



### Features

- Universal Temperature Input (RTD Pt100 & J, K, T, R, S, B, N Thermocouples)
- Programmable Input Signal Conditioning (Digital Filter & Zero Offset)
- Programmable Sterilization Timer with Guaranteed Soak Time
- High Temperature Safety Alarm
- Automatic Cycle Abortion at High Temperature Limit
- Computed Saturated Steam Pressure Display
- Independent Air Purging and Sterilization Set-points
- Independent Outputs for Air Outlet Valve & Steam Control
- Front / Remote Sterilization Cycle Start Command
- Optional, Serial Communication Port or Water Level Switch Input
- DIN Standard Dimensions :     48(H) X 48(W) X 110(D), mm  
  96(H) X 96(W) X 65(D), mm

### Specifications

Display	
Digital Readout 48X48	Upper Readout : 4 digits, 0.39" Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.3" Luminous Green LED, 7 Segment
Digital Readout 96X96	Upper Readout : 4 digits, 0.56" Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.56" Luminous Green LED, 7 Segment
Status Indicators	5 Red LEDs (3mm Round)
Keys	
Type	4 Tactile Switches
Functions	PAGE, DOWN, UP, ENTER
Sensor Input	
Type (User Programmable)	Thermocouple : J, K, T, R, S, B, N RTD Pt100, 3 wire
Corrections	<ul style="list-style-type: none"> <li>• In-built Cold-Junction Compensation for Thermocouples</li> <li>• In-built Lead Resistance Compensation for RTD (Upto 22 Ohms in each lead)</li> </ul>
Accuracy	± 0.25% of reading ± 1°C

Display Range	Refer Table 1
Display Resolution (User Programmable)	Thermocouples : 1°C Fixed RTD Pt100 : 0.1 / 1°C
Zero Offset	User Adjustable over Full Range
ADC	16 Bit ( $\pm 32,768$ Counts), Sigma-Delta ( $\Sigma\Delta$ )
Sampling Time	200mS (5 Samples per Second)
Input Resistance	> 8 MOhm
Common Mode Rejection	> 100dB at 50/60 Hz
Signal Conditioning	L-C Analog Filter with Programmable Digital Low-Pass Filter
<b>Sterilization Timer</b>	
Operation Mode	Soak Time at Sterilization Setpoint with Hold Band
Range	1 to 999 Minutes
Power-fail Recovery	Resume, Reset, Abort
<b>Sterilization Control</b>	
Type	ON-OFF
Mode	Heat Control
Control Parameters	Sterilization Setpoint, Hysteresis
Output (OP-1)	SSR Drive Voltage Pulses
<b>Air Purging Control</b>	
Control Type	ON-OFF
Control Parameters	Air Outlet Setpoint
Output (OP-2)	Relay Change-over Contacts or SSR Drive (Jumper Selectable)
<b>Alarms</b>	
Functions	High Temperature Deviation, End-of-Sterilization, Low Water Level
Output (OP-3)	Relay Change-over Contacts
<b>Outputs</b>	
Relay	Contact Type : Potential-free Change-over Contacts Contact Rating : 5A Resistive @ 120/240 Vac Contact Life : > 5,00,000 Operations at Rated Voltage / Current
SSR Drive	> 4.2 VDC into 1KOhm Minimum
<b>Serial Communication</b>	
Port	RS485, 2-wire, Half Duplex, Start-Stop Synchronized
Protocol	Modbus RTU
Baud Rate	Settable : 1200, 2400, 4800, 9600
Max. Units per Loop	31
Max. Distance	1200 Metres

## Power Supply

Type	Switch Mode (SMPS)	
Line Voltage	Standard : 85~264 VAC, 50/60Hz	Optional : 18~36 VDC
Consumption	5VA Max	

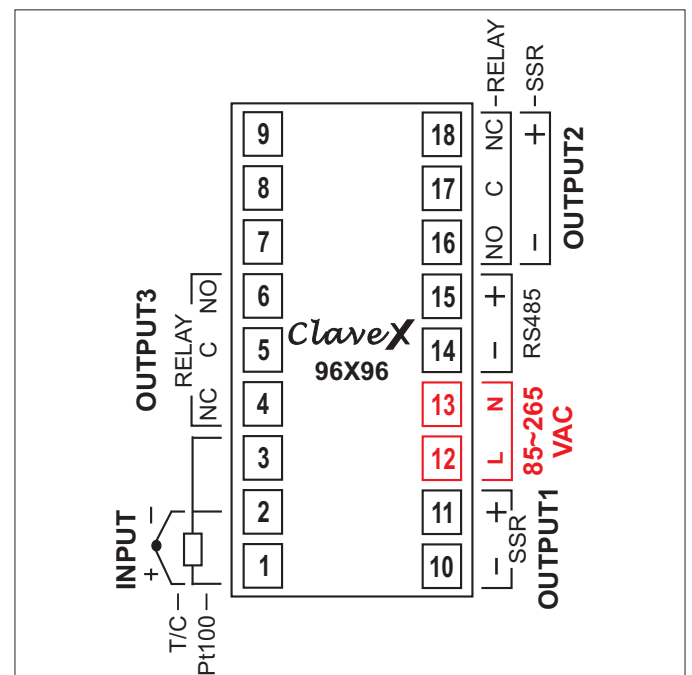
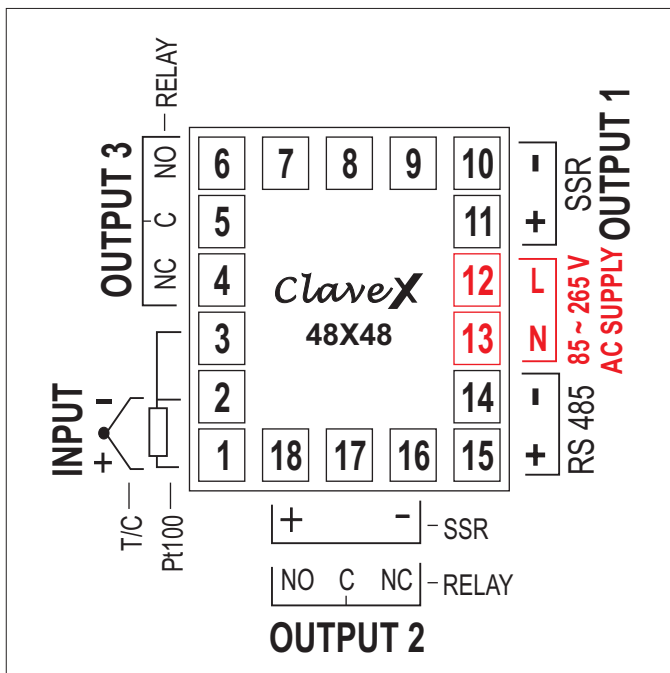
## Physical

Mounting	Plug-in with Panel Mounting Clamps	
Overall Dimensions	48(H) X 48(W) X 110(D), mm	96(H) X 96(W) X 65(D), mm
Panel Cutout	45(H) X 45(W), mm	92(H) X 92(W), mm
Terminals	Screw Type	
Weight	48 X 48 : 225 gm, Appx.,	96 X 96 : 400 gm, Appx.

## Environmental

Operating Ambient	0~55°C & 5~90%RH Non-condensing	
Storage Temperature	-10 to +70°C	
EMC Standards	EN50081-2 & EN 50082-2 Generic Stds for Industrial Environment	
Safety Standards	Meets EN61010, Installation Catagory II	
Atmospheres	Not Suitable for use in Corrosive or Explosive Atmospheres. The Panel in which the Instrument is Mounted must be free of Electrically Conductive Pollution.	

## Back Panel Terminations



## Table 1 : Temperature Ranges for Thermocouples & RTD

Input Type	Range (Min. to Max.)
Type J Thermocouple (Fe-K)	0 to +960°C / +32 to +1760°F
Type K Thermocouple (Cr-Al)	-200 to +1376°C / -328 to +2508°F
Type T Thermocouple (Cu-Con)	-200 to +385°C / -328 to +725°F
Type R Thermocouple (Pt/Pt-Rh13%)	0 to +1770°C / +32 to +3218°F
Type S Thermocouple (Pt/Pt-Rh10%)	0 to +1765°C / +32 to +3209°F
Type B Thermocouple	0 to +1825°C / +32 to +3092°F
Type N Thermocouple	0 to +1300°C / +32 to +2372°F
3-wire, RTD Pt100	-199 to +600°C / -328 to +1112°F or -199.9 to 600.0°C / -199.9 to 999.9°F

### Ordering Code

Input*		Output 1		Output 2		Output 3		Power Supply		Options		Size	
TC	Thermocouple	1	SSR	1	Relay/SSR	1	Relay	0	85~264 VAC	N	None	48	48 X 48
PT	RTD Pt100									S	Serial Port	96	96 X 96
										L	Level Switch		

**Example Code**    **PT-1-1-1-0-L-48**

RTD Pt100 Input, Output-1 SSR, Output-2 Relay/SSR, Output-3 Relay,  
85~264 VAC Supply, Water Level Switch Input, 48 X 48

\* Input type is universal and user programmable. The ordering code only implies the factory settings at the time of dispatch.