LABFACILITY L300 8-ZONE TEMPERATURE ALARM / ON-OFF CONTROLLER WITH 10A SWITCHING

The Labfacility L300 Pt100 and Thermocouple temperature alarm / on-off controller can be used in conjunction with a PC to provide accurate monitoring and alarm or on-off control of up to 8- zones simultaneously. It can also be used as a stand-alone instrument without the need for a PC.

The PC software supplied with the instrument allows control, configuration, measurement, logging, charting, alarm & relay configuration and calibration functions via a PC.

The in-built, self-calibration facility for the thermocouple version is a rapid and convenient method for on-site calibration and does not require any additional equipment other than a special, external link. Self-calibration of Pt100 ranges is equally simple and uses plug-in precision resistors.

LAB079/1216

- *Low cost – high performance*

- *USB PC interface*

- *8 thermocouple (type J,K,T,E,N,R,S& B) or Pt100 (3 wire) inputs*

- *Built-in display for selected channel or all channels auto-scrolling*

- *Resolution 0.1°C on display, 0.01°C in software*

- *Self-calibration feature*

- *Select °C / °F*

- *PC software included for remote control and measure, logging, configuration and calibration*

- *8 x configurable change-over relays 10A/250V*

- *Simple operation*

- *CE marked*

- *RoHS compliant*

- *2 year warranty*

Applications

✦ Food preparation ✦ Storage facilities ✦ Technical educational establishments

✦ Environmental ✦ R&D ✦ Heating & ventilation setup ✦ Building & energy management

✦ Instrumentation laboratories ✦ Experimentation ✦ Refrigeration/freezer plant monitoring

✦ Museums and Galleries

Specification at an ambient temperature of 20°C

Measurement

Input / Ranges

Thermocouple to IEC 584

Type J -200°C to 750°C
Type K -200°C to1200°C
Type T -200°C to 350°C
Type E -200°C to 900°C
Type N 0°C to 1300°C
Type R 0°C to 1760°C
Type S 0°C to 1760°C
Type B 300°C to 1800°C
Pt100 to IEC751, 3 wire -200°C to 850°C
Note: all inputs are non-isolated and sensors must be of insulated construction.

Accuracy

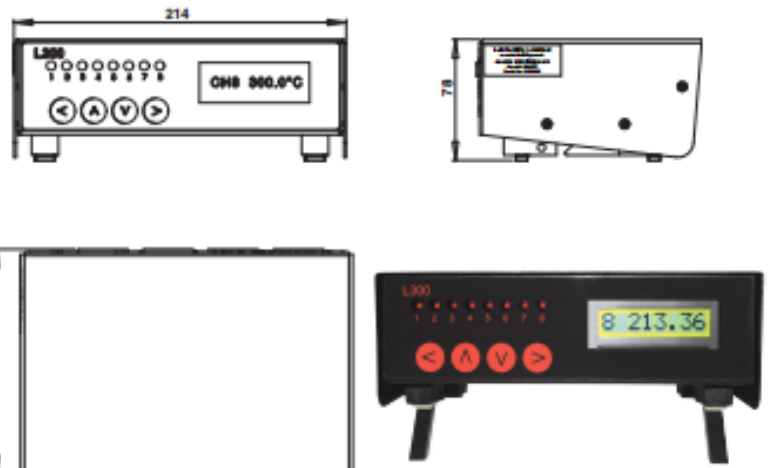|	
Thermocouples J K T E & N	better than +/- 0.1°C +/-0.1% of range -100°C to span (Zero to span Type N) +/- 0.15% of range -101 to -200°C (J K T & E)
Thermocouples R S & B	better than+/-0.1°C +/-0.15% of range
Linearisation	±0.05°C
Pt100 range	better than ±0.05°C ±0.1% of range
Zero drift	±0.01% of span per °C
Span drift	±0.01% of span per °C
Display	LCD, backlight
Display resolution	Thermocouple ranges 0.1°C, Pt100 range 0.01°C
Indication	Channel No., measured temperature (°C or °F)
Reference junction compensation for thermocouples	Automatic, accurate reference junction compensation is incorporated for thermocouple ranges
Self-calibration	User facility incorporated. The instrument auto-calibrates on every A/D cycle *
Sensor open circuit detection & indication	Upscale indication
Ambient operating temperature	0 to 50°C

Alarm/Control

Alarm modes	High / Low / Band/ control
Relay contacts	x3 normally open*/common/normally closed * The contact position when the relay is de-energised Rated 10A/250V, resisitive load. Relays (1to 8) can be assigned to any input and polarity (normal or Inverse) selected.
User interface	Front panel keys for selecting channel number for display or auto-scan selection; front panel keys for relay configuration and alarm parameters. 8 x LED indicators for relay actuation.
Storage temperature	-20°C to 70°C
Display	LCD with backlight
Input Terminations	8 x thermocouple: mini connectors 8 x Pt100, terminal blocks
Relay Terminations	4 x 6 way connector
PC Interface	USB
Power supply	6Vdc (5.5-9.0V) via universal mains adaptor (supplied) 120-250V 50/60Hz
Logging interval	5 seconds to 1 hour
On-board memory	512 sets of readings
PC software	Supplied as standard on CD-ROM Remote control & measure: - Log readings to file Download to PC Logging, charting, alarm configuration and calibration

* The integral, self-calibration facility for the thermocouple version is a rapid and convenient method for on-site calibration and does not require any additional equipment other than the special, external link (optional). Self-calibration of Pt100 ranges is quickly and conveniently performed using plug-in precision resistors (optional). Traceable calibration can be achieved by the user conveniently and without recourse to a accredited Laboratory if there is access to a certified DVM; this can be used to measure the L200 internally generated calibrated Voltage via the "cal port" presented externally to the instrument case. Considerable time and cost saving are achieved by this method.

Standard accessories The L300 is supplied with a power supply adaptor, USB lead, PC software, and instruction manual (on CD). L300-TC includes external link.