1.0 GENERAL

The unit is a highly accurate and stable digital process indicator that accepts all common used process signals. The unit can be used "stand alone" or, with the Modbus serial communications port option, as part of a larger system.

The case design enables option Pods to be easily installed without the need for dismantling or re-calibration. A range of Pods are available for:

• Relay outputs
• Isolated 4-20 mA re-transmission
• Modbus serial communications

Control Systems: Installation design and practice”.

3.3 Wiring

All connections are made to sockets which are removable for ease of maintenance.

3.5 Sensor Connections

All sensor connections are made via the five way “fast wiring” socket at the rear of the unit (wire size 0.5 to 1.5mm²).

DIN 43700

4.0 PROGRAMMING THE INSTRUMENT

The unit is a microprocessor based instrument enabling it to satisfy a variety of applications. All programming is available from the front panel or via a PC using the appropriate software.

4.1 Programming Guide

The Root Menu mode is accessed from “Run” by pressing (1) followed by (2) The display will now show “inPt”. In order to understand how to navigate the menu, the following diagram shows where we are within the basic Root menu.

4.3 Entering Menu Mode

The Root Menu is accessed from “Run” by pressing ENTER (B&C) followed by CYCLE (A). The display will now show “0/0”. In order to understand what this means, the following diagram shows where we are within the basic Root menu.

4.4 Entering a Submenu

To enter a submenu, first cycle around the Root menu until the required submenu is displayed. For the purpose of this tutorial please the CYCLE (A) key until “0/0” is displayed. Pressing SHIFT (B) enters the Input Submenu. If required, further submenus can be accessed by pressing CYCLE (A) key until the required menu is displayed.

5.0 SAFETY INFORMATION

1. WARNING READ SAFETY INFORMATION BELOW BEFORE INSTALLATION

• Hazardous voltages may be present on the terminals – the equipment must be isolated and grounded in accordance with BS EN61010-1 for connection to a Category II supply (pollution degree 2).

• ISOLATION The power supply terminals and associated internal circuitry are isolated from all other parts of the equipment.

3. WARNING

If not installed in accordance with these instructions, protection against electrical hazards may be impaired.

4. WARNING

• The Mains supply to the equipment must be protected by an external 1 Amp fuse and a suitable switch or circuit breaker which should be near the equipment.

• The equipment contains no user serviceable parts.
4.3.3 Editing a Parameter

The main menu is used to modify any of the parameters. The titles of the menu items are parameters which can be edited. Press the CYCLE (A) key until INPt is displayed, then press the menu item. The current setting will now be shown flashing. To change the setting, press the menu item to change the setting.

4.4.1 The INPt (INPUT) Submenu

Each relay can be set as high or low alarm independently. Refer to section 7.1 for SLT1 menu structures.

5.0 OPERATION

5.1 Run Mode Operation

The normal display shows in the menu is the process variable. The + and - keys are used to increase or decrease the menu value. The channel above or below is selected using the INC (C) or CYCLE (A) key. Pressing the CLEAR (A) and CYCLE (A) key simultaneously clears the display. Pressing the CLEAR (A) key from our current position in the Inputs submenu takes

7.1 Dual Relay Pod - P006-0002

The relay pod has two “change over” relays with a common vaper.

- NC = Normally closed
- NO = Normally open

7.1.1 SLT1, SLT2 (Relay Pod) Submenu

Each relay can be set as high or low alarm independently.

7.1.2 Relay Specification

- Maximum Load: 7A @ 250V 7A @ 30V
- Maximum Power: 1750VA 210W
- Maximum Switching: 250V 125V
- Electrical Life: 10 Million operations
- Mechanical Life: 50 Million operations
- Hysteresis Operation
- Low Alarm
- High Alarm

7.2 Modbus Serial Communications Pod - P006-0005

The diagram below shows a PC connected to Modbus pods.

- Modbus pod
- Modbus type
- Modbus type

7.3.3 Comms Pod Specification

Configuration, system I/O and display unit PC communication, Protocol: Modbus RTU format

8.0 MECHANICAL DETAIL

Material: ABS-PC
Weight: 260g
Flammability: V-2 FV-0
Core weight: 45g
Panel cutout: 92mm x 45mm

9.0 EMISSIONS

BS EN50081-1
BS EN50082-2
BS EN51010-1
BS EN61010-1

10.0 ENERGIES

BS EN51010-1
BS EN61010-1

11.0 APPROVALS

EMC
Safety
ESD
Ambient Storage Temperature -50 to +85 ºC
Power Consumption 6VA

Environmental

Sensing to PANEL: IP65
Ambient Operating Range: 30 to 60 ºC
Ambient Humidity Range: 10 to 90% RH non-condensing

Approvals

EMC: Emissions EN 50081-1
Safety: Safety EN 50082-2
UL: pending

Environmental Approaches for Temperature Cyclic Terminates

Low Temperature: -40 ºC
High Temperature: 85 ºC
Damp Heat: IEC 68-2-1
Damp Heat: IEC 68-2-2
Salt Spray: IEC 68-2-3
Damp Heat: IEC 68-2-3
Sulphur Dioxide: IEC 68-2-2
Lung: IEC 68-2-2

7.0 OPTION PODS

7.1.1 Installing Pods

Power must be removed from unit before adding removing a pod.

In chapter 1 section 2 it should be positioned on the left side of the unit looking from the front to correspond to front panel alarm indicator, slot 2 (alarm 3 and 4) is positioned on the right.

To install an option pod, slide back the cover to its retracted position and push the pod connection within the mating connector.

If an option pod is removed, the support folded beneath the connector will pg into the back cover, the pod can then be removed from the instrument connector.

7.3.2 Comms Pod Specification

Configuration, system I/O and display unit PC communication, Protocol: Modbus RTU format

15.0 Optional Link

Connection of this link connects a 100 ohm termination resistor across pins 7 and 8. This resistor should only be in the instrument far away from the heat.

16.0 Optional Link

Connection of this link connects a 100 ohm termination resistor across pins 7 and 8. This resistor should only be in the instrument far away from the heat.

17.0 Optional Link

Connection of this link connects a 100 ohm termination resistor across pins 7 and 8. This resistor should only be in the instrument far away from the heat.

Full details of the Modbus protocol are supported separately with the pod.