ELEPHANT

Manufacturer of shut-off and control valves

TECHNICAL DATA SHEET

Bimetallic axial thermometer ELEPHANT
TB-311-Ax 10-25 bar
stainless steel, accuracy class 1.5-2.5

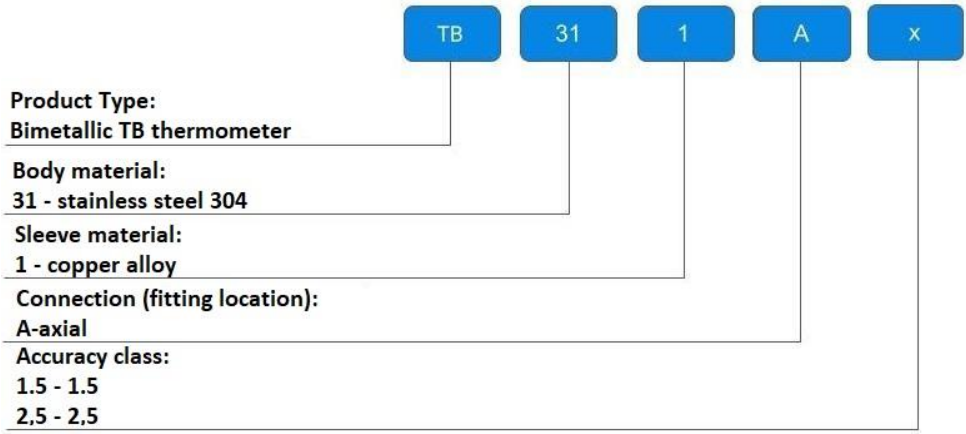
+34 900 433 073, sales@valveelephant.com
Carrer d'Aragó,264,3-1,08007 Barcelona, Spain

1. GENERAL PRODUCT INFORMATION

1.1. Product name: Bimetallic axial thermometer ELEPHANT TB-311-Ax 10-25 bar stainless steel, accuracy class 1.5-2.5.
1.2. Purpose. Bimetallic thermometer is designed to measure the temperature of liquids, steam and gases in heating and sanitary installations, in air-conditioning and ventilation systems.
1.3 Principle of operation. The principle of operation of bimetallic thermometers is based on the dependence of deformation of the sensitive element on the measured temperature. A bimetallic spring is used as a sensitive element. A bimetallic spring is made of two firmly connected metal plates having different temperature coefficients of linear expansion. As the temperature changes, the spring bends and rotates the thermometer's arrow. One end of the spring is fixed inside the stem and the other end is connected to the arrow axis.

** the image may differ from the original*

1.4. Deciphering of the designation:



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2. BASIC TECHNICAL DATA AND CHARACTERISTICS

Table 1

Body diameter, mm	63-100
Nominal pressure, bar	DN63 — 16 DN80 — 10-15 DN100 — 10-25
Device type	axial
Operating temperature range t, ºC	-40 to 160
Ambient temperature, ºC	-70 to 60
Type of enclosure dust and moisture protection	IP43
Operating medium	liquids, vapors and gases in heating and sanitary installations, air conditioning and ventilation systems
Accuracy class	1.5 — 2.5
Connection	threaded G 1/2″
Body material	stainless steel 304
Sleeve material	copper alloy
Service life, years	10
Scope of application	air conditioning, heating, water supply systems

3. TECHNICAL DATA AND PARAMETERS

Table 2

Body diameter, mm	Operating temperature range t, ºC	Length of immersion part, mm	Nominal pressure, bar	Accuracy class
63	0 ÷ 120	46	16	2,5
		64	16	2,5
		100	16	2,5
	0 ÷ 100	46	16	2,5
		64	16	2,5
		100	16	2,5
	-40 ÷ 60	46	16	2,5
		64	16	2,5
80	0 ÷ 120	46	15	2,5
		64	15	2,5
		100	15	2,5
	0 ÷ 120	64	10	1,5
		100	10	1,5
		150	10	1,5
	-40 ÷ 60	100	10	1,5

Table continuation 2

100	0 ÷ 120	46	10	1,5
		64	10	1,5
		100	10	1,5
		150	25	1,5
		200	25	1,5
	0 ÷ 160	46	16	1,5
		64	10	1,5
		100	25	1,5
		150	25	1,5
		200	25	1,5
	-40 ÷ 60	64	10	1,5
		100	10	1,5
		150	10	1,5

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4. WEIGHT AND DIMENSIONAL PARAMETERS

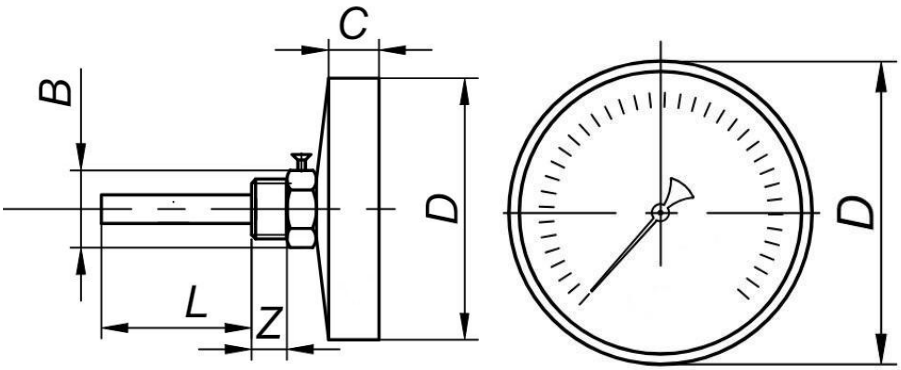

Table 3

	D, mm	Z, mm	B, mm	C, mm	L, mm	Weight, kg
DN63	63	10	21x21	13	46, 64, 100	no more than 0.3
DN80	80	10	21x21	13	46, 64, 100, 150	no more than 0.3
DN100	100	10	21x21	13	46, 64, 100, 150, 200	no more than 0.3

5. INSTALLATION AND OPERATING INSTRUCTIONS

5.1. The use of a thermowell is mandatory for measuring the temperature of liquids. Filling the thermowells with liquid is not allowed.
5.2 When using brass thermowells, the system pressure should not exceed 60 bar, stainless steel - 400 bar.
5.3 The thermometers can withstand the effect of overload from the influence of the temperature of the measured medium exceeding the upper limit.
of the measured medium exceeding the upper limit of measurement by 10 percent of the reading range.
5.4 The safety of thermometers operation is ensured by the strength of the protective sleeve.
5.5 In order to minimize the temperature measurement error, it is necessary to immerse the end of the protective sleeve to a depth of not less than 1/3 and not more than 2/3 of the internal diameter of the pipeline. Different immersion depth of the thermocouple can be achieved by selecting the length of the welded boss or immersion part of the bimetallic thermometer. When mounting the device, a boss with internal thread is welded onto the pipeline. The thermometer sleeve is screwed into the boss and the thermometer is installed in the sleeve.
5.6 Mount the thermometer only by the hexagon on the socket using a wrench. It is forbidden to mount the thermometer by the body.
5.7 It is recommended to use a special sealing tape, gasket or other material compatible with the medium as a seal at the point of connection of the devices with the temperature source to ensure tightness.
5.8 The following conditions must be observed during operation:
5.8.1. use the thermometer for its intended purpose and within the temperature and pressure limits specified in the technical data;
5.8.2. carry out periodic inspections within the terms established by the norms and rules of the organization operating the thermometer;
5.8.3. carry out works on defect elimination in the absence of pressure and temperature in the lines supplying the measured medium.

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6. TRANSPORTATION AND STORAGE CONDITIONS

6.1. Transportation and storage conditions - in the manufacturer's packaging in accordance with the procedure established at the enterprise.
6.2 Mechanical damage and contamination of internal surfaces during transportation are not allowed.

7. UTILIZATION

7.1. The product is disposed of in accordance with the procedure established at the enterprise (remelting, burial, resale).

8. WARRANTY OBLIGATIONS

8.1. Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.
8.2. The warranty applies to equipment installed and used in accordance with the installation instructions and product specifications described in this data sheet.
8.3. The manufacturer guarantees compliance of the product with safety requirements, provided that the consumer complies with the rules of transport, storage, installation and operation.
8.4. The warranty covers all defects caused by the fault of the manufacturer.
8.5. The warranty does not apply:

- parts and materials of the product subject to wear and tear;
- for cases of damage caused by:
    - modifications to the original design of the product;
    - violation of general installation recommendations;
    - faults caused by improper maintenance and storage; improper operation and use of the equipment.

9. WARRANTY TERMS

9.1. Claims to the quality of the goods may be made during the warranty period.
9.2. Defective products are repaired or exchanged for new ones free of charge during the warranty period. ELEPHANT decides whether to replace or repair the product. The replaced product or its parts resulting from the repair shall become the property of 'ELEPHANT'.
9.3. Costs related to dismantling, installation and transport of the defective product during the warranty period shall not be reimbursed to the Buyer.
9.4. If the claim is unfounded, the Buyer shall pay the costs of diagnostics and expertise of the product.
9.5. Products are accepted for warranty repair (as well as for return) fully assembled.

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WARRANTY CARD №____

№	Product Name	Packs

Name and address of the trading organisation

_____

Date of sale _____ Seller's signature _____

Stamp or seal of the trading organisation Acceptance stamp

I agree with the terms and conditions of the warranty:
Buyer _____ (signature)

Warranty period - 12 months from the date of commissioning, but not more than 18 months from the date of sale.

For warranty repairs, complaints and product quality claims, please contact ELEPHANT at: Carrer d'Aragó,264,3-1,08007 Barcelona, Spain E-mail address: sales@valveelephant.com.

When making a complaint about the quality of goods, the buyer shall present the following documents:

1. A free-form application, which shall specify:
   - name of the organisation or full name of the buyer, actual address, contact telephone numbers;
   - name and address of the organisation that carried out the installation;
   - basic parameters of the system in which the product was used;
   - a brief description of the defect.
2. Document confirming the purchase of the product (delivery note, receipt)..
3. Act of hydraulic test of the system in which the product was installed.
4. This completed warranty card.

A note on the return or exchange of goods _____

Date: «___»_____202__yr. Caption _____