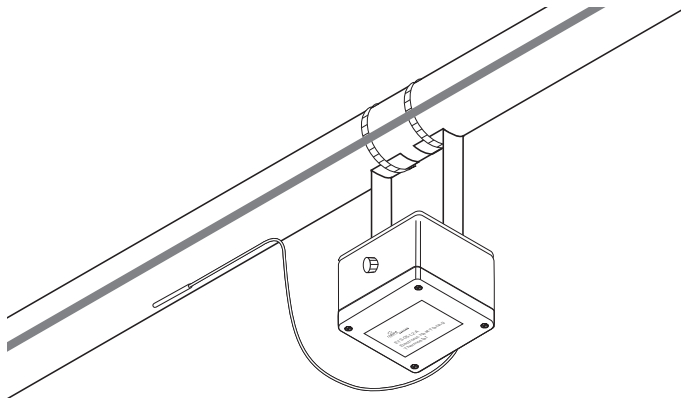


# ETS-05-XX-A

## CONNECT AND PROTECT

### Surface Sensing Electronic Thermostat



#### PRODUCT OVERVIEW

The nVent RAYCHEM ETS-05-XX-A electronic surface sensing thermostat provides accurate temperature control for heating cables.

The ETS-05-XX-A is available in two versions. The ETS-05-L2-A is for temperatures up to 199°C (390°F), while the ETS-05-H2-A can be used for temperatures up to 499°C (930°F). The maximum nominal load is 24 A for both thermostats. Temperature setting is accurate via digital rotary switches inside the enclosure.

The ETS-05-XX-A has a LED indicator which indicates the status of the thermostat (powered on/off), the status of the heat-tracing cable (powered on/off) and the status of the sensor. In case of sensor failure the thermostat can switch to an on or off state, depending upon the users requirement.

#### PRODUCT CHARACTERISTICS

	ETS-05-L1-A-KIT ETS-05-L2-A-KIT	ETS-05-H1-A ETS-05-H2-A
Application	Surface sensing-Pipe Mount	Surface sensing-Wall Mount
Area of use	Hazardous area: Zone 1 or Zone 2 (Gas) or Zone 21 (Dust) CL I, DIV 2 Ordinary Locations	

#### APPROVALS/CERTIFICATION



Hazardous Locations

In Combination with Pipe Stand:  
 CL I, ZN1 AEx e ia mb IIC T5..T3 Gb  
 ZN 21 AEx tb IIIC T100°C..T150°C  
 Ex e ia mb IIC T5..T3 Gb  
 Ex tb IIIC T100°C..T150°C Db  
 CLI, DIV 2, Groups B, C, D  
 CL II, DIV 2, Groups E, F, G  
 Class III  
 TYPE 4X, IP66

When Used without Pipe Stand:  
 CL I, ZN 1 AEx e ia mb IIC T5 Gb  
 ZN 21 AEx tb IIIC T100°C  
 Ex e ia mb IIC T5 Gb  
 Ex tb IIIC T100°C Db  
 CL I, DIV 2, Groups B, C, D  
 CL II, DIV 2, Groups E, F, G  
 Class III  
 TYPE 4X, IP66

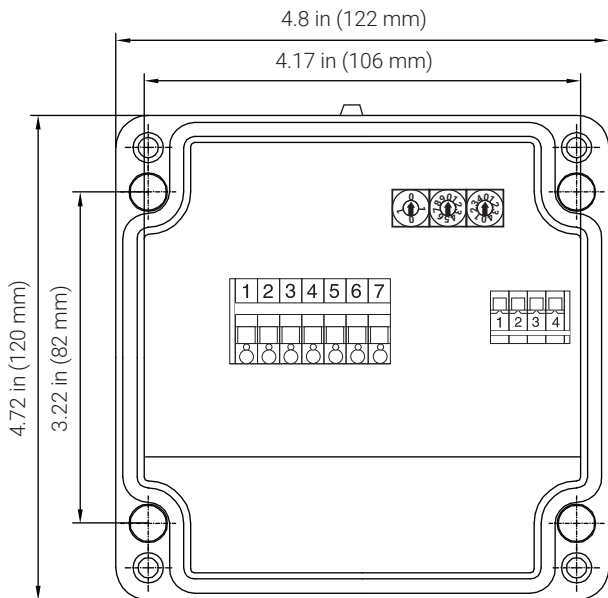
## PRODUCT SPECIFICATION

Temperature setpoint range	0°C to 199°C (32°F to 390°F)	0°C to 499°C (32°F to 930°F)
Temperature measurement range	-55°C to 260°C (-67°F to 500°F)	-55°C to 585°C (-67°F to 1085°F)
Sensor type	100 Ohm RTD, included in ETS-05-Lx-A-KIT (part of the pipe stand)	100 Ohm RTD (not included with thermostat)
Maximum sensor lead resistance	20 Ohm	20 Ohm
Ingress protection	IP66	IP66
Switching accuracy	±1 K at 5°C (41°F)	±1 K at 5°C (41°F), 2°C at 499°C (930°F)
Switching differential (Hysteresis)	≈ 3°C (5°F)	≈ 3°C (5°F)
Output relay	Single Pole change over type (SPST)	Single Pole change over type (SPST)
Switching capacity	24 A resistive load	24 A resistive load
Ambient temperature range	-40°C to + 60°C (-40°F to + 140°F)	-40°C to + 60°C (-40°F to + 140°F)
Supply voltage	L1-A: 99-132 VAC -10% L2-A: 195-277 VAC -2.5%	H1-A: 99-132 VAC -10% H2-A: 195-277 VAC -2.5%
Internal power consumption	3 VA	3 VA
Terminal size	max. 6 mm <sup>2</sup> (10AWG)	max. 6 mm <sup>2</sup> (10AWG)
Cable entries	2 x 3/4" 1 x Pipe stand	2 x 3/4" 1 x 3/4" Gland for power cable in
Mounting Method	JB-RTD-STAND (included in kit)	Wall-Mount

## LED STATUS INDICATIONS

	Green: ETS-05 powered on, heat-tracing cable off	Green: ETS-05 powered on, heat-tracing cable off
	Yellow: ETS-05 powered on, heat-tracing cable on	Yellow: ETS-05 powered on, heat-tracing cable on
	Red flashing: Sensor failure - controller in fail safe mode	Red flashing: Sensor failure - controller in fail safe mode

## DIMENSIONS (IN MM)



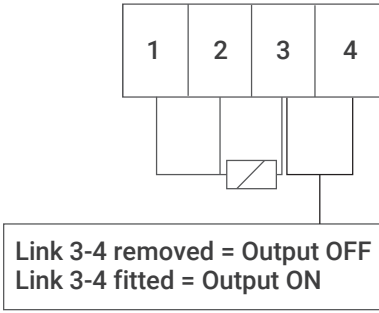
## POWER TERMINALS

1 Line Out	2 Neutral Out	3 Neutral Supply	4 Line Supply	5 Earth	6 Earth	7 Earth
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Terminals 2 and 3 are joined electrically

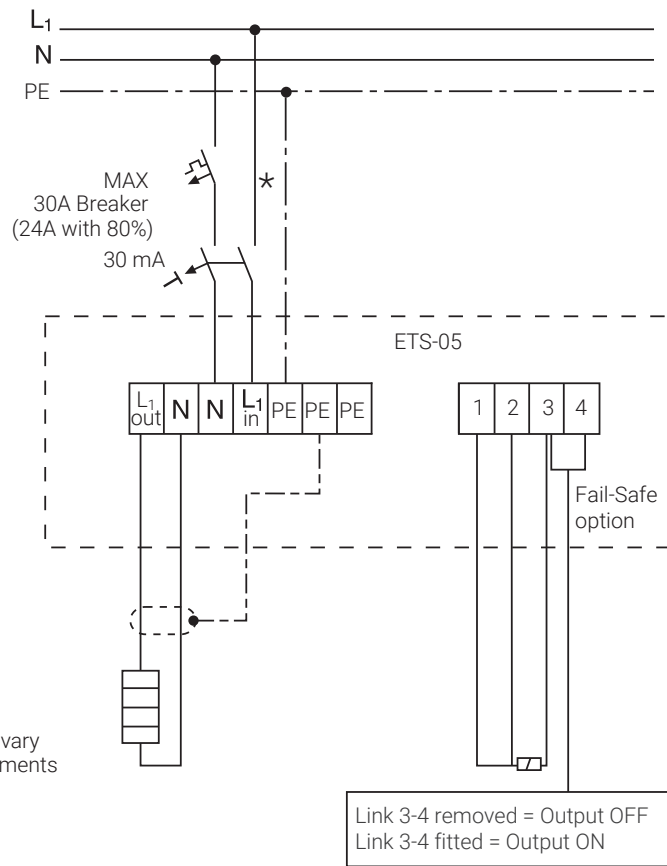
Terminals 5, 6 and 7 are joined electrically

**SENSOR/FAILURE MODE SELECT TERMINALS**



Terminals 1 to 3 allow for the connection of a three wire PT100 sensor.  
 Terminals 3 to 4 allow the user to select the default heating status on sensor error.  
 Without a link fitted the heating will turn OFF if a sensor error is detected.  
 With a link fitted the heating will turn ON if a sensor error is detected (default).

**TYPICAL WIRING DIAGRAM FOR DIRECT SWITCHING**



\* Circuit breaker configurations may vary according to local standards/requirements

**MOUNTING METHOD**

JB-RTD-STAND: P000001997

SB-101: 990944-000

**ORDERING DETAILS**

ETS-05 Thermostats  
 (Thermostat Only)

ETS-05-H1-A: 1244-015664  
 ETS-05-H2-A: 1244-015665

ETS-05 Thermostat Kits  
 (Includes Pipe Stand)

ETS-05-L1-A KIT: 1244-017701  
 ETS-05-L2-A KIT: 1244-017702

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