

DESCRIPTION AND APPLICATION

STE-1400 Series, 10,000 ohm, Type III thermistor, temperature sensors are available for duct, immersion, strap-on, room, and outside air applications. See also [Models on page 2](#). Applicable probes are constructed to provide good heat transfer and fast response.

The **STE-1430 room** sensor, designed for inconspicuous and tamper-resistant temperature measurement of occupied spaces, can be mounted on an interior hollow wall in a standard single-gang electrical box. The sensor is mounted to the back of a flat, brushed stainless-steel plate.

The **STE-1451 outside** air sensor is mounted in a gasketed weatherproof LB-style aluminum enclosure for protection against the outdoor elements. It comes with an c/w 1/2" NPT fitting for connection to conduit.

An **STE-1411/1412/1413/1414/1415/1416/1417 averaging duct** sensor incorporates numerous sensors and is available in a 5/16-inch OD bendable copper probe or in a flexible plenum-rated cable. The completed assembly acts as a single sensor and any temperature change is averaged across the sensor. The probes can flex to fit any size duct.

Each **STE-1401/1402/1404/1405 duct** sensor is encapsulated in a rigid 1/4-inch OD stainless-steel probe. The probe protrudes from the sensor housing (if included). The probe can be inserted directly into the duct for single-point monitoring, and mounting holes are provided to rigidly support the assembly.

An **STE-1423/1424 immersion/duct** sensor is encapsulated in a rigid 1/4-inch OD 304 stainless-steel probe. The probe protrudes from the sensor housing for insertion into an HMO-4545/4546 stainless-steel thermowell for immersion applications. (See [Accessories on page 3](#) for thermowells and thermal compound.) These sensors can also be used (without thermowells) as a rigid-probe duct sensors for small ducts.

The **STE-1455 strap-on** sensor is encapsulated in a two-inch-long, 1/4-inch OD stainless-steel probe. The probe has a five-foot lead wire. The **STE-1454** strap-on sensor also comes with an enclosure. A strap-on sensor is typically used if an immersion sensor is impractical.



FEATURES

- ◆ Type III 10,000 ohm thermistor encapsulated temperature sensors.
- ◆ Available in a number of models to accommodate various installation applications.
- ◆ Models are available with and without enclosures and with different length leads.

SPECIFICATIONS

Sensor	Type III thermistor, 10K ohm @ 77° F (25° C)
Accuracy	±0.36° F (±0.20° C)
Temperature Limits	See installation guides for the different models
Wiring	Wire leads pigtail or cable, dependent on model
Mfg. Process	ISO 9001 registered quality system
Approvals	CE and RoHS compliant

NOTE: These specifications are for models that started shipping May 2020. For specifications of earlier models, see Rev. Q of this document.

MODELS

MODEL	SENSOR TYPE	PROBE TYPE	PROBE LENGTH	ENCLOSURE	CONNECTIONS*
STE-1405	Duct, Rigid	1/4-inch OD stainless-steel	4 inches (100 mm)	None (mounting bracket only)	10-ft. FT-6 plenum-rated, 22 AWG cable
STE-1401			8 inches (200 mm)		
STE-1402			8 inches (200 mm)		
STE-1404			12 inches (300 mm)		
STE-1411	Duct, Averaging	Copper, bendable	6 feet (1.8 m)	Plastic, UL94-V0, IP65 (NEMA 4X) ABS	FT-6 plenum-rated, 22 AWG wire leads
STE-1412			12 feet (3.6 m)		
STE-1414			20 feet (6.1 m)		
STE-1413			24 feet (7.3 m)		
STE-1415		Flexible, FT-6 plenum-rated cable	6 feet (1.8 m)		
STE-1416			12 feet (3.6 m)		
STE-1417			24 feet (7.3 m)		
STE-1423			Immersion** or Rigid Duct		
STE-1424	6 inches (150 mm)				
STE-1454	Strap On	1/4-inch OD stainless-steel	2 inches (50 mm)	None	5-ft. non-plenum-rated, PVC insulated, 22 AWG cable (between sensor and enclosure for STE-1454)
STE-1455					
STE-1430	Room	Sensor is behind a blank, flat, stainless steel plate for mounting on a (not supplied) single-gang electrical box			Wire leads
STE-1451	Outside Air	Inside an LB-type aluminum, IP65 (NEMA 4X), enclosure			

***NOTE:** All sensors have short leads except for those with five-foot or ten-foot cables.

****NOTE:** For immersion applications, the STE-1423 sensor requires an HMO-4545 thermowell, and the STE-1424 requires an HMO-4546. See [Accessories on page 3](#).

ENCLOSURES

The STE-1401, STE-1405, and STE-1455 have no enclosures.

The STE-1430 sensor is behind a blank, flat, brushed stainless steel plate for mounting on a (not supplied) single gang electrical box. It has an IP50 (NEMA 1) rating after mounting.

The STE-1451 outside air temperature sensor has an aluminum LB enclosure with an IP65 (NEMA 4X) rating.

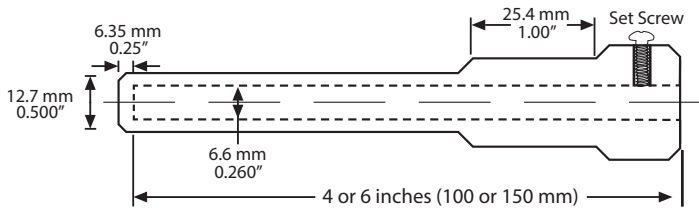
All others have a UL94-V0, IP65 (NEMA 4X) ABS plastic utility box, with a hinged and gasketed cover.



ACCESSORIES

For the STE-1421 and STE-1422 **immersion sensors**, these thermowells and thermal compound are available:

- HMO-4532** Thermal compound for thermowells, 1 oz.
- HMO-4545** 4" 304 stainless-steel well (for the STE-1423)
- HMO-4546** 6" 304 stainless-steel well (for the STE-1424)



NOTE: STE-1423/1424 sensor probe is secured inside the thermowell with a set screw. Using HMO-4532 thermal compound inside the well ensures optimal heat transfer.

NOTE: STE-1423/1424 immersion sensors replace older STE-1421/1422 sensors used with (threaded) HMO-4534/4544 thermowells. When replacing an STE-1421/1422 sensor with an STE-1423/1424, the thermowell also needs to be replaced with an HMO-4545/4546.

SUPPORT

Additional product and other resources are available on the web at www.kmcccontrols.com.



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