Rosemount High Density Temperature Measurement
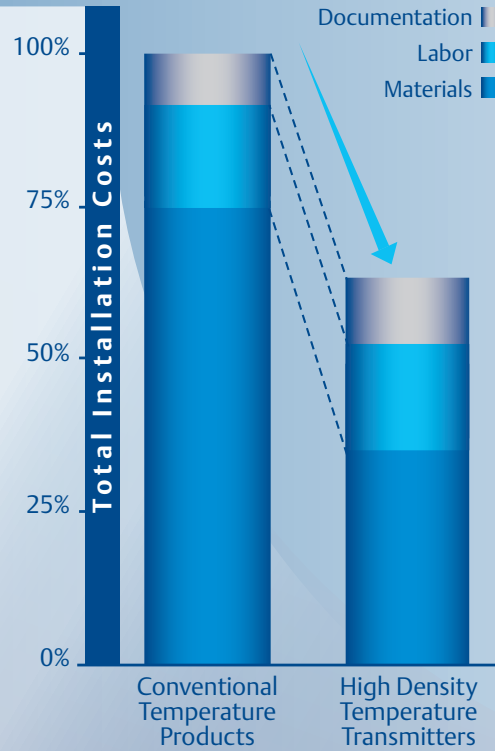
Simplify Your Project

848T

Balancing Project Risk is a Daunting Challenge

Emerson's approach to temperature measurement can help lower the risk of budget overruns and start-up delays. Rosemount High Density transmitters reduce installation complexities, lower costs and simplify your project.

Total Installation Costs

| | Documentation | Labor | Materials |

100%

75%

50%

25%

0%

Conventional Temperature Products

High Density Temperature Transmitters

Reduce Cost with Less Wiring

Wiring infrastructure such as conduit, cable trays and marshalling panels add significant cost to a project. Rosemount High Density transmitters measure multiple temperatures to reduce or eliminate wiring infrastructure and provide significant cost savings.
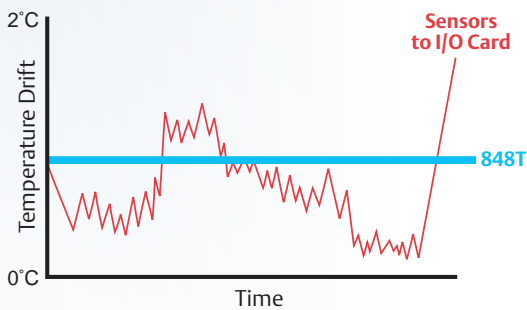
Traditional Transmitters
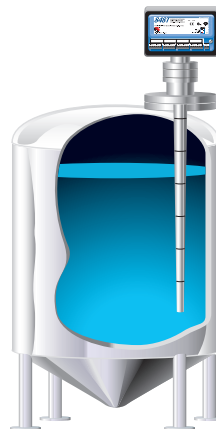
High Density Transmitter

Faster Start-ups with Fewer Devices

Installing wiring runs for each temperature measurement is labor intensive and costly. Rosemount High Density transmitters measure more temperature points with fewer devices to reduce installation and commissioning time.

Rosemount 848T Temperature Transmitter with Multipoint Sensor

Improve Performance with Reliable Measurement

Long sensor wiring runs are susceptible to drift giving unreliable information. Rosemount High Density transmitters shorten sensor wiring lengths and filter electrical noise to provide stable and accurate measurement.

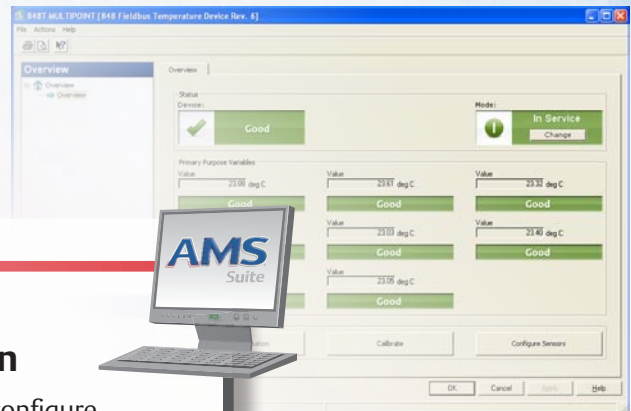## Reduce Complexity with Complete Solutions

Managing multiple temperature vendors for a project adds complexity. Emerson manufactures transmitters and sensors globally to meet your project needs.

Implementation Made Easy

Rosemount High Density transmitters simplify installation to reduce overall cost and labor effort.

Scalable Architecture

- Add new devices to existing networks
- Hundreds of temperature measurements on one network

Easy Access to Device Information

- Evaluate, diagnose, and configure with Device Dashboards
- Access transmitter and sensor diagnostics

Eliminate Individual Signal Wires

- Communicate with single 2-wire loop
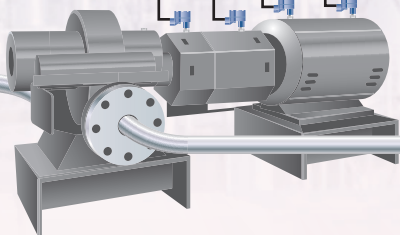- Connect without marshalling panels

Smart Wireless Gateway

FOUNDATION™ fieldbus

Rosemount 848T Wireless Temperature Transmitter

- 4 Independently configurable inputs
- Thermocouple, RTD, ohm, mV, and 4-20 mA inputs
- Mounts anywhere with field hardened enclosure
- Intrinsically safe Power Module for easy replacement in hazardous areas
- Uses standard HART® configuration tools to integrate into WirelessHART™ network
- Up to 400 measurements on a single Smart Wireless Gateway

WirelessHART™ Network

Eliminate Signal Wire

- Simplify installation without cable trays
- Install without junction boxes
- Connect without marshalling panels

Mount Close to Process

- Shorten sensor wires to improve measurement reliability
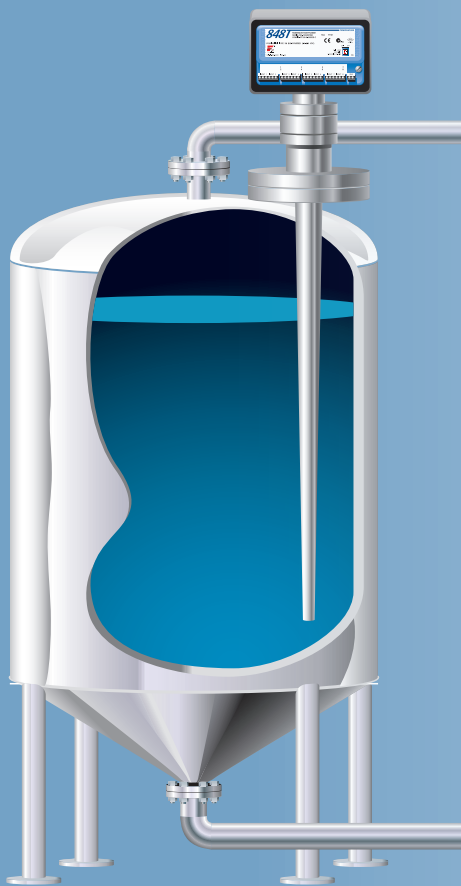- Field hardened enclosures for harsh environments

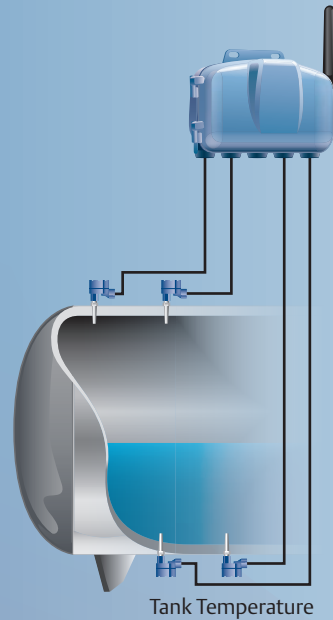## Rosemount 848T Temperature Transmitter

- 8 Independently configurable inputs
- Thermocouple, RTD, ohm, mV, and 4-20 mA inputs
- DIN rail mounting for flexible installation practices
- Calculates minimum, maximum and average
- Up to 128 measurements on one FOUNDATION™ fieldbus segment

Deliver Results with Innovative Solutions

From preventing unexpected shutdowns to reducing installation costs, Rosemount High Density transmitters have proven to deliver positive business results. Our customers have simplified their projects by installing Rosemount 848T temperature transmitters in their plant.

Measure Tank Temperature to Improve Product Quality

Challenge:
- Maintaining tank temperature was difficult
- Existing measurement wired thermocouples directly to control room
- Drifting measurement increased risk of producing off-spec product

Solution:
- Rosemount 848T Wireless reduced sensor wiring and eliminated drift
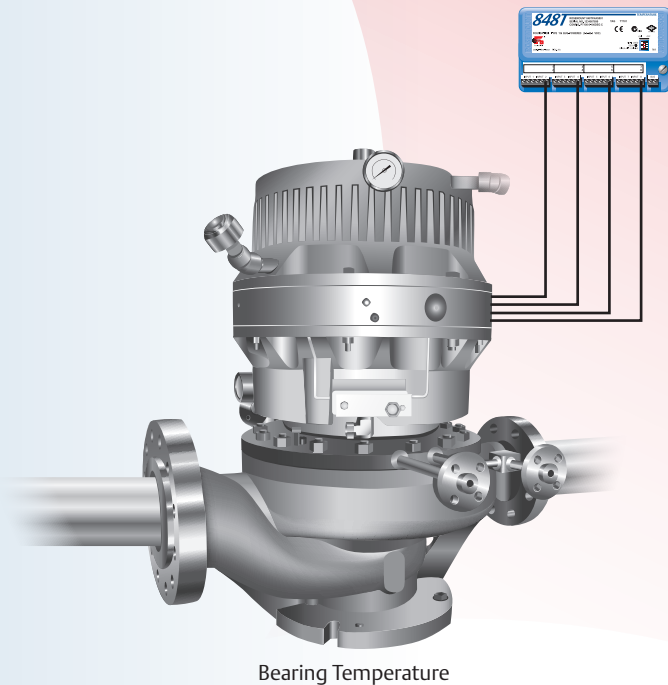- Product quality was improved and installation costs were reduced by $5,500 per point

Tank Temperature

Improve Reactor Control to Prevent Shutdown

Challenge:
- Control of reactor during polymerization process was needed to ensure product quality
- Sensor wired directly to control room incurred high material and labor costs
- Reactor could become plugged causing a two to three week shutdown

Solution:
- Rosemount 848T profiled 16 temperature points in reactor dome
- Detected a polymer buildup and prevented a costly shutdown
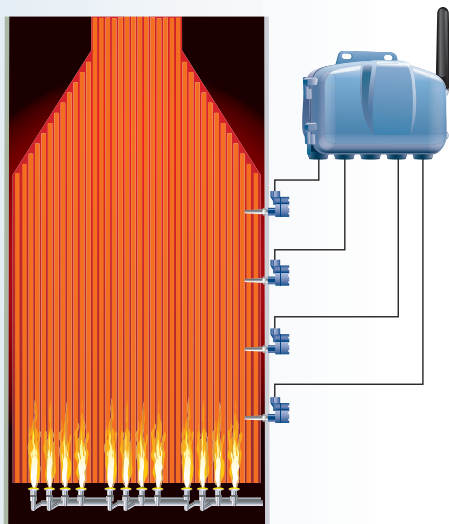
Reactor Temperature Profiling

Prevent Compressor Failure by Monitoring Bearing Temperature

Challenge:
- Monitoring bearing temperature to prevent gas compressor failure
- Local temperature monitoring did not report information to control system
- Gas compressor failure would cause shutdown of hydrocracker

Solution:
- Rosemount 848T detected damage to the bearing preventing a hydrocracker shutdown
- Saved over 70% in wiring cost amounting to $20,000

Bearing Temperature

Monitor Oven Temperature to Reduce Operation Costs

Challenge:
- Difficulties monitoring and controlling coke oven temperatures
- Existing measurement was unreliable and operator rounds were costly
- Unreliable measurement risked oven collapse and energy waste

Solution:
- Rosemount 848T Wireless provided reliable measurement ensuring proper oven temperature
- Eliminated operator rounds and provided access to process information

Coke Oven Temperature

To experience the Rosemount 848T visit www.rosemount.com/848T

EMERSON
Process Management