

# 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>	Panel snap-in mounting
<b>Fill fluid</b>	Xylene
<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	<ul style="list-style-type: none"> <li>■ Copper, plastic-covered</li> <li>■ Copper-braided</li> <li>■ Double copper-braided</li> </ul>

Accuracy specifications			
<b>Indication accuracy</b>			
TF0x	059	±2 % of measuring range	
TF0x	058	KHR	±3 % of measuring range
		KHS	±4 % of measuring range
		KF	±2 % of measuring range

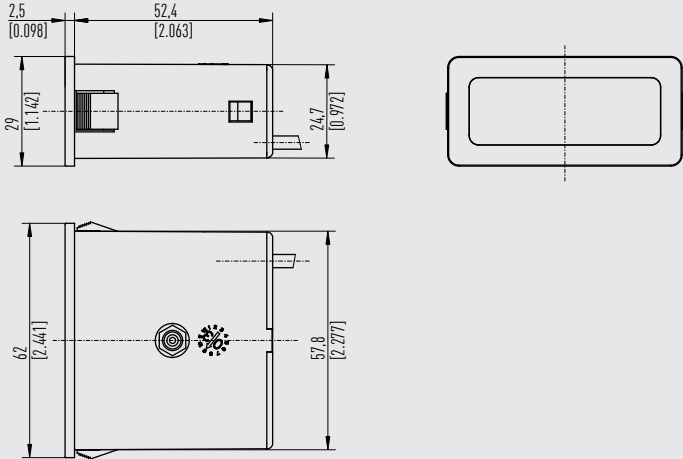
Measuring ranges				
<b>Measuring range</b>	-40 ... +250 °C [-40 ... +482 °F]			
<b>Unit (scale range)</b>	<ul style="list-style-type: none"> <li>■ °C</li> <li>■ °F</li> <li>■ °C/°F (dual scale)</li> <li>■ °F/°C (dual scale)</li> </ul>			
<b>Dial</b>				
Scale angle	TF0x	059	K	↯°180, ↯°240
			K45	Max. ↯°180
	TF0x	058	KHR/KHS	Max. ↯°90
			KF	↯°180, ↯°240
Scale graduation	<ul style="list-style-type: none"> <li>■ Single scale</li> <li>■ Dual scale</li> </ul>			
Scale colour	Single scale		Black, white	
	Dual scale		Red	
			→ 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]**

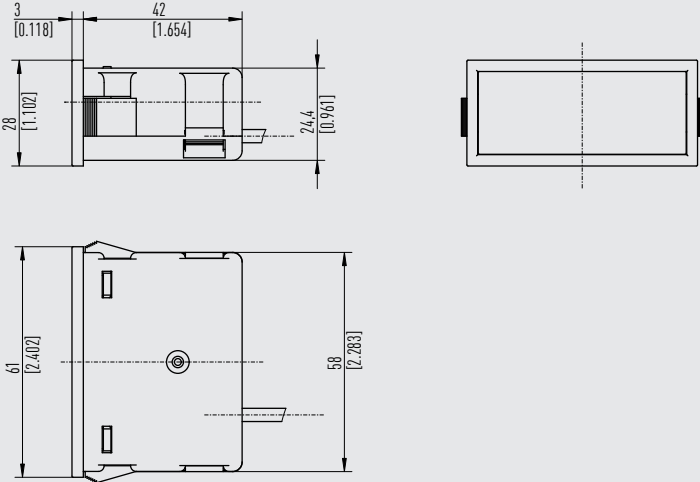
**Model TF01-058 KF with radius R (3 mm [0.12 in] or 5 mm [0.2 in])**



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Weight: 80 g [2.8 oz]

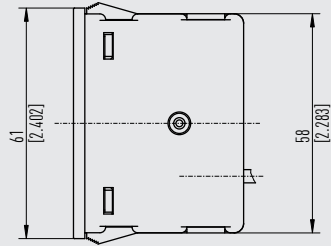
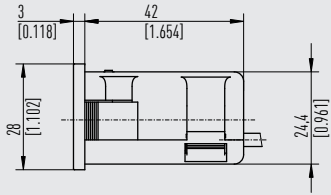
**Model TF01-058 KHR**



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Weight: 71 g [2.5 oz]

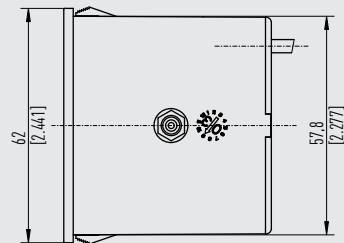
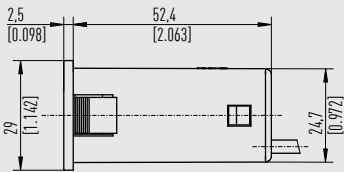
**Model TF01-058 KHS**



Weight: 71 g [2.5 oz]

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**Model TF00-058 KHR**

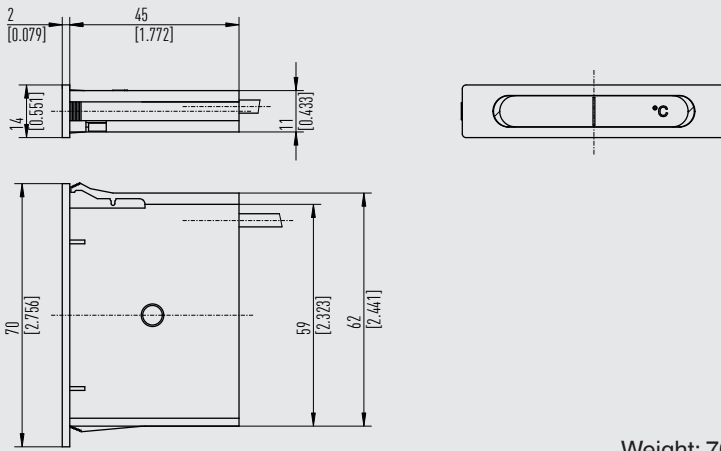


Weight: 78 g [2.75 oz]

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**Model TF01-059 K45**

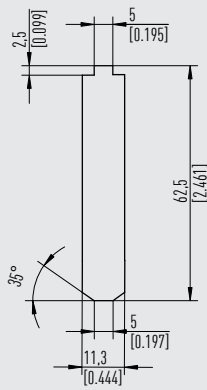
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Weight: 70 g [2.47 oz]

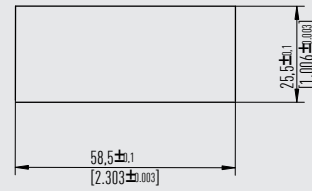
**TF0x-059\_ front panel cut-out**

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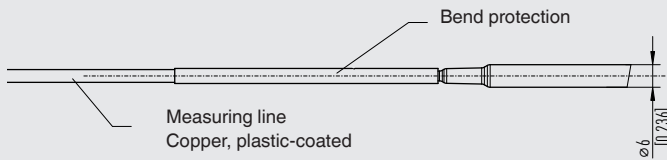
**TF0x-058\_ front panel cut out**

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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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