

ATR121

Controller with Dual Setpoint



- Food industry
- Ovens/furnaces
- Refrigeration
- Sterilizers
- Environmental chambers
- Safety units
- Injection moulding
- Driers

GENERAL SPECIFICATIONS

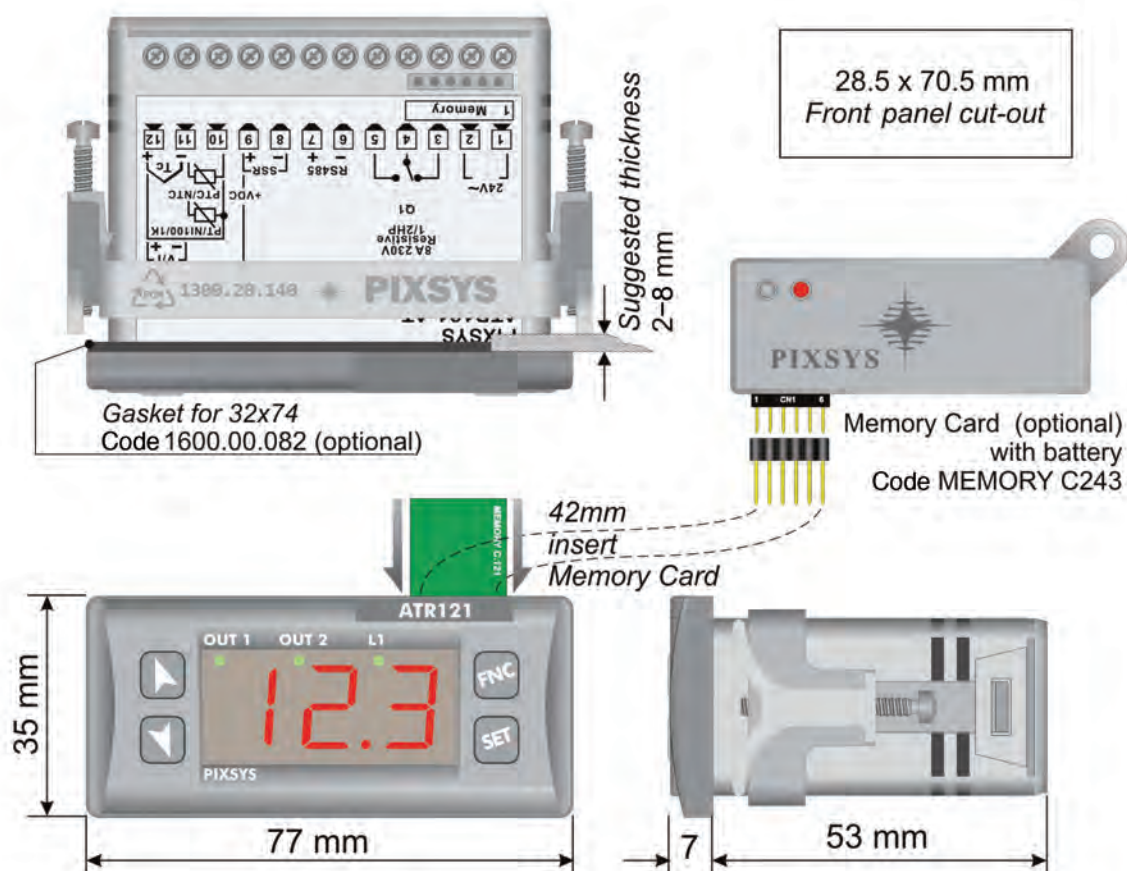
Dimensions	32H x 74W x 58D mm
Supply Voltage	230VAC
Power consumption	2W
Display	3-digit red LED plus decimal point; green status LEDs
Operating Ambient	0-40°C, 35-95%RH
Inputs	1 configurable for J, K, R or S thermocouples; Pt100; Ni100; Pt500; Pt1000; PTC; NTC; 0/4 to 20mA; 0 to 10VDC; potentiometers $\leq 6k\Omega$ or $\leq 150k\Omega$
Outputs	Control relay 8A; Alarm relay 5A; SSR Control/Alarm; Open/Close logic (time-proportioned)
Control Action	ON/OFF; PID Autotuning; Heating/Cooling PID
Accuracy	0.5% $\pm$ 1digit for TC/RTD; 0.2% $\pm$ 1digit for mA/V
Sampling Time	66ms (selectable software filter on input and display)
Sealing	IP54 front panel (IP65 with gasket), IP30 housing, IP20 terminal blocks
Configuration	Parameters protected by password

The ATR121 is a dual-setpoint controller with a 3-digit red LED display. The input is configurable for thermocouples type J, K, S & R; Pt100; PTC1000; Ni100; NTC10k (typically used in the refrigeration industry); Pt500/Pt1000 (widely used in air-conditioning); 0 to 1V; 0 to 10V; 0 to 20mA and 4 to 20mA. Potentiometers with a full scale value of $6k\Omega$ or $150k\Omega$ may also be used and there is a "latch on" function for quick calibration and setting of minimum, maximum and zero via the front keys.

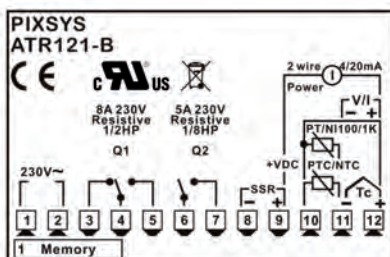
Two set-points are available, one for control and one for the alarm function. They can be configured to activate two relay outputs or an SSR output. The main relay for the control output is rated at 8A. The alarm relay is rated at 5A (alarm modes: threshold, band, deviation). Open/Close logic for motorised valves is also available.

Software features include ON/OFF control, PID + Autotuning and Heating-Cooling PID with a neutral zone. A single output (1 relay + SSR) version is also available.

Front of panel sealing to IP65 can be achieved using a gasket (optional). There is also an optional Memory Card to copy all of the configuration parameters from one controller to another without powering them up.



Model :



MODEL	INPUTS	OUTPUTS	POWER SUPPLY
ATR121-B	Configurable / Selectable	2 Relays + SSR	230 Vac +/-10% 50/60 Hz

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Issue A -September 09
Specifications subject to change without notice

ATR243

Multifunction Controller



- Metalworking furnaces
- Heating element control
- Refrigeration
- Footwear machinery
- Plastics extrusion
- Injection moulding
- Dryers
- Load cell control
- Motorised valve control
- Woodworking machinery
- Pharmaceutical industry
- Cold stores
- Current control
- Remote control via RS485
- Signal converter

GENERAL SPECIFICATIONS

Dimensions	48H x 48W x 122.5D mm
Supply Voltage	24 to 230VAC/DC +/- 15% 50/60Hz
Power Consumption	3W
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 10V; 0/4 to 20mA; 0 to 40mV; potentiometer 6k Ω /150k Ω ; TA 50mA.
Outputs	ATR243-20ABC: 2 relays 5A resistive OR 1 relay + 1 logic SSR 12V-30mA /4 to 20mA / 0 to 10V for control or retransmission ATR243-21ABC-T: 2 relays 5A resistive + 1 logic SSR 12V-30mA /4 to 20mA / 0 to 10V for control or retransmission + RS485 Modbus RTU (57600 baud max) + Input TA 50mA for Loop Break Alarm ATR243-31ABC: 3 relays 5A resistive + 1 logic SSR 12V-30mA / 4 to 20mA / 0 to 10V for control or retransmission + Input TA 50mA 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% $\pm$ 1digit for TC/RTD; 0.2% $\pm$ 1digit for V/mA
Sampling Time	Selectable (15ms max)
Sealing	IP54 front panel (IP65 with gasket), IP30 housing, IP20 terminal blocks
Configuration	Parameters protected by password; optional memory card with battery for repeat configurations; software for configuration via a PC.

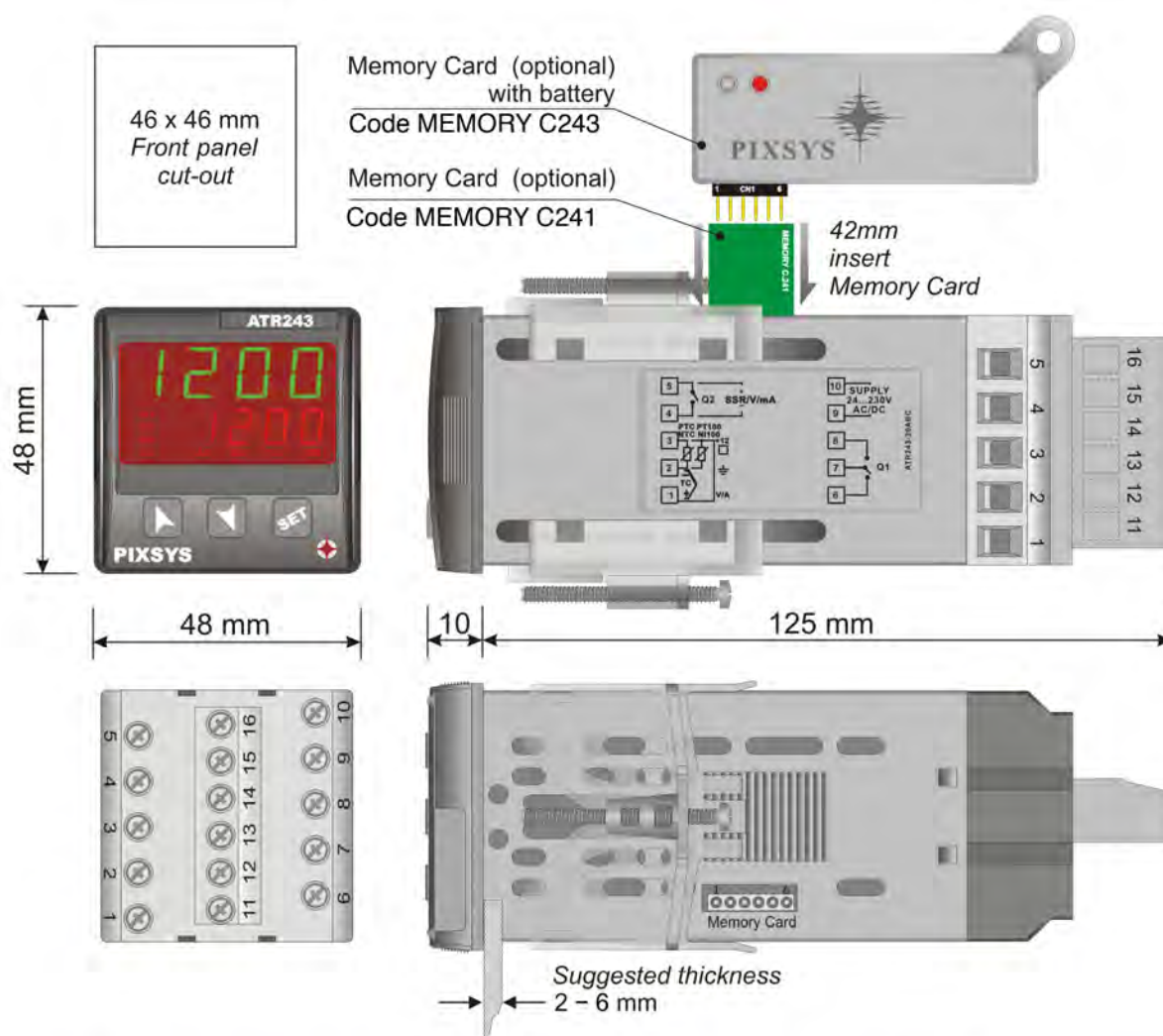
This multifunction controller offers 2 to 4 setpoints. It has one analogue input which is configurable for up to 18 different sensors/signals. The 2 to 4 outputs are configurable as relays (including Open/Close logic for motorised valve control), SSR, 4 to 20mA and 0 to 10V (either for control or re-scalable retransmission of the process variable/setpoint).

The built-in switching power supply has an extended range of 24 to 230VAC/DC and does not require any jumper setting. The control modes are ON/OFF, PID + Autotuning and Heating/Cooling PID with a neutral zone.

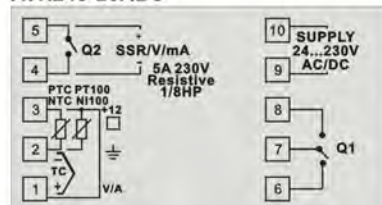
Software features include launch tuning, setpoint selection via digital input, optional manual reset of the output via the front keypad, latch-on function for sensor calibration (including load cells) and a programmable cycle of 3 steps. Optional features include RS485 serial communication (Modbus RTU) and load monitoring function (Loop Break Alarm) with current transformer TA.

Front of panel sealing to IP65 can be achieved using a gasket (optional). There is also an optional Memory Card to copy all of the configuration parameters from one controller to another without powering them up.

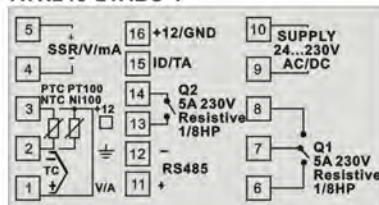
Software application LabSoftView for Windows enables setting and monitoring of parameters on a PC.



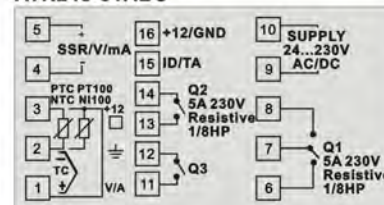
ATR243-20ABC



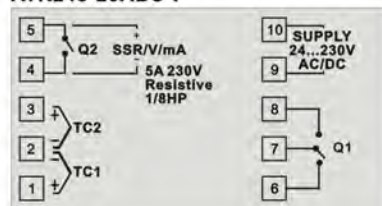
ATR243-21ABC-T



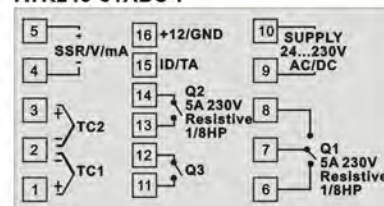
ATR243-31ABC



ATR243-20ABC-I



ATR243-31ABC-I



MODEL	INPUTS	OUTPUTS	POWER SUPPLY
ATR243-20ABC	Selectable	2 Relays + SSR / 4..20mA / 0..10V	24...230V AC/DC +/- 15% 50/60Hz
ATR243-20ABC-I		2 Relays + SSR / 4..20mA / 0..10V + RS485	
ATR243-21ABC-T		3 Relays + SSR / 4..20mA / 0..10V	
ATR243-31ABC-I			

ATR142

Controller/Indicator with Triple Setpoint



- Dairy industry
- Refrigeration
- Sterilizers
- Environmental chambers
- Footwear machinery
- Cereal driers
- Metalworking
- Heating element control
- Indicator for inverters
- Building Automation
- Galvanizing
- Chillers

GENERAL SPECIFICATIONS

Dimensions	32H x 74W x 58D mm
Supply Voltage	24 to 230VAC/DC
Power Consumption	2W
Display	4-digit green + 4-digit red LED; 6 status LEDs
Operating Conditions	0-40°C, 35-95%RH
Inputs	1 configurable for J, K, R or S thermocouples; Pt100; Ni100; Pt500; Pt1000; PTC; NTC; 0/4 to 20mA; 0 to 10VDC; potentiometers $\leq 6k\Omega$ or $\leq 150k\Omega$
Outputs	Control relay 8A; Alarm relay 5A; SSR Control/Alarm; Open/Close logic (time-proportioned); RS485 serial communication, MODBUS-RTU/Slave (version -T)
Control	ON/OFF; PID Autotuning; Heating/Cooling PID
Accuracy	0.5% $\pm$ 1digit for TC/RTD; 0.2% $\pm$ 1digit for mA/V
Sampling Time	15ms (selectable software filter on input and display)
Sealing	IP54 front panel (IP65 with gasket), IP30 housing, IP20 terminal blocks
Configuration	Parameters protected by password
Optional Functions	Timer ON/OFF; Pause/Continue Timer (assigned to alarm relay)

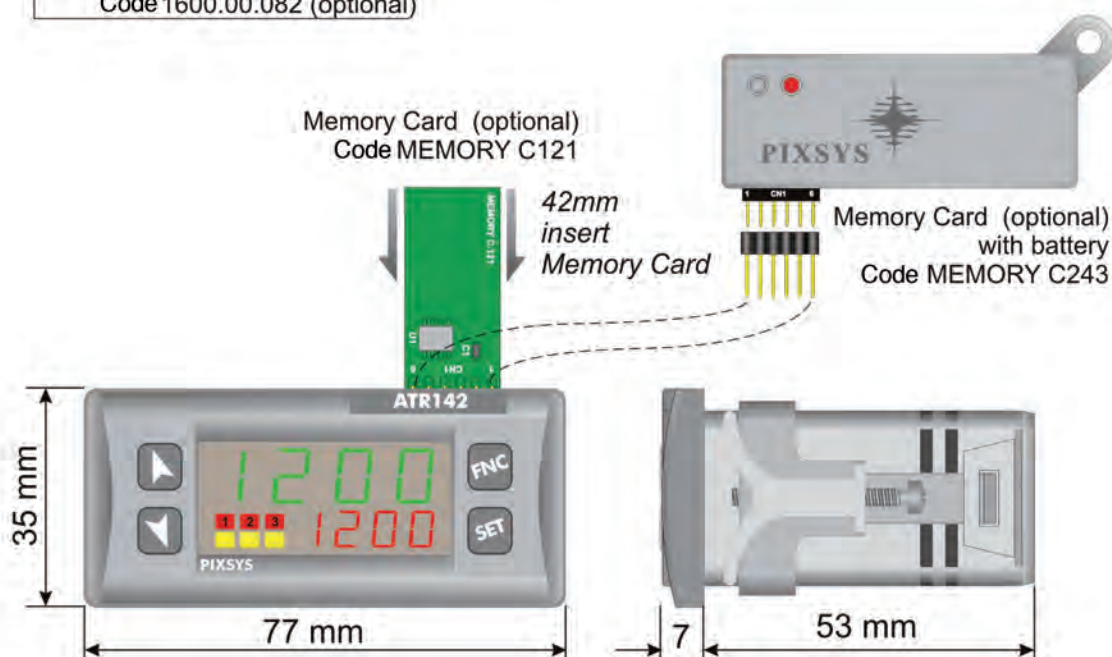
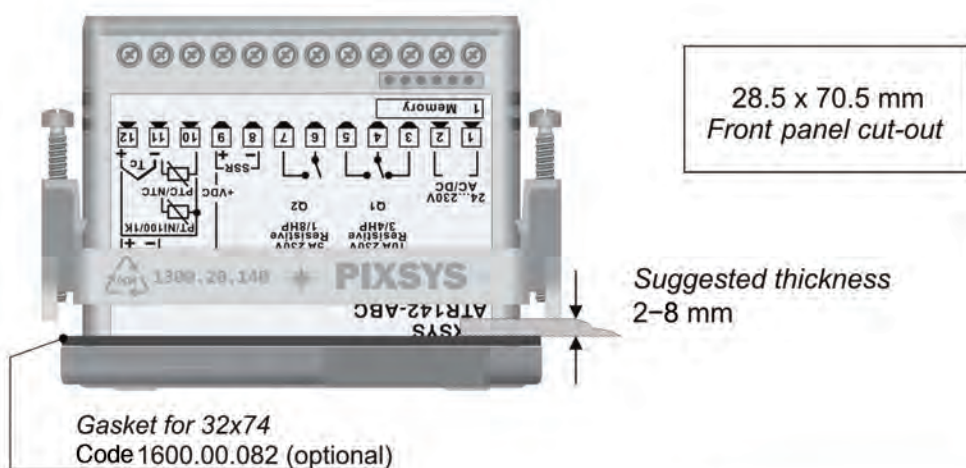
This triple-setpoint controller has a dual red/green LED display which shows the process variable and setpoint value at the same time. The built-in switching power supply has an extended range of 24 to 230VAC/DC and does not require any jumper setting. The analogue input is selectable for thermocouples J, K, R & S; Pt100; PTC1000; Ni100; NTC10k (refrigeration industry); Pt500/Pt1000 (widely used in air-conditioning); 0 to 10V; 0 to 20mA and 4 to 20mA. Potentiometers with full scale up to $6k\Omega$ and $150k\Omega$ may also be used and there is a "latch on" function for quick calibration and setting of minimum, maximum and zero via the front keys.

Three setpoints are provided for control and/or alarm functions. They can be assigned to two relay outputs or an SSR output. The main control relay is rated at 8A. The alarm relay is rated at 5A (alarm modes: threshold, band, deviation). Open/Close logic for motorised valves is also available.

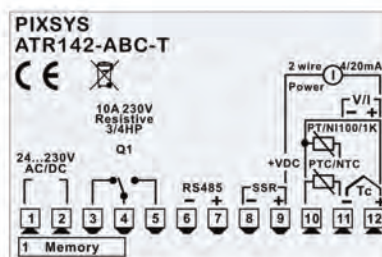
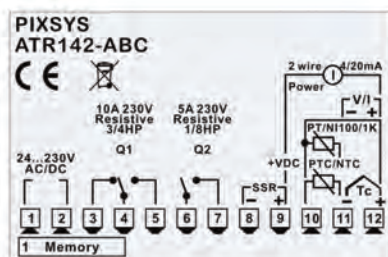
Software features include ON/OFF control, PID + Autotuning and Heating-Cooling PID with a neutral zone. A single output (1 relay + SSR) version is available with RS485 serial communication and Modbus-RTU/Slave protocol for supervisory systems.

Front of panel sealing to IP65 can be achieved using a gasket (optional). There is also an optional Memory Card to copy all of the configuration parameters from one controller to another without powering them up.

Software application LabSoftView for Windows enables setting and monitoring of parameters on a PC. A special software release which integrates both the basic control loop and the timer function is available upon request.



Model :



MODEL	INPUTS	OUTPUTS	POWER SUPPLY
ATR142-ABC	Selectable	2 Relays + SSR	24...230V AC/DC +/- 15% 50/60Hz
ATR142-ABC-T		1 Relay + SSR + RS485	

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PPT245

DIN-Rail Mounted Multifunction Indicator/Controller



- Metalworking furnaces
- Heating element control
- Footwear machinery
- Plastic extrusion
- Injection moulding
- Motorised valve control
- Woodworking machinery
- Pharmaceutical industry
- Current control
- Remote control via RS485
- Signal converter

GENERAL SPECIFICATIONS

Housing	DIN 43880 for mounting on type EN 50022 rail or on a flat surface
Supply Voltage	24 to 230VAC/DC +/- 15% 50/60Hz
Power Consumption	3W
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 10V; 0/4 to 20mA; 0 to 40mV; potentiometer 6k Ω / 150k Ω ; TA 50mA.
Outputs	2 relays 5A resistive + 1 logic SSR 12V-30mA / 4 to 20mA / 0 to 10V for control or retransmission, galvanically isolated from input and power supply RS485 Modbus RTU (57600 baud max) Input TA 50mA 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% $\pm$ 1digit for TC/RTD; 0.2% $\pm$ 1digit for V/mA
Sampling Time	Selectable (15ms max)
Sealing	IP20
Configuration	Parameters protected by password; optional memory card with battery for repeat configurations; LabSoftView software for configuration via a PC
Optional Enclosure	Polycarbonate with transparent lid, IP65, 160H x 90W x 90D mm

The PPT245 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 which can be configured either as a SSR logic signal or a 4 to 20mA / 0 to 10V 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.

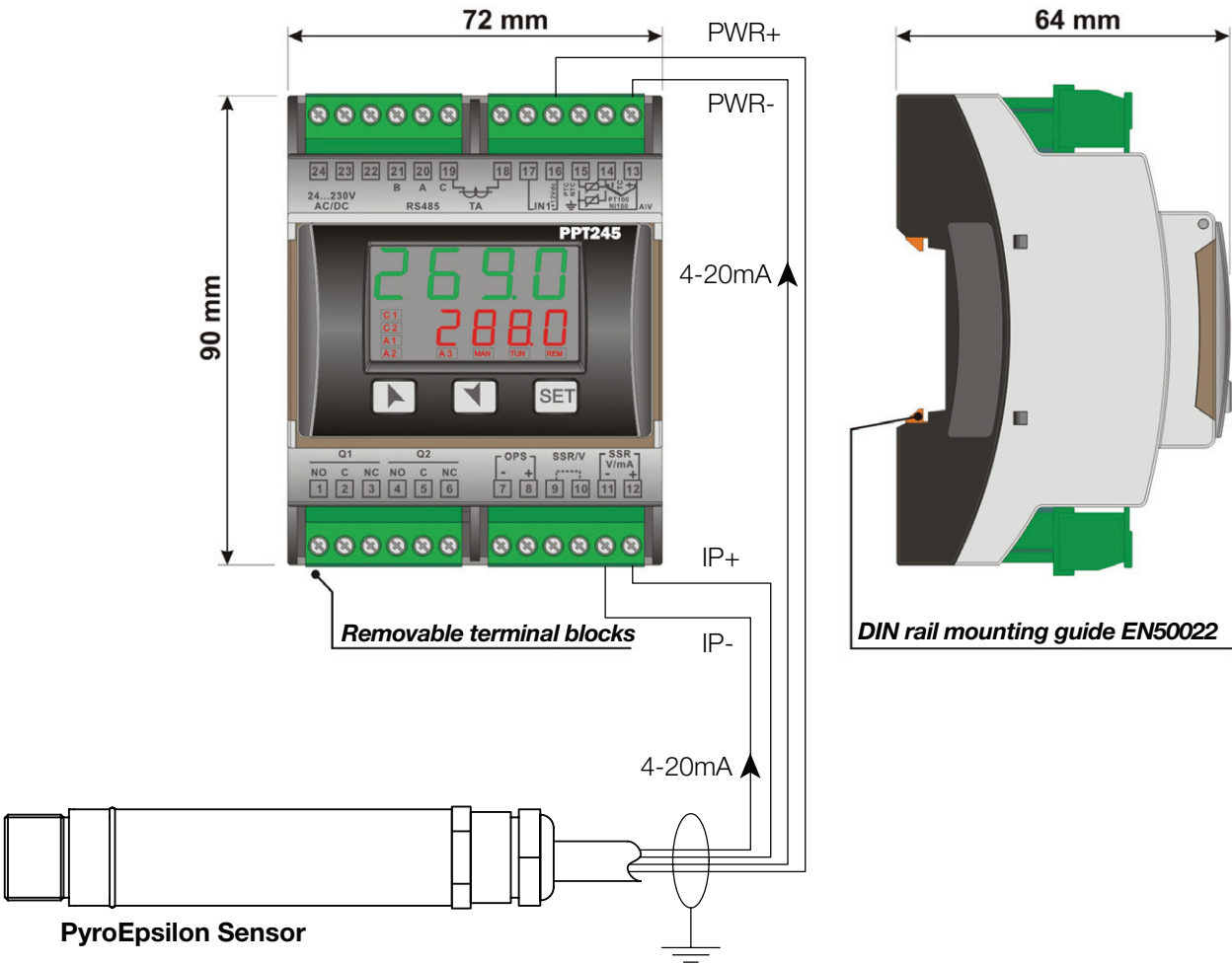
The built-in switching power supply has an extended range of 24 to 230VAC/DC and does not require any jumper setting. The control modes are ON/OFF, PID + Autotuning and Heating/Cooling PID with a neutral zone.

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. RS485 serial communication (Modbus RTU) and load monitoring function (Loop Break Alarm) with current transformer TA are also provided.

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.

The PPT245 is also available mounted in an IP65 enclosure with clear lid, which is ideal for mounting on a machine or close to the process where the operator can see the display.

If the PPT245 is ordered with a PyroEpsilon sensor, it is supplied pre-configured to display the 4 to 20mA 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 PPT245 no other power source is required. The PPT245 can be supplied from a 24V to 230V source (+/-15%), AC or DC.



MODEL	INPUTS	OUTPUTS	POWER SUPPLY
PPT245-21ABC-T	Selectable	2Relays + SSR / 4..20mA / 0..10V + RS485	24...230V AC/DC +/- 15% 50/60Hz