



DC80 Digital Indicating, dual setpoint Temperature Controller

Features

- ✦ Precision 10-turn trim pots for two independent set points
- ✦ True Proportional control, using linear time proportioning circuit
- ✦ No Calibration or set point droop
- ✦ <math><0.5^{\circ}\text{C}</math> indication drift
- ✦ Built-in automatic cold junction Compensation circuitry
- ✦ Standard open sensor display and up-scale break protection
- ✦ Dimensions : 96H x 96W x 110D mm

Options

- ✦ 0.1°C resolutions for RTD input.
- ✦ Optically isolated output to drive solid state relay.
- ✦ 1inch high 7-segment LED display.
- ✦ Universal power input from 85 ~ 265V AC 50/60 Hz

SHIVA CONTROLS & SYSTEMS' Model DC-80 temperature controller is designed to perform consistently under severe and harsh industrial environments at an economical price. These instruments have standard features including two independent 5Amp SPDT relay with control output as time proportioning or ON/OFF control mode, an easy-to-read LED display and 2 LEDs for output status indication.

Two independent, precision 10-turn trim pots enable accurate set point setting. Both the set points are independent of each other and can be set within the full span of the instrument. The standard output on second set point is ON/OFF only.

These instruments are calibrated for either one of Type J or K thermocouple or RTD (2-wire or 3-wire). Other calibrations are also available.

Sensor	Standard Calibration Points	Useful range with standard calibration	Accuracy between calibration points
Fe/K (J)	RT, 400	-50 to 450	1%
Cr/Al (K)	RT, 500	-50 to 500	0.8%
Cr/Al (K)	500, 1000	500 1200	0.8%
Pt/Pt-Rh13% (R)	900, 1600	900 to 1600	0.5%
Pt/Pt-Rh10% (S)	900, 1600	900 to 1600	0.5%
Pt-100	100, 400	-100 to 500	0.25%
Pt-100	-100.0, 199.9	-199.9 to 199.9	0.25%

SPECIFICATIONS

Input	: Thermocouple / RTD sensor
Resolution	: 1°C standard, 0.1°C optional for RTD input
Setpoint method	: Two precision multiturn trimpot
Sensor break protection	: Built-in, relay OFF and display reads †
Cold junction compensation	: Automatic built-in circuitry
Accuracy	
Set point	: Absolute
Measurement	: See the table
Working Range	: See the table
Control mode	
1st set point	: ON / OFF with standard 1°C hysteresis Or Time proportioning with standard 10°C Bandwidth and 20 seconds cycle time centered around set point
2nd set point	: ON / OFF only
Control output	: Standard 2 nos. 5Amp, 230V AC SPDT mechanical Relay. Higher rated relay outputs or Optically isolated output to drive solid state relay onspecification
Control response time	: 20 milli seconds standard and 0.5 milli seconds Typical for solid state outputs
Indication & control drift	: < 0.5°C, constant after 18 hours (Test condition Ambient 45°C, Cr/Al thermocouple for worst case)
Indication response time	: 200 milli seconds typical
Common mode rejection	: 90 dB @ 50 Hz
Input filter cutoff	: 10 KHz
Display	: Easy-to-read 12.5mm high 7-segement LED display
Ambient	
Operating temperature	: 5 to 55°C
Humidity	: 95% RH
Input power	: 230V AC, ±20% @ 50Hz
Dimensions	
	: 96W x 96H x 110D mm (Overall)
	: 92W x 92H + 0.0/0.5 mm (Panel cutout)

We reserve the right to change the specifications
without prior notice.
Development is a continuous process.

SHIVA CONTROLS & SYSTEMS,

I 32, Sarita Building, Prabhat Industrial Complex,
I 02, Western Express Highway, Dahisar East,
MUMBAI 400 068.

Tel: 28488245 TeleFax: 28974837

Email: response@shivacontrols.com

www.shivacontrols.com

CONTROL IS IN putting BETTER CONTROLS