1.0 Description

The EWSE air temperature sensors are designed for wall or pipe mounting in harsh indoor or outdoor environments.

A rugged 6mm diameter sheathed RTD probe is housed in the centre of a 14mm dia. outer protection tube. The RTD sensor terminal block or optional transmitter are housed in a tough aluminium alloy enclosure, rated to IP65.

An IP68 cable gland is fitted to the left hand side of the enclosure, suitable for cables from 2.5 to 6.5mm diameter.

2.0 Receiving and Unpacking

Please inspect the packaging and sensor thoroughly for any signs of transit damage. Please notify Omega customer service if any damage is found.

3.0 Specifications

Dimensions:
- Box: 80 W x 75 H x 58 mm D
- Sensors: 75 mm long x 14 mm O.D
- Cable Entry: IP68 gland for 2.5 to 6.5 O.D cable

EWSE-Pt100 Sensor Only Model:
- Sensor Type:
  - Pt100 class A 4-wire standard
  - Pt1000 on request
- Ambient Temperature Range: -50 to +100°C
- Electrical Connection: Screw terminal block

EWSE-Pt100-TX:
- Ambient Temperature Range: -40 to +85°C at 10 to 90% RH non condensing
- Standard Transmitter Scaling: 4 mA at -25°C, 20 mA at +75°C
- Electrical Connection: Screw terminals, 2-wire
- Power Supply: 10 to 30Vdc, loop powered
- Power Supply: [(V supply-10)/20] Ω, eg. 700Ω @ 24V

4.0 Mechanical Installation

The EWSE has been designed for wall or pipe mounting. For wall fixing a drilling template is provided in Annex A of this manual.

An optional bracket, part number EWSE-MB is available for pipe mounting. See Annex B for details.

5.0 Electrical Installation

For the EWSE-Pt100-TX temperature sensor with transmitter please refer to the transmitter manual M4561 for wiring and scaling information. The standard EWSE-Pt100 model features a 4 way screw terminal block for connection to the 4-wire Pt100 sensor.
January 2, 2012

For immediate technical or application assistance:

For warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence. The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

For WARRANTY RETURNS, please have the following information available BEFORE contacting OMEGA:
1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

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EWSE MOUNTING BRACKET

SUITABLE FOR USE WITH PIPES BETWEEN Ø30mm TO Ø60mm

ORDERING PART NUMBER: EWSE - MB

FIXING KIT

The following fasteners are supplied with each bracket assembly:

2 x M6 x 75 long BZP Hexagon headed set screws
2 x M6 x 40 long BZP Hexagon headed set screws
2 x M6 flat washers BZP
2 x M4 x 20 long BZP Cap screws

MUK001 / 0311 - Annex B.
1.0 DESCRIPTION

The TX12 head mounted temperature transmitter connects to any standard Pt100 resistance sensor and converts the linearised temperature to a (4 to 20) mA signal. The transmitter is a two wire device, and is fully configurable by the user, over a wide range of temperature. The TX12 head mounted temperature transmitter incorporates additional configuration menus, allowing the user to push button trim the sensor range and control ANNEX A; ANNEX F.

2.0 RECEIVING AND UNPACKING

Please inspect the packaging and instrument thoroughly for any signs of transit damage. If the instrument has been damaged, please notify your supplier immediately.

3.0 SPECIFICATION @ 20 °C

- **THERMAL DRIFTS**
  - ±0.2 μA / V measured @ 50 Hz 1 V (peak to peak)
- **ACCURACY**
  - ±(mA out / 2000) or ±5 μA whichever is greater
  - Low 3.8 mA; high 21.5 mA
- **TYPES**
  - **OUTPUT**

3.1 Linearisation

- Sensor Type: PT100  100 R @ 0°C 2 or 3 Wire
- Sensor Range
- BS EN 60751(IEC 751) standard / JISC1604
- Linearisation
- 25 °C

4.0 INSTALLATION AND WIRING

- The transmitter is protected against reverse connection and over voltage. If no sensor load symbol represent any other device connected in the loop, such as Monitoring equipment or loop power supply.
- The transmitter conforms with EC directive BS EN 61326: 1998 when correctly installed.
- For an up or down scale output from power up typically 5 Seconds
- Response Time 1 Second to reach 90% of final value
- Update Time 0.5 Seconds
- Connection Screw Terminal
- (-40 to 85) °C

5.0 LIMITS

- **MINIMUM SUPPLY VOLTAGE** (Vsupply – 10)/20
- **MAXIMUM SUPPLY VOLTAGE** 30 V
- **MINIMUM SUPPLY CURRENT** < 200 μA
- **MAXIMUM SUPPLY CURRENT** 30 mA
- **THERMAL DRIFTS**
  - ±0.25 % / °C
- **ACCURACY**
  - ±0.5 % of span

6.0 INSTRUCTION

- **NAVIGATING THE MENUS**
  - Three types of button press are used:—
    - Single press = advance to next page
    - Double press within 0.5 seconds = Escape or change direction
    - Triple press within 0.5 seconds = Return to menu 1

- **USING THE PUSH BUTTON**
  - Button use a 3 mm screw driver (flat blade) inserted into the hole. The button has a slight click action.

- **EXAMPLE OF USE**
  - Figure 2 gives connection details, the output is shown connected to a 24 V supply. The current, depending on configuration.
  - Figure 3 Configuration circuit

7.0 IMPORTANT

- PARTICULAR CARE SHOULD BE TAKEN REGARDING TIMEOUTS IN MENU 2 & 3
- READ COMPLETE SECTION BEFORE ATTEMPTING CONFIGURATION
- IN CASE OF DIFFICULTIES CONTACT LOCAL AUTHORITY

For latest product manuals: omega.co.uk
Shop online at: omega.co.uk e-mail: sales@omega.co.uk

**NEWPORT**

For ready-to-use models contact your nearest location.
Use single button press to advance selection to "menu 2", the program LED will indicate by one flash every burst. This indicates "menu 1" is selected.

Press and hold button > 2 seconds to enter menus. Menu 1 will then be selected, indicated by two flashes of the program LED every burst. Press and hold button > 2 seconds again to advance to menu 2, indicated by three flashes of the program LED every burst.

Menu 2: Burnout Selection (Timeout is 3 seconds)

This menu allows the user to trim the output current at 4 mA and 20 mA points. The transmitter will automatically trim the 4 mA end if the output is within the active range temperature. If the program LED is on at this stage, the input is out of range.

Menu 3: User Trim (Timeout is 20 seconds)

This menu allows the user to trim the output current at 4 mA and 20 mA points. For this menu, which stage the program LED will either toggle on and off at a slow rate indicating low range temperature and allow ten seconds. Possible. This affords our customers the latest in technology and engineering.

User configuration uses three menus, each menu sets a different parameter:

Menu 1 User trim (Timeout is 10 seconds)

Press and hold button > 2 seconds to enter menus. Menu 1 will then be selected, indicated by one flash every burst. This indicates "menu 1" is selected.

Press and hold button > 2 seconds again to advance to menu 2, indicated by three flashes of the program LED every burst. Press and hold button > 2 seconds again to advance to menu 3, indicated by three flashes of the program LED every burst.

Menu 1 User trim (Timeout is 10 seconds)

This menu allows the user to trim the output current at 4 mA and 20 mA points. The auto trim rate will speed up. Monitor the current change on the current meter.

Menu 3 User trim (Timeout is 20 seconds)

This menu allows the user to trim the output current at 4 mA and 20 mA points. Which stage the program LED will either toggle on and off at a slow rate indicating low range temperature and allow ten seconds. Which stage the program LED will either toggle on and off at a slow rate indicating low range temperature and allow ten seconds.