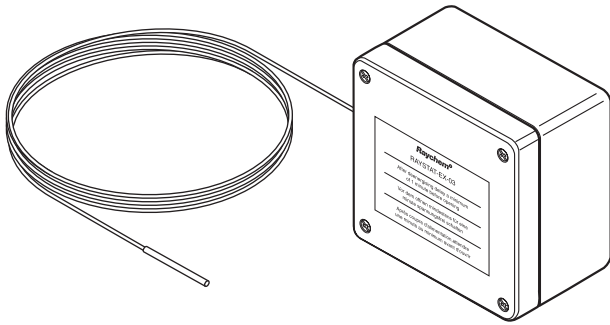# *DigiTrace* RAYSTAT-EX-03-A
ELECTRONIC LINE-SENSING THERMOSTAT

PRODUCT OVERVIEW

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.

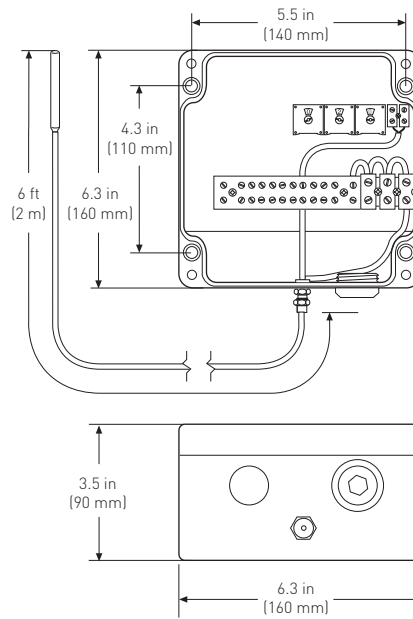The thermostat is supplied with a factory-installed 6 ft (2 m) stainless-steel RTD.

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.
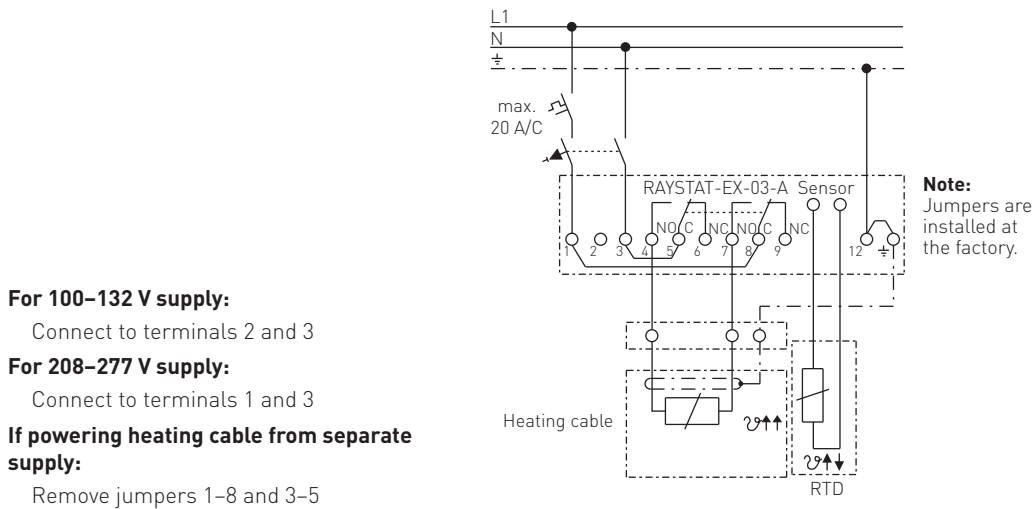
SPECIFICATIONS

Enclosure	• 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 mm²) Heating cable: 12 AWG (4 mm²) Ground: 10 AWG (6 mm²)

RAYSTAT-EX-03-A

DIMENSIONS

TYPICAL WIRING DIAGRAM FOR DIRECT SWITCHING

Note:
Jumpers are installed at the factory.

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

FM APPROVED (C / US)

Class I, Zone 1, Ex emia IIC T6
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)

EN-DigiTraceRayStatEX03A-DS-H56841   09/13   **THERMAL MANAGEMENT SOLUTIONS**

PENTAIR

NORTH AMERICA

Tel: +1.800.545.6258
Fax: +1.800.527.5703
Tel: +1.650.216.1526
Fax: +1.650.474.7711
thermal.info@pentair.com

EUROPE, MIDDLE EAST, AFRICA

Tel: +32.16.213.511
Fax: +32.16.213.603
thermal.info@pentair.com

ASIA PACIFIC

Tel: +86.21.2412.1688
Fax: +86.21.5426.2917
cn.thermal.info@pentair.com

LATIN AMERICA

Tel: +1.713.868.4800
Fax: +1.713.868.2333
thermal.info@pentair.com