

BUSHINGS AND ACCESSORIES

FOR DISTRIBUTION AND POWER TRANSFORMERS



LIQUID FILLED THERMOMETERS FOR DISTRIBUTION TRANSFORMER - TYPE BM -



DESCRIPTION AND GENERAL SPECIFICATIONS:

These instruments are used to detect the temperature in the oil filled transformers and are made for outdoor mounting in as well tropical or arctic climates (ambient temperature range: -30°C / $+70^{\circ}\text{C}$). All components are made of corrosion resistant materials.

I Nominal diameter:

80mm or 100mm; Radial stem and Back entry stem.

I Casing:

In Stainless steel housing, suitable for outdoor installation, with glass window.

I Dial:

White Dial with black lettering.

I Without Contacts

I Temp. sensing system:

Bimetallic spring.

I Maximum temp. indicating pointer :

Fitted on the window and resettable with a knob on the window.

I Bulb:

Style M → Male attack 1" BSP ; Lenght 150mm

Style F → Female attack 3/4" ; Lenght =120mm

Style PK → Removable pocket 1/2" BSP ; Lenght =120mm

I Standard measuring ranges:

0 / $+120^{\circ}\text{C}$ for oil immersed transformer;

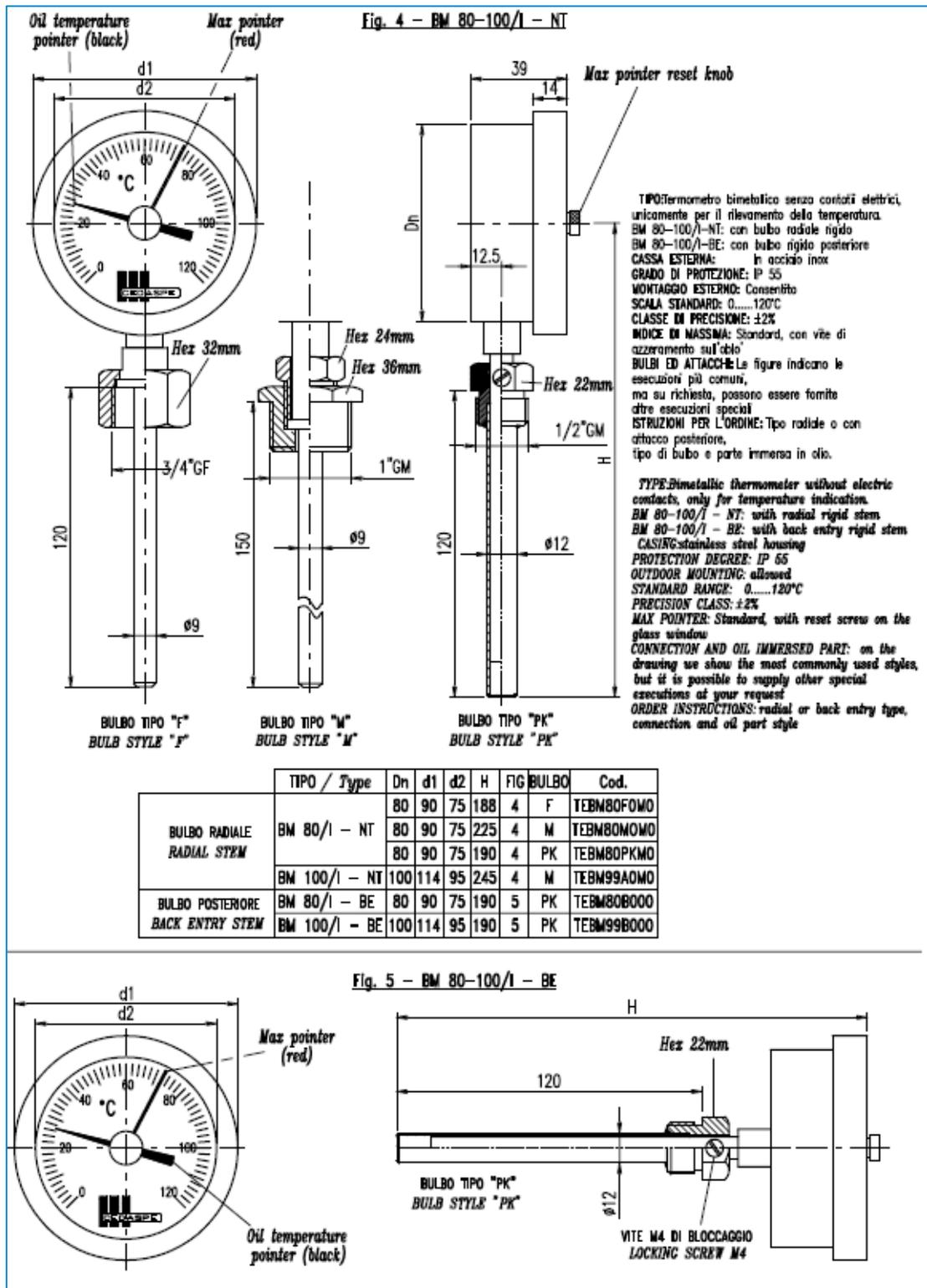
I Measuring precision:

2% of full scale value

I Protection degree:

IP55

Bimetallic Thermometer type BM for DT – Radial and Back entry Stem



OPERATING INSTRUCTIONS AND MAINTENANCE:

I Rigid stem thermometers:

Fix the connection on the thermometers pocket by means of a spanner.

Attention do not try to tighten the connection by rotating the thermometer's head as you may damage it.

Once the connection is fixed you may need to position the dial to get the best readability.

The positioning can be made by loosening the nut and fixing it again when the correct position is found.

I Max pointer reset:

The Max pointer is reset when it is again in contact with the indicator arrow.

I Maintenance:

No particular maintenance is required.

Only, on regular basis, schedule inspections to verify correct function and calibration.

Typically a check of the precision must be done after 24 months.

In case the transparent is dirty, thus reducing the readability of the dial, you can clean it with a soft cloth, water and soap.

FINISHED PRODUCT QUALITY CONTROL TESTS:

I Instruments calibration:

Carried out through thermostatic baths controlled by microprocessor based monitoring unit.

The procedure varies according to instruments scale.

The calibration procedure, being the thermometer scale = 0/+120°C is made by using different baths set at the following temperatures:

Baths 1 = 0°C;

Baths 2 = 50°C;

Baths 3 = 100°C.

I Calibration procedure:

Step 1: a check is carried out to see whether the temperature taken by the instrument under test differs from that taken through the sample sensor by more that 70% of the maximum allowed instruments reading tolerance value.

This test is performed by sequentially plunging the thermometer bulb into successive temperature increasing thermostatic baths: 0°C, 50°C, 100°C.

Step 2: the instrument is heated until the instruments pointer exceed by 20% the angular full scale value.

Step 3: Step 1 is repeated, but inversely.

I Check of instruments mechanical protection degree:

IP55