



EUROTHERM
CONTROLS

2132

MODEL

- **PID or On/Off control**
- **Heating and cooling**
- **Customized operator interface**
- **SSRx Load Doctor™ diagnostics**
- **Multiple alarms on a single output**
- **Self-tuning with overshoot inhibition**
- **Setpoint rate limit**
- **Scalable linear input**
- **Site configurable**
- **85 to 264Vac supply**
- **Plug-in from front**
- **IP 65, NEMA 4X panel sealing**
- **Compliant with European EMC and low voltage safety directives**



Temperature Controller

The 2132 is a PID or On/Off temperature controller, with self-tuning, in a compact 1/32 DIN size [1.89x0.94x4.06in (48x24x103mm)]. It has a single input, configurable on-site for either thermocouple, resistance thermometer and linear millivolts or milliamps. It has two outputs: a logic output for operating a solid state contactor and a relay output, either of which is configurable for heating, cooling or alarms.

Precise control

An advanced PID control algorithm gives stable ‘Straight-line’ control of the process. A one-shot tuner is provided to set up the PID values and calculate the overshoot inhibition parameters.

SSRx Load Doctor™

diagnostics

Employing patented PDSIO® technology, the Load Doctor™ Diagnostics are a major innovation in the 2132. When used in combination with a solid state contactor (SSC), it allows the logic output of a 2132 to transmit the power demand signal and simultaneously read back a load fault alarm on the same pair of wires. This alarm will flash as a message on the controller front panel and can trip the alarm relay. It indicates that there is a fault in the heating circuit caused by: contactor failed “ON”, contactor failed “OFF”, fuse “OPEN”, heater “OPEN” or wiring “OPEN.”

Universal input

An advanced analog to digital converter samples the input at 5Hz and continuously corrects it for drift. This gives high stability and rapid response to process changes. The input covers all thermocouple types, Pt100 RTD and linear millivolts or milliamps. Input filtering from 1.0 to 999.9 seconds is included.

Customized operation

Custom LEDs provide a bright, clear display of the measured temperature. The setpoint is displayed and adjusted by pressing the raise or lower buttons.

Tactile buttons ensure positive operation. Access to other parameters is simple and easy to understand and can be customized to present only those parameters that need to be viewed or adjusted. All other parameters are locked away under password protection.

Alarms

Up to three process alarms can be combined onto a single output. They can be full scale high or low and deviation from setpoint alarms. They can also be configured as ‘blocking’ alarms which means they will become active only after entering a safe state.



Instant Accuracy™



2132 TECHNICAL SPECIFICATION

Input

Range	-12 to +80mV
Calibration accuracy	0.25% of reading ± 1 LSD or $\pm 1^\circ\text{C}/\text{F}$
Sample rate	5Hz
Linearization accuracy	<0.1% of reading
Resolution	<2 μV
Input filter	1.0 to 999.9 secs
Input offset	User adjustable over full display range
Thermocouples	Refer to Display Ranges table
Cold junction compensation	Typically >15 to 1 rejection of ambient temp. change External references: 32, 113 and 122°F (0, 45 and 50°C)
RTD	2-wire, Pt100 DIN43760
Linear millivolts	-12 to +80mV, (Configurable between limits)
Linear millamps	0 to 20mA (using an external 2.5Ω sense resistor)

Outputs

Logic: Rating	9Vdc, 18mA (non-isolated)
Application	Heating, cooling or alarms SSRx Load Doctor™ (PDSIO® mode 1): Logic heating with load failure alarm
Relay: Rating	Min: 12V, 100mA dc Max: 2A, 264Vac resistive
Application	Heating, cooling or alarm

Control Functions

Control modes	PID or PI with overshoot inhibition, PD, P only or On/Off Heating, cooling or heating plus cooling outputs
Setpoint rate limit	0.01 to 99.99 degrees or display units per minute
Self-tuning	One-shot calculation of PID and overshoot inhibition parameters
Automatic droop compensation	Automatic calculation of manual reset value when using PD control
Alarms: Types	Full scale high or low, deviation high, low or band, Load Doctor™
Modes	Latching or non-latching. Normal or blocking action Up to three alarms can be combined onto a single output

General

Display	4 x 7 segment high intensity LED
Weight	5.29oz (150g)
Supply:	VH= 85 to 264Vac -15%, +10%, 48 to 62Hz. 2.5watts max. VL= 20 to 29Vac or Vdc
Temperature and RH	Operating: 32 to 131°F (0 to 55°C), RH: 5 to 90% noncondensing. Storage: 14 to 158°F (-10 to 70°C)
Panel sealing	IP65, NEMA 4X
Electromagnetic compatibility	Meets generic emission standard EN50081-1(92) for residential, commercial and light industrial Meets general immunity requirements of EN50082-2(95) for industrial environments
Safety standards	EN 61010, installation category 2. (voltage transients must not exceed 2.5kV)
Atmospheres	Electrically conductive pollution must be excluded from the cabinet in which this controller is mounted. This product is not suitable for use above 6,562ft (2000m) or in corrosive or explosive atmospheres without further protection

Ordering Code

Basic Product	Function	Supply	Manual
2132	CC Controller	VH 85-264VAC	XX No Manual
		VL 20-29VAC/DC	ENG English
			FRA French
			GDR German
			ITA Italian

The 2132 input type and output control functions are fully configurable on-site. If preconfiguration is required, ask for details on the full ordering code.

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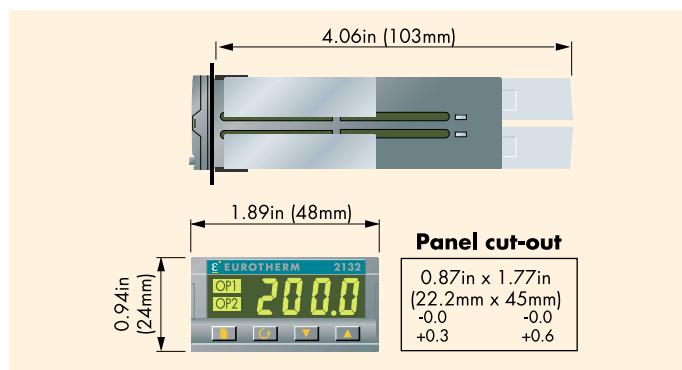
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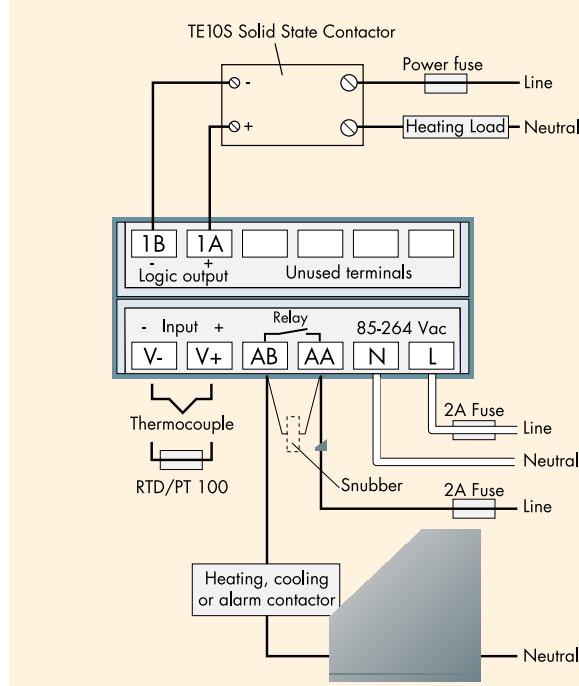
	Min	°C	Max	Min	°F	Max
J thermocouple	-210		1200	-350		2192
K thermocouple	-200		1372	-325		2500
T thermocouple	-200		400	-325		750
L thermocouple	-200		900	-325		1650
N thermocouple	-200		1300	-325		2370
Platinell II	0		1369	32		2500
R thermocouple	-50		1768	-60		3200
S thermocouple	-50		1768	-60		3200
B thermocouple	0		1820	32		3310
C thermocouple	0		2319	32		4200
RTD 100	-200		850	-325		1560
Linear mV or mA			-999 to +9999 with up to 2 decimal places			
Custom sensor, EXERGEN™ or POLYSORT™						consult factory

Note: Temperature can be displayed to 0.1°C/F. Scales conform to the ITS90 standard. A custom thermocouple can be supplied in place of the type C input.

Outline dimensions



Rear Terminal Connections



Informações sobre programação
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