Labelling

Symbols used on this instrument

One or more of the symbols may appear as a part of the instrument labelling. When connecting a USB device, an X must be plugged directly into the instrument. The use of extension USB cables may compromise the ESD compliance.

- Observe static precautions when accessing the rear terminals. Take special care with respect to USB and Ethernet connections.

Specification

Temperature scale: ITS90

- General

CJC Types: Off, internal, external, remote.

- I/O types

Analogue input: Four/eight

- Input types

dc Volts, dc mV, dc mA, dual mA, bipolar

- Remote CJC source: Any input channel

Internal CJC error: < 1

Internal CJC rejection ratio: 40:1 from 25

- Environmental Performance

Thermocouple, dual TC (refer to Table 3.3.3)

- Operating

Ambient temperature range

0 to 55

- Storage

5% to 85% RH non-condensing

- Environmental Pollution

Corrosive atmospheres

ESD compliance

Observe static precautions when accessing respect to USB and Ethernet connections.

- Mechanical Installation

Panel cutout

Height (3.9in) = 92mm (3.62in) [both = ±0.8mm (0.03in)]

Minimum inter-unit spacing

Horizontal = 50mm (2.0in)

Vertical = 35mm (1.4in)

Restriction of Hazardous Substances (RoHS)

This unit is CE approved. The symbol mark for Canada and New Zealand (RASM)

Panel Mounting

- ¼ DIN

Weight: Instrument only: 0.44 kg (15.52 oz)

- Physical

Panel mounting: ¼ DIN

Weight: Instrument only: 0.44 kg (15.52 oz)

- Technical Drawings

Legal for trade accuracy: 1.0:

Accuracy

±0.1% of reading + 0.1% of span

- Calibration

Annual calibration: Yes

- Environmental

Protection degree 2

- Approvals

Pollution degree 2

- ESD

EN61010-1 (Installation category 2)

- EMC

EN61326-1 (category A)

Symbol Meaning

Refer to the User Manual for instructions.

The unit is self-powered.

C-Tick mark for Australia (ACA)

CE mark for CE Directive.

= the symbol mark for Canada and New Zealand (RASM)

= the symbol mark for Canada and New Zealand (RASM)

- Note

This symbol is in accordance with the limits as stated in the RoHS directive for the instrumentвал of the hazardous materials used for this part is a mixture that is established in WETTRI.
Safety Notes

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

Caution: Live sensors. If the unit is designed to operate if the temperature sensor is connected directly to an electric heating element, however, you must ensure that service personnel do not touch cables, connectors and switches for connecting the sensor must be mains rated for use in 240 V ac. CAT.

Caution: Wiring. It is important to connect the unit in accordance with the instructions given in the User Manual. Fitted first and discontinued last, wiring must comply with all local wiring regulations, i.e. UK, the latest EE wiring regulations, IEC60364-1, and USB, NEC Class 1 wiring methods. Do not connect ac supply to low voltage sensor input or low level inputs and outputs as this would not be safe.

1. Over Temperature Protection. To prevent overheating of the process under fault conditions, a separate over-temperature protection unit should be fitted which will isolate the heating circuit. This must have an independent temperature sensor. Alarm relays within the unit will not give protection under all failure conditions.

2. Before any other connection is made, the protective earth terminal shall be connected to a protective conductor. The mains (supply voltage) wiring must be terminated in such a way that, if it is used, the earth wire would be the last wire to be disconnected.

3. Where a protective conductor (e.g. condensation, carbon dust) is likely, adequate air conditioning/meeting sealing etc. must be installed in the enclosure.

4. Signal and supply voltage wiring should be kept separate from one another. Where this is impractical, shielded cables should be used for the signal wiring.

5. If the unit is used in a manner not specified by the manufacturer, the protection provided by the equipment might be impaired.

6. Installation must only be carried out by suitably qualified personnel.

7. To prevent hands or metal tools touching parts that may be electrically live, the unit must be installed in an enclosure.

8. The maximum continuous voltage applied between any of the following terminals must not exceed 240 V ac:
   - relay output to logic or sensor connections;
   - any connection to ground.

9. Grounding of the temperature sensor shield. In some installations it is common practice to replace the temperature sensor while the unit is still powered up. Under these conditions, as an additional protection against electric shock, we recommend that the shield of the temperature sensor is grounded. Do not rely on grounding through the framework of the machine.

10. Water based products may be used to clean labels. A mild soap solution may be used to clean other exterior surfaces.

11. Before removing a unit from its sleeve, disconnect the supply and wait at least two minutes to allow capacitors to discharge.

12. The unit must be stored in a clean environment. The unit must be plugged directly into the wall socket using a short extension lead. This is to prevent the USB may 'lock up' or reset in noisy environments and the only means of recovery is to remove the device, then reinsert it. EMC related failure during a write operation might cause corruption of the data held on a USB memory stick. For this reason, the data on the memory stick should be backed up before insertion and checked after removal.

USB Device Precautions

Note: the use of USB Flash drives is not recommended.

1. Precautions against electrostatic discharge should be taken when the unit terminals are being accessed. The USB and Ethernet connections are particularly vulnerable.

2. Ideally, the USB device should be plugged directly into the wall socket, as the use of extension leads may compromise the unit's ESD compliance. Where the unit is being used in an electrically noisy environment, however, it is recommended that the user brings the USB socket to front panel using a short extension lead. This is because the USB may 'lock up' or reset in noisy environments and the only means of recovery is to remove the device, then reinsert it.

3. When using a USB extension cable, a high quality screened cable must be used with a maximum length of 3 metres (10 ft.).

4. Each wire connected to LA, LB and LC must be less than 30 metres in length.