

# 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

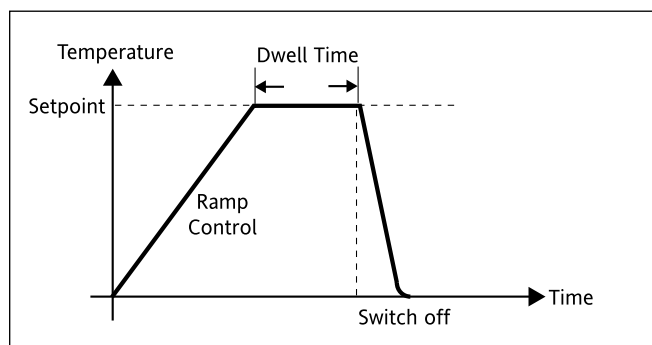
### Panel sealing:

IP65, plug-in from front panel

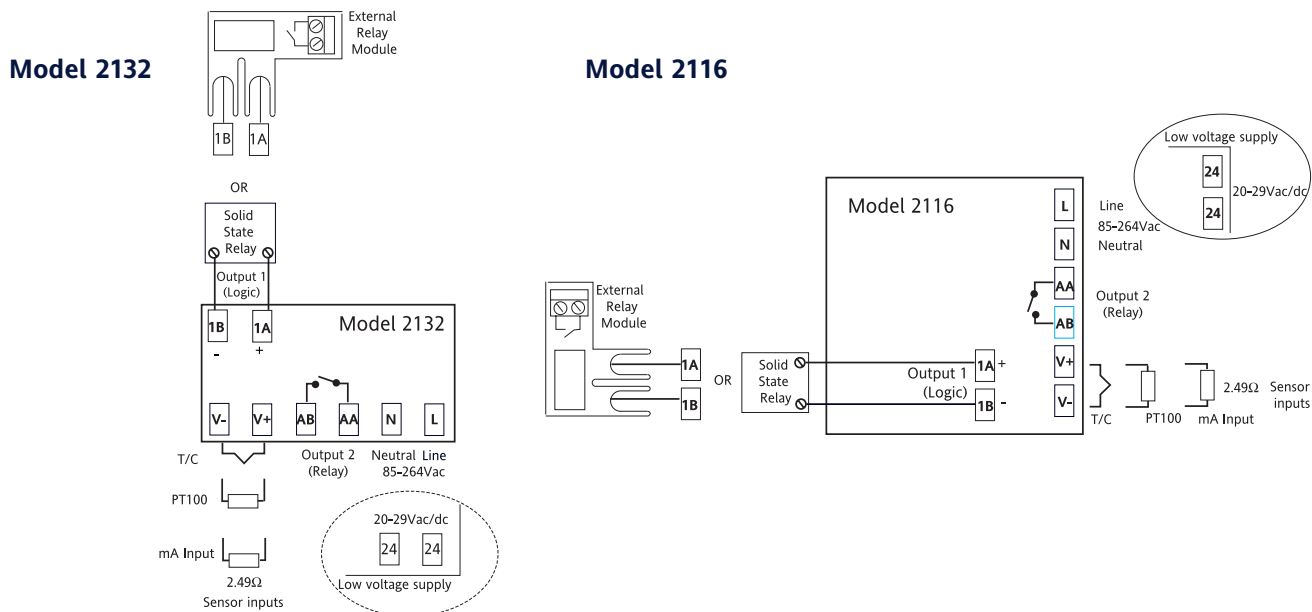
### Data sheet:

HA026158

### 2100 Timer Functionality



## Rear terminal connections and ordering codes



Model 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	Output 1 (Logic)	Sensor Input	Setpoint Min	Setpoint Max	Units
<b>2132</b> 48x24mm unit <b>2116</b> 48x48mm unit	<b>XX</b> No function <b>Logic output</b> 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 <b>Logic input</b> AC Alarm ack/reset KL Keylock TM Timer Off/On	<b>Standard Sensor Inputs</b> J J Thermocouple K K Thermocouple T T Thermocouple L L Thermocouple N N Thermocouple-Nicrosil/Nisil R R Thermocouple-Pt/Pt13%Rh S S Thermocouple-Pt /Pt10%Rh B B Thermocouple-Pt/Pt30%Rh -6%Rh P Platinel II Thermocouple Z RTD/PT100 DIN 43760 <b>Factory Downloaded Input</b> C C Thermocouple - W5%Re/W26%Re (Hoskins) D D Thermocouple - W3%Re/W25%Re E E Thermocouple 1 Ni/Ni18%Mo Thermocouple 2 Pt20%Rh/Pt40%Rh Thermocouple 3 W/W26%Re (Engelhard) Thermocouple 4 W/W26%Re (Hoskins) Thermocouple 5 W5%Re/W26%Re (Engelhard) Thermocouple 6 W5%Re/W26%Re (Bucose) Thermocouple 7 Pt10%Rh/Pt40%Rh Thermocouple 8 Exergen K80 I.R. pyrometer <b>Process Inputs (Scaled to setpoint min and max)</b> M -9.99 to 80.00mV linear Y 0 to 20mA linear (note 4) A 4 to 20mA linear (note 4) W 0 to 5Vdc linear G 1 to 5Vdc linear V 0 to 10Vdc linear	<b>Min</b> <b>°C</b> <b>Max</b> -210    1200 -200    1372 -200    400 -200    900 -200    1300 -50    1700 -50    1768 0    1820 0    1369 -200    850 0    2319 0    2399 -250    1000 0    1399 0    1870 0    2000 0    2010 10    2300 0    2000 200    1800 -45    650 -999    9999 -999    9999 -999    9999 -999    9999 -999    9999	<b>Min</b> <b>°C</b> <b>Max</b> -999    9999 -999    9999 -999    9999 -999    9999	C Celsius F Fahrenheit K Kelvin X Linear input
	<b>Output 2 (Relay)</b> 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				<b>Ext. Relay Module</b> XX Not fitted R7 Fitted (Operated by the logic output)
					<b>Input Adaptor</b> XX Not fitted V1 0-10Vdc A1 0-20mA or 4-20mA 0.1% current sense resistor (2.49Ω)

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.

### 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 to 1000°C, no options