4000 SERIES

Digitron
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OPERATING INSTRUCTIONS

WARRANTY

This instrument has been carefully assembled and tested, and is warranted against faulty workmanship and materials for 12 months from the date of purchase.
During the warranty period any defective instrument will be repaired or replaced at the discretion of the manufacturer This warranty does not cover damage or failure resulting from misuse or accident.
Modification, adjustment or any alteration with the internal arrangement of the instrument shall absolve the manufacturer from any liability in respect of the instrument.
Any instrument to be repaired should be forwarded to the manufacturer, carriage paid and at the owner's risk.
A brief description of the fault should be included.

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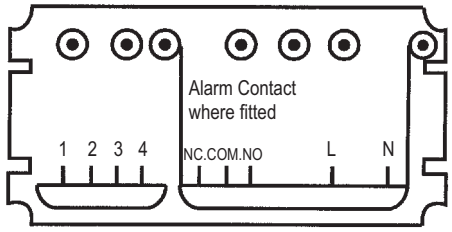
XG.0430 rev.3

SELECTING AND INSTALLING POWER SUPPLY (MODELS 4501, 4504, 4801, 4804)

Remove the PCB from its housing, locate the supply voltage selector as shown in Figure 1, then configure to the desired voltage.

The supply should be wired to the terminal connector and fitted to the appropriate position as indicated on the back of unit.



The cable should be clamped into position using the clamping arms provided. It is imperative that all covers are replaced before the power supply is switched on.

SAFETY STATEMENT

The design of this instrument has been checked to EN61010 for Class 11 use.

This operating instruction contains information and warnings that must be observed to keep the instrument in a safe condition. The instrument should not be switched on if it is damaged and it should not be used under wet conditions.

For the correct and safe use of this instrument it is essential that both operating and service personnel follow generally accepted safety procedures in addition to the safety precautions specified.

Whenever it is likely that a safety protection has been impaired the instrument must be made inoperative and be secured against any unintended operation. Qualified maintenance or repair personnel should be informed.

Safety protection is likely to be impaired, if for example, the instrument shows visible damage or fails to operate normally.

SYMBOLS AND TERMS

	Where caution is required. Refers the user to the operator manual for further information.
	This symbol warns the user that high voltages are present close to this symbol.
WARNING	These statements identify conditions or practices that could be dangerous or fatal to personnel.
	Alternating current.
	Equipment protected throughout by reinforced insulation.

WARNING

This instrument has different mains wiring details to instruments in the same series manufactured before January 1 1997. We strongly recommend close attention to the instruction manual supplied with this instrument.

The instrument is not fitted with a separate a.c. power supply on/off switch and will have a.c. voltages present whenever it is connected.

To clean the instrument, disconnect all power sources and then wipe the surface lightly with a clean, soft cloth dampened with water.

The instrument should preferably be operated in a clean, dry environment with an ambient temperature of between 0°C and +50°C.

WARNING

Before removing the covers for installation, maintenance, or repair, the mains supply must be isolated.

This instrument is specified for use in a Pollution Category 11 Environment which is normally non-conductive with temporary light condensation. This instrument must not be used in more hostile, dusty or wet conditions.

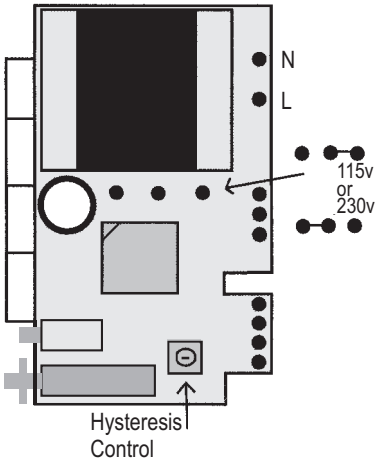
Do not use this instrument in a flammable or explosive atmosphere.

POWER AND FREQUENCY REQUIREMENTS

This instrument operates from line voltages to Installation Category 11, local level supplies distributed within the building.

Supply Voltage:	216-253V a.c. 50/60Hz 109-126V a.c. 50/60Hz
Power Consumption:	230V a.c. 25mA 115V a.c. 45mA
Fuse Rating:	230V a.c. 50mA (T) UL/CSA 115V a.c. 50mA (T) UL/CSA

Figure 1



HYSTERESIS (MODELS 4801, 4804)

The hysteresis is factory preset to ±2 counts. It should only be adjusted by qualified and trained staff, and using a small insulated screwdriver as indicated in Figure 1.

It should not be carried out while the instrument is powered up. Hysteresis may be adjusted by ±1 count up to ±10 counts.

WIRING

All connections should be made using the supplied terminal plugs only, and these slide on to the appropriate terminal pins. Detailed connections are given on the rear of the instrument and these drawings should be used in conjunction with the following instructions.

Note: When refitting the plugs, ensue that this is done correctly.

ALARMS (MODELS 4801, 4804)

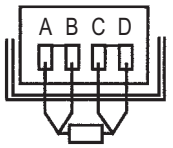
These models have a relay fitted and the alarm point can be adjusted from the front panel.

SET POINT ADJUSTMENT

Hold in the set point button and adjust the set point potentiometer for the required number of counts as indicated by the display.

USING 3 WIRE SENSORS

These should be connected as per the 2 wire sensors, but with terminal A+B and C+D linked.



Thermocouple

PANEL FITTING

The instrument is designed to fit in a panel cut out measuring 92 x 45mm. The panel should be between 1.5 and 3.5mm thick.

The instrument is fitted by sliding into the aperture and pressing firmly home into position.

REMOVAL

Before the instrument can be removed from the panel, the connectors **must** be unplugged from the rear of the panel.

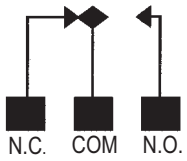
1. Ensure that the power is disconnected.
2. Remove the front window by gently levering with a small screwdriver on the slot on the lower edge of the window.
3. Use a screwdriver to release the clamping arms by slightly bending back the lugs as shown below, whilst gently pulling the instrument forward.

RELAY CONNECTIONS

These instruments have a control relay with a rating of 5A at 250V a.c., and 30V d.c. for resistive loads.

Connection is shown on the rear label and should be made using the supplied terminal block.

These ratings should not be exceeded and an external contactor should be used for high power or 3 phase requirements.



When relay is not energised:

N.C. = Normally Closed

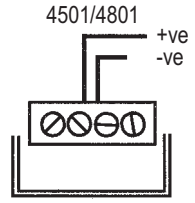
COM = Common

N.O. = Normally Open

NB: The rear cover should always be fitted.

THERMOCOUPLES (MODELS 4501, 4801)

Thermocouples should, if possible, be wired directly into the terminal block taking care to observe the correct polarity.

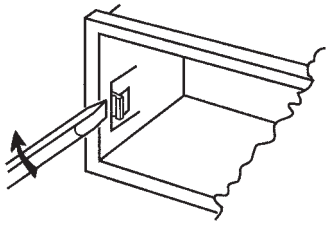


If the thermocouple has to be extended, this should only be carried out by using extension or compensating cable of a type appropriate to the thermocouple being used.

NOTE: The accuracy may be affected by cable lengths. This is also affected by the type of cable.

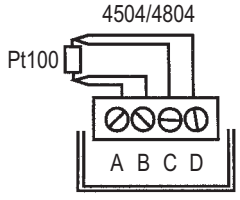
REMOVAL OF PCB FROM CASE

Follow instructions for removal. Tap instrument (face down) into the palm of the hand. If it does not slide out it can be pushed out by gentle pressure from the rear on the terminal pins. Do **not** use a screwdriver to prise out the PCB.



PLATINUM RESISTANCE SENSORS (MODELS 4504, 4804)

The sensor should be connected to the instrument using a four core copper cable as shown below:



Standard Pt100 sensor identification colours:

Yellow	A	Red	C
Black	B	Blue	D