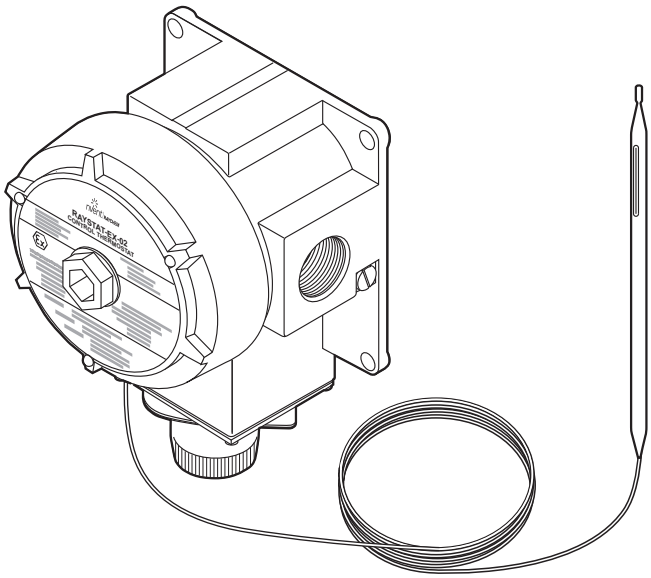
RAYSTAT-EX-02

SURFACE SENSING MECHANICAL THERMOSTAT



This EEx d approved surface sensing thermostat provides temperature control for all nVent RAYCHEM BTV, QTVR, KTV, VPL and XTV heating cables in hazardous areas. The switching temperature range is –4°C to +163°C and is adjustable externally to the Ex enclosure by a dial mounted under a bolted-on cover and seal.

The switching current capacity is 22 A. It has a single pole change-over switch with volt-free contacts.

Cable entry is through a single 3/4" NPT thread entry. nVent RAYCHEM cable glands are available to suit non-armoured and armoured cable.

The 3 m long stainless steel fluid filled bulb and capillary give freedom to locate the enclosure remote from the bulb. The bulb exposure range is –50°C to +215°C.

The cast aluminium construction with stainless steel fittings gives a lightweight unit which can be pipe mounted using nVent RAYCHEM support brackets or surface mounted.

THERMOSTAT

Area of use	Hazardous area: Zone 1, Zone 2 (Gas), Zone 21, Zone 22 (Dust)
	Ordinary

APPROVALS

LCIE 08 ATEX 6095 X
Ex II 2 G D
IECEx LCI 08.0036X
Ex d IIC T6
Ex tD A21 IP66 T80°C

TC RU C-BE.ИМ43.B.01764 ООО "ТехИмпорт"
1Ex d IIC T6 Gb X
Ex tb IIIC T80°C Db X
Ta -40°C...+60°C IP65
Made in USA

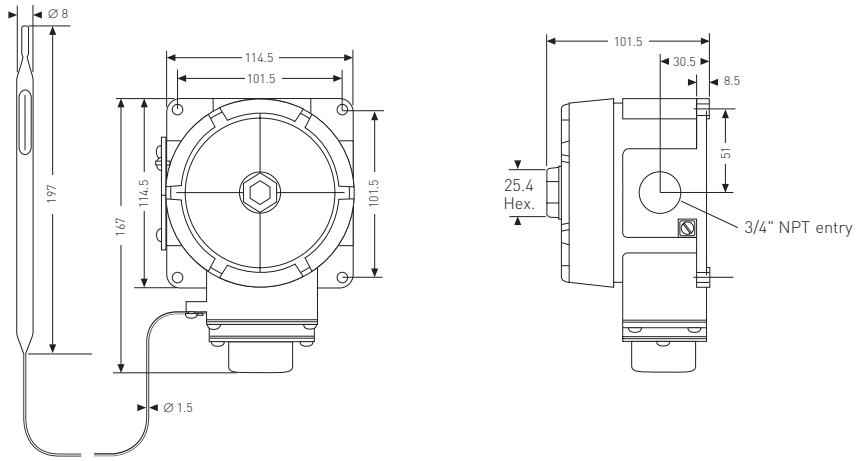
ENCLOSURE

Body and lid	Lacquer coated cast aluminium with stainless steel fittings and nitrile rubber internal lid seal
Protection	IP 65 if installed with nVent RAYCHEM cable glands GL-33 or GL-34
Lid fixing	Screw thread lid locked in place by a 2 mm hexagonal key grub screw
Entry	1 x 3/4" NPT
Ambient operating temperature	–40°C to +60°C

TEMPERATURE SENSING

Type	Fluid filled bulb and capillary
Dimensions	Capillary 3 m long, bulb 197 mm x 8 mm
Material	Stainless steel (Type 55316)
Exposure temperature	−50°C to +215°C
Minimum bend radius	Do not bend bulb, 15 mm for capillary

DIMENSIONS (IN MM)



SWITCHING

Type	Single pole change over volt free contacts (SPDT)
Rating	22 A at 480 Vac, switching (100.000 cycles)

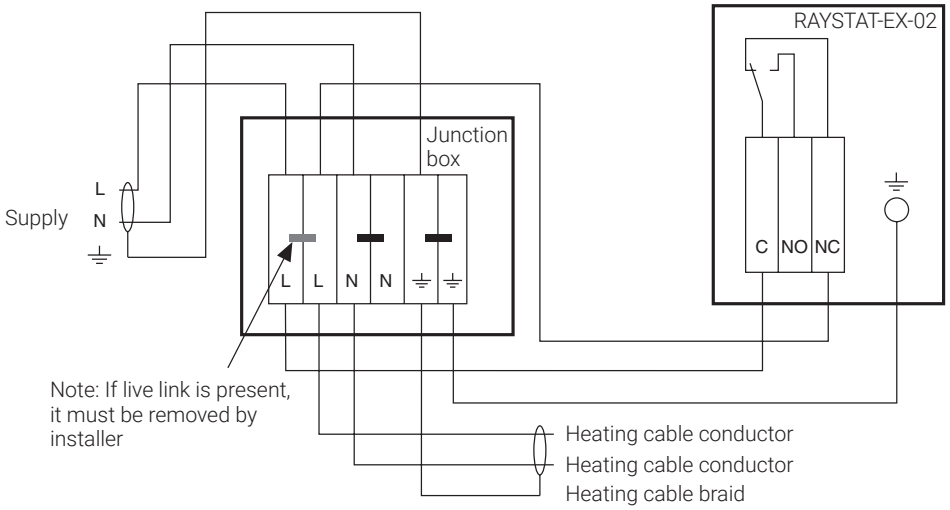
SETTING

Range	−4°C to +163°C
Repeatability	±1.7 K
Differential	5 K
Accuracy (switch on)	±4.5°C at 21°C ambient and 50°C sensor temperature
Method	External knob and dial

CONNECTION TERMINALS

Supply	3 terminals for 1 to 4 mm² conductors
Internal earth	Single bolt for 1 to 4 mm² conductors
External earth	Single bolt and clamp for 1 to 4 mm² conductors

CONNECTION DETAILS AND THERMOSTAT CONTROL SYSTEM



Maximum recommended heating cable lengths (230 V supply)

The maximum recommended heating cable length is restricted by the electrical protection sizing or the switching capacity of the RAYSTAT-EX-02.

For circuits and electrical protection rated up to and including 20 A

Use the maximum recommended heating cable lengths, mentioned in the cable datasheet.

For circuits and electrical protection rated above 20 A but less than or equal to 22 A

Use the shorter length of the values given in the cable datasheet and those given for your switching temperature in the table below.

For circuits and electrical protection rated above 22 A, RAYSTAT-EX-02 must NOT be connected for direct switching.

HEATING- CABLE REFERENCE

	3BTV2-CT/-CR	5BTV2-CT/-CR	8BTV2-CT/-CR	10BTV2-CT/-CR	10QTVR2-CT	15QTVR2-CT	20QTVR2-CT	4XTV2-CT-T3	8XTV2-CT-T3	12XTV2-CT-T3	15XTV2-CT-T3	20XTV2-CT-T2	5KTV2-CT	8KTV2-CT	15KTV2-CT	20KTV2-CT	5VPL2	10VPL2	15 VPL2	20VPL2
Switching temp. (°C)	**L max. (m) - Maximum recommended heating cable length**																			
5	200	165	120	105	110	85	65	230	145	105	85	65	200	145	90	65	220	145	95	70
10	200	165	120	105	110	90	65	235	150	110	85	65	205	145	90	65	220	150	95	70
15	200	165	120	105	115	90	70	245	155	110	85	65	210	150	95	65	220	150	95	70
20	200	165	120	105	115	95	75	250	160	115	90	65	215	155	95	70	220	150	100	70
25	200	165	120	105	115	95	75	250	165	120	90	70	220	160	100	70	220	155	100	75
30	200	165	120	105	115	95	80	250	170	125	95	70	225	160	100	70	220	155	100	75
35	200	165	120	105	115	95	85	250	180	130	95	75	225	165	105	75	220	155	100	75
40	200	165	120	105	115	95	90	250	180	135	100	75	225	170	105	75	220	155	105	75
45	200	165	120	105	115	95	95	250	180	140	100	75	225	175	110	80	220	155	105	75
50	200	165	120	105	115	95	105	250	180	145	105	80	225	180	115	80	220	155	105	75
55	200	165	120	105	115	95	110	250	180	145	110	80	225	180	115	85	220	155	105	80
60	200	165	120	105	115	95	110	250	180	145	110	85	225	180	120	85	220	155	110	80
65	200	165	120	105	115	95	110	250	180	145	115	85	225	180	125	90	220	155	110	80
70	--	--	--	--	115	95	110	250	180	145	120	90	225	180	130	95	220	155	110	80
75	--	--	--	--	115	95	110	250	180	145	120	90	225	180	130	95	220	155	115	80
80	--	--	--	--	115	95	110	250	180	145	125	95	225	180	130	100	220	155	115	85
85	--	--	--	--	115	95	110	250	180	145	130	100	225	180	130	105	220	155	115	85
90	--	--	--	--	115	95	110	250	180	145	130	100	225	180	130	110	220	155	120	85
95	--	--	--	--	115	95	110	250	180	145	130	105	225	180	130	110	220	155	120	85
100 to 110	--	--	--	--	115	95	110	250	180	145	130	110	225	180	130	110	220	155	120	85
115 to 120	--	--	--	--	--	--	--	250	180	145	130	110	225	180	130	110	220	155	125	90
125 to 150	--	--	--	--	--	--	--	--	--	--	--	--	225	180	130	110	220	155	125	95

MOUNTING METHOD

nVent RAYCHEM support bracket nVent RAYCHEM SB-100, SB-101, SB-110, SB-111, SB-125 or surface mounting with 4 fixing holes (M6) on 101.5 x 101.5 mm centres

SETTING

Power cable gland for armoured cable	GL-33	493217-000
Power cable gland for non-armoured cable (to be ordered separately)	GL-34	931945-000

ORDERING DETAILS

Part description	RAYSTAT-EX-02
PN (Weight)	404385-000 (1.77 kg)

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