

# LD5-RT8 and LE5-RT8 RTD/AD590 Eight Input scanning monitors

The LD5-RT8 and LE5-RT8 monitors allow monitoring/control of up to eight 2 or 3 wire Pt100 or Pt1000 RTD inputs or up to eight AD590 sensors. Four setpoint relay outputs with flexible operation modes are provided as standard with a further 4 relays being optionally available.



Model LE5-RT8 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-RT8 has no Ethernet port or datalogger memory or web page.

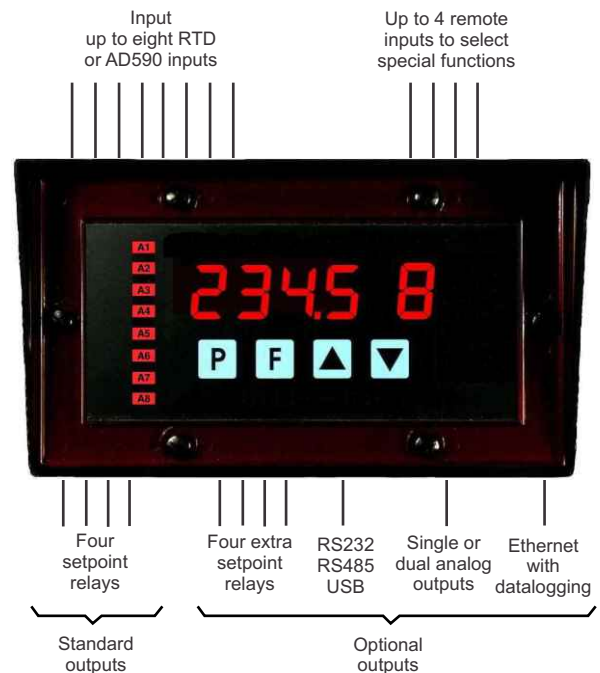
Displays available:

- 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). 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

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## 0.1 Technical specifications

Input types:	Up to 8 inputs Pt100 or Pt1000 2 or 3 wire or up to 8 off AD590 semiconductor sensors
Accuracy:	Better than 0.1°C when calibrated
Measuring range:	Pt100 up to 350 Ohms Pt1000 up to 3000 Ohms AD590 -55 to 155 °C
Sample rate:	3 samples per second (8 channels scanned in approx. 2.4 secs)
ADC Resolution:	Effective resolution 18.5 bits
Thermal stability:	25ppm per °C
Ambient temperature:	LED -10 to 60° C
Humidity:	5 to 95% non condensing
Power supply:	<b>100 and 200mm LED:</b> AC 240 or 110V selectable, 50/60Hz or AC 48/42/32/24 selectable, 50/60Hz or DC isolated wide range 12 to 24V. <b>20mm, 38mm, 45mm, 57 or 58mm LED:</b> 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):	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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## LD5-RT8 and LE5-RT8 order codes

The last sections is for optional items (if required).

[ ] - [RT8] - [ ] - [ ] - [ ]

LD5	-----	<b>Main input board type</b>
LE5	-----	Input board with Ethernet and Datalogger memory fitted, Web page
		<b>Power supply</b>
ACH	-----	240VAC/110VAC
ACL	-----	24 to 48VAC
DC	-----	12 to 48VDC isolated (20 to 58mm displays) or 12 to 24VDC (100 & 200mm displays)
DCN	-----	24V non isolated (20 to 58mm displays only)
		<b>Display type</b>
20R6	-----	20mm 6 digit red LED - with front pushbuttons and alarm annunciators
38R6	-----	38mm 6 digit red LED - with front pushbuttons and alarm annunciators
38D6	-----	38mm 6 digit red LED - with front pushbuttons and alarm annunciators, high contrast daylight viewable
38G6	-----	38mm 6 digit green LED - with front pushbuttons and alarm annunciators, high contrast daylight viewable
38A6	-----	38mm 6 digit amber LED - with front pushbuttons and alarm annunciators, high contrast daylight viewable
38W6	-----	38mm 6 digit white LED - with front pushbuttons and alarm annunciators, high contrast daylight viewable
45R5	-----	45mm 5 digit red LED - with front pushbuttons and alarm annunciators
57R4	-----	57mm 4 digit red LED
58R4	-----	58mm 4 digit red LED - high contrast daylight viewable
58G4	-----	58mm 4 digit green LED - high contrast daylight viewable
58A4	-----	58mm 4 digit amber LED - high contrast daylight viewable
58W4	-----	58mm 4 digit white LED - high contrast daylight viewable
100R4	-----	100mm 4 digit red led
100R6	-----	100mm 6 digit red led
100D4	-----	100mm 4 digit red led - high contrast daylight viewable
100G4	-----	100mm 4 digit green led - high contrast daylight viewable
100A4	-----	100mm 4 digit amber led - high contrast daylight viewable
100W4	-----	100mm 4 digit white led - high contrast daylight viewable
100D6	-----	100mm 6 digit red led - high contrast daylight viewable
100G6	-----	100mm 6 digit green led - high contrast daylight viewable
100A6	-----	100mm 6 digit amber led - high contrast daylight viewable
100W6	-----	100mm 6 digit white led - high contrast daylight viewable
200R4	-----	200mm 4 digit red led - standard brightness
200G4	-----	200mm 4 digit green led - standard brightness
200A4	-----	200mm 4 digit amber led - standard brightness
200W4	-----	200mm 4 digit white led - standard brightness
200RD	-----	200mm 4 digit red led - high contrast daylight viewable
200GD	-----	200mm 4 digit green led - high contrast daylight viewable
200AD	-----	200mm 4 digit amber led - high contrast daylight viewable
200WD	-----	200mm 4 digit white led - high contrast daylight viewable
		<b>Optional outputs</b>
S	-----	RS232/RS485 serial communications - isolated
U	-----	USB communications port - isolated
SU	-----	RS232/RS485 plus USB port - isolated
SRRRR	-----	RS232/RS485 serial communications plus 4 extra relays
URRRR	-----	USB port plus 4 extra relays
SURRRR	-----	RS232/RS485 plus USB port plus 4 extra relays
I	-----	4-20mA analog retransmission 12 bit - isolated
A	-----	4-20mA, 0-1VDC or 0-10VDC analog retransmission 16 bit - isolated
IRRRR	-----	4-20mA analog retransmission 12 bit - isolated plus 4 extra relays
ARRRR	-----	4-20mA, 0-1V or 0-10VDC output 16 bit - isolated plus 4 extra relays
RRRR	-----	4 extra relays
II	-----	Dual 4-20mA output 12 bit - isolated
AA	-----	Dual 4-20mA output plus RS485 serial communications - isolated

Ethernet, datalogger memory and web page cannot be retrofitted to existing LD5 models.

8 channel 4-20mA or DC Volt input version, models LD5-I8, LD5-V8 and LE5-I8, LD5-V8 also available with same power supply, display and output options as above - see separate brochure

8 channel thermocouple input version, models LD5-TC8 and LE5-TC8 also available with same power supply, display and output options as above - see separate brochure

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