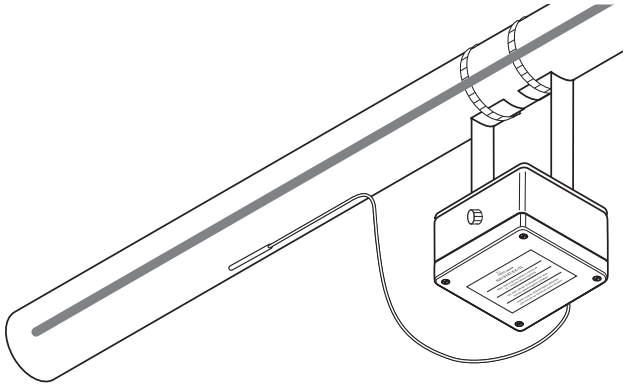
ETS-05

nVent RAYCHEM

SURFACE SENSING ELECTRONIC THERMOSTAT



PRODUCT OVERVIEW

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

The ETS-05 is available in two versions. The ETS-05-L2-E is for temperatures up to 199°C, while the ETS-05-H2-E can be used for temperatures up to 499°C. The maximum nominal load is 32 A for both thermostats. Temperature setting is accurate via digital rotary switches inside the enclosure.

The ETS-05 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-L2-E (P)	ETS-05-H2-E (P)
Application	Surface sensing	Surface sensing
Area of use	Hazardous area: Zone 1 or Zone 2 (Gas) or Zone 21 or Zone 22 (Dust) Ordinary	

APPROVALS CERTIFICATION

nVent RAYCHEM – ETS-05 Electronic Thermostat Ex II 2(1)G II 2D
Ex e ia mb (Ga) IIC T5 Gb
Ex tb IIIC T100°C Db
Ta–40 to +60°C Supply = 99-121V (ETS-05-x1-x) or 195-230V (ETS-05-x2-x)
Maximum switched current 32A Resistive
IECEx BAS 13.0071
Baseefa13ATEX0137
Um=253V
Ex tb IIIC T100°C Db IP66
Max. Current = 0.5A
Prospective short circuit current 1500A

EAC Ex
ТС RU C-BE.ИМ43.B.01764 ООО "ТехИмпорт"
1Ex e ia mb [ia Ga] IIC T5 Gb X
IP66 Ta -60°C...+60°
Made in GB
Ex tb IIIC T100°C Db X ООО "ТехИмпорт"
1Ex e ia mb [ia Ga] IIC T5 Gb
Ex tb IIIC T100°C Db
IP66 Ta -60°C...+60°
Made in GB

PRODUCT SPECIFICATION

No earth plate (standard)	Order ETS-05-L2-E	Order ETS-05-H2-E
With earth plate (optional)	Order ETS-05-L2-EP	Order ETS-05-H2-EP
Temperature setpoint range	0°C to 199°C	0°C to 499°C
Temperature measurement range	–55°C to 260°C	–55°C to 585°C
Maximum sensor lead resistance	20 Ohm	20 Ohm
Ingress protection	IP66	IP66
Switching accuracy	±1 K at 5°C	±1 K at 5°C, 2°C at 499°C
Switching differential (Hysteresis)	≈ 3°C	≈ 3°C
Output relay	Single Pole change over type (SPST)	Single Pole change over type (SPST)
Switching capacity	32 A resistive load	32 A resistive load
Ambient temperature range	–40°C to + 60°C	–40°C to + 60°C
Supply voltage	230 V +10% / -15% 50/60 Hz	230 V +10% / –15% 50/60 Hz
Internal power consumption	3 VA	3 VA
Terminal size	max. 6 mm^2	max. 6 mm^2

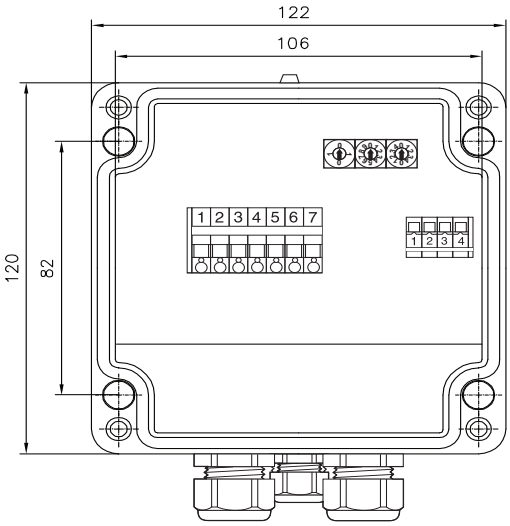
PRODUCT SPECIFICATION

Cable entries	2 x M25: 1 x M25 gland for power cable in 1 x M25 rain plug for heating cable out	2 x M25: 1 x M25 gland for power cable in 1 x M25 rain plug for heating cable out
Sensor	M16 gland with 3 wire PT100 flexible sensor, 2 m long	M16 gland with 3 wire PT100, stainless steel sensor, 2 m long,

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)



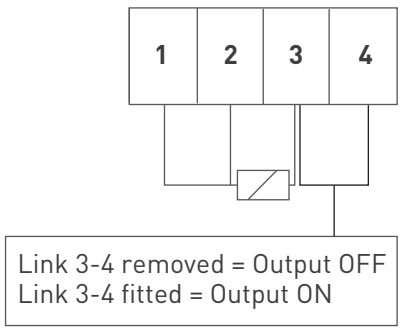
Power Terminals

1	2	3	4	5	6	7
Line Out	Neutral Out	Neutral Supply	230V Supply	Earth	Earth	Earth

Terminals 2 and 3 are joined electrically

Terminals 5, 6 and 7 are joined electrically

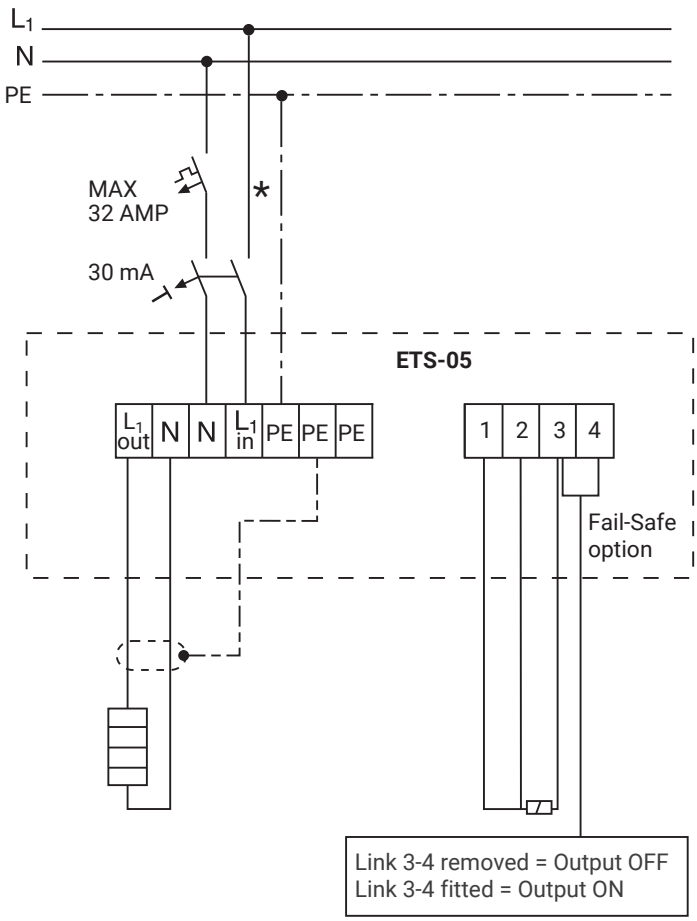
Sensor/Failure Mode Select Terminals



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 (default)
With a link fitted the heating will turn ON if a sensor error is detected

TYPICAL WIRING DIAGRAM FOR DIRECT SWITCHING



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

MOUNTING METHOD

	Support bracket SB-100, SB-101, SB-110, SB-111, SB-130 or surface mounting with 4 fixing holes on 106 x 82 mm centres		Support bracket SB-100, or SB-101, SB-110, SB-111, SB-130 or surface mounting with 4 fixing holes on 106 x 82 mm centres	

ORDERING DETAILS

Product Name	ETS-05-L2-E	ETS-05-L2-EP	ETS-05-H2-E	ETS-05-H2-EP
Part number	1244-014367	1244-017508	1244-014368	1244-017509

North America
Tel +1.800.545.6258
Fax +1.800.527.5703
thermal.info@nvent.com

Europe, Middle East, Africa
Tel +32.16.213.511
Fax +32.16.213.604
thermal.info@nvent.com

Asia Pacific
Tel +86.21.2412.1688
Fax +86.21.5426.3167
cn.thermal.info@nvent.com

Latin America
Tel +1.713.868.4800
Fax +1.713.868.2333
thermal.info@nvent.com

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