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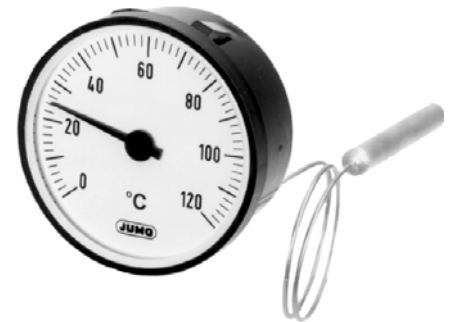


# Dial Thermometer

**- discontinued -**

## Particularities

- Temperature indicator for panel mounting
- Class 2
- IP53 front protection
- Housing sizes: 52 mm and 60 mm dia.  
 Bezel: 48x48 mm, 52x52 mm and 72x72 mm



Type 608202/2660

## Brief description

Dial thermometers are universal temperature indicators for monitoring the temperature. The instruments feature a plastic housing with a liquid-filled measuring system.

The temperature-dependent change in volume of the liquid-filled measuring system is converted into a rotary movement of the pointer by a Bourdon tube, without any intermediate gearing.



Type 608202/2772

## Technical data

<b>Housing or bezel</b>	black plastic (ABS)
<b>Protection</b>	IP53 front protection to EN 60529
<b>Window</b>	polycarbonate (PC), standard size 60 in PMMA (Plexiglas)
<b>Scale</b>	white, black lettering
<b>Accuracy class</b>	Class 2 to EN 13190
<b>Indication adjustment</b>	at the housing rear
<b>Limit temperatures</b>	storage and transport -20 to +60°C (indication range -40 to +40°C: up to 50°C)
<b>Nominal position</b>	unrestricted
<b>Measuring system</b>	liquid-filled
<b>Time constant</b> $t_{0.632}$	approx. 12 sec, measuring in agitated water bath, with a 6 mm dia. probe
<b>Ambient temperature effect</b>	in % of indication range (referred to the deviation from the reference value +23°C)
<b>on housing</b>	0.15% of indication range per °C change in ambient temperature
<b>on capillary (per meter)</b>	0.03% of indication range per °C change in ambient temperature
	at higher ambient temperature – higher temperature indication

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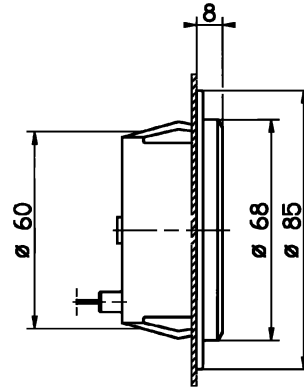
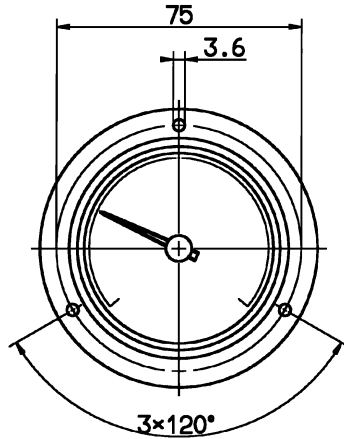
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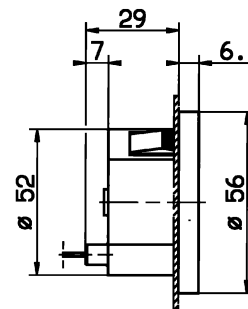
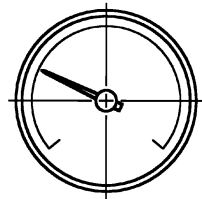
## Dimensions

Type: 608202/2060



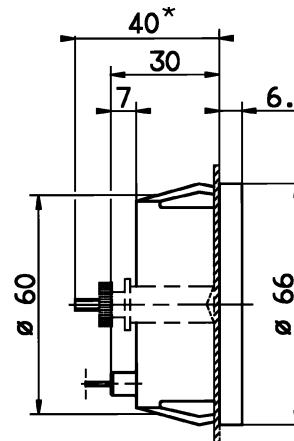
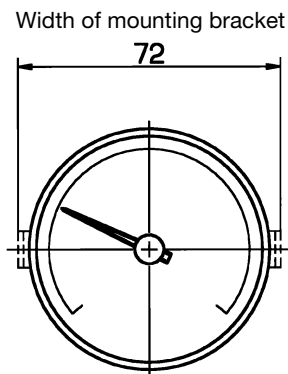
Panel cut-out:  $\varnothing 62^{+0.5}$  mm

Type: 608202/2652



Panel cut-out:  $\varnothing 52^{+0.5}$  mm

Type: 608202/2660



Panel cut-out:  $\varnothing 62^{+0.5}$  mm

\* with code TZ 455

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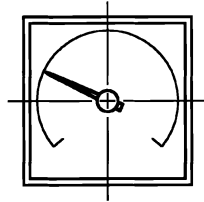
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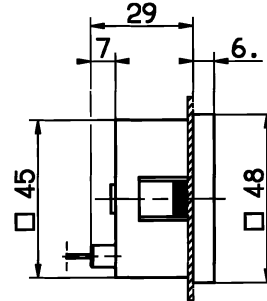


## Dimensions

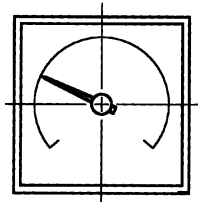
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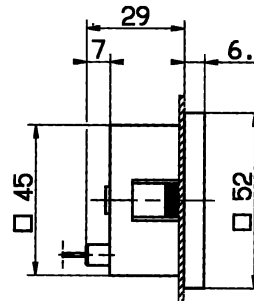
Panel cut-out: 45 x 45  $^{+0.6}_0$  mm



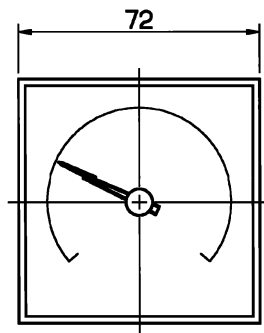
Type: 608202/2752



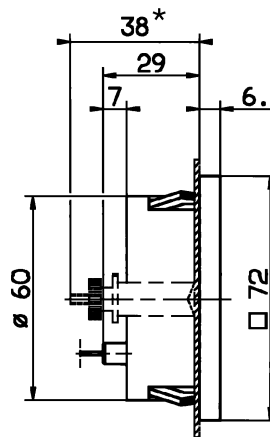
Panel cut-out: 45 x 45  $^{+0.6}_0$  mm



Type: 608202/2772



Panel cut-out:  $\varnothing$  62  $^{+0.5}_0$  mm



\* with code TZ 455

**Note:**

Physical and toxic features of the expansion means, which could emerge in the event of a measuring system break.

Control range with scale limit value	Hazardous reactions	Fire and explosion hazard		hazardous to waters	Information about toxicology		
		Ignition temperature	Explosion limit		irritant	dangerous to health	toxic
< +200°C	no	+ 355°C	0,6 - 8 V%	yes	yes	<sup>1)</sup>	no
≥ 200°C ≤ +350°C		+ 490°C	- -	yes	yes	<sup>1)</sup>	
> 350°C ≤ +500°C		no	no	no	no	no	

<sup>1)</sup> There is currently no statement by the health authority concerning hazards to health in the event of short-term exposure and low concentration, e.g. measuring

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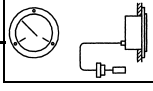
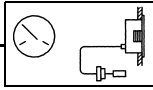
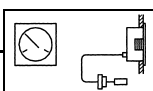
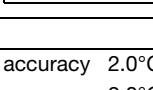
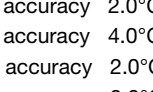
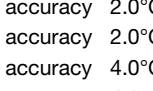
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## Order details

### Dial thermometer, Class 2, Type 608202

Order code	(1) Basic type
608202	Mechanical dial thermometer, Class 2
(2) Basic type extensions	
2060	Style: 20; housing size: 60 mm dia. 
2652	Style: 26; housing size: 52 mm dia. 
2660	Style: 26; housing size: 60 mm dia. 
2748	Style: 27; housing size: 48 mm dia. 
2752	Style: 27; housing size: 52 mm dia. 
2772	Style: 27; housing size: 72 mm dia. 
(3) Indication range (AB)	
469	-40 to + 40°C; measuring range -30 to + 30°C, accuracy 2.0°C
566	-30 to + 50°C; measuring range -20 to + 40°C, accuracy 2.0°C
643	-20 to +120°C; measuring range 0 to +100°C, accuracy 4.0°C
807	0 to + 60°C; measuring range +10 to + 50°C, accuracy 2.0°C
810	0 to + 80°C; measuring range +10 to + 70°C, accuracy 2.0°C
814	0 to +100°C; measuring range +10 to + 90°C, accuracy 2.0°C
818	0 to +120°C; measuring range +20 to +100°C, accuracy 4.0°C
826	0 to +160°C; measuring range +20 to +140°C, accuracy 4.0°C
832	0 to +200°C; measuring range +20 to +180°C, accuracy 4.0°C
834	0 to +250°C; measuring range +30 to +220°C, accuracy 5.0°C
926	+50 to +250°C; measuring range +70 to +230°C, accuracy 4.0°C
840	0 to +300°C; measuring range +30 to +270°C, accuracy 10.0°C
927	+50 to +300°C; measuring range +80 to +270°C, accuracy 5.0°C
843	0 to +350°C; measuring range +50 to +300°C, accuracy 10.0°C
932	+50 to +350°C; measuring range +80 to +320°C, accuracy 10.0°C
(4) Capillary type (FL) <sup>1</sup>	
02	FL02 copper capillary with copper braiding, approx. 2.5 mm dia. (up to +300°C top of indication range)
11	FL11 copper capillary with PE sleeve, approx. 3.5 mm dia. (up to +120°C top of indication range)
17	FL17 stainless steel capillary, 1.5 mm dia.
21	FL21 copper capillary, 1.0 mm dia. (up to +300°C top of indication range)
(5) Capillary length <sup>1</sup>	
1000	1000 mm
2000	2000 mm
3000	3000 mm
4000	4000 mm
5000	5000 mm
...	special length (specify in plain text: in 1000 mm steps, maximum length: 10000 mm)

<sup>1</sup> See Data Sheet 608730 for description and features

<sup>2</sup> Screw-in spigot to DIN 3852 Form A.

<sup>3</sup> List extra codes in sequence, separated by commas.

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## Order details

### Dial thermometer, Class 1.5, Type 608202

#### Order code

<b>(6) Process connection (PA)<sup>1</sup></b>		
750	TF 01; temperature probe with stepped support tube	
752	TF 11; temperature probe without support tube	
843	TA 02; immersion tube with union nut and loose nipple <sup>2</sup>	
161	TA 03; immersion tube with loose union nut	
847	TA 06; sliding clamp fitting on support tube <sup>2</sup>	
311	TA 20; immersion tube with loose nipple and shoulder <sup>2</sup>	
872	TA 21; immersion tube with loose plug and conical seal	
873	TA 22; immersion tube with loose plug, conical seal and loose nipple <sup>2</sup>	
401	TA 23; immersion tube with plug and spring clip	
848	TA 25; sliding clamp fitting on capillary <sup>2</sup> (with FL 17 and FL 21 only)	
913	SH 07; screw-in pocket, assembled, with clamping clip and fixing screw <sup>2</sup> (with TF 01)	
820	SH 09; weld-in pocket, assembled, with clamping clip and fixing screw (not with FL21 - welding shoulder with steel 1.4515) (with TF 01)	
876	SH10; screw-in pocket, assembled <sup>2</sup>	
871	SH11; screw-in pocket, assembled <sup>2</sup>	
<b>(7) Diameter of process connection (PA)<sup>1</sup></b>		
6	6 mm dia.	
8	8 mm dia.	
10	10 mm dia.	
11	11 mm dia.	
12	12 mm dia.	
<b>(8) Thread for process connection (PA)<sup>1</sup></b>		
000	no thread (with TF 01 and TF 11)	
103	G <sup>3</sup> / <sub>8</sub> thread	
104	G <sup>1</sup> / <sub>2</sub> thread	
105	G <sup>3</sup> / <sub>4</sub> thread	
114	M 10 x 1 thread (with TA 23 and SH 11 only)	

<sup>1</sup> See Data Sheet 608730 for description and features

<sup>2</sup> Screw-in spigot to DIN 3852 Form A.

<sup>3</sup> List extra codes in sequence, separated by commas.

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## Order details

### Dial thermometer, Class 1.5, Type 608202

#### Order code

<b>(9) Material of probe / support tube<sup>1</sup></b>	
26	stainless steel (CrNi, 1.4571)
96	copper (Cu) / brass (CuZn) (up to 200°C)
95	stainless steel (CrNi, 1.4571) – probe / brass (CuZn) – support tube (above 250°C)
<b>(10) Material of process connection (PA)<sup>1</sup></b>	
00	none (TF01 and TF11 only)
01	steel (St)
26	stainless steel (CrNi, 1.4571)
46	brass (CuZn)
<b>(11) Fitting length of process connection (PA)<sup>1</sup> (dimension EL or S)</b>	
0	minimum fitting length TF 11 (active probe dimension)
50	50 mm
100	100 mm
150	150 mm
200	200 mm
...	special length (specify in plain text, in 50 mm steps)
<b>(12) Extra codes (TZ)</b>	
000	no extra code
455	mounting bracket at rear with 60 mm housing dia. and 72 x 72 mm bezel
315	capillary reinforcement on housing and probe (not with FL 21)
522	customized scale

Special versions on request!

#### Order code

(1) 608202 / (2) .... - (3) ... - (4) .. - (5) .... - (6) ... - (7) .. - (8) ... - (9) .. - (10) .. - (11) ... / (12) .. , ...

#### Order example

608202 / 2660 - 832 - 11 - 2000 - 161 - 6 - 104 - 96 - 46 - 150 / 000<sup>3</sup>

<sup>1</sup> See Data Sheet 608730 for description and features

<sup>2</sup> Screw-in spigot to DIN 3852 Form A.

<sup>3</sup> List extra codes in sequence, separated by commas.