

Electronic line-sensing thermostat

The RAYSTAT-EX-03-A electronic line-sensing thermostat provides accurate control for all heating cable types.

The enclosure, electronics, and sensor are approved for use in Division 2 and Zone 1 hazardous locations. The thermostat can be supplied at voltages of 100–277 Vac 50/60 Hz, and has a double-pole switch rated at 16 A. The switch can be configured to provide a

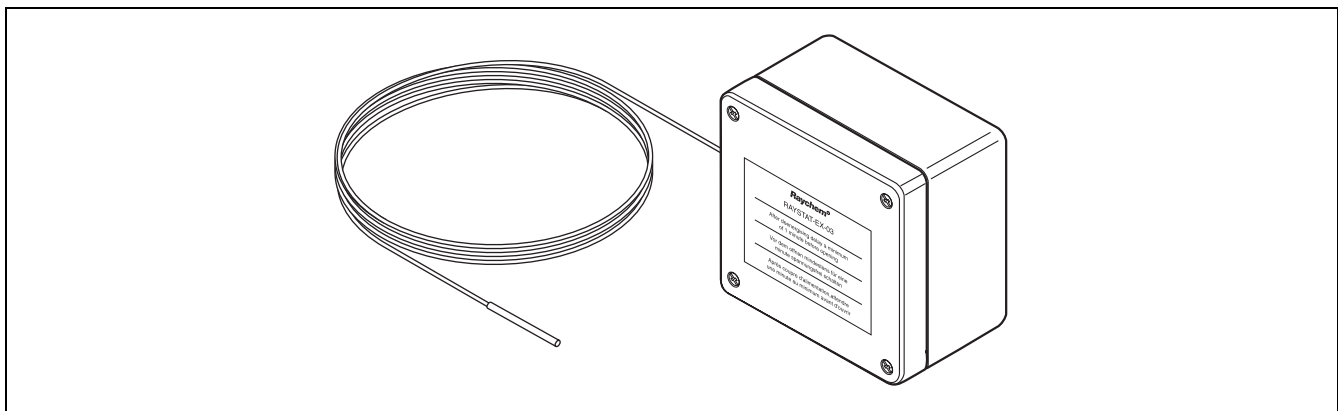
dry contact. Temperature setting is accurate via digital thumb wheel switches inside the enclosure.

The thermostat is supplied with a factory-installed 6 ft (2 m) stainless-steel RTD.

The enclosure is manufactured from high impact-resistant glass-filled polyester offering NEMA 4X, IP66 protection. Two 3/4-inch

(19 mm) entries allow the incoming power and heating cable to be connected to the unit.

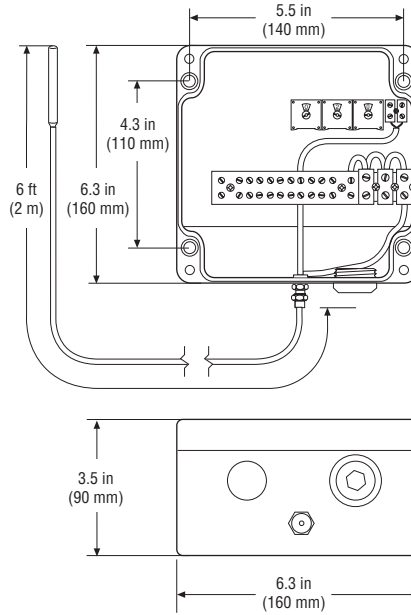
For pipe temperatures up to 482°F (250°C), the units can be mounted directly on the pipe using the JB-SB-25 support bracket.



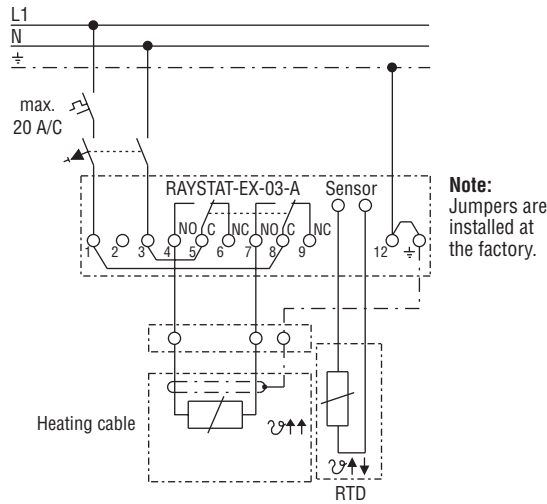
Specifications

Enclosure	<ul style="list-style-type: none"> • NEMA 4X; IP66 • Electrostatic charge-resistant glass-filled engineering polymers, black • Exposed hardware of stainless steel
Entries	Two 3/4-in (19 mm) conduit through holes (one with hole plugged)
Ambient operating range	–40°F to 105°F (–40°C to 40°C)
Set point range	32°F to 930°F (0°C to 499°C)
Switch	DPDT
Switch capacity	16 A (suitable for heating cables on 20 A circuit breakers)
Supply voltage	AC 100–277 V, 50/60 Hz
Accuracy	±1% of set point, minimum 1°C
Deadband	±1% of set point, minimum 1°C
Sensor type	100 Ω platinum RTD
Sensor material	Stainless steel
Sensor length	6 ft (2 m)
Connection terminals	Power supply: 12 AWG (4 mm ²) Heating cable: 12 AWG (4 mm ²) Ground: 10 AWG (6 mm ²)

Dimensions



Typical Wiring Diagram for Direct Switching



For 100–132 V supply:

Connect to terminals 2 and 3

For 208–277 V supply:

Connect to terminals 1 and 3

If powering heating cable from separate supply:

Remove jumpers 1–8 and 3–5

Approvals

Hazardous Locations



Class I, Zone 1, AEx emia IIC T6
 Class I, Zone 1, Ex emia IIC T6
 Class I, Div. 2, Groups B, C, D
 Class II, Div. 2, Groups F, G
 Class III



Class I, Zone 1, AEx emia IIC T6
 Class I, Div. 2, Groups B, C, D
 Class II, Div. 1 and 2, Groups E, F, G
 Class III

Ordering Details

Part description	RAYSTAT-EX-03-A
Part number	453609
Weight	7.2 lb (3.3 kg)