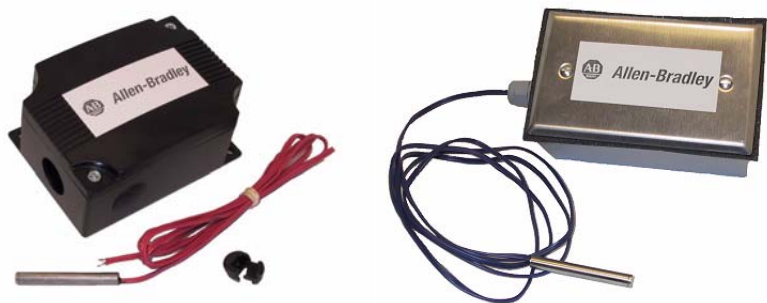




Strap-on Temperature Transmitter

Catalog Number(s) 1414-ITE03ADSAA,
1414-ITE03ACSAA, 1414-ITE02ADSAA,
1414-ITE02ACSAA, 1414-CTE03PDSAA,
1414-CTE03PCSAA, 1414-CTE03PASAA



About the Strap-on Temperature Transmitter

Designed for monitoring temperatures on pipes where an immersion sensor can not be used. It is available with various enclosures to fit any application

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. *Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls* (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://www.literature.rockwellautomation.com>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.





In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

<p>WARNING</p> 	<p>Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.</p>
<p>IMPORTANT</p>	<p>Identifies information that is critical for successful application and understanding of the product.</p>
<p>ATTENTION</p> 	<p>Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard and recognize the consequences.</p>
<p>SHOCK HAZARD</p> 	<p>Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that dangerous voltage may be present.</p>
<p>BURN HAZARD</p> 	<p>Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that surfaces may be dangerous temperatures.</p>

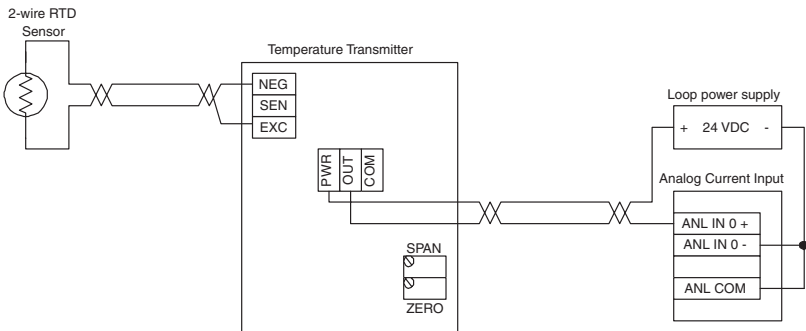
Install the Strap-on Temperature Probe

Mount the probe under any pipe insulation in direct contact with the pipe to measure the temperature of the pipe using metal pipe straps or cable ties. For best results, thermal compound should be used between the probe and pipe to improve heat transfer and the installation should be wrapped with insulation to reduce the effects of ambient air.

Wire/Connect the Strap-on Temperature Transmitter

Connect the transmitter to the controller using twisted 18 to 22 AWG wire. The transmitter requires two wires for DC 4 to 20 mA loop-powered operation. The use of shielded cable is optional but recommended for the highest noise immunity. Do not route signal wires in the same conduit with power cables as signal degradation may occur. The controller Analog Input (AI) must be selected to match the transmitter output before power is applied. The AI type must be a current input with 250 or 500 ohm impedance. All transmitters have an operating range of 0 to 70°C (32 to 158°F). The transmitter board should not be mounted where temperatures exceed these values. See the connection diagram for more details.

Typical wiring to a controller is shown in the connection diagram.



For 4 to 20 mA loop signal, only the PWR and OUT terminals are used.

Field Calibration

The unit can be calibrated in the field by using precision resistor values equal to the zero and span of the transmitter temperature range.

1. Disconnect the sensor from the transmitter and connect the resistor that represents the zero value to the EXC and NEG terminals.

TIP

If the unit uses a three-wire sensor, a jumper must be placed between EXC and SEN.

2. Adjust the ZERO pot until the desired output is achieved.
3. Connect the resistor that represents the span value to the EXC and NEG terminals.
4. Adjust the SPAN pot until the desired output is achieved.

Repeat these steps until no further adjustment is required.

Specifications

Strap-on Temperature Sensor Specifications

Specification	Value
Standard Length	2"
Operating Temperature Range	-20 ... 105 °C (-4 ... 221 °F)
Ambient Temperature Range	0 ... 70 °C (32 ... 158 °F)
Cable Type	PVC insulated, parallel bonded
Wiring Connections	Terminal blocks
Enclosures	ABS or Weatherproof
Sensor Types	1 k Ω Platinum RTD

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