

2200e Series Temperature and Process Controllers



Ideal for

- extrusion with optimized fan, or oil cooling
- ovens and furnaces
- cold stores

Available in 1/16, 1/8 and 1/4 DIN panel sizes, the 2200e series is configurable for PID, On/Off or motorized valve control - satisfying both electrical and gas heating applications. Self-tuning is included to optimize control performance.

The 2216e is also available as a DIN rail mounting unit.

Modular heating and cooling outputs are provided, as well as a choice of one or two alarm relay outputs. The 1/8 and 1/4 DIN units have two digital inputs to select auto/manual transfer, standby mode, second setpoint or alarm acknowledge. The 1/4 DIN model 2204e has an additional 10 amp high current output option.

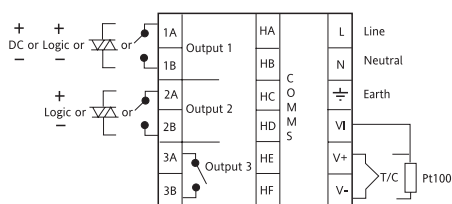
Digital communications with industry standard protocols including Modbus® and DeviceNet® are available for easy connection to supervisory control and data logging systems.

Simple heat treatment profiles can be programmed using the internal ramp generator and dwell timer.

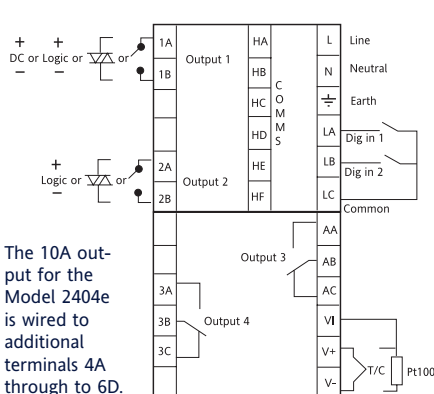
Eliminate ammeters by using Eurotherm's advanced load current monitoring facility. Heater current may be displayed and also open or short circuit faults detected. See page 3-50 for more information.

Rear terminal connections

Model 2216e



Model 2208e/2204e



Specifications

Dimensions:

Model 2216e: 48W x 48H x 103D

Model 2208e: 48W x 96H x 103D

Model 2204e: 96W x 96H x 103D

Control modes:

PID or On/Off or motorized valve

Supply voltages:

85-264Vac, 10.0 watts maximum

Operating ambient:

0-55°C, 0-90% RH non-condensing

Inputs:

See sensor inputs in the configuration coding

Output ratings:

Relay: 2A, 264Vac resistive

Logic: 18Vdc, 20mA

Triac: 1A, 264Vac resistive

DC: Isolated 0-20mA, at 12Vdc

Panel sealing:

NEMA 4X

Ordering codes

Hardware coding	Model Number	Function	Supply Voltage	Output 1	Output 2	Output 3	Output 4	10 Amp Output	Comms	Manual
			VH				Omit for 2216	Omit for 2216 & 2208		

Model Number	Output 1	Output 2	Output 3	Output 4	10 Amp Output
2216e 48x48mm unit 2208e 48x96mm unit 2204e 96x96mm unit	XX Not fitted Relay: 2-pin R1 Fitted unconfigured RH Heating output RU Valve raise output FH High alarm 1 FL Low alarm 1 DB Dev. band alarm 1 DL Dev. low alarm 1 DH Dev. high alarm 1 Logic L1 Fitted unconfigured LH Heating output M1 PDS Heater break detect (note 1) M2 PDS Current monitoring (note 2) Triac T1 Fitted unconfigured TH Heating output TU Valve raise output DC control (Isolated) D3 Fitted unconfigured H6 0-20mA heating H7 4-20mA heating C6 0-20mA cooling C7 4-20mA cooling DC retran. (Isolated) Select from Table A	XX Not fitted Relay: 2-pin R1 Fitted unconfigured RC Cooling output RH Heating output RW Valve lower output FH High alarm 2 FL Low alarm 2 DB Dev. band alarm 2 DL Dev. low alarm 2 DH Dev. high alarm 2 AL High & low alarms 1 & 2 Logic output L1 Fitted unconfigured LC Cooling output LH Heating output Logic input AM Auto manual select S2 Setpoint 2 select AC Alarm ack/reset EH Integral hold SB Standby mode SR PDS Remote SP select MS CTX mode 5 current I/P Triac T1 Fitted unconfigured TC Cooling output TH Heating output TW Valve lower output	XX Not fitted Relay RF Fitted unconfigured RH Heating output RC Cooling output FH High alarm 3 FL Low alarm 3 DB Dev. band alarm 3 DL Dev. low alarm 3 DH Dev. high alarm 3 AL High & low alarms 3 & 4 PDS Alarms LF Heater break detect HF Current monitoring heater break SF Current monitoring SSR failure	XX Not fitted Relay RF Fitted unconfigured RH Heating output RC Cooling output FH High alarm 4 FL Low alarm 4 DB Dev. band alarm 4 DL Dev. low alarm 4 DH Dev. high alarm 4 AL High & low alarms 3 & 4 PDS Alarms LF Heater break detect HF Current monitoring heater break SF Current monitoring SSR failure	XX Not fitted R5 Fitted unconfigured RH Heating output
Function					
CC PID Control NF On/off control VC Motorized Valve control AL Alarm unit					
Supply Voltage					
VH 85-264Vac					
Comms					
2XX Not fitted Modbus protocol 2YM 2-wire RS485 2FM 4-wire RS422 2AM RS232 DeviceNet® 2DN DeviceNet EI-Bisynch protocol 2YE 2-wire RS485 2FE 4-wire RS422 2AE RS232 PDS input 2RS Setpoint input					
Manual					
XXX No manual ENG English FRA French GER German NED Dutch SPA Spanish SWE Swedish ITA Italian					

Configuration coding (optional)	Sensor Input	Setpoint Min	Setpoint Max	Display Units	Digital Input 1	Digital Input 2	Control	Options Power	Cooling
		note 3	note 3		Omit for 2216	Omit for 2216			

Sensor Input	Setpoint Min	Setpoint Max	Display Units	Options
Standard Sensor Inputs 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	Min °C Max -210 1200 -200 1372 -200 400 -200 900 -200 1300 -50 1700 -50 1768 0 1820 0 1369 -200 850	Min °C Max 0 2319 0 2399 -250 1000 0 1399 0 1870 0 2000 0 2010 10 2300 0 2000 200 1800 -45 650	C Celsius F Fahrenheit K Kelvin X Linear input	Control action XX Reverse acting (std) DP Direct acting Power feedback XX Enabled on logic, relay & triac heating outputs PD Feedback disabled Cooling options XX Linear cooling CF Fan cooling CW Water cooling
Factory Downloaded Input 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	Min °C Max 0 2319 0 2399 -250 1000 0 1399 0 1870 0 2000 0 2010 10 2300 0 2000 200 1800 -45 650	Min °C Max -999 9999 -999 9999 -999 9999 -999 9999 -999 9999 -999 9999	XX No function AM Manual select SR PDS Remote setpoint select S2 Second setpoint EH Integral hold AC Alarm acknowledge SB Standby mode MS CTX mode 5 current input (input 1 only)	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. PDS current monitoring will transmit the power demand signal to a TE10S Solid State Relay and read back load current and open and short circuit alarms. Note 3. Setpoint limits: Include the decimal position required in the displayed value. Up to one for temperature inputs, up to two for process inputs. Note 4. An external 1% current sense resistor is supplied as standard. If greater accuracy is required, a 0.1% 2.49Ω can be ordered as part no. SUB2K/249R.1.
Process Inputs (Scaled to setpoint min and max) 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	Min °C Max -999 9999 -999 9999 -999 9999 -999 9999 -999 9999			