

TEMPERATURE



1000 OHM 375 PLATINUM RTD PROBE SENSORS

MODELS ST-A91, ST-D91, ST-O91, ST-R91, ST-R91S, ST-W91, ST-U91

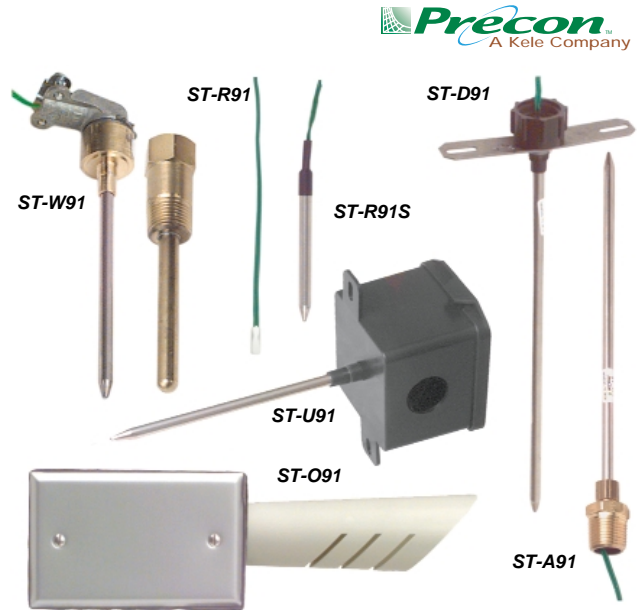
DESCRIPTION

The Type 91 **Platinum RTD Probe Sensors** have a 1000Ω thin film platinum resistance element. Using standard 304 stainless steel probes, these sensors provide stable, accurate measurement for temperature control and building automation systems.

All of these sensors are available with an optional 4-20 mA transmitter output. See the T91U transmitter in the Temperature section.

FEATURES

- **High accuracy**
- **Low-drift platinum**
- **Interchangeability**
- **Low cost**
- **NIST traceable optional**
- **Five-year warranty**



PROBE VARIATIONS	
<p>The ST-A91 All-Purpose Sensor can be used in a variety of applications. The male 1/2" NPT fitting is for mounting in a conduit or handibox. The 9" (22.9 cm) stainless steel probe is tip-sensitive.</p> <p>The ST-D91 Duct Sensor has mounting tabs for direct mounting on a duct or for installation in a handibox. A nylon 1/2" FNPT fitting is used for open wire or conduit fittings. The 9" (22.9 cm) stainless steel probe is tip sensitive.</p> <p>The ST-O91 Outdoor Sensor is equipped with a weather shield and weatherproof box. The box has two 1/2" FNPT openings for conduit.</p> <p>The ST-R91 Raw Sensor is for special applications when size or weight is a consideration. It can be mounted with an optional accessory PN-46 mounting clip or with ties.</p>	<p>The ST-R91S Strap-On Sensor is suitable for direct application to pipe surfaces for chilled and hot water applications. Installation is with an optional accessory APB-28 or ties. Insulation around the sensor (2' (61 cm) wrapped on each side) is critical for a good reading. The 3" (7.6 cm) stainless steel probe is tip-sensitive.</p> <p>The ST-U Universal-Mount Sensor provides precision remote temperature sensing in multiple applications such as Duct, OSA, and Immersion installations for building automation systems. The sensing element is sealed with a thermally conductive compound in a 4.87" (12.4 cm) long stainless steel probe and is attached to a 2.5" (6.4 cm) square enclosure.</p> <p>The ST-W91 Immersion Sensor comes standard with a brass or optional stainless steel thermowell and a Greenfield fitting for a flex connection or open wire installation. The well insertion is 3.25" (8.3 cm) and screws into a 1/2" saddle (Thredolet®).</p>

SPECIFICATIONS			
Sensing element	1000Ω thin film platinum TCR 0.00375 Ω/Ω/°C	Long term stability	< 0.09°F (0.2Ω) per five years in air environments
Ice point resistance	1000Ω ±2Ω (±0.2%)	Recommended current	1 mA max in still air for < 0.5°F (0.3°C) self-heating
Interchangeability	±0.5°C @ 0.8% of temp @ ±0.2% R ₀ trim [NIST traceable is optional]	Approx sensitivity	2.1Ω/°F @ 32°F (0°C)
Temp range	-67° to 240°F (-55° to 115°C)	Wiring	8' (2.44m) of 24 AWG zipcord (prestripped)

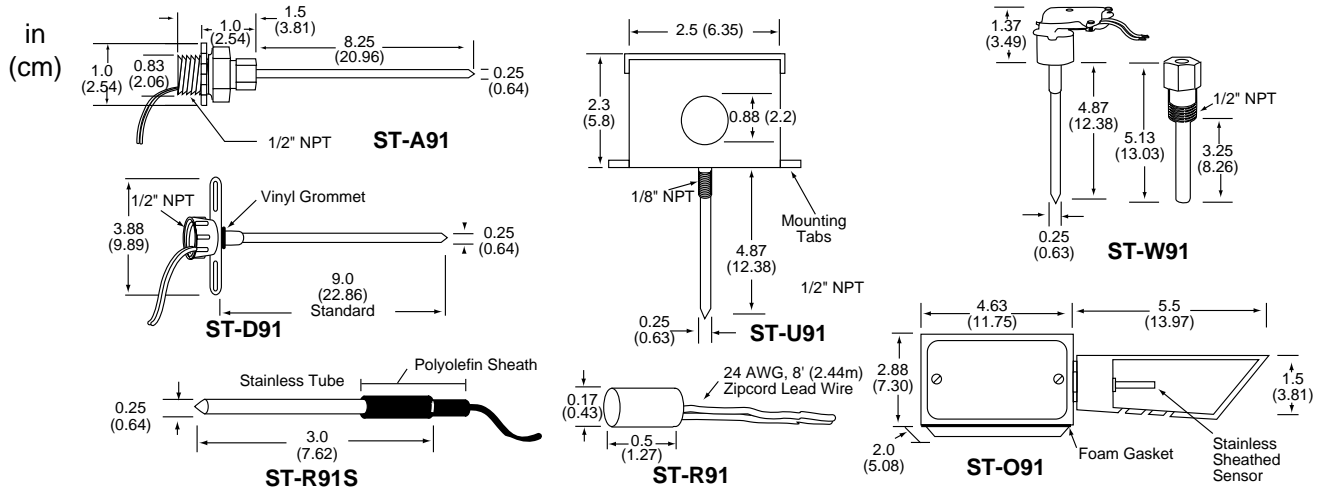
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DIMENSIONS



ORDERING INFORMATION

MODEL	DESCRIPTION
ST-A91	1000Ω Platinum RTD All-Purpose Sensor
ST-D91	1000Ω Platinum RTD Duct Sensor
ST-O91	1000Ω Platinum RTD Outdoor Air Sensor
ST-R91	1000Ω Platinum RTD Raw Sensor
ST-R91S	1000Ω Platinum RTD Strap-On Sensor
ST-U91	1000Ω Platinum RTD Universal-Mount Sensor (Duct, Immersion, OSA)
ST-W91	1000Ω Platinum RTD Immersion Sensor with Brass Thermowell
MOUNTING ACCESSORIES	
—	ST-W Sensor with brass well or ST-D, ST-O, ST-R
B	ST-U Kit with WEL-B brass well for immersion mounting (ST-U only)
E	ST-W Sensor without well or ST-D, ST-O, ST-R
O	ST-U Kit with OSAB weather shield, gasket, and bracket for wall mount (ST-U only)
S	ST-W or ST-U sensor with stainless steel well
OPTIONS (see page 45 for option details)	
XD	Dual sensors in one probe
XH	Handibox housing (ST-A91, -D91, -W91 only)
XW	Weatherproof housing (ST-A91, -D91, -W91 only)
XL	Custom length, 2" to 60" (5 to 152 cm)(ST-A91, -D91, -W91, -R91S, U91 only)
XLT	Liquid tight fitting (ST-W91 only)
XN1	NIST certificate, 1 reference point 32°F (0°C)
XN2	NIST certificate, 2 reference points 32°/160°F (0°C/77°C)
XP	Matched sensor pairs matched to ±0.1°F, 0.55°C (must order two sensors)
XG	Greenfield fitting (ST-D91, U91 only)
X25	25' (7.62m) 24 AWG twin lead
XC25	25' (7.62m) jacketed cable

ST-W91 - [] - [] **Example:** ST-W91-XW Immersion sensor with brass well and weatherproof housing option

Related Products

T91U 4-20 mA temperature transmitters
TCC-12/TCC-111 Thermal conductive compound