

## On-Off Temperature Controller (Model LC 5248)

LC 5248



Masibus' Model LC5248 is the most industry popular high performance indicating On/Off controller having dual display for PV and SV. Model LC5248 is available in dual programmable relay output version to suit OEM / Panel manufacturers requirement as much as it meets the end user needs. Relays can be configured either for alarm or control purpose. Model LC5248 has two 4 digit display.

This model is manufactured with special designed 18 bit A to D convertor for high resolution measurement. (0.1°C resolution for thermocouple and Pt100). This technology provides improved operating performance, low cost, enhanced reliability and higher stability.

Masibus introduced a unique feature of LED brightness adjustment in this controller which enables plant engineers/ operators to adjust intensity of controllers' LED display in order to achieve comfort for eyes.

Control and programming of the unit is performed via the front panel tactile push buttons which clicks when operated. All the programme functions are contained in easy to understand menus. The front panel is robust, easy to clean, non reflective membrane.

Model LC5248 is truly smart. While many programmable instruments do require hardware access for input type selection and calibration, Model LC5248 totally eliminates any hardware access or switch settings by its unique digital calibration technique - all it requires is just a few key strokes at the front panel keyboard. This unique feature enhances maintenance and operational reliability of the instrument.

This model is packaged in 48mm x 48mm x 77mm plastic enclosure .

## Features

- *High performance with low cost*
- *Easy to use*
- *Universal Input*
- *Micro-controller based cost-effective dual display controller*
- *LED brightness control*
- *Field selectable universal input*
- *Digital calibration*
- *Two relay output*
- *Dust protected tactile keys*
- *On-site configurable*
- *48 X 48 mm bezel size*

**masibus**  
Advanced Automation - Sure Solutions

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## TECHNICAL SPECIFICATION LC 5248

Number of Inputs	1
Input Type, Measurement Range & accuracy	As per table 1
Sampling Period	250 mS
Burn out detection	0.5 $\mu$ A
Input Impedance	>1 M ohms
Noise Rejection Ratio	
Common Mode	> 120 dB (50 Hz)
Normal Mode	> 40 dB (50 Hz)
Reference-junction compensation error	$\pm 2$ °C (0 to 55 °C)
Response time	
Input to relay o/p	<1 sec
Resolution ( A to D convertor)	18 bits
<b>Outputs</b>	
Relay output (usage)	Control
Number of relay contact outputs	2 (two)
Control type	ON-OFF control , Below ON set point / Above ON set point
Relay contact rating	230 Vac / 2Amp. (NO or NC, Common)
<b>Display Specification</b>	
Process Value display	4- digit 7- segment Red LED (0.4")
Set Value / parameter display	4 digit 7 - segment Green LED (0.28")
Status Indicating lamp	Red LED's
Operation keys	INC, DEC(increase / decrease set points or various parameters),ENT

## Construction/Installation/Wiiring

Enclosure	General purpose
Body construction	Poly-carbonet Plastic
Case color	Black
Weight	120 gms.
Dimensions	48W X 48H X 77D (all in mm)
Panel Cut-out	45(W) X 45(H) (all in mm)
Wiring	2.5 sq.mm
Standard Accessories	2 mounting clamp
<b>Power supply/Isolation</b>	
Power supply	85- 265 VAC @50Hz/ 120-290 VDC
	18- 36 VDC (Optional)
Power consumption	< 5 VA
Memory backup	EEPROM
Isolation resistance	Between power supply terminal and ground terminal, 500V DC, 200 MO
<b>Environmental Conditions</b>	
Ambient Temperature:	0 to 55 °C
Ambient humidity	Upto 95 % RH ( Non-condensing)
Storage temperature	0 - 80 °C

## TECHNICAL SPECIFICATIONS LC 5248

Die electric strength	1) 1.5KV AC between AC supply & i/p AC supply for 1 minute 2) 1.5 KV AC between AC supply and Relay-1 contact for 1 minute. 3) 1.5KV AC between AC supply and Relay-2 contact for 1 minute. 4) 1.5 KV AC between Input and Relay-1 contact for 1 minute 5) 1.5 KV AC between Input and Relay-2 contact for 1 minute
LED Brightness Control	Availbale

TABLE 1

Input Type	Range	Measurement Accuracy
Thermocouples	J(W/1°C) -200 to 1200 °C	$\pm$ (0.25% of FS $\pm$ 1 degree)
	J(W/0.1°C)-199.9 to 999.9°C	$\pm$ (0.25% of FS $\pm$ 1 degree)
	K (W/1°C) -200 to 1372 °C	$\pm$ (0.25% of FS $\pm$ 1 degree)
	K (W/0.1°C)-199.9 to 999.9 °C	$\pm$ (0.25% of FS $\pm$ 1 degree)
RTD	Pt-100 -200 to 850 °C	$\pm$ (0.25% of FS $\pm$ 1 degree)
	-199.9 to 850.0 °C	$\pm$ (0.25% of FS $\pm$ 1 degree)
Linear	4-20mA/ 1-5V -1999 to 9999	$\pm$ (0.25% of FS $\pm$ 1 count)
	0-20mA/ 0-5V -1999 to 9999	$\pm$ (0.25% of FS $\pm$ 1 count)

## ORDERING CODE

Model LC 5248	
Input Type	APS
X	XX
1 J (W/1°C)	U1 85- 265 VAC
2 J (W/0.1°C)	U2 18- 36 VDC
3 K (W/1°C)	
4 K (W/0.1°C)	
9 Pt-100, 3W	
C 4-20mA	
D 0-20mA	
E 1-5VDC	
F 0-5VDC	

X - Specify from table