Panel-Mounting
The mounting panel must be rigid, and may be up to 6.0mm thick. A cut-out...

CAUTION: Installation should only be performed by technically competent personnel. Local Regulations regarding electrical installation & safety must be observed.

1. INSTALLATION
The models covered by this manual have three different DIN case sizes (refer to section 10). Some installation details vary between models. These differences have been highlighted in the manual:

Note: The functions described in sections 2 thru 9 are common to all models.

Installing Option Module(s)
The mounting panel must be rigid, and may be up to 6.0mm thick. A cut-out

1/8 & 1/4 Din Size Instruments

To access module 1, 3 or 4, first detach the PSU and CPU boards from the front by lifting the upper, and then lower mounting struts. Gently separate the boards:

Option Module Connectors

These diagrams show all possible option combinations. The actual

Note: This controller uses Three-Point Stepping Control. This requires two identical outputs (2 Relays, 2 Trans, 2 SSR Drives or 1 Dual Relay) for the valve Open & Close functions. See Output Usage 1-0 in Configuration Mode.

2. SELECT MODE

Note: The functions described in sections 2 thru 9 are common to all models.

Installing Option Modules

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5. AUTOMATIC TUNING MODE
First select Automatic tuning mode from Select mode (see section 2). Press to scroll through the modes, then press or to set the required value.

To exit from Automatic tuning mode, hold down and press to return to Select mode. Pre-tune is a single-shot routine and is thus self-disengaging when complete. If Pre-tune is in Setup mode, the Pre-tune will attempt to run at every power-up, until a different full user mode (available from your supplier) for deals on customised models.

6. OPERATOR MODE
This mode is entered at power-on or accessed from Select mode (see section 2). Note: All Configuration mode and Setup mode parameters must be set as required before starting normal operation. Press to scroll through the parameters, then press or to set the required value. Note: All Operator Mode parameters in Display 6 are only read (see DP in configuration mode), they can only be adjusted via Setup mode.

7. MESSAGES & ERROR INDICATIONS
These messages indicate that an error has occurred, or there is a problem with the process variable input connection.

Caution: Do not continue with the process until the issue is resolved.

8. SERIAL COMMUNICATIONS
Refer to the full user guide (available from your supplier) for details.

10. SPECIFICATION

UNIVERSAL INPUT
- Thermocouple: 0.15% of full range, ±1LSB (1°C for Thermocouple CJC). Calibration: B54347, MS1525 & E5254.
- PT1000: Calibration: ±0.5°C @ 120°C.
- Sampling Rate: 4 per second.
- Impedance: 100XV resistive, except DC milli (0) and V (4/20).
- Source: Thermocouple: RTD to 4 to 20 mA, 2 to 10 and 1 to 5 V ranges.
- Isolation: Only Closed Loop measuring (except SSR driver).
- Universal input must not be connected to operate accessible circuits if relay outputs are connected to a hazardous voltage source. Separate intrinsic safety or input grounding would then be required.

AUXILIARY INPUT
- 24 VDC & 1 1 LS.)
- Sampling Rate: 4 per second.
- Source: Break, Close = 10VDC & 1 1 VDC inputs.
- Value control output turn off if RSP is the active SP.
- Isolation: 500V - Basic isolation. Referenced safety isolation from other inputs and outputs.

DIGITAL INPUTS
- protocol: ModBus RTU. Isolation: Reinforced safety isolation from all inputs and outputs.

INPUTS
- Drive Capability: SSR drive voltage >10VDC to 500V.
- Isolation: Not isolated from universal input or other SSR driver outputs.
- Power Rating: 20 to 140mA (28V max. for alarm or signal switching of valve).
- Current Rating: 0.01 to 1A (28V max. rms current @ 25°C), derates linearly above 40°C to 0.5A @ 80°C.
- Isolation: Referenced safety isolation from inputs and outputs.
- Isolation: Referenced safety isolation from inputs and outputs.
- Power Rating: 28V to 28V DC (40V nominal) into 910G minimum resistance.
- Protocol: MODBUS.
- Isolation: Referenced safety isolation from all inputs and outputs.

OPERATINGCONDITIONS FOR INDOOR USE
- Ambient Temperature: 0°C to 55°C (Operational) -20°C to 80°C (Storage).
- Relative Humidity: 20% to 95%, non-condensing.
- Supply Voltage and Power: 100 to 240VAC ±10%, 50/60HZ, 7.5VA (for mains powered versions), or 20 to 48VDC 50/60HZ 7.5VA or 22 to 60VDC 5W (for low voltage versions).

ENVIRONMENTAL
- Standards: UL, CE.
- CE: Complies with EN61010-1 & 3.1.27.
- EN61326 (Suscipability & Emissions).
- Safety: Complies with EN61010-1 & 3.1.27.
- Pollution Degree: 2, Installation Category II.
- Front Panel Sealing: To IP68 (IP20 behind the panel).
- PHYSICAL
- Front Panel Size: 0” x 48 x 48mm, 0” x 64 x 48mm,
- 0” x 96 x 96mm
- Depth Behind Panel: 10” x 36” x 36”, 0” x 72” x 100mm
- Weight: 0.21kg maximum.