

# Heat Tracing Junction Box with Thermostat

(R100/JBST, R130/JBST, R160/JBST, R200/JBST)

R Series Customised Solution

- Available for use safe and hazardous areas.
- Enclosures suitable for Gas Group IIA, IIB and IIC.
- Ingress Protection IP66.
- Full range of accessories and termination kits available.

## INTRODUCTION

As part of our commitment to innovation in the industry, Heat Trace Limited is offering a customised Exd solution.

Capillary thermostats are temperature adjustable ON-OFF thermostats comprising a liquid filled sensing bulb connected to an electrical switch via a capillary tube.

Capillary thermostats can monitor surface temperatures such as pipes or vessels. It is suitable for connection of one power cable and one heating cable, allowing the thermostat to directly control the heating circuit.

Junction box may be used to provide process temperature control in safe areas, or Zone 1 or 2 hazardous areas by switching the heating circuits at the desired temperature.

The thermostat can be provided in various sizes R 100 (Ø100mm) ; R 130 (Ø130mm) ; R 160 (Ø160mm) ; R 200 (Ø200mm) which can be configured / customised based on requirements.

As standard, the enclosure is made of high grade, cast aluminium and painted with RAL 7035 paint. Other options of material of construction of enclosure and paint shade are available on request.

The equipment is tested and approved for hazardous area to following standards and ATEX Directive 2014/34/EU:  
IEC 60079-0:2017 and EN IEC 60079-0:2018, IEC 60079-1:2014 and EN 60079-1:2014, IEC60079-31:2022 and EN 60079-31:2014, IEC 60529:2013 and EN 60529:1992/A2:2013



The Heat Tracing Authority™

## SPECIFICATION

### ENCLOSURE:

<b>Material:</b>	Standard Copper Free Aluminium
<b>Paint Shade:</b>	RAL 7035, light grey
<b>Protection:</b>	Ex (db) - IP66
<b>Rated Voltage:</b>	1.1kV AC/DC
<b>Area Suitability:</b>	Zone 1 / Zone 2, IIA / IIB / IIC
<b>Cable Entries:</b>	3x(1xPower Cable, 1xHeat Tracing Cable & 1xThermostat sensor)

### APPROVAL DETAILS:

<b>IECEX :</b>	IECEX CML 23.0177X
<b>ATEX:</b>	CML 23ATEX1502X
<b>UKCA:</b>	CML 23UKEX1503X

### EQUIPMENT MARKING:

<b>IECEX:</b>	Gas: Ex db IIC T6/T5 Gb Dust: Ex tb IIIC T80°C/T95°C Db (-60°C or (-)20°C <Ta<(+45°C/(+)60°C/(+)75°C
<b>ATEX/UKCA:</b>	Gas: $\text{Ex}$ II 2 G D Ex db IIC T6/T5 Gb Dust: $\text{Ex}$ II 2 G D Ex tb IIIC T80°C/T95°C Db (-60°C or (-)20°C <Ta<(+45°C/(+)60°C/(+)75°C

### THERMOSTAT SPECIFICATION:

	Temp. range (°C):	Setting accuracy (°C):	Switch rating (Amp/Volt)	Sensor diameter (mm)	Sensor length (mm):
<b>Type A</b>	0-50	±2	20/250	5.8	127
<b>Type B</b>	0-120	±3	20/250	5	106
<b>Type C</b>	50-320	±11	20/250	5	60
<b>Type D</b>	0-120	±4	30/250	8	166
<b>Type E</b>	50-320	±10	30/250	5.8	145
<b>Capillary tube material:</b>				Stainless Steel	
<b>Capillary tube protection:</b>				Stainless Steel Conduit	
<b>Sensor type:</b>				Liquid filled	
<b>Sensor material:</b>				Stainless Steel	
<b>Capillary tube length</b>				1.5 Mtr.	

<b>Switch type:</b>	SPST
<b>Switch life:</b>	100,000 operations
<b>Temperature setting adjustment:</b>	Internal tamper-proof switch
<b>Earthing:</b>	Internal and external earthing
<b>Number of Terminals:</b>	4x(2L+1N+1E )

### SAFE USE:

- Only certified cable glands & accessories of required Ex protection shall be used.
- Each entry shall have no more than one thread adapter. A stopping plug shall not be used with a thread adapter.
- If holes or unused cable entry are left open, explosion protection can no longer be guaranteed.
- Close open holes using stopping plug approved for required type of protection.

### STANDARD KIT CONTENT:

- Junction Box with specified entries fitted with Mechanical thermostat, switch bracket.
- Terminal & Accessories (Terminal, End Plate, Stopper, Terminal Marker which ever applicable).
- 2xSS Earthing Stud.
- O Ring, Grub Screw, Allen key for Grub Screw.
- SS Certification Plate.
- SS Tag Plate.
- 2x(M8x12) SS Nut, Bolt and Washer Set for Mounting.
- Cable Entry Marking Sticker.
- External earthing stud is fitted with PVC Sleeved copper lug.
- Earthing Sticker.
- Instruction Manual.
- Adhesive Aluminium Foil Strip for fixing of Thermostat Sensor.

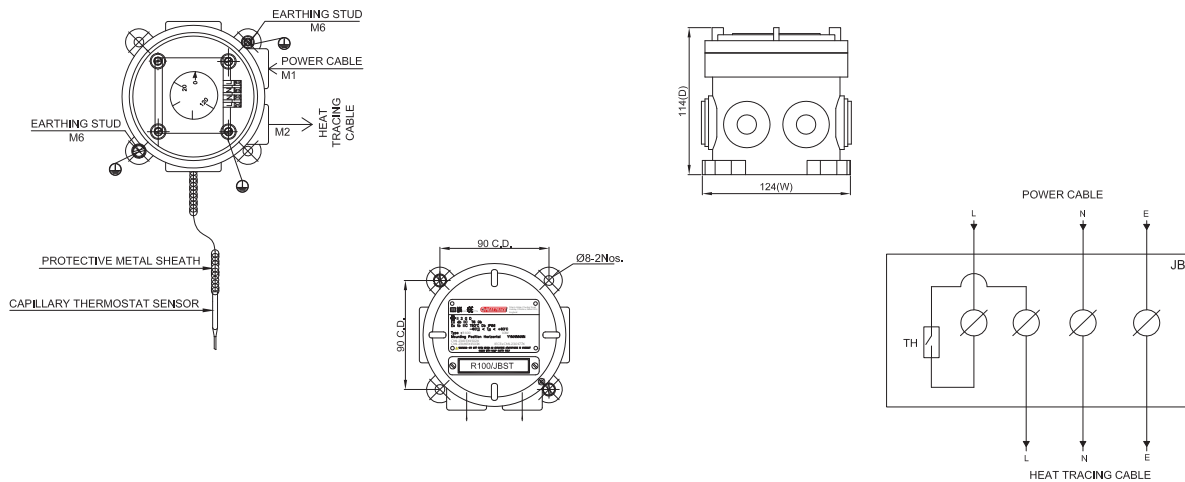
### MORE CUSTOMISATION ON REQUEST:

#### Please ask for price and delivery for below customisation:

- Paint shade other than RAL 7035 can be offered on request.
- Enclosure Stainless Steel, Cast Iron.
- Installation Accessories Cable Gland for Power Cable, Tracer Gland, Pipe Mounting Support Bracket, Pipe Straps.

# Heat Tracing Junction Box with Thermostat

PART NO. : R100/JBST\*



SN.	Description	Part No.*	Power Cable Size (mm <sup>2</sup> )	Entry Size for ** Power Cable M1	Entry Size for ** Heat Tracing Cable M2
1	Heat Tracing Junction Box with Thermostat	R100/JBST/2.5/50/A/20A	3C x 2.5	M20	M20
2		R100/JBST/2.5/50/B/20A	3C x 2.5	M20	M25
3		R100/JBST/2.5/120/A/20A	3C x 2.5	M20	M20
4		R100/JBST/2.5/120/B/20A	3C x 2.5	M20	M25
5		R100/JBST/2.5/320/A/20A	3C x 2.5	M20	M20
6		R100/JBST/2.5/320/B/20A	3C x 2.5	M20	M25

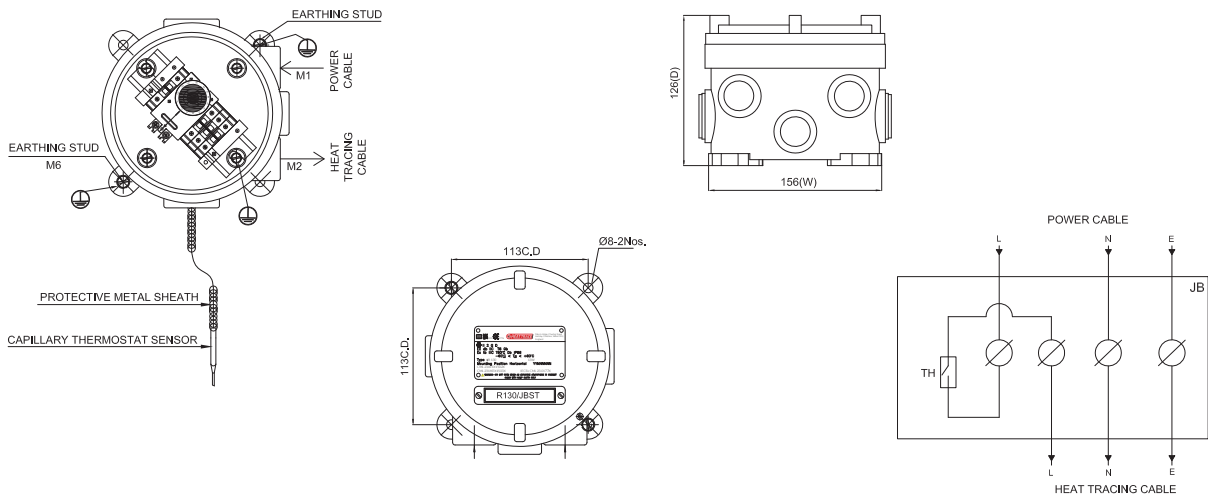
\*\* Equivalent NPT entries can be provided on request.

Note: 1) All dimensions are in mm with tolerance of  $\pm 5\%$ .

2) External earthing stud is fitted with PVC Sleeved copper lug.

# Heat Tracing Junction Box with Thermostat

PART NO. : R130/JBST\*



SN.	Description	Part No.*	Power Cable Size (mm <sup>2</sup> )	Entry Size for ** Power Cable M1	Entry Size for ** Heat Tracing Cable M2
1	Heat Tracing Junction Box with Thermostat	R130/JBST/4/50/A/20A	3C x 4	M20	M20
2		R130/JBST/4/50/B/20A	3C x 4	M20	M25
3		R130/JBST/4/120/A/20A	3C x 4	M20	M20
4		R130/JBST/4/120/B/20A	3C x 4	M20	M25
5		R130/JBST/4/320/A/20A	3C x 4	M20	M20
6		R130/JBST/4/320/B/20A	3C x 4	M20	M25
7		R130/JBST/6/120/A/20A	3C x 6	M20	M25
8		R130/JBST/6/120/B/20A	3C x 6	M20	M25
9		R130/JBST/6/320/A/20A	3C x 6	M20	M25
10		R130/JBST/6/320/B/20A	3C x 6	M20	M25
11		R130/JBST/6/120/A/30A	3C x 6	M20	M20
12		R130/JBST/6/120/B/30A	3C x 6	M20	M25
13		R130/JBST/6/320/A/30A	3C x 6	M20	M20
14		R130/JBST/6/320/B/30A	3C x 6	M20	M25
15		R130/JBST/10/120/A/20A	3C x 10	M25	M20
16		R130/JBST/10/120/B/20A	3C x 10	M25	M25
17		R130/JBST/10/320/A/20A	3C x 10	M25	M20
18		R130/JBST/10/320/B/20A	3C x 10	M25	M25

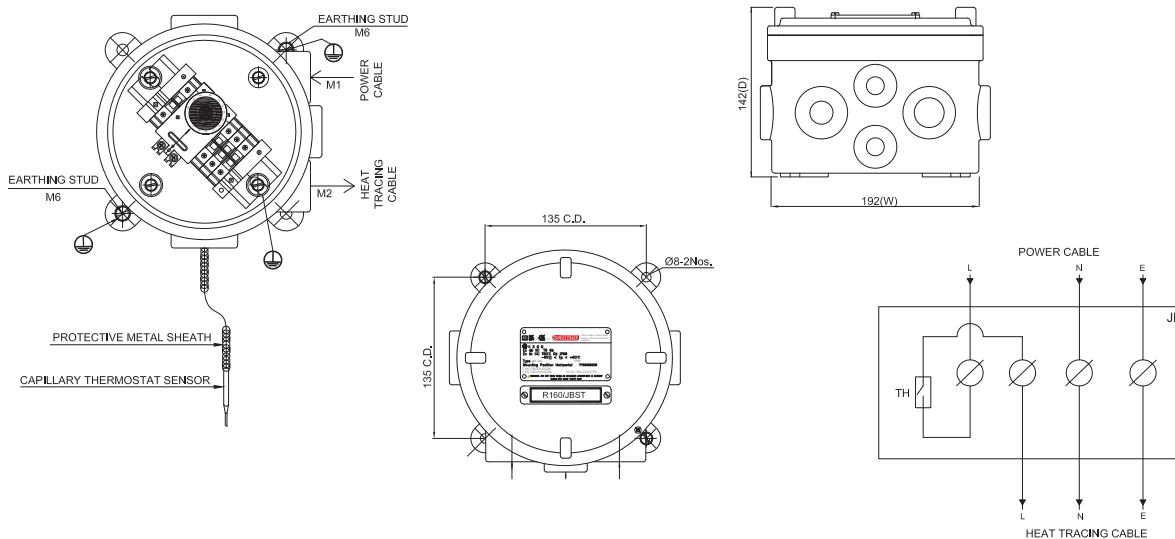
\*\* Equivalent NPT entries can be provided on request.

Note: 1) All dimensions are in mm with tolerance of  $\pm 5\%$ .

2) External earthing stud is fitted with PVC Sleeved copper lug.

# Heat Tracing Junction Box with Thermostat

PART NO. : R160/JBST\*



SN.	Description	Part No.*	Power Cable Size (mm <sup>2</sup> )	Entry Size for ** Power Cable M1	Entry Size for ** Heat Tracing Cable M2
1	Heat Tracing Junction Box with Thermostat	R160/JBST/10/50/A/20A	3C x 10	M25	M20
2		R160/JBST/10/50/B/20A	3C x 10	M25	M25
3		R160/JBST/10/120/A/20A	3C x 10	M25	M20
4		R160/JBST/10/120/B/20A	3C x 10	M25	M25
5		R160/JBST/10/320/A/20A	3C x 10	M25	M20
6		R160/JBST/10/320/B/20A	3C x 10	M25	M25
7		R160/JBST/10/120/A/30A	3C x 10	M25	M20
8		R160/JBST/10/120/B/30A	3C x 10	M25	M25
9		R160/JBST/10/320/A/30A	3C x 10	M25	M20
10		R160/JBST/10/320/B/30A	3C x 10	M25	M25
11		R160/JBST/16/120/A/20A	3C x 16	M25	M20
12		R160/JBST/16/120/B/20A	3C x 16	M25	M25
13		R160/JBST/16/320/A/20A	3C x 16	M25	M20
14		R160/JBST/16/320/B/20A	3C x 16	M25	M25
15		R160/JBST/16/120/A/30A	3C x 16	M25	M20
16		R160/JBST/16/120/B/30A	3C x 16	M25	M25
17		R160/JBST/16/320/A/30A	3C x 16	M25	M20
18		R160/JBST/16/320/B/30A	3C x 16	M25	M25

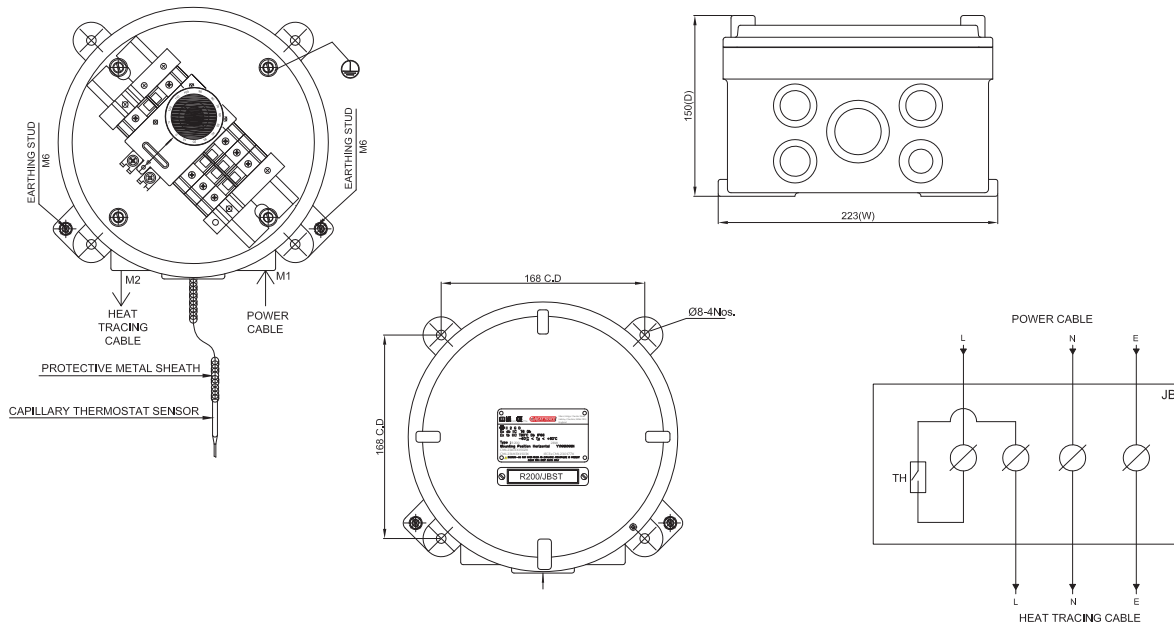
\*\* Equivalent NPT entries can be provided on request.

Note: 1) All dimensions are in mm with tolerance of ±5%.

2) External earthing stud is fitted with PVC Sleeved copper lug.

# Heat Tracing Junction Box with Thermostat

PART NO. : R200/JBST\*



SN.	Description	Part No.*	Power Cable Size (mm <sup>2</sup> )	Entry Size for ** Power Cable M1	Entry Size for ** Heat Tracing Cable M2
1	Heat Tracing Junction Box with Thermostat	R200/JBST/25/50/A/20A	3C x 25	M32	M20
2		R200/JBST/25/50/B/20A	3C x 25	M32	M25
3		R200/JBST/25/120/A/20A	3C x 25	M32	M20
4		R200/JBST/25/120/B/20A	3C x 25	M32	M25
5		R200/JBST/25/320/A/20A	3C x 25	M32	M20
6		R200/JBST/25/320/B/20A	3C x 25	M32	M25
7		R200/JBST/25/120/A/30A	3C x 25	M32	M20
8		R200/JBST/25/120/B/30A	3C x 25	M32	M25
9		R200/JBST/25/320/A/30A	3C x 25	M32	M20
10		R200/JBST/25/320/B/30A	3C x 25	M32	M25

\*\* Equivalent NPT entries can be provided on request.

Note: 1) All dimensions are in mm with tolerance of  $\pm 5\%$ .

2) External earthing stud is fitted with PVC Sleeved copper lug.