



ON-OFF Controller

SPECIFICATIONS

Input type	Range
PT100 (0.1°C)	-199.9 to 850.0 °C
PT100 (1°C)	-200 to 850°C
J	-199.9 to 1200°C
K	-199.9 to 1372°C
T	-199.9 to 400°C
R	0 to 1768°C
S	0 to 1768°C
*4-20mA / 1-5VDC	-1999 to 9999 (Field Scalable)
*0-20mA / 0-5VDC	
0-10VDC	

*Use external 250ohms, 0.1% for current Input
Table 1.1

Inputs

Input Type	Thermocouple, RTD (Pt100), Current, Voltage
Accuracy T /C and RTD : Linear:	$\pm 0.25\%$ of FS ± 1 degree $\pm 0.1\%$ of FS ± 1 count
Resolution	ADC:16bits,Display:0.1°C/1°C
Sampling Rate	5 Samples/Sec
CJC Error	± 2.0 °C Max
Sensor Burnout current	0.25uA
RTD excitation current	0.166mA (Approx)
Allowable wiring resistance for RTD	Maximum 15 ohms/wire (Conductor resistance between three wires should be equal)
NMRR	> 40 dB
CMRR	> 120 dB
Input Impedance	> 1M Ω (Voltage Input) 250 Ω (Current Input)
Max Voltage	20VDC

Display & Keys

	5006RN	LC5296H
PV	4-Digit, 7Segment, 0.56" High, Red	4-Digit, 7-Segment, 0.56" or 0.8" High, Red
Status LEDs	Relay & Communication	

Keys	SET1, SET2, Increase, Decrease
------	--------------------------------

Output Types

Relay Output	
Relays	2
Type	Single Change over (C, NO, NC)
Rating	5A @ 230VAC / 30VDC
Retransmission Output (Optional)	
Current	0/4-20mA @ 500 ohms max.
Voltage	0/1-5V,0-10V @ 2Kohms min.
Accuracy	$\pm 0.25\%$ of FS
Communication Output (optional in lieu of 2 nd Retransmission o/p)	
Interface	RS485 (2 Wire)
Protocol	Modbus-RTU
Baud rate	9600, 19200, 38400 bps
Loop Power Supply	
LPS	24VDC ($\pm 10\%$) @26mA with Inbuilt Short Circuit Protection

Power Supply

Standard	85-265VAC/ 100-300VDC
Optional	18-36VDC
Power consumption	<10 VA

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: 20M Ω or more at 500 V DC between power terminals and grounding terminal.

Advance Feature

- Input scalability for linear input

Physical

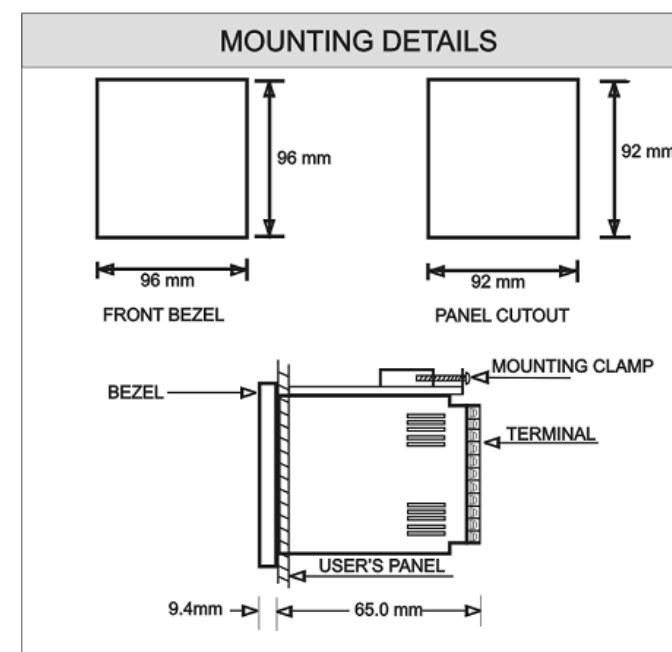
	5006RN	LC5296H
Dimension (H x W x D) mm	96 x 96 x 75	48 x 96 x 85
Front Bezel (H x W)mm	96 x 96	48 x 96
Panel Cutout mm	92 x 92	45 x 92
Depth Behind Panel mm	65	75
Weight (Approx.)	300g.	300g.
Enclosure Mate rial	Molded ABS	
Enclosure Protection	IP 20	
Terminal Cable Size	2.5mm ²	

Environmental Conditions

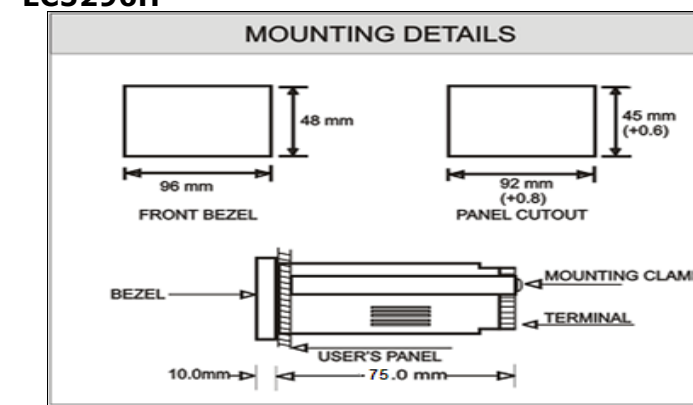
TEMPCO	< 100ppm/°C
Input to PV Display	< 100ppm/°C
Display to RX	
Humidity	20% to 95% RH (Non-Condensing)
Instrument Warm-up Time	Approx. 15 minutes
Ambient temperature	0 to 55°C
Storage Temperature	0 to 80°C

MOUNTING DETAILS

5006RN

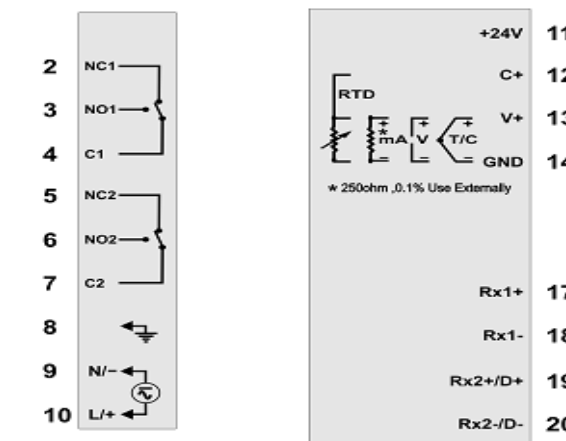


LC5296H

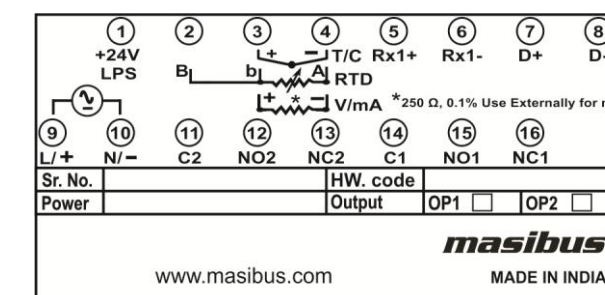


TERMINAL CONNECTIONS

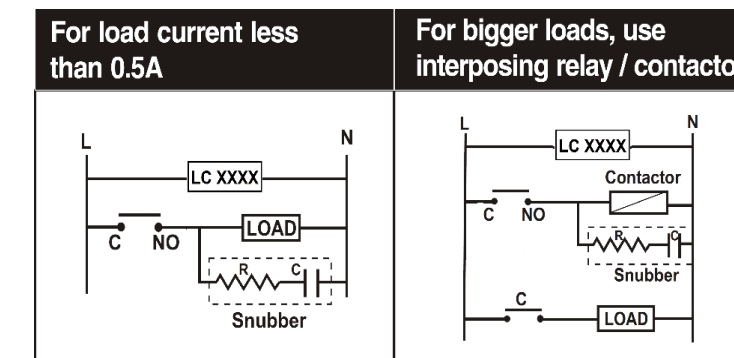
5006RN



LC5296H



LOAD CONNECTION



Electrical precautions during use

Electrical noise generated by switching of inductive loads can create momentary disruption, erratic display, latch up, data loss or permanent damage to the instrument. Use of snubber circuits across loads as shown above, is recommended.

SAFETY/WARNING PRECAUTIONS

To ensure that the device can be operated safely and all functions can be used, please read these instructions carefully. Installation and Start-up must be carried out by qualified personnel only. The relevant county-specific regulations must also be observed.

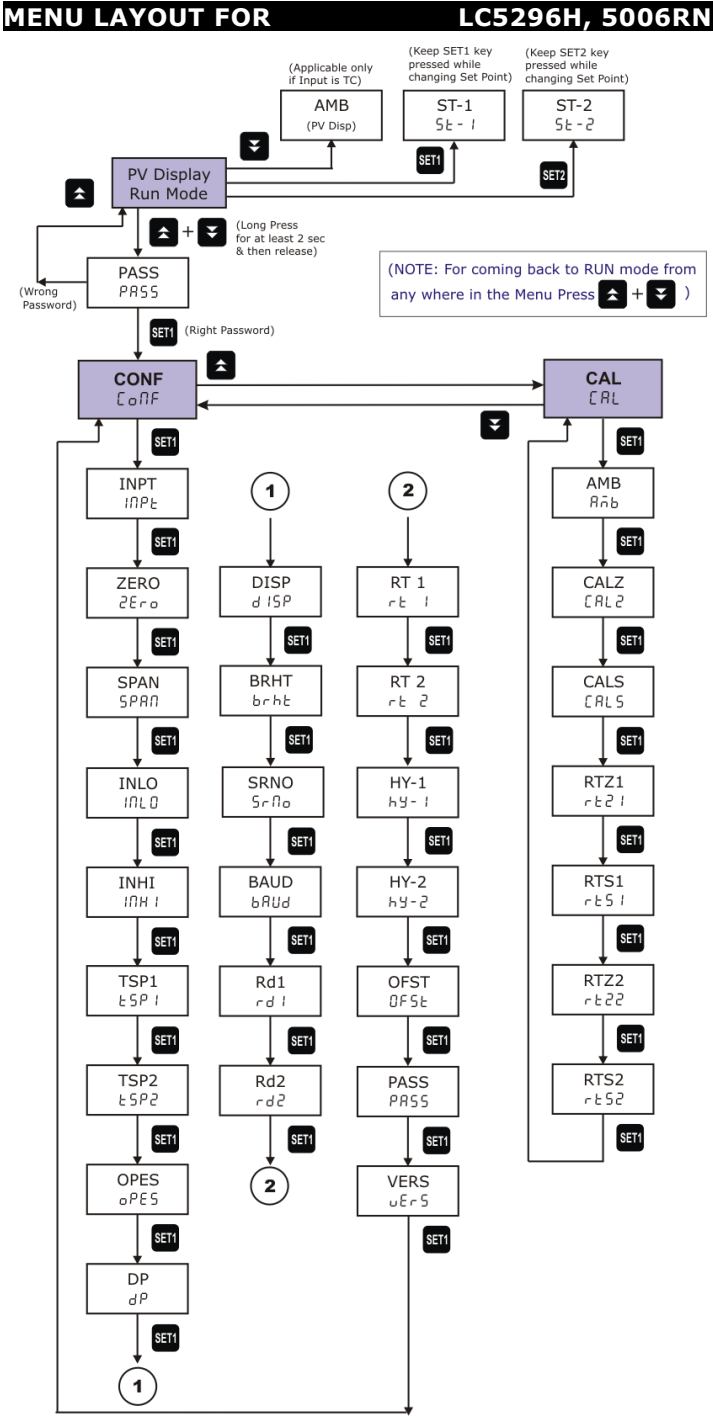
Before start-up it is particularly important to ensure:

- Terminal wiring: check that all cables are correctly connected according to the connection diagram
- All wiring must confirm to appropriate standards of good practice and local codes and regulations. Wiring must be suitable for voltage, current and temperature rating of the system.
- Unused control terminals should not be used as jumper points as they may be internally connected, which may cause damage to the unit.

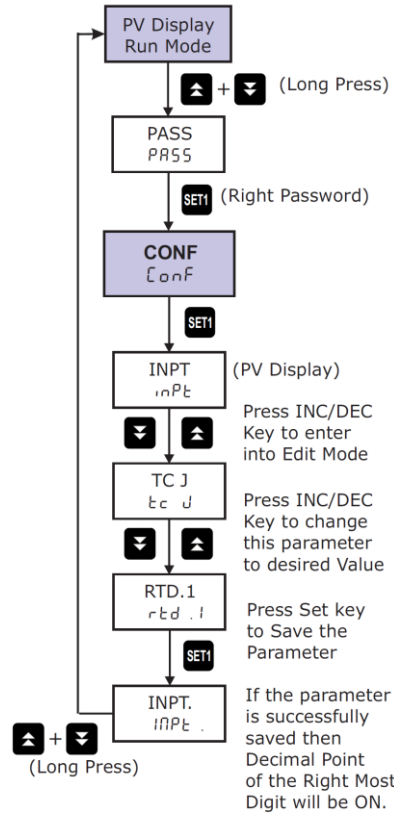
FRONT PANEL DESCRIPTION

Name of Part	Symbol	Function
Increment Key		• Increment the Value of any Parameter.
Decrement Key		• Shows ambient value for T/C Input in RUN mode. • Decrement the value of any parameter
SET-1 Key (Menu / Enter Key)		• Shows Set Point-1, if pressed in RUN mode. • In Sub Menu it can be used to get to the next Parameter. • It is also used to save the parameters to nonvolatile memory, when user setting a proper data by Increment and decrement key for parameter configuration.
SET-2 Key		• Shows Set Point-1, if pressed in RUN mode. • Used to store modified SetPoint-2 Value.

PV (Process Value) Display	PV	• 4 digit 0.56 inch RED Display • 4 digit 0.8 inch RED Display (LC5296H) • Display process value. • Display parameter name when user set parameter. • Display Parameter Value when in Edit mode. • Display error message when an error occurs.
Relay-1 Indication	RL1	• ON when Relay-1 is energized & OFF otherwise.
Relay-2 Indication	RL2	• ON when Relay-2 is energized & OFF otherwise.
TX Indication	TX	• ON when device is transmitting some Data (RS-485).
RX Indication	RX	• ON when device is receiving some Data (RS-485).

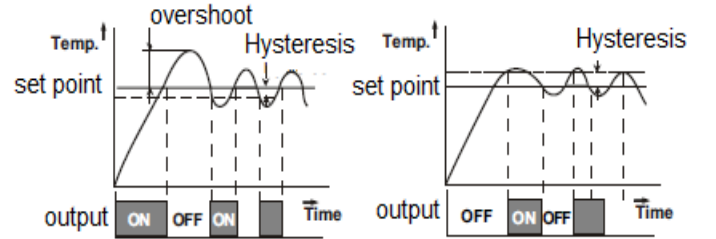


2. How to change Input Type?



CONTROL FUNCTION

ON/OFF Control (For L-ON Mode): The relay is 'ON' up to the set temperature and cuts 'OFF' above the set temperature. As the temperature of the system drops, the relay is switched 'ON' at a temperature slightly lower than the set point.



L-ON H-ON
Figure 1.1: Typical Relay operation

HYSTERESIS: The difference between the temperature at which relay switches 'ON' and at which the relay switches 'OFF' is the hysteresis or dead band.

For operation manual please visit www.masibus.com
Specifications are subject to change without notice due to continuous improvements.
Sonepar India Pvt. Ltd.
B-30, GIDC Electronics Estate, Sector-25, Gandhinagar-382016, Gujarat, India.
Tel: +91 79 23287275-77
Web: www.masibus.com
Email: support.masibus@soneparindia.com