

INSTRUCTION MANUAL

RAINGAUGE HEATER

MODEL TBH1

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RAINGAUGE HEATER MODEL TBH1

1. GENERAL

The TBH1 Heater has been designed for use with the Hydrological Services TB3 Tipping Bucket Raingauge.

The device is basically a thermostatically controlled heating element, that raises the temperature of the gauge internals, catch and funnel to avoid freezing of the gauge in cold climates with subsequent loss of records.

As the outside temperature of the funnel drops below a preset value, the heating element is activated. The heating element remains activated until the outside temperature of the funnel rises sufficiently to de-activate the heating element.

The installation of the heater is simple and may be carried out in the field (refer to fitting instructions).

For information on the TB3 Tipping Bucket Raingauge refer to the TB3-100 Instruction Manual.

2. SPECIFICATION

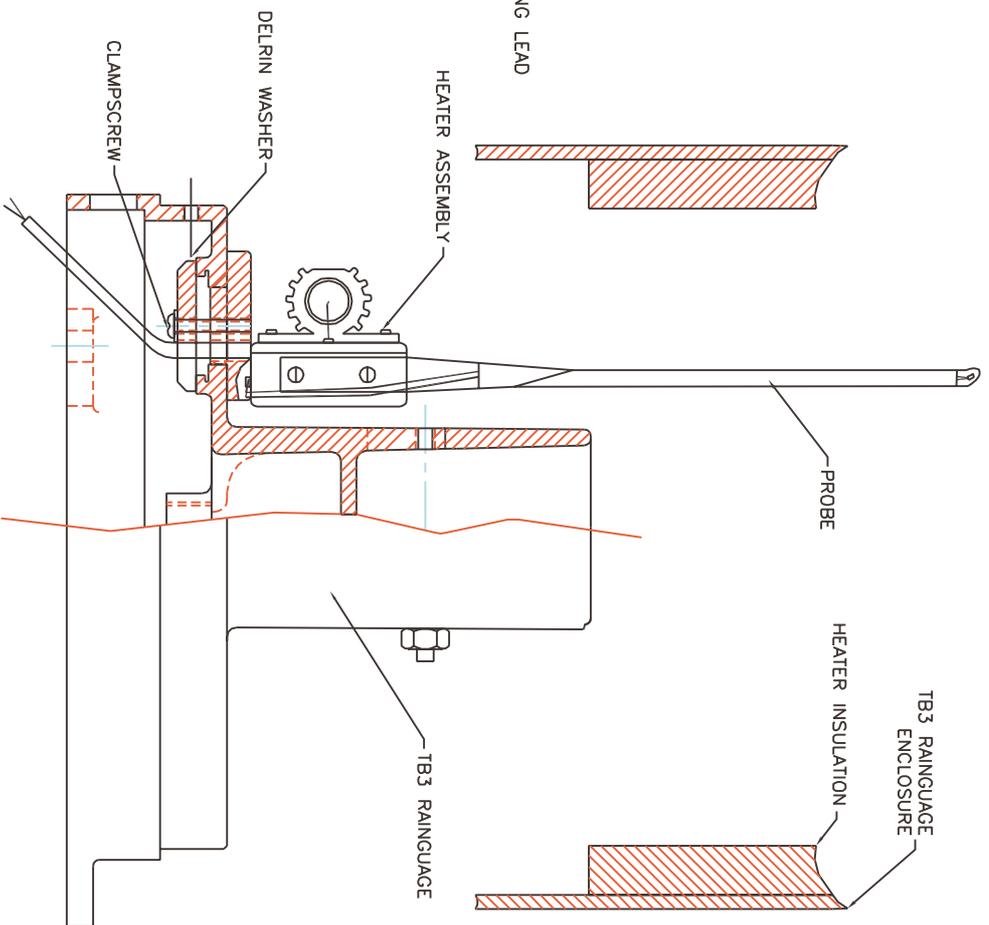
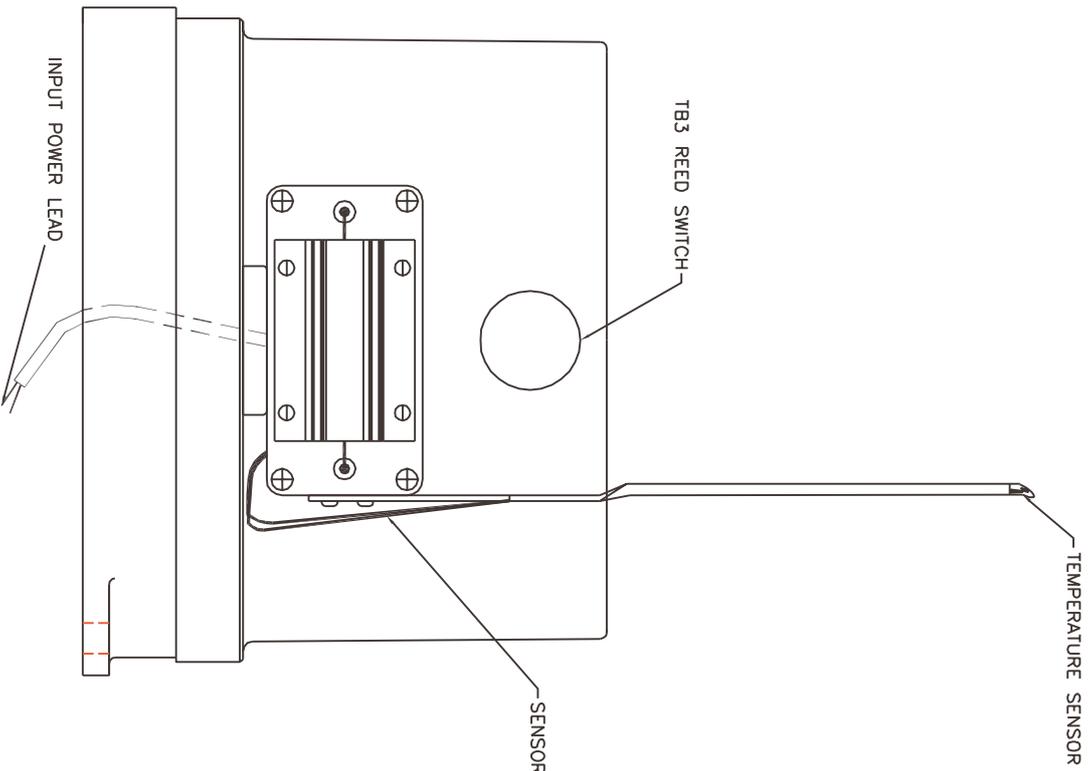
Ambient temperature range	+50 to -10 degrees celcius
Preset activation temperature	+5 degrees celcius
Power generated	65 watts
Voltage requirements	12 VAC,(12 VDC also available)
Current requirements	5.5 amps

3. FITTING INSTRUCTIONS

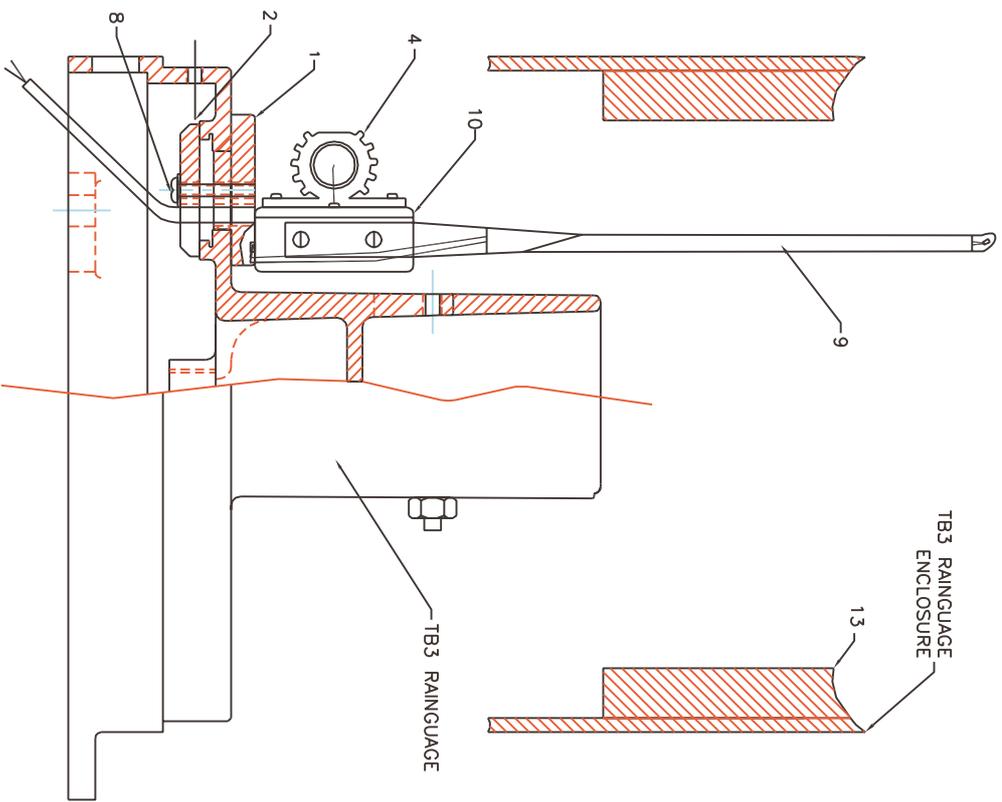
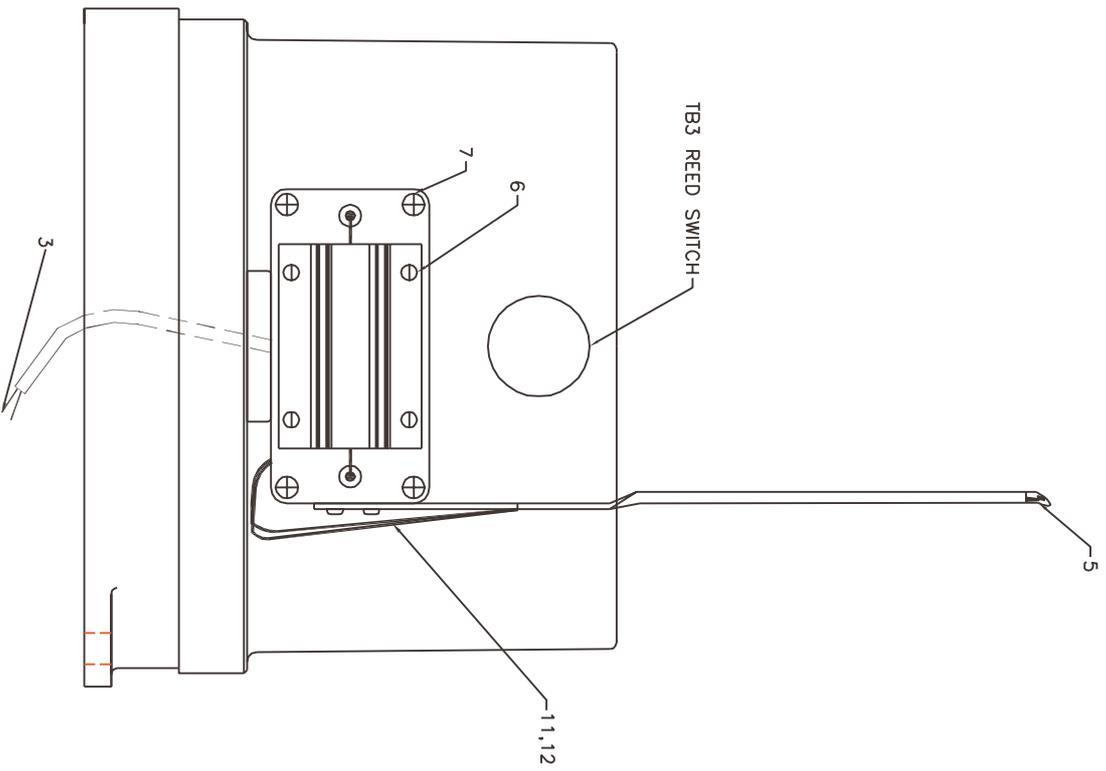
- 3.1 Remove enclosure and ensure that the bucket is secured to avoid damage during handling.
- 3.2 Remove an insect screen (reedswitch side) from base by applying downward pressure with thumbs.
- 3.3 Ensure that lead is connected to the reedswitch assembly as described in the TB3 Raingauge Instruction Manual.
- 3.4 Assemble the Heater Assembly, Delrin Washer(2)and Clampscrew(8)as shown in Diagram 1 and securely tighten the clampscrew.

CARE MUST BE TAKEN TO AVOID BENDING THE TEMPERATURE PROBE.

- 3.5 The position of the temperature probe(9)is factory set, however a check should be carried out to ensure that the probe is in contact with the funnel when the enclosure is in place. This can be done by slowly lowering the enclosure into place, a metallic "CLICK" can be heard as contact is made with the probe(9). The position of the probe(9) may be adjusted by carefully bending it as required.
- 3.6 Connect the power cable to the source.
- 3.7 Install the insulation(13)in the enclosure as shown in Diagram 1 and ensure that it is in contact with the underside of the funnel and that the seam does not overlap. The insulation may be secured by applying four or five small spots of adhesive close to the bottom edge of the insulation after installation. It is advised that the insulation be removed during warmer months if condensation is likely to be a problem.
- 3.8 Install and secure enclosure.



TB3 HEATER INSULATION DETAILS
 DIAGRAM 1



TB3 HEATER PART LIST DETAILS
 DIAGRAM 2

RAINGAUGE HEATER MODEL TBH1

PARTS LIST

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PART NO.</u>	<u>QTY/ASSY</u>
1	MOUNTING DISK	TBH101-01	1
2	DELRIN WASHER	TBH101-02	1
3	INPUT POWER LEAD	TBH10	1
4	HEATING ELEMENT	SC080-23	1
5	TEMPERATURE SENSOR	SC006-78	1
6	PAN HEAD SCREW	SC022-03	6
7	HEX NUT	SC008-06	6
8	CLAMPSCREW	-	1
9	ASSEMBLY PROBE	TBH102	1
10	ASSEMBLY CONTROL BOX	TBH103	1
11	ASSEMBLY RED CABLE	TBH104	1
12	ASSEMBLY BLACK CABLE	TBH105	1
13	ENCLOSURE INSULATION	TBH106-01	1