

2000 SERIES



EUROTHERM
CONTROLS

Ideal for:

- Plastic extrusion
- Trace heating
- Sterilisers/autoclaves
- Laboratory ovens
- Incubators
- Packaging

Advanced load diagnostics

Developed specifically to enhance safety in demanding temperature control applications, Eurotherm's advanced load diagnostics function is a standard feature of the 2200 and 2400 range of PID controllers. Instant detection of SSR short circuit failure and load open circuit faults as well as steady visual display of SSR/contactors 'on state' current is provided.

A specially developed intelligent CT module is used to transmit load current values and fault diagnostic alarms to the controller. Signalling is by means of Eurotherm's pulse density signalling (PDS) communication. Dangerous time delays are eliminated with this technique, enabling fault conditions to be diagnosed the moment they occur thereby minimising any safety risk to personnel or plant.

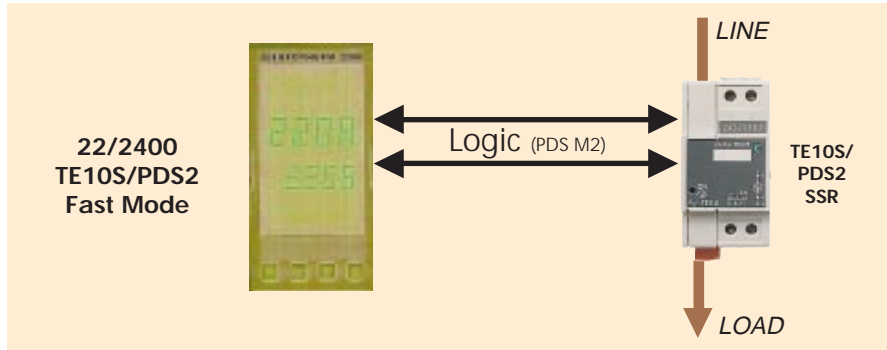
The intelligent CT is available either as an integral option in the TE10 range of single phase solid state relays (SSRs) or as a discrete panel mounted module, PD/CTX. This module is fitted with a logic level output designed to connect directly to an external single phase, zero voltage level switching SSR device. SSRs and contacts requiring larger drive signals may also be monitored using the PD/CTX module in current measurement mode.

Features:

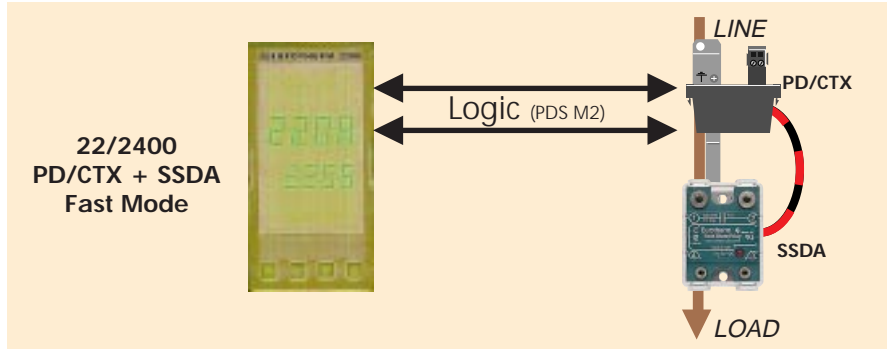
- **SSR/Contactor short** Immediate protection from process thermal runaway
- **Partial load failure protection** Early maintenance warning
- **Over current limit shutdown alarm** Protects against heater short circuit condition
- **Current indication on controller display** Eliminates ammeters and provides a readable display of current
- **Fast operation** Immediate fault detection and alarms
- **Simple two wire connection** simplifies wiring, reduces installation cost and errors

Controller
feature
summary

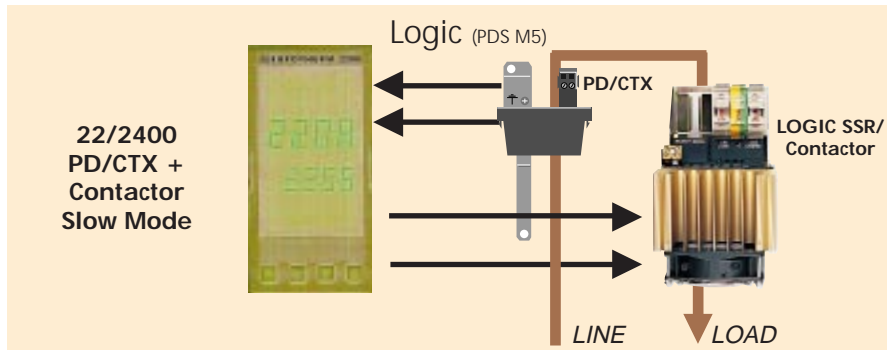
Typical arrangement



Using Eurotherm PDS mode2
Bi-directional, 2 wire signalling for
TE10S switching and load diagnostic
information.



Using Eurotherm PDS mode2
Bi-directional, 2 wire signalling to the
PD/CTX intelligent CT.
The intelligent CT logic output directly
drives an external zero voltage level
switching SSR with up to 7mA, 5V
level logic signal.



Using Eurotherm PDS mode5
2 wire signalling from the PD/CTX
intelligent CT. The intelligent CT
monitors load current and status.
The SSR/contacting switching signal is
either a logic or relay output from the
controller.

Outline technical specification

	TE10S/PDS2 Fast Mode	PD/CTX + SSSA Fast Mode	PD/CTX + Controller Slow Mode
SSR short circuit alarm	Yes, <2Sec response	Yes, 2Sec response	Yes, <30Sec response
Load open circuit alarm	Yes	Yes	Yes
Partial Load Failure alarm (PLF)	Yes	Yes	Yes
Min. resolve current (A)	4A	* 0.1A	* 0.1A
Max. current range (A)	75A	* 500A	* 500A
Display update rate	<5Sec	<5Sec	<15Sec
Min 'Cycle On' time (Sec)	1Sec	1 Sec	1 Sec

* Note: Using turns ratio on PD/CTX.

EUROTHERM CONTROLS LIMITED

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