2132
2116
MODELS

...with improved timer

Model 2132
1/32 DIN (48 x 24mm)

Model 2116
1/16 DIN (48 x 48mm)

PID Temperature Controllers

Available in compact 1/32 and 1/16 DIN panel sizes, the 2132 and 2116 temperature controllers are designed for accurate, trouble free control of ovens, chillers, sterilisers and other simple heating and cooling processes. Two outputs are configurable for heating, cooling and alarms.

Eurotherm's advanced control techniques give stable "straight-line" temperature control. Self tuning is included to optimise the control performance without the need for specialist knowledge or training. Heater failure can be detected when the controller is used with a Eurotherm TE10S Solid State Relay (requires PDSIO mode 1).

Three internal alarm setpoints are provided, configurable as latching or non-latching. Alarms can be "blocked" on start-up to prevent unnecessary operator alerts.

Calibration accuracy is maintained with a self-correcting input circuit. User calibration allows offsets to be applied to compensate for sensor and other system errors.

Improved timer

An improved timer can apply heating (and cooling) for a pre-set period, or delay heating to come on after a set time. The latter is useful for over-night batch processing.

Ideal for:

- **Ovens**
- **Chillers**
- **Sterilisers**
- **Trace heating**
- **Heat sealing**

Features:

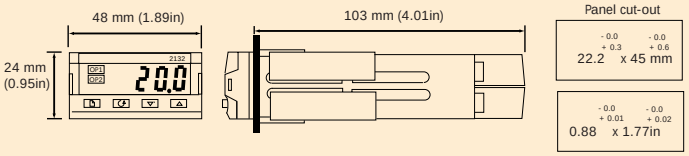
• **Universal input**	Covers a wide range of temperature and process inputs
• **Self tuning**	Easy commissioning
• **In-built timer**	Sets heating/cooling times
• **Setpoint rate limit**	Provides ramp-dwell heat treatment profile
• **Tactile buttons**	Friendly to use
• **Wide-range 85-264V ac, or 20-29Vac/dc supply**	Can be installed world-wide
• **Plug-in from front**	Rapid replacement - reducing downtime
• **IP65 and NEMA 4X panel sealing**	Can be used in wet and dusty atmospheres
• **Three year warranty**	Low ownership cost

EUROTHERM CONTROLS

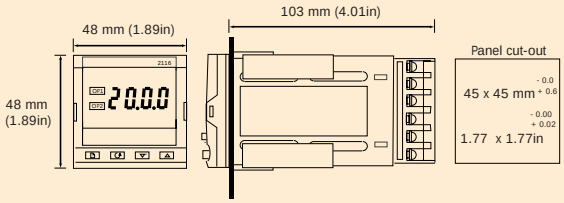
PID Temperature Controllers

Dimensions

2132

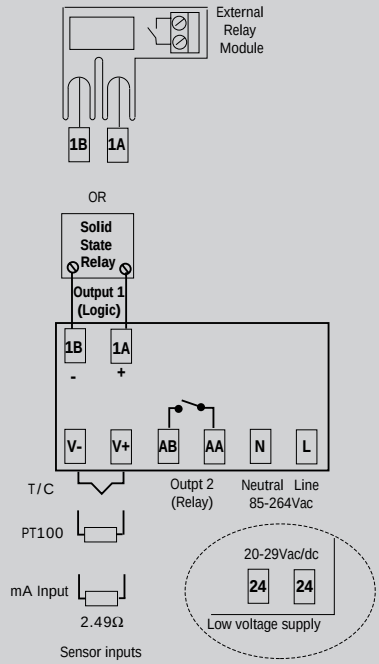


2116

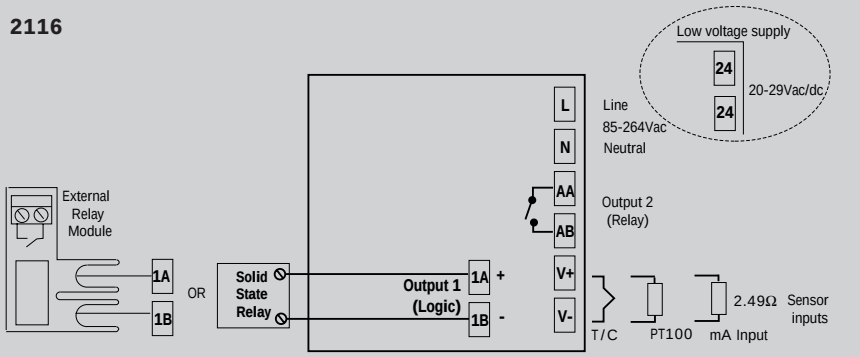


Electrical connections

2132



2116



Specifications

Supply voltage:
85-264Vac, 48-62Hz, or 20-29Vac/dc, 5watts max

Operating ambients:
0-55°C, 5-95%RH non-condensing

Output ratings:
Logic: 9Vdc, 12mA (non-isolated)
(Can also be used as alarm acknowledge, keylock and timer start/stop input)
Relay: 2A, 264V ac resistive

Calibration accuracy:
± 1°C or ± 0.25% of reading whichever is greater

Cold junction compensation:
>15 to 1 rejection of ambient temperature change

Input filtering:
Off to 999.9 seconds

Timer range:
0-9999 minutes

Setpoint rate limit adjustment:
0-999.9 least significant display unit per minute. Adjustable hysteresis

Alarm configuration:
High, low, deviation band, deviation high and low

EMC standards:
Meets generic emissions standard EN50081-2 and immunity standard EN50082-2 for industrial environments

Safety standard:
Meets EN61010, installation category II. Pollution degree 2

Atmospheres:
Not suitable for use above 2000m or in explosive or corrosive atmospheres

Ordering Code

Model Number	Function	Supply Voltage	Manual	Output 1 (Logic)	Output 2 (Relay)	Sensor Input	Setpoint Min.	Setpoint Max.	Units	Ext. Relay Module	Input Adaptor
							note 2	note 2			

Model Number

2132	48 x 24mm unit
2116	48 x 48mm unit

Function

CC	PID Controller
NF	ON/Off Controller
TC	PID Controller + Timer
TN	ON/Off Contr' + Timer

Supply Voltage

VH	85-264Vac
VL	20-29V dc or ac

Manual

XXX	No manual
ENG	English
FRA	French
GER	German
NED	Dutch
SPA	Spanish
SWE	Swedish
ITA	Italian

Output 1 (Logic)

XX	No function
Logic output	
LH	Heating
LC	Cooling
M1	PDS heater break detect (note 1)
FH	High alarm 1
FL	Low alarm 1
DB	Dev. band alarm 1
DL	Dev. low larm 1
DH	Dev. high alarm 1
NW	New alarm
Logic input	
AC	Alarm ack/reset
KL	Keylock
TM	Timer Off/On

Note 1. PDS heater break detect will transmit the power demand to a TE10S Solid State Relay and read beck a heater break alarm.

Output 2 (Relay)

XX	No function
RH	Heating
RC	Cooling
FH	High alarm 2
FL	Low alarm 2
AL	High alarm 2 & low alarm 3
DB	Dev. band alarm 2
DL	Dev. low larm 2
DH	Dev. high alarm 2
NW	New alarm

Sensor Input / Setpoint Min/Max

		Min	°C	Max
Thermocouples				
J	Type J	-210	to	1200
K	Type K	-200	to	1372
T	Type T	-200	to	400
L	Type L	-200	to	900
N	Type N	-200	to	1300
R	Type R	-50	to	1768
S	Type S	-50	to	1768
B	Type B	0	to	1820
P	Platinell II	0	to	1369
Resistance thermometer				
Z	Pt100	-200	to	850
Custom downloaded inputs				
C	Type C - W5%Re/W26%Re (default custom sensor)	0	to	2319
D	Type D - W3%Re/W25%Re	0	to	2399
E	E Thermocouple	-200	to	999
1	Ni/Ni18%Mo	0	to	1399
2	Pt20%Rh/Pt40%Rh	0	to	1870
3	W/W26%Re (Englehard)	0	to	2000
4	W/W26%Re (Hoskins)	0	to	2010
5	W5%Re/W26%Re (Englehard)	10	to	2300
6	W5%Re/W26%Re (Bucose)	0	to	2000
7	Pt10%Rh/Pt40%Rh	200	to	1800
8	Exegen K80 I.R. pyrometer	-45	to	650
Process inputs (linear)				
M	-9.99 to +80mV	-1999	to	9999
Y	0 to 20mA (note 3)	-1999	to	9999
A	4 to 20mA (note 3)	-1999	to	9999
V	0 to 10Vdc (input adapter required)	-1999	to	9999

Units

C	°C
F	°F
K	Kelvin
X	Linear input

External Relay Module

XX	Not fitted
R7	Fitted (Operated by the logic output)

Input Adaptor

XX	Not fitted
V1	0-10Vdc
A1	0-20mA or 4-20mA 0.1% current sense resistor (2.49Ω)

Note 2. Setpoint min and max: include the decimal position required in the display value; up to one for temperature input, up to two for process inputs.

Note 3. An external 1% current sense resistor is supplied as standard. If greater accuracy is required specify 'A1' in the Input Adaptor field.

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