

LD5-TC8 and LE5-TC8 thermocouple monitors

Description

The LD5-TC8 and LE5-TC8 monitors allow monitoring/control of up to eight thermocouple inputs type B,E,J,K,N,R,S or T. Four setpoint relay outputs with flexible operation modes are provided as standard with a further 4 relays being optionally available. A non isolated RS485 communications port allows communication to other systems and can also allow the user to perform setup etc. via a free downloadable Windows program.

Model LE5-TC8 has an Ethernet port fitted plus 16MB datalogger memory and web page. The embedded web page allows viewing via PC, laptop, tablet or smart phone (Android or IOS). Model LD5-TC8 has no Ethernet port or datalogger memory or web page.

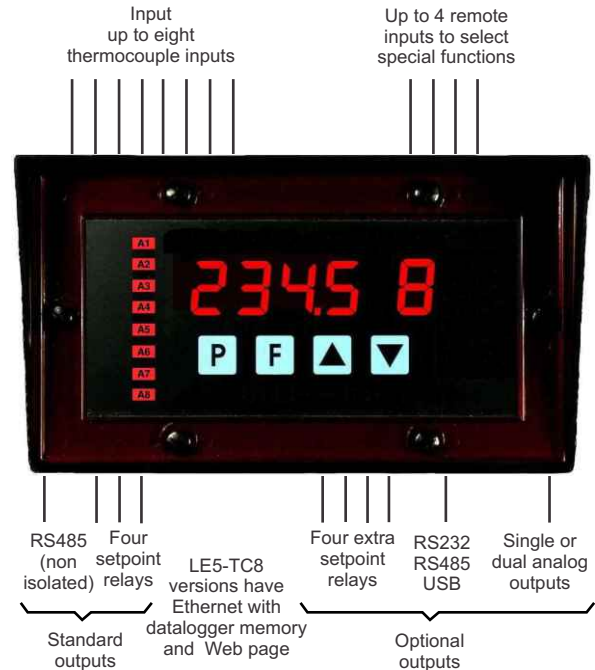
Displays available are:

- 20mm 6 digit, standard contrast LED display
- 38mm 6 digit, standard or high contrast LED display
- 45mm 5 digit, standard contrast LED display
- 57mm 4 digit, standard contrast LED display
- 58mm 4 digit, high contrast LED display
- 100mm 4 digit, standard or high contrast LED display
- 100mm 6 digit, standard or high contrast LED display
- 200mm 4 digit, standard or high contrast LED display.

The 38mm, 58mm, 100mm and 200mm high contrast versions are available in Red, Green, Amber or White LED. The 200mm display is also available in standard contrast version Red, Green, Amber or White LED. The display will cycle through the active channels showing the channel number and the value. The cycling rate can be configured via a software function. The 4 and 5 digit versions will flash the channel number then show the temperature reading.

Displays are mounted in an IP65 enclosure. All calibration and setting up is achieved by user pushbuttons using easy to follow messages on the display or via the free downloadable Windows software (a serial converter may be required). Programming functions include decimal point, digital filter, alarm setpoint parameters, number of input channels, calibration and scaling. Each input may be individually calibrated and the instrument retains the calibration values in non volatile memory.

A programmable digital filter improves stability by smoothing out short term interference. The setpoint alarms may be individually configured for setpoint level, hysteresis, high and/or low alarm, relay trip delay, normally open or normally closed operation, latching or non latching operation. Individual relays may be allocated to any input channel or a number of channels or to operate from a calculated value e.g. average or highest. Relays 1 and 2 can be dedicated for use as PI control (frequency or pulse width) if required.



38mm display version



100mm green display version

LD5-TC8-1.0-0

0.1 Technical specifications

Input types:	Up to 8 thermocouple inputs type B,E,J,K,N,R,S or T can be individually selected for each channel
Accuracy:	Better than 1°C when calibrated
Measuring range:	B 400 to 1866°C, E -100 to 1000°C, J -100 to 870°C, K -100 to 1372°C N -100 to 1300°C, R -35 to 1768°C, S -35 to 1768°C, T -100 to 400°C
Sample rate:	Selectable 1, 2, 4 or 8 seconds per channel
Display scan rate:	Selectable 0 (no automatic scan) to 200 secs. per channel
Thermal stability:	25ppm per °C
Ambient temperature:	LED -10 to 60° C
Humidity:	5 to 95% non condensing
Power supply:	100 and 200mm LED: AC 240 or 110V selectable, 50/60Hz or AC 48/42/32/24 selectable, 50/60Hz or DC isolated wide range 12 to 24V. 20mm, 38mm, 45mm, 57 or 58mm LED: AC 240/110V 50/60Hz or AC 24 to 48V 50/60Hz or DC isolated wide range 12 to 48V or DC 24V non isolated Supply type is factory configured
Output (standard):	4 x relays, 1 x Form C, 3 x Form A rated 5A resistive. Programmable N.O. or N.C. Relays 1 and 2 can alternatively be set for PI control (frequency or pulse width)
Output (standard):	RS485 non isolated serial comms. Ethernet (LE5 models only), can be used with Modbus TCP

Optional outputs - some but not all options below are available in combination - see page 3 for full list

Extra relays:	4 extra relays, form A
Analog retransmission:	Single 4 to 20mA 12 bit Single 4-20mA, 0-1VDC or 0-10VDC (user selectable), 16 bit (4-20mA will drive into resistive loads of up to 800Ω) Analog outputs can be configured for retransmission or PI control
Communications:	RS485 isolated 8 bit (ASCII or Modbus RTU functions 1 and 3) RS232 serial comms. 8 bit (ASCII or Modbus RTU functions 1 and 3) USB port, type B

Applications/input types available with large digit display models - see individual brochures

- 8 channel scanning, RTD, Thermocouple and 4-20mA/DCV input versions available
- Analog input, process transmitters etc. ±20mA, 4-20mA or ±2.5VDC or ±25VDC
- Pulse input, rate, total, count, grand total (encoders, switches, proximity sensors etc.)
- Temperature - RTD, thermocouple, 4-20mA
- Weighing - 4 or 6 wire mV/V output loadcells
- Pressure measurement - 4 or 6 wire mV/V pressure sensors or 4-20mA analog transducers
- Liquid level measurement - 4 or 6 wire mV/V pressure sensors or 4-20mA analog transducers
- Serial input - RS232, RS485 for slave displays etc.
- Synchronous Serial Interface (SSI) for high accuracy position etc. measurement
- Binary, BCD or Gray Code input
- Real Time clock with alarms
- Multifunction timer - elapsed time, stopwatch, run time etc.

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