

3200 SPECIFICATION

General

Line voltage:

90–264V 50–60 Hz

Switchmode power supply

Digital display:

4 LED 10mm (0.4in) digits, green high brightness

Displaying:

Process temperature (PV) or setpoint (SP) in: °C or °F

[Bar, PSI, Ph, rh displayed, processed as °C]

Function/option mnemonics

Error messages

SP1/2 indicators (flashing)

Keypad:

3 tactile elastomeric keys

Range:

Sensor dependent: see 'Inputs'

Display range:

Normal: –250° to 3500°

Hi-res: –199.9° to 999.9°

Microcomputer:

Intel 83C51

8 bit, 16k PROM, 0.25k RAM,

12 MHz. Data retention:

10 years unpowered

Environmental

– Approvals pending

Conformity testing Jan 93

Safety: UL873, VDE0411–1

CSA22.2/142–M1987

Protection:

Fascia NEMA 4X/IP65

EMC Emission:

EN50 081–1, VDE0871/78–B1

FCC Rules 15 s/part J, Class A

EMC Immunity: EN50 082–2/B

Ambient: 0–50°C (32–130°F)

Weight: 100g (3.5oz)

Mouldings: FR polycarbonate

Pack: Recycleable styrene/6

Control Characteristics

SP1 Autotuned PID parameters

bAnd Proportional band/Gain or Hysteresis

i n t e Integral time/Reset

d e r t Derivative time/Rate

d a r c Deriv. approach control

c y c l e Proportional cycle-time

SM = sensor maximum
0.1–(25%SM) °C/°F
e.g. Type K: 0.1–300°C/548°F

0.1–60 minutes or Off

1–200 seconds or Off

0.5–5 × Proportional band

0.1–81 seconds or On/Off

SP2 Operating modes and parameters

S P 2 a Deviation alarms

High, low, band (out of limits)
±0–(25%SM) °C/°F from setpoint

Full scale alarms

S P 2 b Alarm output action

Latching or non-latching

Sequence alarm action

Alarm off till PV reaches setpoint

Cool channel when cool strategy selected

b a n d c Cool Prop band/Gain

c y c l e c Cool Prop cycle-time

S E E c Heat-Cool deadband

P L c Cool max power limit

Manual controls

S P 1 P Read SP1 output power

h a n d Manual heat power

P L 1 Heat max power limit

P a r k Park mode

Safety, calibration and data

K L S c Full scale

L o S c Scale minimum

S P R a n Sensor span (and zero)

b u r n Burn-out protection

r e U d SP1/2 output and

r e U l indicator modes

C h e c k Control accuracy check

d a t a Autotune tuning data

0–100% sensor range

Including negative

±0–(25%SM) °C/°F

Upscale or downscale

Fully configurable (invert)

e.g. direct/reverse

Variance, max, min to 0.1°C/°F

10 tuning cycle results

Inputs

Thermocouples – 9 types

Type	Sensor range	Linearity (±°C)
B	0 to 1800°C	32 to 3272°F
E	0 to 600°C	32 to 1112°F
J	0 to 800°C	32 to 1472°F
K	–50 to 1200°C	–58 to 2192°F
L	0 to 800°C	32 to 1472°F
N	–50 to 1200°C	–58 to 2192°F
R	0 to 1600°C	32 to 2912°F
S	0 to 1600°C	32 to 2912°F
T	–200 to 250°C	–273 to 482°F

(°): Linearity | B:5°(70°–500°C) K/N:1°>350°C
exceptions | R/S:5°<300°C T:1°<–25°>150°C

Standards: IPTS 68/DIN 43710

CJC rejection: 20:1 (0.05°/°C) typical

External resistance: 100Ω maximum



Resistance thermometer

RTD-2 wire	Sensor range	Linearity
Pt100	–200 to 400°C	±0.25°C
	–273 to 752°F	<–100°C±0.5°C

Standards: DIN 43760 (100Ω 0°C/138.5Ω 100°C Pt)

Bulb current: 0.2mA maximum



Linear process inputs

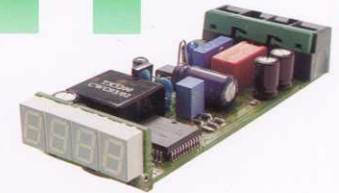
No. displays	0–20mV displays	4–20mV displays	Display range
1	0–100		0–400
2		0–100	–25–400
3	0–1000		0–3000
4		0–1000	–250–3000
5	0–2000		0–3000

Input mV range: –10 to 50mV

See "PIM Process Interface Module" for additional input/output options



3200 SPECIFICATION



Applicable to all inputs

SM = sensor maximum

Calibration accuracy:

±0.25%SM ±1°C

Linearity:

5–95% sensor range

Sampling frequency:

Input 10Hz, CJC 2 sec

Common mode rejection:

Negligible effect up to 140dB,

240V, 50–60Hz

Series mode rejection:

60dB, 50–60Hz

Temperature coefficient:

150 ppm/°C SM

Reference conditions:

22°C ±2°, rated voltage, after

15 mins settling time

Output devices (two)



Miniature power relay:

2A/250V~ resistive load

Form A/SPST (AgCdO)



Solid state relay drive:

To switch a remote SSR

5V/dc +0/–15% 10mA

non-isolated