



Series 42 Digital Indicating Temperature Controller

Features

- ✦ True Proportional control, using linear time proportioning circuit
- ✦ No Calibration or set point droop
- ✦ Easy access front panel adjustment for ON/OFF hysteresis or 'manual reset'
- ✦ 0.5°C 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
72H x 72W x 110D mm

Options

- ✦ 0.1°C resolutions for RTD input
- ✦ Output to drive solid state relay
- ✦ 1inch high 7-segment LED display
- ✦ Universal power supply from 90 to 265V AC

SHIVA CONTROLS & SYSTEMS' Model DC42A, digital indicating temperature controller is designed for maximum versatility at an economical price. These instruments have standard features including a 5Amp SPDT relay with control output as time proportioning or ON/OFF control mode, an easy-to-read LED display and an LED indication for output status.

In these models, an easy access front panel adjustment is available for ON/OFF hysteresis variation for ON/OFF control mode and 'manual reset' for time proportioning control, to stabilize the process temperature at the set point.

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	: Single precision trimpot
Sensor break protection	: Built-in, relay OFF and display reads †
Accuracy	
Set point	: Absolute
Measurement	: See the table
Working Range	: See the table
Control mode	: ON / OFF with standard 1°C hysteresis Or Time proportioning with standard 10°C Bandwidth and 20 seconds cycle time centered around set point
Control output	: Standard 5Amp, 230V AC SPDT mechanical relay Higher rated relay outputs or Optically isolated output to drive solid state relay on specification
Control error reset	: Front panel easy access preset (manual reset)
Cold junction compensation	: Automatic
Indication & control drift	: < 0.5°C, constant after 18 hours (Test condition Ambient 45°C, Cr/Al thermocouple for worst case)
Control response time	: 20 milli seconds standard, 0.5 milli seconds typical for solid state outputs
Indication response time	: 200 milli seconds typical
Common mode rejection	: 90 dB @ 50 Hz
Input filter cutoff	: 10 K Hz
Display	: Easy-to-read 12.5mm high 7-segment LED display
Ambient	
Operating temperature	: 5 to 55°C
Humidity	: 95% RH
Input power	: 230V AC, 20% @ 50Hz
Dimensions	
DC42A	: 96W x 96H x 110D mm (Overall) : 92W x 92H + 0.0/0.5 mm (Panel cutout)
DC42M	: 72W x 72H x 110D mm (Overall) : 68W x 68H + 0.0/0.5 mm (Panel cutout)

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

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