

Mud Temperature In/Out Sensor

Provides precise temperature readings for a wide variety of drilling muds

Applications

- Measuring mud temperature at surface

Safety Notices

- FM intrinsically safe for Class I, Division I
- Explosion-proof for Class I, Division I, Groups B, C, and D
- ATEX intrinsically safe, certificate number: BAS00ATEX1033X
- ATEX Ex II 1 G EEx ia IIC T6

Features

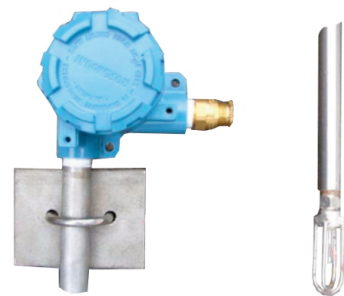
- DIN head-mount and rail-mount form factors
- Small footprint
- Industry-standard 4-20 mA analog signal

Benefits

- Provides reliable, accurate measurements with a very low drift rate
- Suitable for use in hazardous areas as part of an intrinsically safe circuit
- Can be installed in any part of the circulation system not under pressure
- Can be configured to meet HART and PROFIBUS protocols

Tool Description

The mud temperature in/out sensor is a surface sensor typically used to measure mud temperature at two locations: the ditch and the active pit (as close to the suction line as possible). Sensors can be installed in a delta configuration to measure both input and output temperatures, and WellWizard® software can be used to calculate the delta temperature.



The sensor is contained in an explosion-proof housing (shown at left). A thermocouple (shown at right) is inserted directly into the drilling fluid to accurately measure temperature.

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Specifications

Brand	Rosemount
Model	644H
Weight	0.2 lb (96 g)
Mounting	Rail mount
Housing	Low-copper aluminum
Sensor	Platinum and nickel RTD-Pt 100 – 0.00385
Supply voltage	12 to 42.2 V
Output signal	4-20 mA
Accuracy	±0.27°F (±0.15°C)
Stability	±0.15% of reading or 0.27°F (0.15°C) for 24 months
Range	32°F to 572°F (0°C to 300°C)
Resolution	0.05°
Location	Mud pits, gumbo box, flowline
Operating temperature	–40 to 185°F (–40 to 85°C)
Operating humidity	0 to 100% relative humidity
Vibration	0 to 60 Hz, 0.008 in. (0.21 mm)

