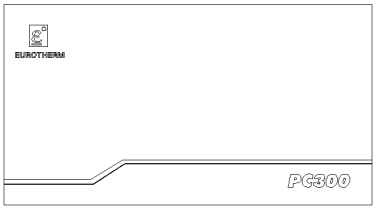
EUROTHERM



Installation Manual and User guide

PC300 Process control system

The PC300 process control system uses highly reliable and field tested PC3000 components. The unit includes an integral power supply, the Local Controller Module 'plus' and two free module positions for installing other I/O modules. The PC300 has a steel case construction and is designed for backplane mounting.

Specification

General

Supply voltage range	85 to 132V ac rms 176 to 240V ac rms Selected by external wiring option
Supply frequency range	48 - 62 Hz
VA requirements	< 40VA for fully loaded rack
Power Supply Output	50W total, 24V @ 1.6A, 5V @ 2.5A
Inrush Current	25A, single cycle, cold start, high line
Power supply hold up time	>20ms at minimum line voltage and maximum load (>100ms typical)
Input protection	RFI Input filter, transient protection
Replaceable Fuse Rating	1.6A time lag

Mechanical

Height	193 mm, inc. mounting brackets
Depth	203 mm, inc. mounting brackets
Width	316 mm
Mounting	Bulkhead mounting
Casing	Robust Metal case to IP20
Module capacity	2 single with I/O slots
Ventilation Space	25mm free space above and below

Environmental

Operating Temperature	0 to 50° C
Storage Temperature	-20 to 70° C
Relative Humidity	5 to 95 % non-condensing
Weight	5.25 Kg
Weight support brackets	0.4 Kg each

EMC

Emissions	EN50081-2: 1994
Immunity	EN50082-2: 1992

Safety

	EN61010-1: 1993/A2: 1995 Installation cat II, Pollution degree 2

LCM-Plus

RAM		256K base RAM
	Slot 1	512K standard
	Slot 2	128k for special FB (optional)
Communications Ports		
	Ports A & B	User ports
	Port C	PC3000 extension rack port
Standard		
	Ports A & B	RS422
	Port C	RS485 / RS422 (jumper selectable)
Baud Rates		
	Ports A & B	300 to 38.4k
	Port C	300 to 115k
Protocols		Software selectable (2 of ports A,B,C)

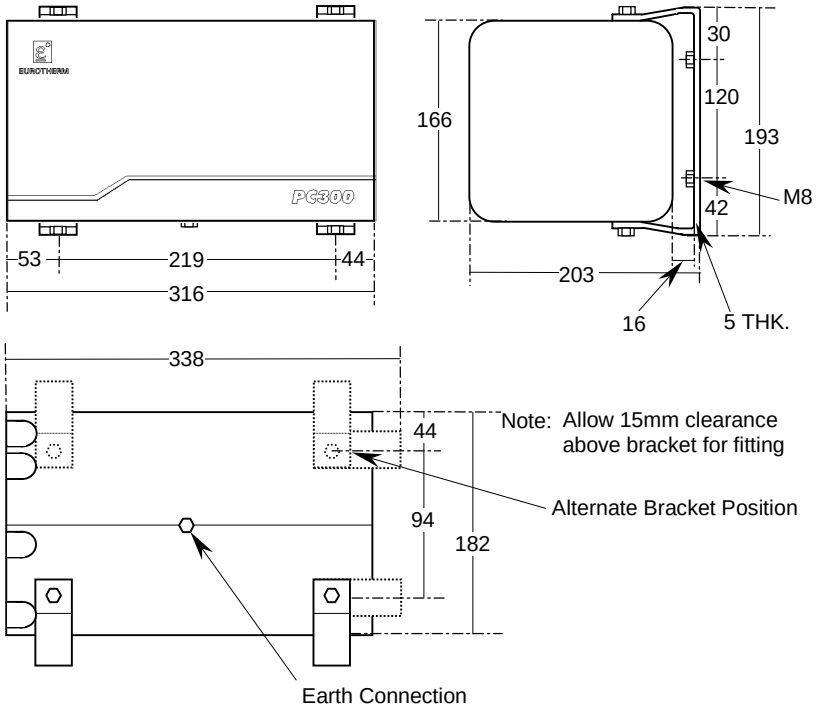
Available I/O modules

Analogue Input	0-100mV 0-10V 0-20mA Thermocouple (J,K,R,S,B,Pyro) PT100 Resistance Thermometer Frequency 0-10kHz Zirconia probe
Analogue Output	0-5V, 0-10V, -10 to +10V etc 4-20mA, 0-20mA etc
Digital Inputs	5Vdc 25Vdc 24Vac 85-264Vac Volt Free
Digital Out	Logic Relay (N/O)
Pulse Input	200kHz - 5v, 12v(selectable)

CE

Installation

Dimensional Details (mm)



Location

The Power Supply Unit resides in the first 'slot' in every rack. The second 'slot' contains the Local Control Module.

I/O module addresses

Configuration is made simple - there is no requirement to configure jumpers or switches to set I/O module addresses. The module address is read directly from the backplane.

Compatability

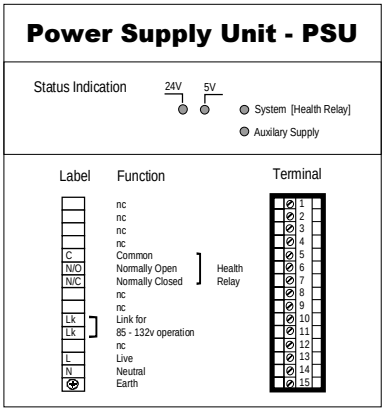
The PC300 is directly compatible with and a subset of the PC3000. The two products share I/0 cards, programming tools.and instruction manuals.

Manuals

PC3000 instruction manuals are used for the PC300.

User Wiring

Slot 1



Supply Voltage

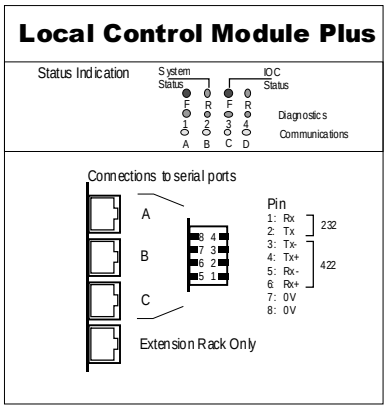
Configuration of the supply voltage is selected by an external wiring option. A link is necessary between terminals 10 and 11 for 85 to 132 V ac operation.

Health Relay

The health relay is energised during normal operation, and is de-energised if the system watchdog fails. Watchdog failure can be caused by the applications program failing to run correctly of a system hardware failure.

Slot 2

Commissioning is simplified by the provision of status indicators fitted to the front of the module. Indication of system status (run and fault), I/O processor status (run and fault), system diagnostic functions and communication channel activity are provided.



System and IOC status LED's

F = Fault
R = Run

Diagnostic LED's

Consult 'PC3000 Hardware Reference Manual' for details

Communication LED's

A, B, C.	Serial channel communication activity
D	Extension rack communication activity

Safety Notes

Warning!

The mains (supply) voltage must be isolated before the mains (supply) connector is handled.

Warning!

Any interruption of the protective conductor inside or outside the apparatus or disconnection of the protective earth terminal is likely to make the apparatus dangerous under some fault conditions. Intentional interruption is prohibited.

Note: In order to comply with the requirements of safety standard EN61010, the power supply module must have one of the following as a disconnection device, fitted within easy reach of the operator and labelled as a disconnection device.

i. A switch or circuit breaker which complies with the requirements of IEC947-1 and IEC947-3
ii. A separable coupler which can be disconnected without the use of a tool
iii. A separable plug, without a locking device, to mate with a socket outlet in the building.

1. Before any other connection is made, the protective earth terminal shall be connected to a protective conductor.
2. The Mains (supply voltage) wiring must be terminated in such a way that the Earth wire would be the last wire to become disconnected should excess tension be applied to the mains cable.
3. It is recommended that crimps be used to terminate the wires before they are inserted into the terminal blocks.
4. The Mains supply fuse within the Power supply unit is replaceable and should only be replaced with a fuse of the same type and rating. In no conditions should the fuse be replaced with one of a higher rating.
5. Whenever it is likely that protection has been impaired, the unit shall be made inoperative and secured against unintended operation. The nearest manufacturers service centre should be consulted for advice.
6. Any adjustment, maintenance or repair of the opened apparatus under voltage, is prohibited.
7. The unit is designed for use only in an enclosure.
8. Where conductive pollution (e.g. condensation, carbon dust) is likely, adequate air conditioning / filtering / sealing etc. must be installed in the enclosure.
9. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment might be impaired.

Symbols used on the unit labelling

One or more of the symbols may appear on the apparatus.

	Refer to User Guide for instructions
	Protective Earth
L	Connect the 'line' (switched) wire here
N	Connect the neutral wire here

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