2100 Series
Temperature/Process Controllers

Ideal for

- small ovens
- chillers
- sterilizers
- trace heating
- heat sealing

Available in compact 1/32 and 1/16 DIN panel sizes, the 2100 series uses advanced PID algorithms to give stable 'straight line' temperature control. Self tuning is included to optimize the control performance without the need for specialist knowledge or training.

A universal input allows selection of nine internally stored thermocouple types and the Pt100 resistance thermometer. Other input linearization can be factory downloaded. Linear inputs can be scaled to the desired display range.

Two outputs are configurable for heating, cooling or alarms.

Three internal alarm setpoints are provided, configurable as high, low or deviation alarms. Alarms can be 'blocked' on start-up to prevent unnecessary operator alerts.

Heater failure can be detected when the controller is used with a TE10S Solid State Relay.

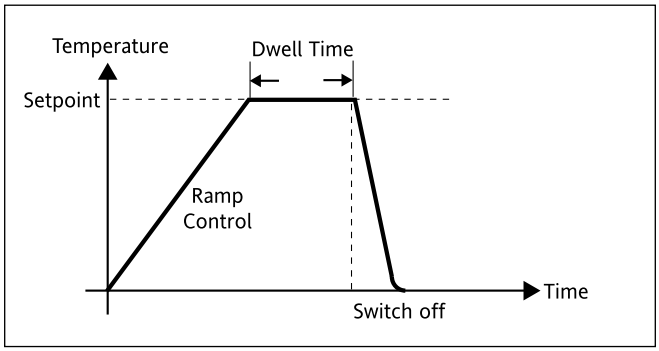
Tactile buttons ensure positive operation.

The operator interface can be customized to present only those parameters that an operator needs to see and adjust, while all other parameters are locked away under password protection.

Specifications

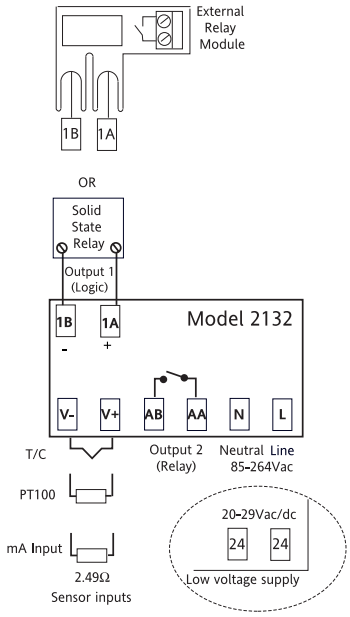
Dimensions:
Model 2132: 48W x 24H x 103D mm
Model 2116: 48W x 48H x 103D mm
Control modes:
PID or On/Off
Supply voltages:
85-264Vac, 5.0 watts maximum
20-29Vac or dc, 5.0 watts maximum
Operating ambient:
0-55°C, 0-90% RH non-condensing
Inputs:
Nine standard thermocouple types, Pt100, 4-20mA linear, Custom input available
Output ratings:
Relay: 2A, 264Vac resistive
Logic: 9Vdc, 18mA
Panel sealing:
IP65, plug-in from front panel
Data sheet:
HA026158

2100 Timer Functionality

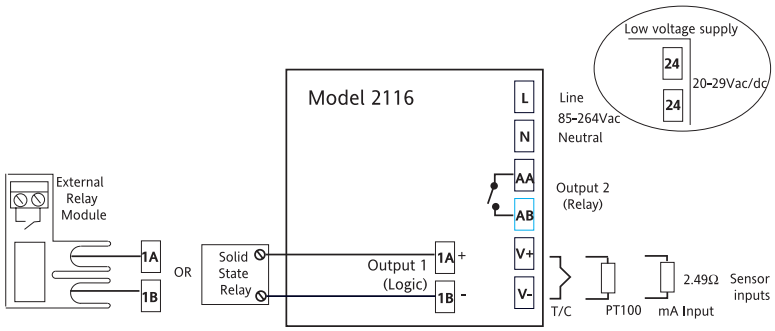


Rear terminal connections and ordering codes

Model 2132



Model 2116



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	48x24mm unit
2116	48x48mm unit

Function

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

Supply Voltage

VH	85-264Vac
VL	20-29Vac/dc

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 alarm 1
DH	Dev, high alarm 1
NW	New alarm
Logic input	
AC	Alarm ack/reset
KL	Keylock
TM	Timer Off/On

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 alarm 2
DH	Dev, high alarm 2
NW	New alarm

Sensor Input / Setpoint Min / Setpoint Max

	Standard Sensor Inputs	Min	°C	Max
J	J Thermocouple	-210		1200
K	K Thermocouple	-200		1372
T	T Thermocouple	-200		400
L	L Thermocouple	-200		900
N	N Thermocouple-Nicrosil/Nisil	-200		1300
R	R Thermocouple-Pt/Pt13%Rh	-50		1700
S	S Thermocouple-Pt /Pt10%Rh	-50		1768
B	B Thermocouple-Pt/Pt30%Rh -6%Rh	0		1820
P	Platinel II Thermocouple	0		1369
Z	RTD/PT100 DIN 43760	-200		850
	Factory Downloaded Input	**Min**	**°C**	**Max**
C	C Thermocouple - W5%Re/W26%Re (Hoskins)	0		2319
D	D Thermocouple - W3%Re/W25%Re	0		2399
E	E Thermocouple	-250		1000
1	Ni/Ni18%Mo Thermocouple	0		1399
2	Pt20%Rh/Pt40%Rh Thermocouple	0		1870
3	W/W26%Re (Engelhard) Thermocouple	0		2000
4	W/W26%Re (Hoskins) Thermocouple	0		2010
5	W5%Re/W26%Re (Engelhard) Thermocouple	10		2300
6	W5%Re/W26%Re (Bucose) Thermocouple	0		2000
7	Pt10%Rh/Pt40%Rh Thermocouple	200		1800
8	Exergen K80 I.R. pyrometer	-45		650
	Process Inputs (Scaled to setpoint min and max)	**Min**	**°C**	**Max**
M	-9.99 to 80.00mV linear	-999		9999
Y	0 to 20mA linear (note 4)	-999		9999
A	4 to 20mA linear (note 4)	-999		9999
W	0 to 5Vdc linear	-999		9999
G	1 to 5Vdc linear	-999		9999
V	0 to 10Vdc linear	-999		9999

Units

C	Celsius
F	Fahrenheit
K	Kelvin
X	Linear input

Ext. 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)

Example ordering code

2132- CC - VH - ENG - LH - RC - K - 0 - 1000 - C - XX - XX

2132, Controller, 85 to 264Vac, English manual, Logic heating, Relay cooling, Type K thermocouple, 0 to1000°C, no options

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

Note 2. Setpoint min and max : Include the decimal position required in the displayed value. Up to one for temperature inputs, 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.