



TEMPERATURE

DUCT THERMISTOR AND RTD SENSORS

ST-D* SERIES

DESCRIPTION

The Precon **ST-D* Series Duct Sensors** provide precision remote temperature sensing for building automation systems and mechanical equipment room instrumentation. The active sensing element is a highly stable precision thermistor material or platinum RTD.

The sensing element is sealed with a thermally conductive compound in a 9" (22.8 cm) long 304 stainless steel tube attached to a 4" (10 cm) electrical strap. The slots in the mounting bracket form mounting ears for direct duct mounting and standard electrical boxes. The grommet on the tube fitting seals a 9/16" (1.43 cm) insertion hole.

FEATURES

- *Lifetime warranty*
- *Wide selection of thermistor and RTD curves*
- *Tip sensitive for precise temperature response*
- *Adaptable with many options*
- *304 stainless steel probe*
- *Easy to mount to duct or back box*
- *Waterproof probe*
- *Greenfield fitting*
- *Handybox*
- *Custom length probes*
- *Weatherproof housing*
- *25' lead length*
- *NIST Traceable*



ST-D3

ST-D91-XH



APPLICATION

The **ST-D* Series** sensors are designed for direct mounting on sheet metal duct systems. Where conduit is required, the duct sensors have a universal nylon mounting connector that adapts to a 1/2" knockout in a standard handy box. The nylon fitting has a 1/2" NPT female conduit fitting.

The duct temperature sensors are waterproof and can be used in high humidity and condensing air. The sensors are point-sensitive and come standard with 9" (22.8 cm) insertion depth. The **XL** option provides custom lengths.

SPECIFICATIONS

Accuracy		Stability	
Thermistor	±0.36°F (0.2°C)	Thermistor	0.24°F (0.13°C) over five years
RTD	±0.54°F (0.3°C) .375 curve ±0.27°F (0.15°C) .385 curve	RTD	<0.09°F (0.05°C) over five years
Sensor types		Heat dissipation	2.7 mW/°C (power needed to raise the temperature by 1°C)
Thermistor	2.252 kΩ, 3 kΩ, 10 kΩ, 20 kΩ, 100 kΩ	Connections	8' (2.4m) of 24 AWG pigtails prestripped ends
RTD	Platinum 100Ω, 385 curve Platinum 1000Ω, 385 curve Platinum 1000Ω, 375 curve	Mounting	Directly to duct, wall, or customer-supplied back box, no adapters needed for standard boxes
Temperature range		Warranty	Lifetime
Thermistor	-30° to 160°F (-34° to 71°C)		
RTD	-67° to 240°F (-55° to 115°C)		
Temperature response			
Thermistor	Negative temperature coefficient		
RTD	Positive temperature coefficient		

TEMPERATURE

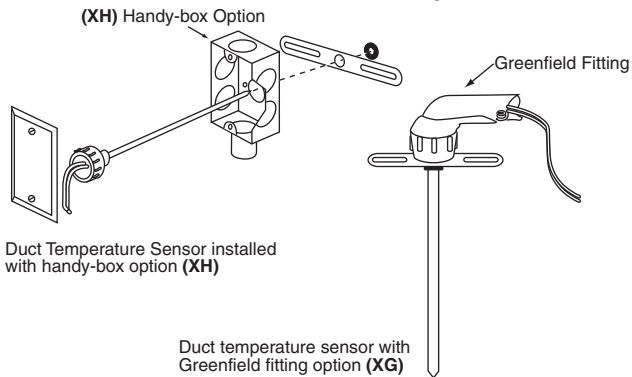
DUCT THERMISTOR AND RTD SENSORS ST-D* SERIES



MOUNTING

Direct duct-mount screws can be used where conduit is not required. Adapters are not required when mounting directly to outlet boxes. Install grommet in the 9/16" (1.43 cm) insertion hole. Use full 8' (2.4m) lead length provided to avoid moisture migration at the field connection.

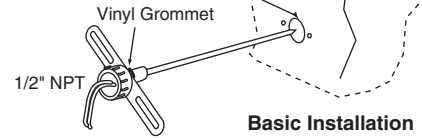
Basic model comes with 8' (2.4m) of 24 AWG, 9" (22.86 cm) probe with T-bar, grommet, and #6 x 1 screws for direct duct mounting.



Duct Temperature Sensor installed with handy-box option (XH)

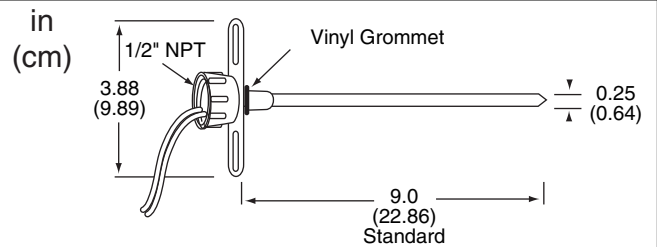
Duct temperature sensor with Greenfield fitting option (XG)

Insertion Hole is 9/16" (1.43 cm)



Basic Installation

DIMENSIONS



ORDERING INFORMATION

MODEL	DESCRIPTION
ST-D3	10,000Ω duct thermistor @ 77°F (25°C), Type III (gray leads)
ST-D21	2252Ω duct thermistor @ 77°F (25°C), Type II (green leads)
ST-D22	3000Ω duct thermistor @ 77°F (25°C), Type II (blue leads)
ST-D24	10,000Ω duct thermistor @ 77°F (25°C), Type II (yellow leads)
ST-D27	100,000Ω duct thermistor @ 77°F (25°C), Type II (gray leads)
ST-D42	20,000Ω duct thermistor @ 77°F (25°C), Type IV (green leads)
ST-D81	100Ω duct RTD @ 32°F (0°C), 385 platinum curve (yellow leads)
ST-D85	1000Ω duct RTD @ 32°F (0°C), 385 platinum curve (blue leads)
ST-D91	1000Ω duct RTD @ 32°F (0°C), 375 platinum curve (green leads)

OPTIONS (List options in alphabetical order with dashes)

XG	Greenfield fitting (factory installed)
XH	Handy-box housing (factory installed)
XHP	Non-metallic handy-box housing (factory installed)
XL	Custom length insertion probe, available 2" to 9' (5.08 cm to 2.74m)
XW	Weatherproof housing (factory installed)
X25	25' (7.62m) lead length
XZ	Three-wire RTD connections (Type 81 only)

ST-D3 — XG **Example:** ST-D3-XG 10,000Ω Type III duct temperature sensor with Greenfield fitting

NOTE: Call Kele for additional temperature sensor options and NIST Traceability.

RELATED PRODUCTS

UR
KT1 Moisture-resistant three-wire butt splice
Mounting screwdriver 1/16" Allen key