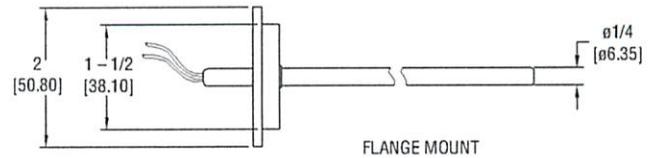
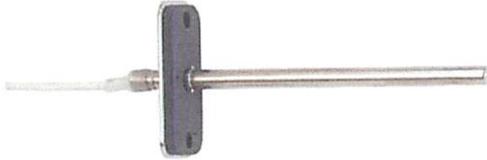


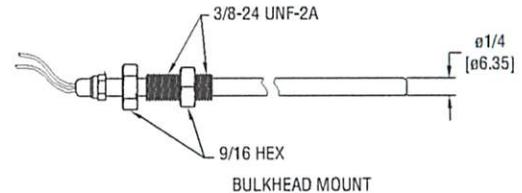


## Series AD Air/Duct Temperature Sensors

### Specifications - Installation and Operating Instructions



FLANGE MOUNT



BULKHEAD MOUNT

The Air/Duct Temperature Sensors are available in precision platinum, nickel, or balco RTDs and interchangeable NTC thermistors. Sensors are constructed with a hermetically sealed 304 SS sheath and are unaffected by high humidity, contamination, thermal shock or vibration. Flange mount sensors offer low profile mounting and quick installation directly into duct work. Select bulkhead mounting if an adjustable insertion depth is required. Rugged air/duct sensors are ideal as air handlers, for cord units, ducts, furnaces, freezers, ovens and other through wall temperature sensing applications.

#### Ordering Information

INSTALLATION	SENSOR	PROBE LENGTH
1 - Flange mount, 3-inch lead wire	1 - 100-ohm platinum RTD	4 - 4 inches/100 mm
2 - Flange mount, 6-foot cable	2 - 1,000-ohm platinum RTD	6 - 6 inches/150 mm
3 - Bulkhead fitting, 3-inch lead wire	3 - 1,000-ohm nickel RTD	8 - 8 inches/200 mm
4 - Bulkhead fitting, 6-foot cable	4 - 1,000-ohm Balco RTD	12 - 12 inches/300 mm
	5 - 10,000-ohm NTC thermistor	
	6 - 3,000-ohm NTC thermistor	
	7 - 5,000-ohm NTC thermistor	
	8 - 100,000-ohm NTC thermistor	
	9 - 20,000-ohm NTC thermistor	

#### SPECIFICATIONS

**Platinum RTD Sensors:**  $\pm 0.1\%$  @ 32°F (0°C), Alpha: 385 per DIN 43760.

**Nickel RTD Sensors:**  $\pm 0.5^\circ\text{F}$  @ 70°F (21.1°C), 6,000 PPM/K T.C.R.

**Balco RTD Sensors:**  $\pm 0.5^\circ\text{F}$  @ 70°F (21.1°C), 4,300 PPM/K T.C.R.

**Thermistor Sensors:**  $\pm 0.2^\circ\text{C}$  interchangeability @ 77°F (25°C).

**Operating Temperature:** -40 to 250°F (-40 to 125°C).

**Probe Material:** 1/4" (6.3 mm) O.D., 0.5 mm wall 304 SS.

**Flange Material:** 304 SS.

**Bulkhead Fitting:** Brass with poly compression sleeve.

#### INSTALLATION

##### Before Installation

- Read these instructions carefully. Failure to do so can result in damage or electrical shock.
- Inspect packaging for signs of damage. If damaged, notify the carrier immediately.
- Verify that the sensor specifications are suitable for the particular application.
- Installers must be trained and qualified technicians.
- **Important:** All wiring must be compatible with applicable codes, ordinances, and instructions.

**Location** - Install the sensor in a location where it will sample the average air temperature in a duct. Avoid areas where the air is stratified because these areas can cause sensing errors.

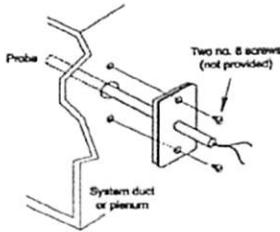
##### Installing the Flange Mount Sensor

1. Drill a 3/8" (9 mm) hole into the duct or plenum where the sensor will be installed.
2. Insert the sensor probe into the duct or plenum until the flange rests against the duct or plenum wall.
3. Use the flange as a template to mark and drill holes for two #8 self-tapping sheet metal screws (not provided).
4. Fasten the sensor to the duct or plenum wall with the sheet metal screws.
5. Make the wiring connections. See Figure 3.

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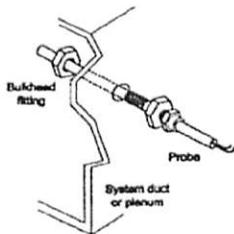
www.dwyer-inst.com  
 e-mail: info@dwyer-inst.com



**Figure 3.** Installing the Flange Mount

#### Installing the Bulkhead Sensor

1. Drill a 3/8-inch (9 mm) hole into the duct or plenum where the sensor will be installed.
2. Remove the mounting nut from the bulkhead fitting.
3. Insert the sensor probe into the duct or plenum until the bulkhead fitting rests against the duct or plenum wall.
4. Guide the nut along the probe and tighten against the duct or plenum.
5. Make the wiring connections. See Figure 4.



**Figure 4.** Installing the Bulkhead Sensor

#### Checkout

Allow the sensor to stabilize in (or against) the pipe for a minimum of five minutes before taking a resistance measurement.

1. Disconnect the sensor lead wires from the controller.
2. Connect an ohmmeter across the lead wires.
3. Ensure that nominal resistance measurements are in accordance with the resistance/temperature curves.
4. Reconnect sensor lead wires to the controller.
5. Check operation of the complete control system.

#### MAINTENANCE

The Series AD Air/Duct Temperature Sensor is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.