD excitation current	0.166mA (Approx)
NMRR	> 40dB
CMRR	> 120dB
Temp-co	< 150ppm/°C
Input Impedance	> 1MΩ
Max Voltage	20VDC

Display and Keys

Process Value 1 & 2	0.56", 7 segment, Red LED, 4 digits
Status LEDs	Relay & Communication
Keys	SET1, SET2, Increase, Decrease

Output

Control Output	
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 Output (Optional in lieu of 2nd Retransmission o/p)	
Interface	RS485
Protocol	Modbus-RTU
Baud Rate	9600, 19200, 38400
Transmitter Supply*	24VDC (±10%) @60mA

Power Supply

Standard	85-265VAC/ 125-300VDC
Optional	18-36VDC
Power Consumption	<10VA

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: 50MΩ or more @ 500 VDC between power terminals and grounding terminal

Physical

Dimensions (mm)	96(H) x 96(W) x 75(D)
Front Bezel (mm)	96(H) x 96(W)
Panel Cutout (in mm)	92 x 92
Depth behind Panel (in mm)	65
Weight	300g approx.
Enclosure Material	Molded ABS
Enclosure Protection	IP20
Terminal Cable Size	2.5mm²

Environmental

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

Table 1: Display Range

Input	Input Type	Range
RTD	PT-100 (3 wire)	-200 to 850 °C, -199.0 to 850.0 °C
Linear	1-5V/0-5V/ 0-10V DC# 0/4-20mA (Ext 250 Ω)	-1999 to 9999

Ordering Code

Model	Input-1*		Input-2		Auxiliary Power Supply		Options: Output-1		Options: Output-2		Relay o/p	
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.

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