

Quick Installation Guide

00825-0100-4842, Rev. AA

December 2006

Level

Rosemount 3100 Series Ultrasonic Level Transmitter External Temperature Sensor

Part No : 03100-0001-0001

For use with ultrasonic transmitters 3102 and 3105



Introduction

For transmitter installations where the temperature sensor is not representative of the air / medium temperature in the process, the use of the external temperature sensor will improve accuracy.

Sensor Specification

Stainless steel type 316 body with locknut, M10 thread, 6mm maximum panel thickness. Sensor working temperature -40°C to $+85^{\circ}\text{C}$, cable working temperature -20°C to $+80^{\circ}\text{C}$. Cable 5m long, single twisted pair.

Note :

When connected to a 3105 intrinsically safe transmitter, this sensor is classified as 'simple apparatus' according to BSEN 50020 paragraph 5.4.

Temperature class T6,
 $-20^{\circ}\text{C} \leq T_a \leq +80^{\circ}\text{C}$

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Installation

1. Connect the two sensor wires to terminals 7 and 8 of the transmitter, polarity is not important. See diagram below; also refer to Transmitter Installation Manual.

Ensure use of a suitably IP rated cable gland to maintain the IP rating of the transmitter .

2. Mount the sensor between the transmitter and the liquid level, to measure the air / medium temperature at a representative point.

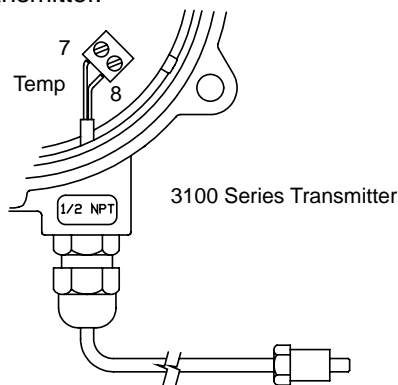
3. Avoid allowing the sensor to become submerged.

4. Do not mount the sensor near a heat source or in direct sunlight.

5. For the optimum response to temperature change do not mount directly onto a large thermal mass.

6. To avoid false echoes, do not mount the sensor directly in the path of the transmitter beam.

7. The transmitter will automatically detect and enable the sensor. Fine adjustments to the temperature calibration may be made; refer to the Installation Manual supplied with the transmitter.



Wiring Diagram
External temperature sensor

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