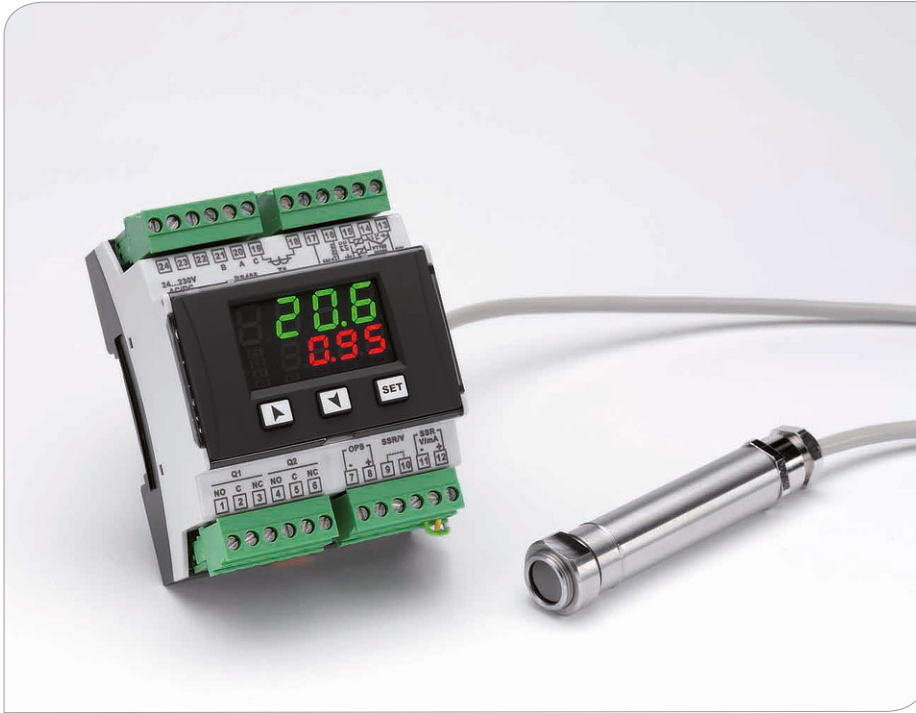# DRR245
DIN-Rail Mounted Multifunction Indicator/Controller

- Universal analogue input
- Relay outputs
- SSR output
- Analogue voltage or current output for control, retransmission, or emissivity adjustment on PyroEpsilon sensor
- Universal supply voltage 24 to 230 V AC/DC
- Remote control via RS485 Modbus
- Ideal as a signal converter

GENERAL SPECIFICATIONS

Housing	DIN 43880 for mounting on type EN 50022 rail or on a flat surface
Supply Voltage	24 to 230 V AC/DC +/- 15% 50/60 Hz
Power Consumption	3 W
Display	4-digit dual LED, 8 red status LEDs
Operating Conditions	0-45°C, 35-95% RH
Inputs	1 configurable for J, K, R or S thermocouples; Pt100; Ni100; Pt1000; Pt500; PTC1k; NTC10k; 0 to 10 V; 0/4 to 20 mA; 0 to 40 mV; potentiometer 6kΩ / 150kΩ; TA 50 mA.
Outputs	2 relays 5 A resistive + 1 logic SSR 12 V - 30 mA / 4 to 20 mA / 0 to 10 V for control or retransmission, galvanically isolated from input and power supply RS-485 Modbus RTU (57600 baud max) Input TA 50 mA for Loop Break Alarm
Digital Input	Tuning start, Setpoint change, Man/Auto selection, Hold function, Start/Stop preprogrammed cycle
Control Modes	ON/OFF, P, PI, PID, Autotuning
Accuracy	0.5% ± 1 digit for TC / RTD; 0.2% ± 1 digit for V/mA
Sampling Time	Selectable (15 ms max)
Sealing	IP20
Configuration	Parameters protected by password; optional memory card with battery for repeat configurations; LabSoftView software for configuration via a PC

The DRR245 DIN-rail mounted controller provides a highly versatile alternative to panel-mounted instruments. It has one analogue input which is configurable for up to 18 different sensors / signals, two relay outputs, and a third output that can be configured either as a SSR logic signal or a 4 to 20 mA / 0 to 10 V analogue signal for control or re-scalable retransmission of the process variable or setpoint.

The analogue output can also be used to adjust the emissivity setting on a PyroEpsilon non-contact temperature sensor – the value is adjusted between 0.2 and 1.0 using the lower (red) LED display and associated push buttons.

The built-in switching power supply has an extended range of 24 to 230 V AC/DC and does not require any jumper setting. The control modes are ON/OFF, PID + Autotuning and Heating/Cooling PID with a neutral zone.
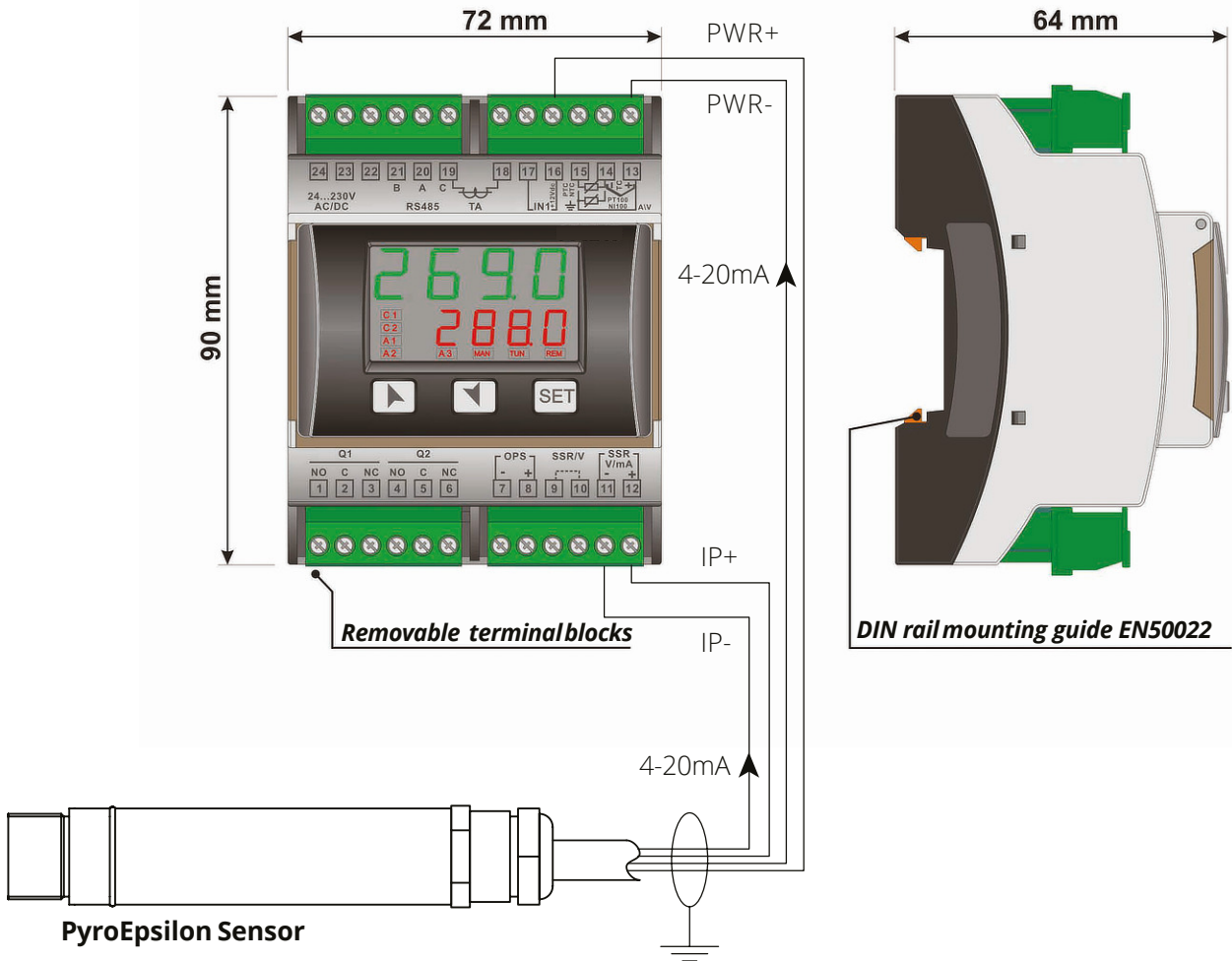
Software features include launch tuning, setpoint selection via digital input, optional manual reset of the output via the front keypad, latch-on function for sensor calibration (including load cells) and a programmable cycle of 3 steps.

RS-485 serial communication (Modbus RTU) and load monitoring function (Loop Break Alarm) with current transformer TA are also provided.

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There is an optional Memory Card to copy all of the configuration parameters from one controller to another without powering them up, whilst LabSoftView for Windows enables setting and monitoring of parameters on a PC.

If the DRR245 is ordered with a PyroEpsilon sensor, it is supplied pre-configured to display the 4 to 20 mA signal from the sensor over the appropriate temperature range. It is also pre-configured to allow the emissivity setting on the sensor to be adjusted over the range 0.2 to 1.0.

Since the PyroEpsilon derives its power from the DRR245 no other power source is required. The DRR245 can be supplied from a 24 V to 230 V source (+/-15%), AC or DC.

72 mm

PWR+

PWR-

4-20mA

90 mm

24...230V AC/DC   RS485   TA   LIN1   PT100 NI100   A/V

269.0
288.0

SET

Q1   Q2   OPS   SSR/V   SSR V/mA

NO C NC NO C NC   - +   - +

1 2 3 4 5 6   7 8 9 10 11 12

Removable terminal blocks

IP+

IP-

64 mm

DIN rail mounting guide EN50022

4-20mA

PyroEpsilon Sensor

MODEL	INPUTS	OUTPUTS	POWER SUPPLY
DRR245-21ABC-T	Selectable	2Relays + SSR / 4..20mA / 0..10V + RS485	24...230V AC/DC +/- 15% 50/60Hz

Calex Electronics Ltd I Leedon House I Chartmoor Road I Leighton Buzzard I Bedfordshire I LU7 4TN
Tel: +44 (0)1525 373178 I Fax: +44 (0)1525 851319 I Email: mail@calex.co.uk

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Specifications subject to change without notice