

# Expansion thermometer

## Model TF58, TF59

WIKA data sheet TM 80.02

### Applications

- Food and beverage industry
- Heating, ventilation and air-conditioning
- Compressors

### Special features

- Temperature indication independent from measuring point
- With capillary
- Universally applicable
- Plastic case for panel mounting



Fig. top: TF00-058 KHS

Fig. bottom: TF00-059 K45

### Description

The TF58 and TF59 expansion thermometers are temperature measuring instruments in plastic cases with drum dials.

An expansion thermometer measures temperature based on the principle of thermal expansion. This principle involves the expansion of materials when heated and their contraction when cooled.

The design of each model varies depending on indication accuracy, scale length, dimensions, mounting type, and panel frame design.

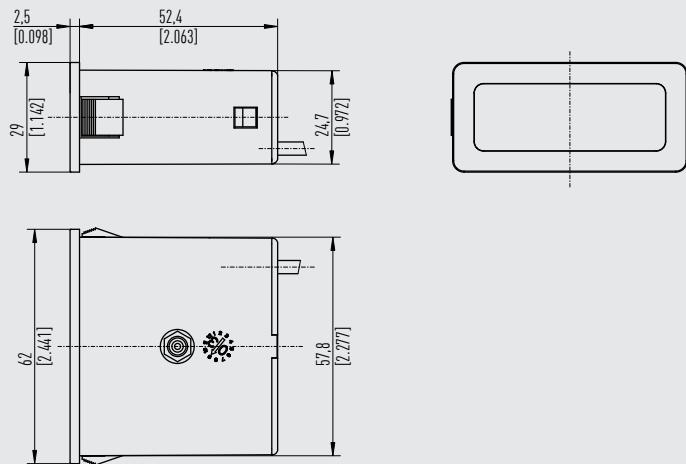
# Specifications

Basic information								
<b>Nominal size in mm [in]</b>								
TF58	58 x 25 [2.28 x 0.98]							
TF59	52 x 11 [2.05 x 0.43]							
<b>Mounting type</b>								
<b>Fill fluid</b>								
<b>Material (in contact with the environment)</b>								
Window	Crystal-clear plastic							
Case	Plastic (ABS), black Model TF00-058 KHR with panel frame (chrome-plated ABS)							
Measurement principle								
<b>Illustration of the principle</b>								
Bourdon tube system								
<b>Remote capillary</b>								
Length	Length in accordance with customer specifications (max. 5 m [16.4 ft])							
Material	<input checked="" type="checkbox"/> Copper, plastic-covered <input checked="" type="checkbox"/> Copper-braided <input checked="" type="checkbox"/> Double copper-braided							
Accuracy specifications								
<b>Indication accuracy</b>								
TF0x	059	$\pm 2$ % of measuring range						
TF0x	058	KHR	$\pm 3$ % of measuring range					
		KHS	$\pm 4$ % of measuring range					
		KF	$\pm 2$ % of measuring range					
Measuring ranges								
<b>Measuring range</b>								
-40 ... +250 °C [-40 ... +482 °F]								
<b>Unit (scale range)</b>								
<input checked="" type="checkbox"/> °C <input checked="" type="checkbox"/> °F <input checked="" type="checkbox"/> °C/°F (dual scale) <input checked="" type="checkbox"/> °F/°C (dual scale)								
<b>Dial</b>								
Scale angle	TF0x	059	K	$\triangle 180$ , $\triangle 240$				
			K45	Max. $\triangle 180$				
	TF0x	058	KHR/KHS	Max. $\triangle 90$				
	KF	$\triangle 180$ , $\triangle 240$						
Scale graduation								
<input checked="" type="checkbox"/> Single scale <input checked="" type="checkbox"/> Dual scale								
<b>Scale colour</b>								
Single scale Dual scale → Other colours on request								
Material								
Plastic								

Process connection	
<b>Stem</b>	
Diameter	<ul style="list-style-type: none"> <li>■ 6 mm [0.24 in]</li> <li>■ 8.5 mm [0.34 in]</li> </ul>
	→ Others on request
Material (wetted)	Copper alloy
Operating conditions	
<b>Medium temperature range</b>	
Capillary, plastic-covered	-40 ... +120 °C [-40 ... +248 °F]
Capillary, copper alloy	-100 ... +350 °C [-148 ... +662 °F]
<b>Operating temperature</b>	
Case	-20 ... +70 °C [-4 ... +158 °F]
Capillary, plastic-covered	-40 ... +120 °C [-40 ... +248 °F]
Capillary, copper alloy	-100 ... +350 °C [-148 ... +662 °F]
<b>Storage temperature range</b>	-20 ... +60 °C [-4 ... +140 °F]

## Dimensions in mm [in]

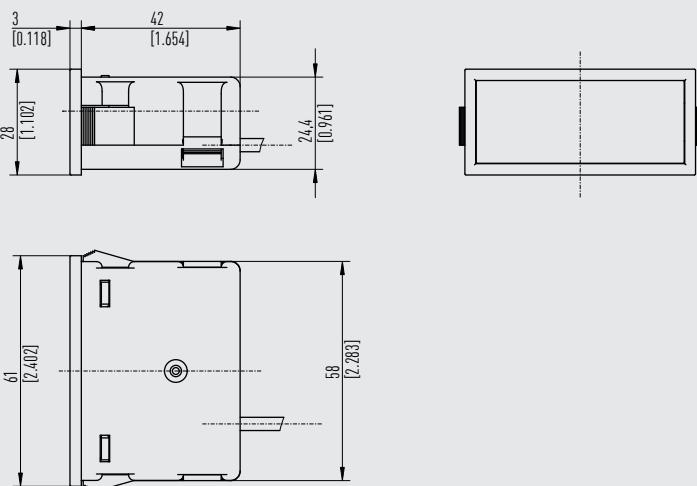
### Model TF01-058 KF with radius R (3 mm [0.12 in] or 5 mm [0.2 in])



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Weight: 80 g [2.8 oz]

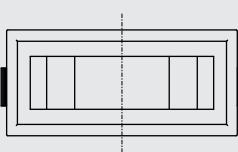
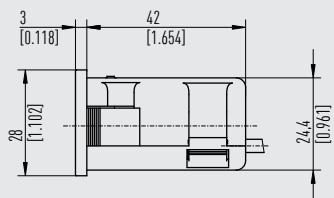
### Model TF01-058 KHR



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Weight: 71 g [2.5 oz]

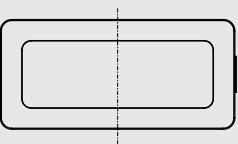
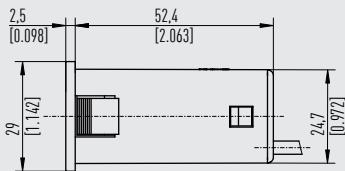
### Model TF01-058 KHS



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Weight: 71 g [2.5 oz]

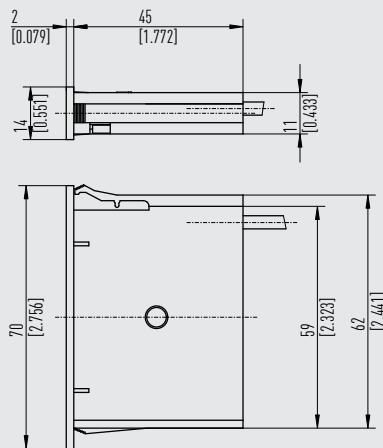
### Model TF00-058 KHR



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Weight: 78 g [2.75 oz]

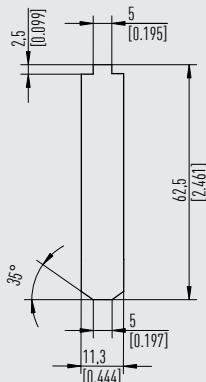
## Model TF01-059 K45



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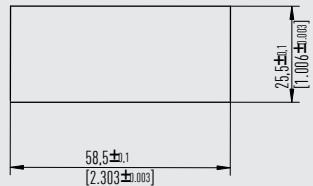
Weight: 70 g [2.47 oz]

### TF0x-059\_ front panel cut-out



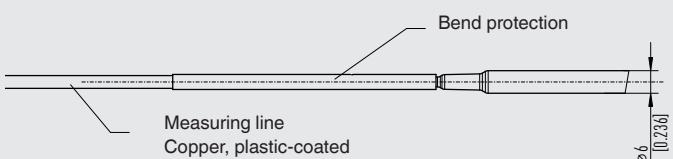
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### TF0x-058\_ front panel cut out



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### BF1, plain stem (without thread)



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## **Ordering information**

Model / Nominal size / Mounting option / Connection design / Scale range / Contact version / Switch points / Process connection / Stem diameter / Insertion length / Remote capillary design and length / Options

To order the described product the order number is sufficient.

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We reserve the right to make modifications to the specifications and materials.

In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.

