

THERMOMANOMETER INDICATORS

TM type



DESCRIPTION

Thermomanometer indicators are measuring apparatus used to indicate the temperature in (-40 ... +200)°C range, working on saturation vapours pressure variation principle from a liquid with temperature .

Some apparatus variant ensures the signal of limit values set in indicating interval, as follows :

Name	Symbol	Function
Thermomanometer indicators : - with protection sleeve - without protection sleeve	TMT TM	indication
Thermomanometer indicators with electrical contacts - with protection sleeve - without protection sleeve	TMTC TMC	indication + signalising

Product's constituent parts :

- Indicator apparatus manometer type – with or without electrical contacts, and °C graduated
- Cooper capillary tube fixed in a flexible protection sleeve
- Stainless steel / brass protection sleeve

TECHNICAL DATA

Constructive variant	Code	Measuring interval °C	The flexible cable length L(m)	Immersion length			
				Diameter (mm)		Height H(mm)	
				transducer	sleeve	transducer	sleeve
	TM-3R	-40...+25	2,3,4,5	20	-	200	-
		-20...+50	2				
		0...100	2				
		20...100	2,3,6,9,12				
		20...120	"				
	TM-4R	20...100	2,3,6,9,12	12	-	200	-
		20...120	"				
		60...150	"				
		100...200	"				
		20...100	2,3,6,9,12				
20...120	"						
60...150	"						
100...200	"						
20...100	2,3,6,9,12	9	-	200	250		
20...120	"						
60...150	"						
100...200	"						
	TMC-3R					-40...+25	2,5
		-20...+50	2				
		0...100	2				
		20...100	2,3,6,9,12				
		20...120	"				
	TMC-4R	20...100	2,3,6,9,12	12	-	200	-
		20...120	"				
		60...150	"				
		100...200	"				
		20...100	2,3,6,9,12				
20...120	"						
60...150	"						
100...200	"						
20...100	2,3,6,9,12	9	-	200	250		
20...120	"						
60...150	"						
100...200	"						

Liquids to be filled : depends of measured temperature values and it is use the next substances : propane, freon, ethyl chloride , ethyl ether , benzene .

Accuracy : 2,5%

Tank maximum pressure :

- max. 25 bar : TM-3R; TM-4R; TMC-3R; TMC-4R; TMT-5R; TMTC-5R
- atmospheric pressure : TMT-6R and TMTC-6R

Answering time :

- TMC - max. 9 min with 6 m cable length
- TMT - max. 10 min with 12 m cable length

Normal protection degree :

- IP 40 for TM and TMT
- IP 50 for TMC and TMTC

The environment temperature : (-10 ... +60)°C

To be used in non corrosive and non explosive environment.

ORDERING

In order it will be specified :

The apparatus type, measurement domain, immersion depth, the flexible cable length and the electrical contacts variant

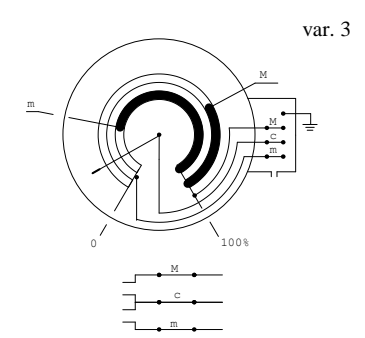
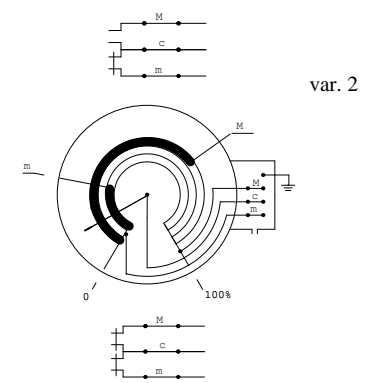
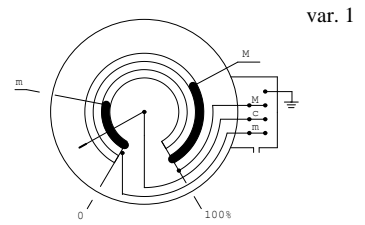
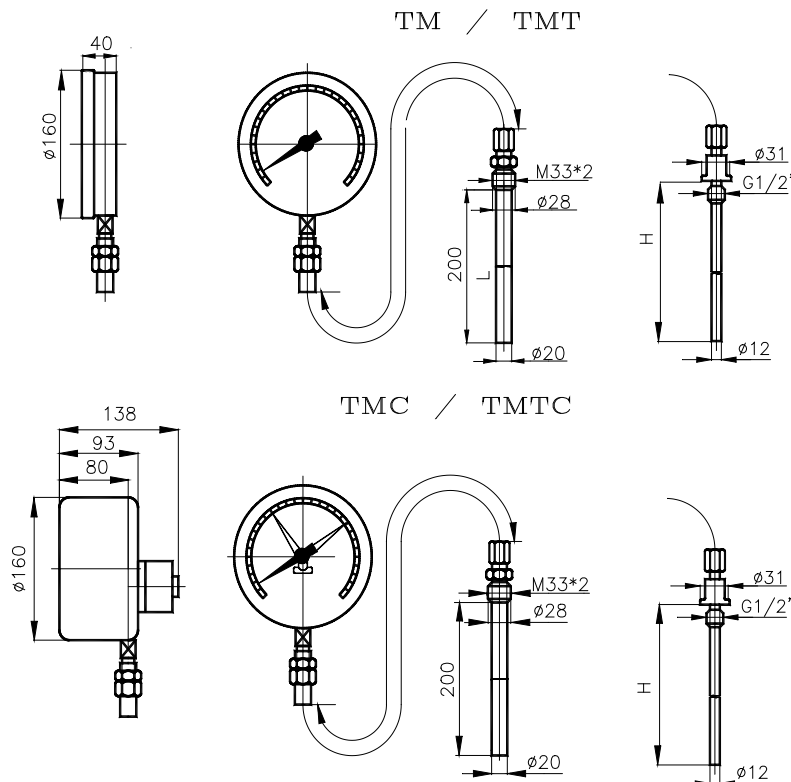
SUGGESTS

The mounting should be made on panels with a (5 ... 25) Hz vibration frequency.

The apparatus should not be mounted lower than transducer level.

The transducer will be mounted in vertical position $\pm 5^\circ$, and the connect is M33x2/G1/2" type.

Should be avoid the transducer mounting in very hot places and exposed to mechanical shocks for do not distort the measured real temperature.



Interruption current :
 0,05 A at 220 Vca
 0,1 A at 125 (110) Vca
 0,1 A at 220 Vcc
 0,02 A at 125 (110) Vcc