

## Quick Installation Guide

00825-0100-4842, Rev. BA

November 2010

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 integral temperature sensor is not representative of the air / medium temperature in the process, the use of the external temperature sensor improves accuracy.

### Sensor Specification

316 Stainless steel body with two locknuts, M8 thread, 6 mm maximum panel thickness. Sensor working temperature -40 to 85 °C, cable working temperature -20 to 80 °C. Cable 5 m long, single twisted pair.

### Note :

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

Temperature class T6,  
 $-20\text{ °C} \leq T_a \leq 80\text{ °C}$



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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.

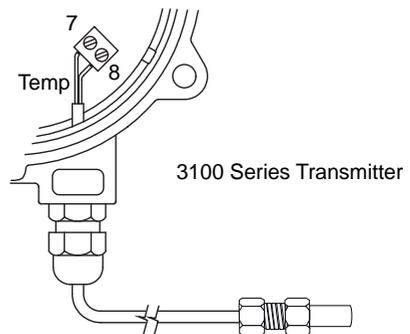
3. Avoid allowing the sensor to become submerged.

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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**Emerson Process Management**  
**Rosemount Division**  
8200 Market Boulevard  
Chanhassen, MN USA 55317  
T (U.S.) 1-800-999-9307  
T (Intl) (952) 906-8888  
F (952) 949-7001  
[www.rosemount.com](http://www.rosemount.com)

**Emerson Process Management**  
Bleigstrasse 23  
P.O. Box 1046  
CH 6341 Baar  
Switzerland  
T +41 (0) 41 768 6111  
F +41 (0) 41 768 630

**Emerson FZE**  
P.O. Box 17033  
Jebel Ali Free Zone  
Dubai UAE  
T +971 4 883 5235  
F +971 4 883 5312

**Emerson Process Management**  
**Asia Pacific Private Limited**  
1 Pandan Crescent  
Singapore 128461  
T (65) 6777 8211  
F (65) 6777 0947 / (65) 6777 0743  
[Enquiries@AP.EmersonProcess.com](mailto:Enquiries@AP.EmersonProcess.com)

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