



**Version : BTC 48**  
**Small Display Board**



**Version : BTC 96**  
**Large Display Board**

### Features

- Jumper-less Selectable J/K Thermocouples & RTD Pt100 Inputs
- Programmable Input Signal Conditioning (Digital Filter & Zero Offset)
- Self Tune PID or On-Off Control
- Heat (Reverse) or Cool (Direct) Control Mode
- Both Output-1 & Output-2 are User Configurable as Relay or SSR
- In-built Programmable Timer
- Auxiliary Control (Output-2) : Blower / Alarm / Compressor with Time Delay
- Dimensions

Control Board : 95 X 95, mm

Display Board : **Large** 84.5(H) X 89.5(W), mm

**Small** 40(H) X 66(W), mm

### Specifications

Display	
Digital Readout	<p><b>Large Display Version</b> Upper Readout : 4 digits, 0.80" Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.56" Bright Green LED, 7 Segment</p> <p><b>Small Display Version</b> Upper Readout : 4 digits, 0.39" Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.39" Bright Green LED, 7 Segment</p>
Status Indicator	3 Red LED (3mm Round)
Keys	
Type	4 Tactile Switches
Functions	PAGE, DOWN, UP, ENTER
Sensor Input	
Type (User Programmable)	Thermocouple : J, K 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 (Up to 22Ω in each lead)</li> </ul>

Accuracy	± 0.25% of reading ± 1°C
Range & Resolution	<b>J Type TC</b> Range : 0 to +960°C Resolution : 1°C Fixed <b>K Type TC</b> Range : -200 to +1376°C Resolution : 1°C Fixed <b>RTD Pt100</b> Range : -199 to +600°C Resolution : 0.1/1°C Selectable
ADC	16 Bit (±32,768 Counts), Sigma-Delta (ΣΔ)
Sampling Time	200mS (5 Samples per Second)
Input Resistance	> 1 MOhm
CMR	> 100dB at 50/60 Hz
Signal Conditioning	R-C Analog Filter with Programmable Digital Low-Pass Filter
Zero Offset	User Adjustable over Full Range
<b>Alarms</b>	
Numbers	1
Programmable Parameters	Type : Process Low, Process High, Deviation, Window, End-of-Soak Logic : Normal, Reverse Hysteresis : 1 to 999 Unit Counts Inhibit : No, Yes
Output	Output-2 (OP-2) Relay Change-over Contacts or SSR Drive can be Configured as Alarm Output
<b>Auxiliary Control</b>	
Control Type	Second Setpoint or Blower / Compressor Setpoint
Control Parameters	Second Setpoint : Hysteresis, Control Logic Blower / Compressor : Hysteresis, Time Delay
Output	Output-2 (OP-2) Relay Change-over Contacts or SSR Drive can be Configured as Auxiliary Control Output
<b>Main Control</b>	
Type	ON-OFF Or Self Tune PID
Mode	Heat only, Cool only
Control Parameters	• ON-OFF : Hysteresis • Self Tune PID : Proportional Band, Integral Time, Derivative Time, Cycle Time, Power Low, Power High, Overshoot Inhibit
Output	Output-1 (OP-1) Relay Change-over Contacts or SSR Drive
<b>Programmable Timer</b>	
Operation Mode	Free Running or Soak at Setpoint with Hold Band
Range	5 Seconds to 999 Hours
Power-fail Recovery	Resume, Reset, Abort
Output	Output-2 (OP-2) Relay Change-over Contacts or SSR Drive can be Configured as End-of-Soak Alarm Output
<b>Outputs</b>	
Relay	Contact Type : Potential-free Change-over Contacts Contact Rating : 7A Resistive @ 120/250 VAC Contact Life : > 5,00,000 Operations at Rated Voltage / Current
SSR Drive	≅ 12 VDC @ 40 mA

Power Supply	
Type	Switch Mode (SMPS)
Line Voltage	85~264 VAC/VDC, 50/60Hz
Consumption	5VA Max
Physical	
Mounting	Board Type Mounting
Overall Dimensions	<ul style="list-style-type: none"> <li>Control Board : 95 X 95, mm</li> <li>Display Board : <b>Large</b> 84.5(H) X 89.5(W), mm <b>Small</b> 40(H) X 66(W), mm</li> </ul>
Terminals	Screw Type
Weight	400gm, Max.
Environmental	
Operating Ambient	0~55°C & 5~90%RH Non-condensing
EMC Standards	EN50081-2 & EN 50082-2 Generic Stds for Industrial Environment
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.

## Electrical Connections

