



Contact Dial Thermometer

Special features

- Class 1.5
- Display range -40 to +600 °C
- Temperature controller with actual value display as built-in or add-on device in the stainless steel case with a bayonet connection
- Case size Ø: 100 mm
- Protection type IP65

Brief description

Contact dial thermometers are devices with an actual value display for temperature measurement, control, and monitoring and can be used universally.

The temperature-dependent volume change in a measuring system filled with liquid or the temperature-dependent pressure change in a measuring system filled with gas is converted to a rotational movement of the actual value indicator by a bourdon tube; no transmission gear is required. The microswitch is actuated by the rotational movement of the indicator shaft via a tap system.



Technical data

Basic type extension	0210, 1010, 2010, 2210, 2310
Case	Stainless steel case with bayonet connection (1.4301)
Protection type	IP65 according to DIN EN 60529
Front pane	Polycarbonate
Scale	White, with black lettering
Display	Class 1.5 similar to DIN EN 13190
Strain relief spring	For capillary devices on the case and the temperature probe
Setpoint value adjustment	By setpoint adjuster in the front pane; with screwdriver, protected by the bolted cover.
Display correction	On the rear, no display correction with design type 20
Limit value temperatures	For transport and storage -20 to +70 °C (for display range 0 to +60 °C up to max. 65 °C; -40 to +40 °C up to max. 50 °C; -30 to +50 °C up to max. 60 °C)
Rated position (NL)	Any

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Technical data

Display range (AB)	Display range in °C	Measuring range in °C	Tolerance in °C (+/-)
469	-40 to +40	-30 to +30	1.5
566	-30 to +50	-20 to +40	1.5
643	-20 to +120	0 to +100	3.0
807	0 to +60	+10 to +50	1.5
810	0 to +80	+10 to +70	1.5
814	0 to +100	+10 to +90	1.5
818	0 to +120	+20 to +100	3.0
826	0 to +160	+20 to +140	3.0
832	0 to +200	+20 to +180	3.0
834	0 to +250	+30 to +220	4.0
926	+50 to +250	+70 to +230	3.0
840	0 to +300	+30 to +270	6.0
927	+50 to +300	+80 to +270	4.0
843	0 to +350	+50 to +300	6.0
932	+50 to +350	+80 to +320	6.0
848	0 to +400	+50 to +350	6.0
851	0 to +450	+50 to +400	6.0
854	0 to +500	+50 to +450	8.0
858	0 to +600	+100 to +500	10.0

	Liquid filling	Gas filling
Measuring system	Display range (AB) ≤ 350 °C	Display range (AB) ≥ 400 °C
Time constant $t_{0.632}$	Approx. 12 s, measured in water, with a probe Ø of 6 mm made of Cu.	Approx. 4 s, measured in oil, with a probe Ø of 10 mm made of stainless steel.
Ambient temperature influence effect	In % of the display range (referring to the deviation from the reference value +23 °C)	
On case	0.15% of the display range per K ambient temperature change	0.05% of the display range per K ambient temperature change
On capillary (per m)	0.03% of the display range per K ambient temperature change	No influence
	At higher ambient temperature – higher temperature display – lower switching point	

	Standard	Extra code (TZ) 650
Electrical contact	Single-pole microswitch with mechanically actuated changeover contact	
Contact type		
Switching capacity	AC 230V, +10/-15%, 48 to 63Hz, cos φ = 1 (0.6)	
	5 (1.5) A	10 (3) A
Switching differential	Approx. 1.5% of the display range	1.5 to 3% of the display range
Switching point accuracy	± 0.5% of the display range referring to the switch-off point with rising temperature	
Switching reliability	To ensure a high switching reliability, we recommend a minimum voltage of 24 V and a minimum current of 100 mA	
Electrical connection	Junction box: conductor cross-section up to 2.5 mm ² , suitable for cable Ø from 6.5 to 13 mm	

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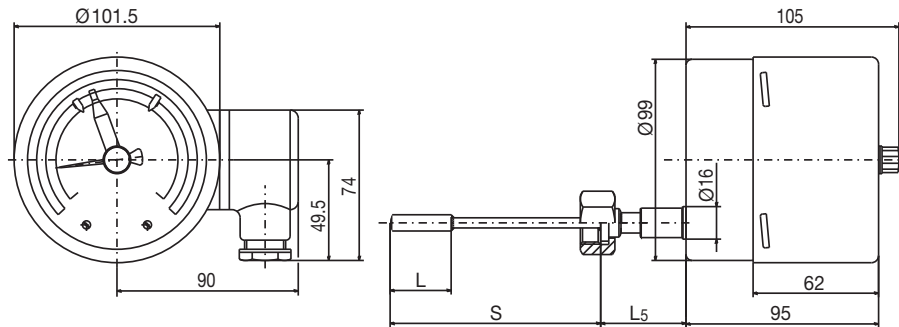
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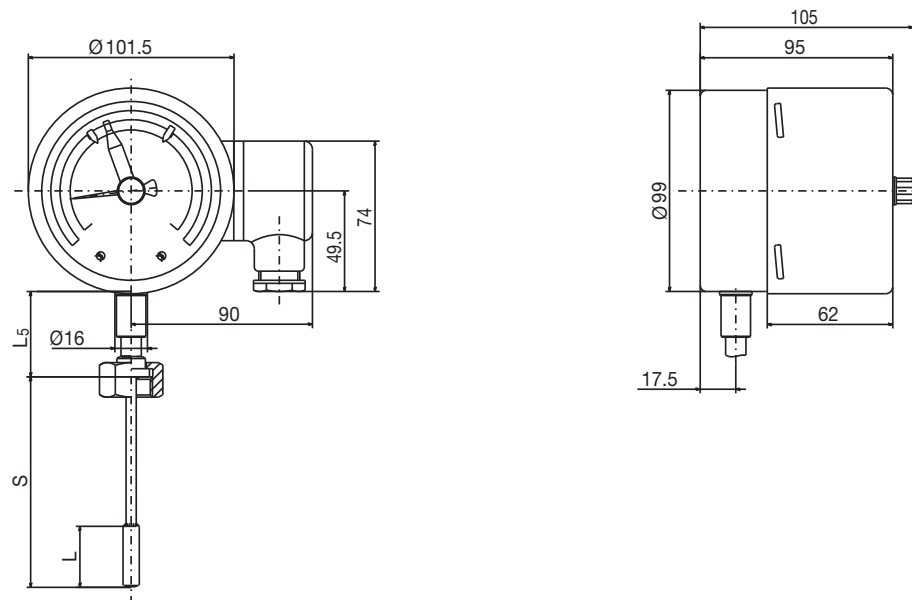


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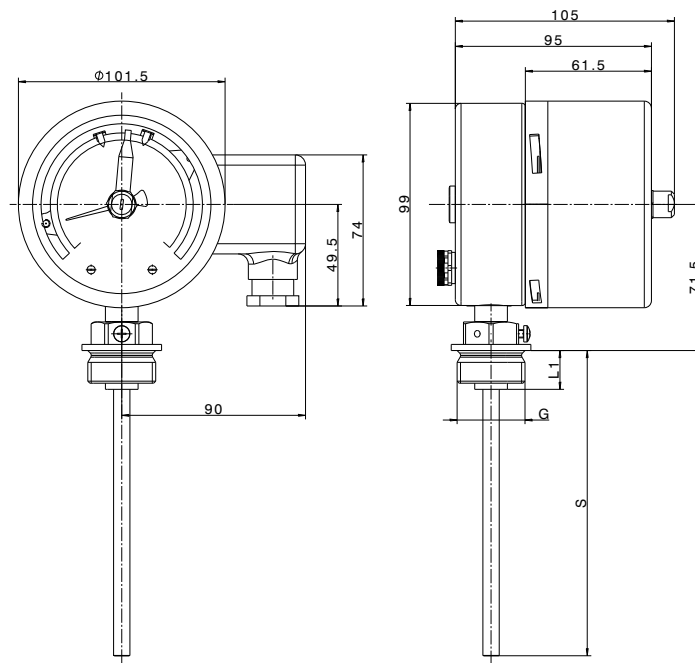
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 608523/0210



Type:
 608523/1010



Type:
 608523/1010 + TA24



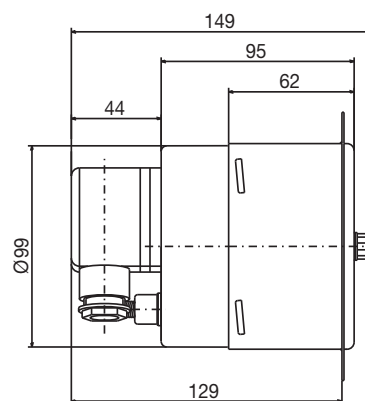
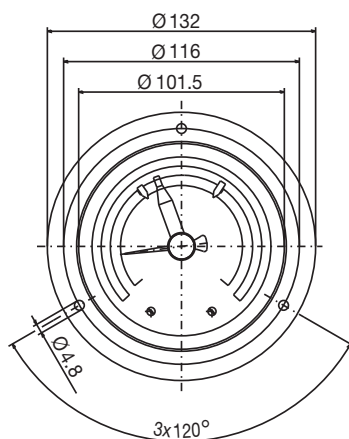
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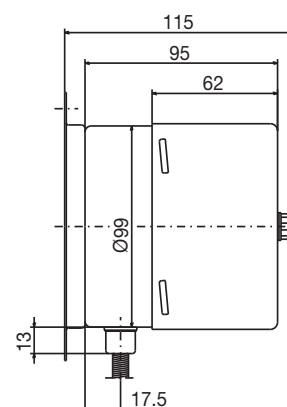
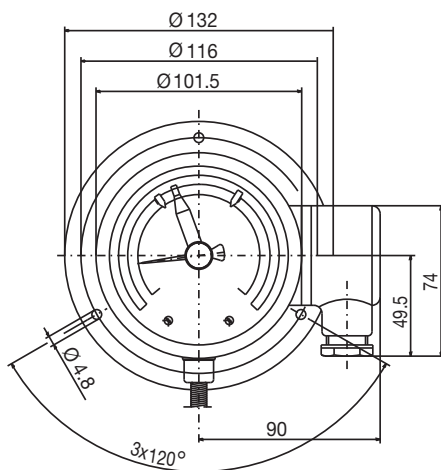


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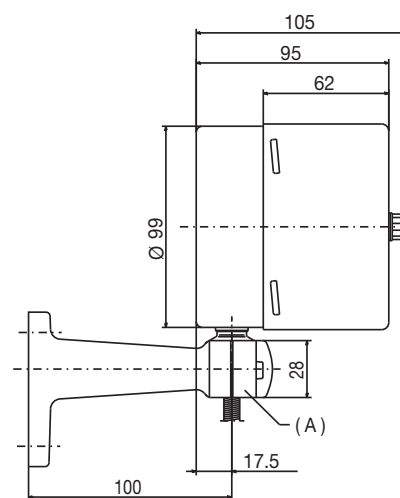
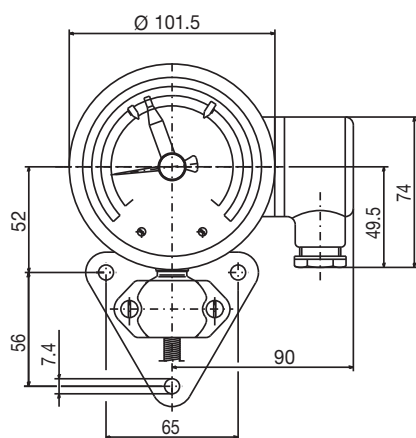
Panel cut-out Ø 105 ^{+0.5}/₀ mm

Type:
 608523/2210



Panel cut-out Ø 105 ^{+0.5}/₀ mm

Type:
 608523/2310



Bracket for measuring device according to DIN 16281

(A) Spigot Ø 26 mm

L ₅	Protection tube connection type
40 mm	TA 03, TA 30
≤ 69 mm	TA 02
42.5 mm	TA 21
51.5 mm	TA 22, TA 31

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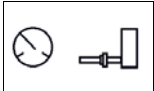
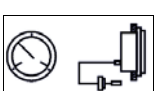
Order code

(1) Basic type

608523 Mechanical contact dial thermometer class 1.5

(2) Basic type extension

Case size Ø

0210	Design type 02		100 mm
1010	Design type 10		100 mm
2010	Design type 20		100 mm
2210	Design type 22		100 mm
2310	Design type 23		100 mm

(3) Display range in °C

469	-40 to +40
566	-30 to +50
643	-20 to +120
807	0 to +60
810	0 to +80
814	0 to +100
818	0 to +120
826	0 to +160
832	0 to +200
834	0 to +250
926	+50 to +250
840	0 to +300
927	+50 to +300
843	0 to +350
932	+50 to +350
848	0 to +400
851	0 to +450
854	0 to +500
858	0 to +600

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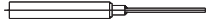
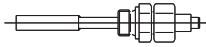
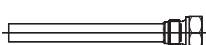
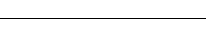
(4) Capillary type (FL)^a

00	Without (with rigid connection)
02	FL 02 Cu capillary with Cu textile braiding, approx. Ø 2.5 mm (up to AB end value +300 °C)
11	FL 11 Cu capillary with PE coating, approx. ø 3.5 mm (up to AB end value +120 °C)
17	FL 17 Stainless steel capillary, approx. Ø 1.5 mm
21	FL 21 Cu capillary, approx. Ø 1.0 mm (up to AB end value +300 °C)

(5) Capillary length^b

0	Without (with rigid connection)
1000	1000 mm
2000	2000 mm
3000	3000 mm
4000	4000 mm
5000	5000 mm
...	Special length (specification in plain text: 1,000 mm increments, maximum length 10,000 mm), additional lengths upon request

(6) Process connection (PC)^a

750	TF 01	Temperature probe with stepped support tube	
752	TF 11	Temperature probe without support tube	
843	TA 02	Protection tube with union nut and loose screw connection ^b	
161	TA 03	Protection tube with loose screw connection	
847	TA 06	Protection tube with displaceable threaded fitting on support tube ^b	
311	TA 20	Protection tube with loose screw connection and connection collar ^b	
872	TA 21	Protection tube with loose pressure screw and conical seal (only G 3/8 possible)	
873	TA 22	Protection tube with loose pressure screw, conical seal, and loose screw connection ^b	
401	TA 23	Protection tube with pressure screw and contact pressure spring (only M 10x1 possible)	
874	TA 24	Protection tube (CuNi) with screw connection (CuZn), O-ring seal and clamping screw ^{a b}	
913	SH 07	Screw-in protection tube, multi-sectional, with clamping piece and fixing screw (suitable for TF 01 and TF 11)	
820	SH 09	Weld-in protection tube, multi-sectional, with clamping piece and fixing screw ^b (not for FL 21 – welding collar with steel 1.4515)	
876	SH 10	Screw-in protection tube, multi-sectional ^b (suitable for TA 21)	
871	SH 11	Screw-in protection tube, multi-sectional ^b (suitable for TA 21)	

^a For the description and special features refer to data sheet 608730.

^b Screw-in spigot according to DIN 3852, form A.

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Order code	(7) Ø Process connection (PC) ^a
6	6 mm
8	8 mm
10	10 mm
11	11 mm
12	12 mm
(8) Thread type of process connection (PC)^a	
000	Without thread (for TA 01 and TF 11)
103	Screw connection G 3/8
104	Screw connection G 1/2
105	Screw connection G 3/4
106	Screw connection G 1
114	Screw connection M 10 x 1 (only with TA 23 and SH 11)
(9) Material, probe / support tube^a	
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 from 250 °C)
(10) Material of process connection (PC)^a	
00	Without (only TF 01 and TF 11)
26	Stainless steel (CrNi, 1.4571)
46	Brass (CuZn)
(11) Insertion length, process connection (PC)^a (dimension "EL" or "S")	
0	Minimum insertion length TF 11 (active probe dimension)
50	50 mm
100	100 mm
150	150 mm
200	200 mm
...	Special length (specifications in plain text – 50 mm increments)

^a For the description and special features refer to data sheet 608730.

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Contact Thermometer Transformer and industry version

Special features

- Class 1.5
- Display ranges -40° C to +600° C
- Electromechanical temperature controller as add-on device with actual value indicator in polyamide (PA6) case
- With one or two microswitches
- Case size: Ø 80 mm

Brief description

The contact thermometer is a universal device with actual value display for temperature measurement, control and monitoring.

The temperature-dependent volume change in a measuring system filled with liquid or the temperature-dependent pressure change in a measuring system filled with gas is converted to a rotational movement of the actual value indicator by a bourdon tube; no transmission gear is required. The microswitch is actuated by the rotational movement of the indicator shaft via a tap system.



Type 608540/1080

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Technical data

Case, bezel, and cover cap	Plastic (PA 6), gray, UV-stabilized
Protection type	IP 54 according to DIN EN 60529
Front pane	PMMA (Plexiglas)
Scale	White, with black lettering
Accuracy class	Class 1.5 similar to EN 13190

	Liquid filling	Gas filling
Measuring system	Display range (AB) $\leq 350^{\circ}\text{C}$	Display range (AB) $\geq 400^{\circ}\text{C}$
Time constant $t_{0.632}$	Approx. 12 s, measured in water, with a probe $\varnothing$ of 6 mm made of Cu.	Approx. 4 s, measured in oil, with a probe $\varnothing$ of 10 mm made of stainless steel.
Influential effect of the ambient temperature	In % of the display range (referring to the deviation from the reference value $+23^{\circ}\text{C}$)	
On case	0.15% of the display range per K ambient temperature change	0.05% of the display range per K ambient temperature change
On capillary (per m)	0.03% of the display range per K ambient temperature change	No influence
	At higher ambient temperature – higher temperature display – lower switching point	

	Standard	Extra code (TZ) 650
Electrical contact	Single-pole microswitch with mechanically actuated changeover contact	
Contact type		
Switching capacity	AC 230V, $+10/-15\%$, 48 to 63Hz, $\cos \varphi = 1$ (0.6)	
	5 (1.5) A	10 (3) A
Switching differential	Approx. 1.5% of the display range	1.5 to 3 % of the display range
Switching point accuracy	$\pm 0.5\%$ of the display range referring to the switch-off point with rising temperature	
Switching reliability	To ensure a high switching reliability, we recommend a minimum voltage of 24 V and a minimum current of 20 mA	
Electrical connection	Screw terminals: conductor cross-section 2.5 mm^2 , protected by cover cap with cable fitting. Suitable for cable diameter from 6.5 to 16 mm.	
Setpoint value adjustment	With a screwdriver, protected by a cover.	
Limit value temperatures	-30 to $+70^{\circ}\text{C}$ (storage and transport -30 to $+70^{\circ}\text{C}$)	
Rated position (NL)	NL90, position symbol $\perp$	

Display range (AB)	Display range in $^{\circ}\text{C}$	Measuring range in $^{\circ}\text{C}$	Tolerance in $^{\circ}\text{C}$ (+/-)
469	-40 to $+40$	-30 to $+30$	1.5
643	-20 to $+120$	0 to $+100$	3.0
807	0 to $+60$	$+10$ to $+50$	1.5
814	0 to $+100$	$+10$ to $+90$	1.5
818	0 to $+120$	$+20$ to $+100$	3.0
832	0 to $+200$	$+20$ to $+180$	3.0
840	0 to $+300$	$+30$ to $+270$	6.0
848	0 to $+400$	$+50$ to $+350$	6.0
854	0 to $+500$	$+50$ to $+450$	8.0
858	0 to $+600$	$+100$ to $+500$	10.0

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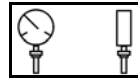
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**Order details:****Contact thermometer, type 608540****Order code: (1) Basic type**

608540 Mechanical contact thermometer, industrial version

(2) Basic type extension

1080 Design type: 10; case size: ø 80 mm



0280 Design type: 02; case size: ø 80 mm



2280 Design type: 22; case size: ø 80 mm



2380 Design type: 23; case size: ø 80 mm

**(3) Display range in °C**

469 -40 to +40
643 -20 to +120
807 0 to +60
814 0 to +100
818 0 to +120
832 0 to +200
840 0 to +300
848 0 to +400
854 0 to +500
858 0 to +600

(4) Capillary type (FL)¹

00 Without (with rigid connection)
02 FL 02 Cu capillary with Cu textile braiding, approx. Ø 2.5 mm (up to AB end value +300°C)
11 FL 11 Cu capillary with PE coating, approx. ø 3.5 mm (up to AB end value +120°C)
17 FL 17 Stainless steel capillary, Ø 1.5 mm
21 FL 21 Cu capillary, Ø 1.0 mm (up to AB end value +300°C)

(5) Capillary length¹

0 Without (with rigid connection)
1000 1000 mm
2000 2000 mm
3000 3000 mm
4000 4000 mm
5000 5000 mm
... Special length (specifications in plain text: 1,000 mm increments, maximum length 10,000 mm)

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Order details:

Contact thermometer, type 608540.

Order code:	(6) Process connection (PC) ¹	
750	TF 01; Temperature probe with stepped support tube	
752	TF 11; Temperature probe without support tube	
843	TA 02; Protection tube with union nut and loose screw connection ²	
161	TA 03; Protection tube with loose union nut	
847	TA 06; Displaceable threaded fitting on support tube ²	
311	TA 20; Protection tube with loose screw connection and connection collar ²	
872	TA 21; Protection tube with loose pressure screw and conical seal	
873	TA 22; Protection tube with loose pressure screw, conical seal, and loose screw connection ²	
401	TA 23; Protection tube with pressure screw and contact pressure spring	
874	TA 24; Protection tube (CuNi) with screw connection (CuZn), O ring seal and clamping screw ^{2, 5}	
913	SH 07; Screw-in sleeve, multi-sectional, with clamping piece and fixing screw ² (with TF 01)	
820	SH 09; Weld-in sleeve, multi-sectional, with clamping piece and fixing screw (not with FL 21 – weld collar with steel 1.4515) (with TF 01)	
876	SH 10; Screw-in sleeve, multi-sectional ²	
871	SH 11; Screw-in sleeve, multi-sectional ²	
	(7) Diameter of process connection (PC) ¹	
6	Ø 6 mm	
8	Ø 8 mm	
10	Ø 10 mm	
12	Ø 12 mm	
	(8) Thread type of process connection (PC) ¹	
000	Without thread (for TF 01 and TF 11)	
103	Screw connection G ³ / ₈	
104	Screw connection G ¹ / ₂	
105	Screw connection G ³ / ₄	
106	Screw connection G1	
114	Screw connection M 10 × 1 (only for TA 23 and SH 11)	
	(9) Material, probe / support tube ¹	
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 (from 250°C)	
	(10) Material of process connection (PC) ¹	
00	Without (only TF 01 and TF 11)	
26	Stainless steel (CrNi, 1.4571)	
46	Brass (CuZn)	
	(11) Insertion length, process connection (PC) ¹ (dimension "EL" or "S")	
0	Minimum insertion length TF 11 (active probe dimension)	
100	100 mm	
150	150 mm	
200	200 mm	
...	Special length (specifications in plain text – 50 mm increments)	

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Data sheet 608540

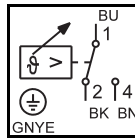
Page 6/6

Order details:

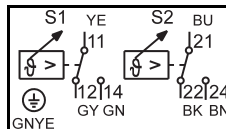
Contact thermometer, type 608540

Order code: (12) Switching output

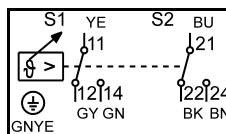
20 1 switch



21 2 switches



22 2 switches in fixed sequence



(13) Extra codes (TZ)

000 Without extra code
 430 Drag indicator
 650 Microswitch 10 (3) A (AC/DC 230 V, +10/-15%, 48 to 63 Hz, cos φ = 1 (0.6))
 518 Stop for Min. — or Max. — setpoint value limitation, default setting
 522 Customized scale

Order code:

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)
 608540 / - ... - .. - - ... - . - ... - .. - .. - ... - .. / ... , ...

Order example:

608540 / 2280 - 818 - 02 - 2000 - 843 - 8 - 104 - 96 - 46 - 100 - 20 / 000³

¹ For description and special features refer to data sheet 608730.

² Screw-in spigot according to DIN 3852 form A.

³ List extra codes in sequence, separated by commas.

⁴ Not with design types 02 and 10.

⁵ Material, probe / support tube: design types 02 and 10: stainless steel
 design types 22 and 23: brass

Stock versions

(Delivery within 3 working days after receipt of order)

Transformer version

Sales no.	Type	Display range °C / °F	Switching output (SA)	Temperature probe Process connection	Protection tube "S"
60/00491256	608540/1080-643-00-0-874-8-106-26-46-150-21/430, 522, 477 with drag indicator	-20 to +120°C	21 2 switches	TA 24, G1" CuZn	150 mm
60/00512083	608540/1080-643-00-0-874-8-106-26-46-150-20/430, 522, 477 with drag indicator		20 1 switch		

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Contact Dial Thermometers

Special features

- Class 1.5
- Display range -40 to +600 °C
- Temperature controller with actual value display as built-in or add-on device in a stainless steel case
- With 1 or 2 microswitches
- Case sizes Ø: 60 mm, 80 mm, and 100 mm
- Front panel: 72 mm × 72 mm and 96 mm × 96 mm

Brief description

Contact dial thermometers are devices with an actual value display for temperature measurement, control, and monitoring and can be used universally.

The temperature-dependent volume change in a measuring system filled with liquid or the temperature-dependent pressure change in a measuring system filled with gas is converted to a rotational movement of the actual value indicator by a bourdon tube; no transmission gear is required. The microswitch is actuated by the rotational movement of the indicator shaft via a tap system.

Contact dial thermometers in the series 608520/608550 are RoHS-compliant and cadmium-free.

**Type 608520/2380****Type 608550/1080**

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Technical data

General Information

Case and front panel	Stainless steel (1.4301)
Cover cap	Plastic (PA6), gray, UV-stabilized
Protection type	IP54 according to DIN EN 60529
Front pane	Acrylic glass (PMMA)
Chassis	Aluminum (3.2582.05)
Scale	White, with black lettering
Display	Class 1.5 similar to DIN EN 13190
Strain relief spring	For capillary devices on the case and the temperature probe
Setpoint value adjustment	By setpoint adjuster in the front pane
Display correction	On the rear
Limit value temperatures	For transport and storage -30 to +70 °C (for display range -40 to +40 °C up to max. 50 °C; -30 to +50 °C up to max. 60 °C)
Rated position (NL)	Any

Display range

Display range (AB)	Display range °C	Measuring range in °C	Tolerance in K (±)
469	-40 to +40	-30 to +30	1.5
643	-20 to +120	-20 to +120	3.0
807	0 to 60	10 to 50	1.5
814	0 to 100	10 to 90	1.5
818	0 to 120	20 to 100	3.0
832	0 to 200	20 to 180	3.0
840	0 to 300	30 to 270	6.0
848	0 to 400	50 to 350	6.0
854	0 to 500	50 to 450	8.0
858	0 to 600	100 to 500	10.0

Filling

	Liquid filling	Gas filling
Measuring system	Display range (AB) ≤ 350 °C	Display range (AB) ≥ 400 °C
Time constant $t_{0.632}$	Approx. 12 s, measured in water, with a probe-Ø of 6 mm made of copper	Approx. 4 s, measured in oil, with a probe Ø of 10 mm made of stainless steel
Ambient temperature influence effect	In % of the display range (referring to the deviation from the reference value 23 °C)	
On case	0.15 % of the display range per K ambient temperature change	0.05 % of the display range per K ambient temperature change
On capillary (per m)	0.03 % of the display range per K ambient temperature change	No influence
	At higher ambient temperature - higher temperature display - lower switching point	

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Electrical contact

Electrical contact	Standard	Extra code (TZ) 650
Contact type	Single-pole microswitch with mechanically actuated changeover contact	
Switching capacity	AC 230 V, +10/-15 %, 48 to 63 Hz, $\cos \varphi = 1$ (0.6) 5 (1.5) A	
Switching differential	Approx. 1.5 % of the display range	10 (3) A
Switching point accuracy	±0.5 % of the display range referring to the switch-off point with rising temperature	
Switching reliability	To ensure a high switching reliability, we recommend a minimum voltage of 24 V and a minimum current of 100 mA.	

Electrical connection

Electrical connection	Standard	Design type 02 and 22	Design type 10, 23 and extra code 426	Case Ø 60 mm
	Screw terminals, connection cross-section up to 2.5 mm ²	Connection cable 0.6 m ferrule	Cover cap with cable fitting, suitable for cable Ø from 6.5 to 13 mm	Cover cap with cable fitting, suitable for cable Ø from 8 to 10 mm

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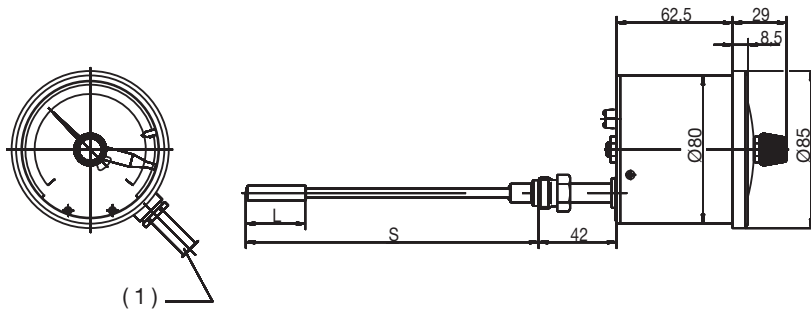
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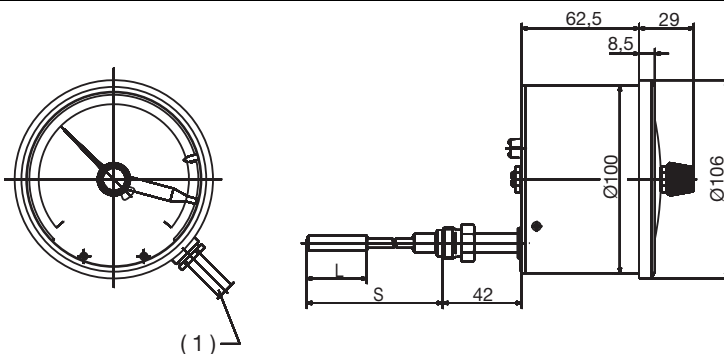
Dimensions

Type 608520/0280



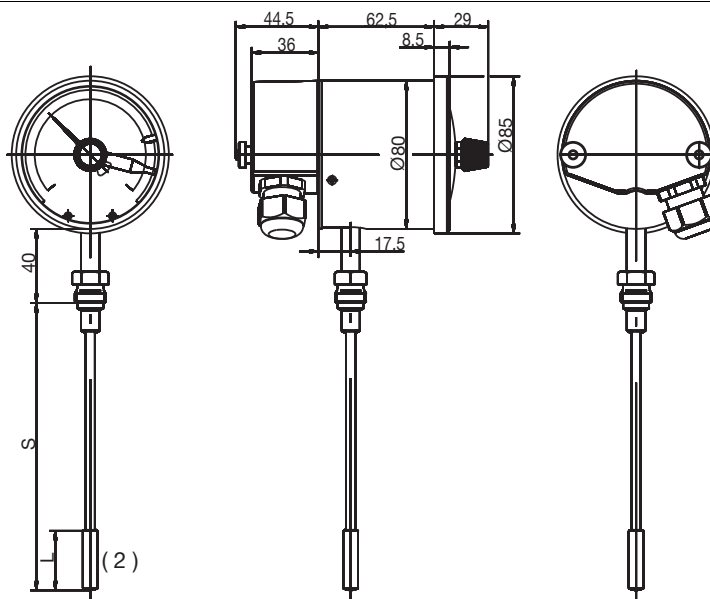
(1) Connecting cable 0.6 m

Type 608520/0210



(1) Connecting cable 0.6 m

Type 608520/1080



(2) Active probe dimension

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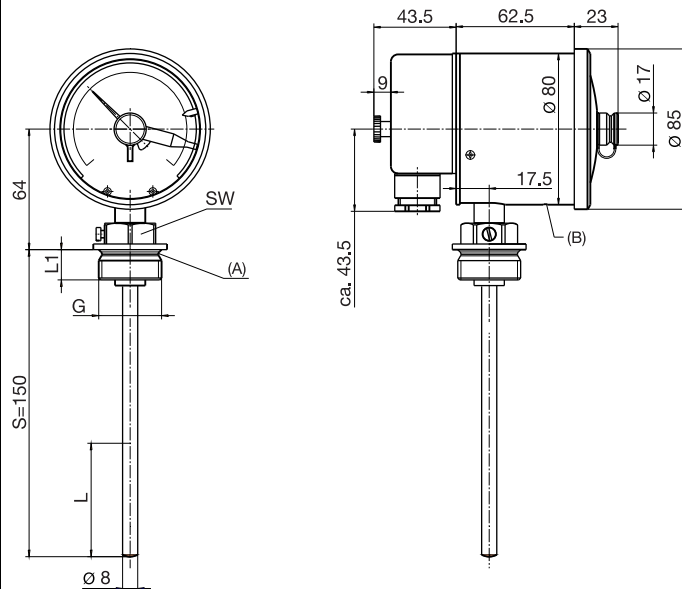
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Type 608550/1080 + TA24

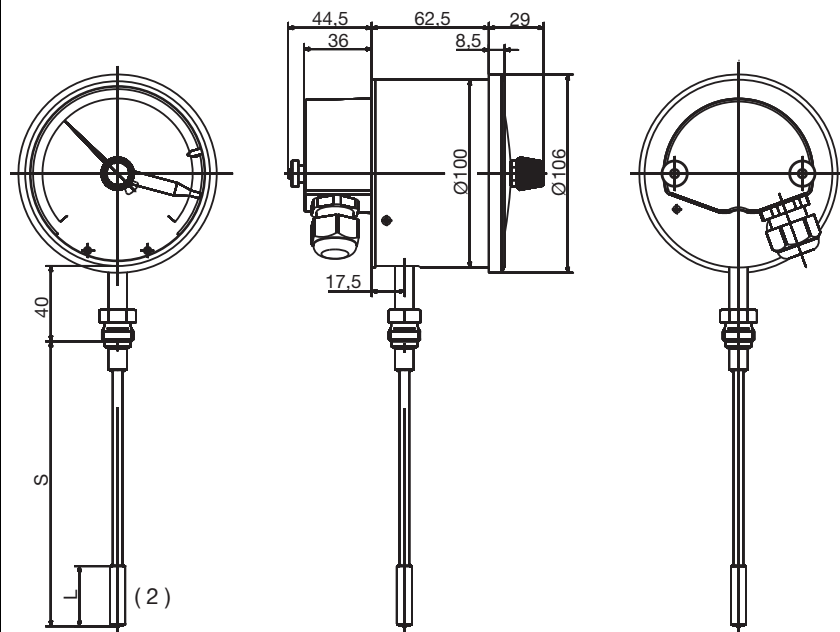


(A) Screw-in spigot,
DIN 3852 Form A

(B) Air vent

(L) Active probe dimension for indication range 0 to 120 °C, approx 70 mm
for indication range -20 to +120 °C, approx 60 mm

Type 608520/1010



(2) Active probe dimension

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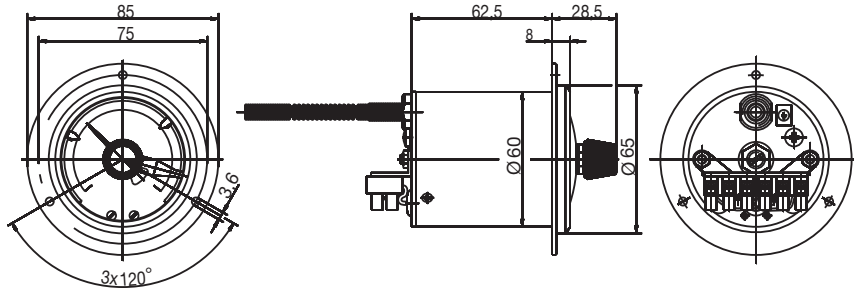
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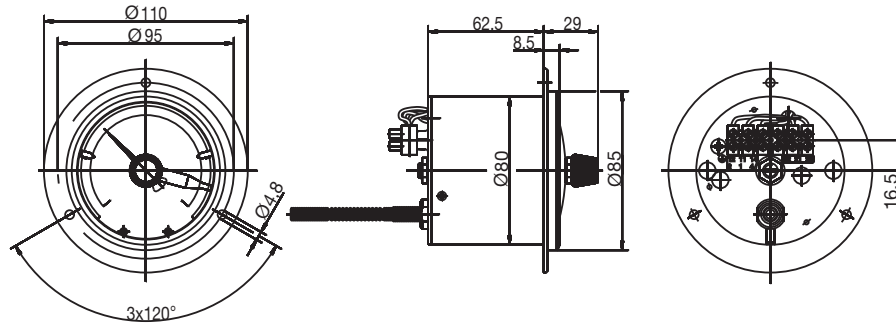


Type 608520/2060



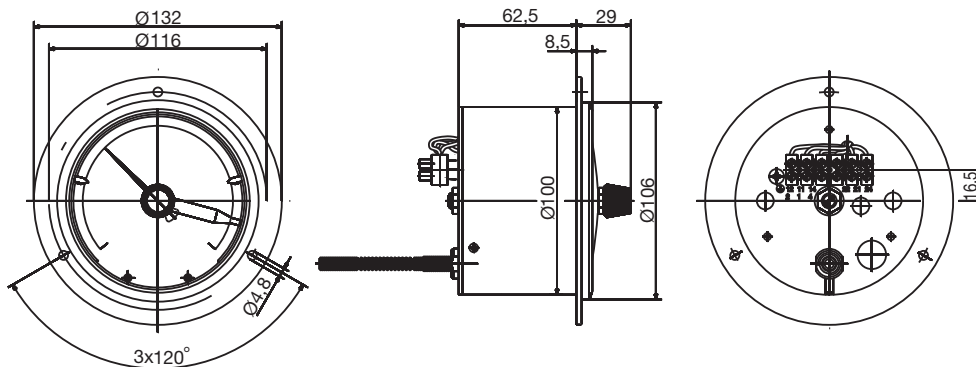
Panel cut-out for case Ø 60 mm = $62^{+0.5/0}$ mm

Type 608520/2080



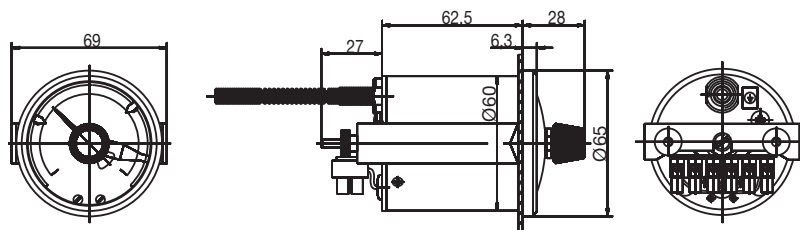
Panel cut-out for case Ø 80 mm = $82^{+0.5/0}$ mm

Type 608520/2010



Panel cut-out for case Ø 100 mm = $100_0^{+0.5}$ mm

Type 608520/2160



Panel cut-out for case Ø 60 mm = $62_0^{+0.5}$ mm

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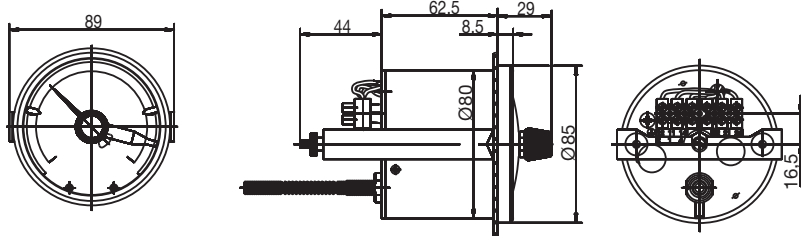
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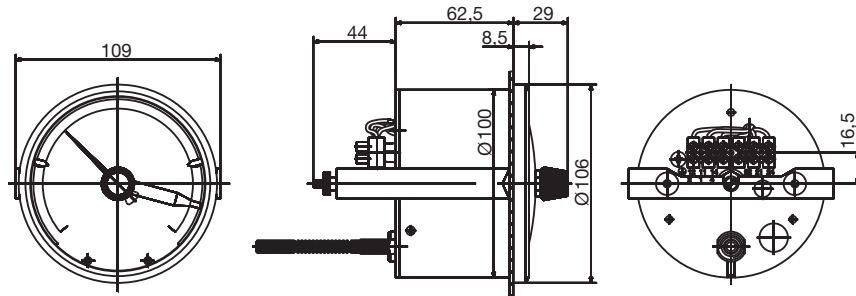


Type 608520/2180



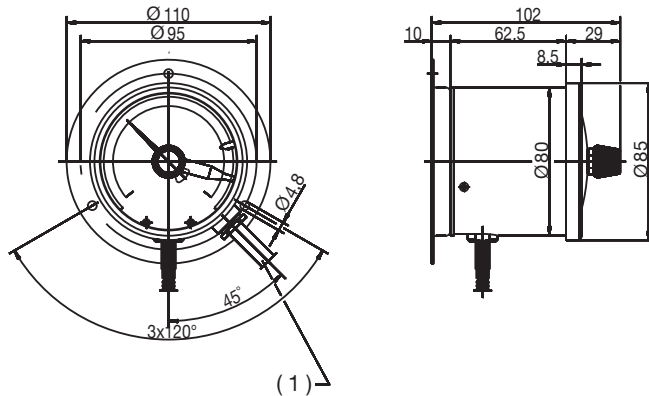
Panel cut-out for case $\varnothing 80 \text{ mm} = 82_0^{+0,5} \text{ mm}$

Type 608520/2110



Panel cut-out for case $\varnothing 100 \text{ mm} = 100_0^{+0,5} \text{ mm}$

Type 608520/2280



(1) Connecting cable 0.6 m long, ferrule

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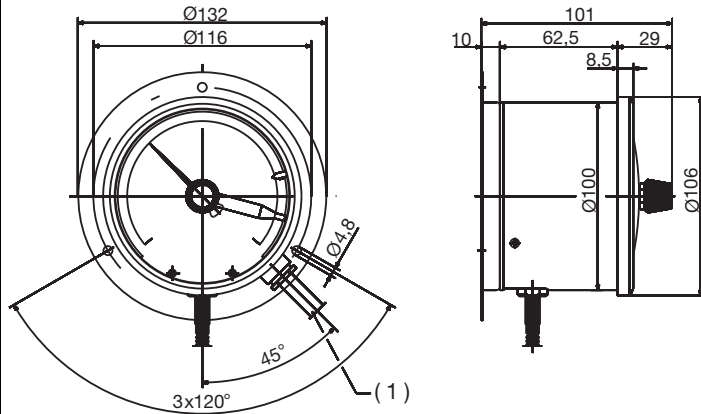
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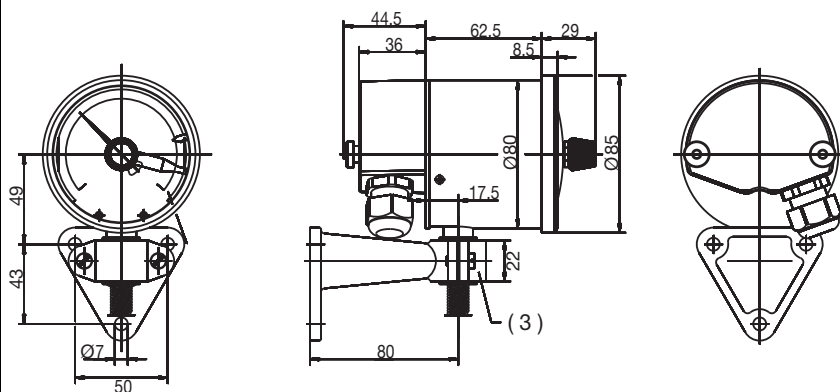


Type 608520/2210



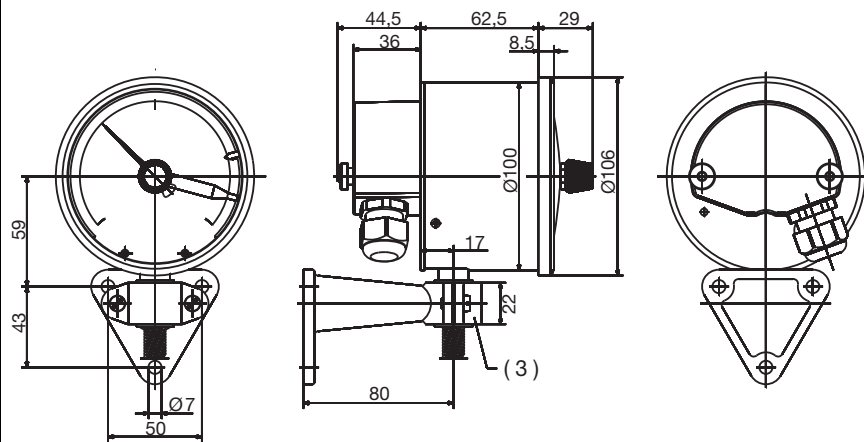
(1) Connecting cable 0.6 m long, ferrule

Type 608520/2380



(3) Spigot Ø 20 mm

Type 608520/2310



(3) Spigot Ø 20 mm

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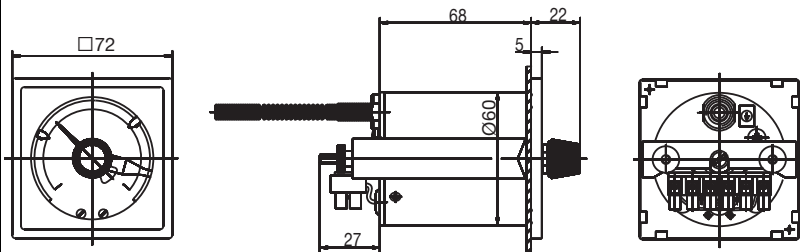
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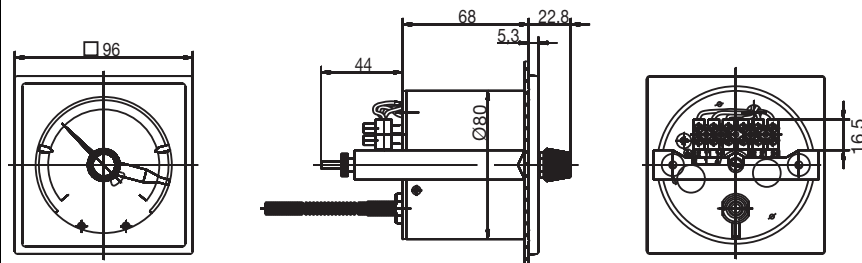


Type 608520/2572



Panel cut-out for front panel 72 mm × 72 mm = $\varnothing 62_{+0.5}^0$ mm

Type 608520/2596



Panel cut-out for front panel 96 mm × 96 mm = $\varnothing 82_{+0.5/0}^0$ mm or 92 mm × 92 $_{+0.5/0}^0$ mm (extra code 460)

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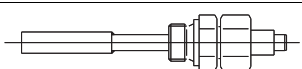
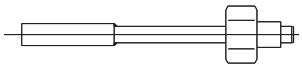
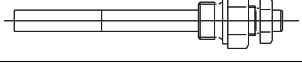
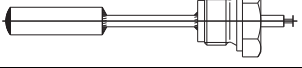
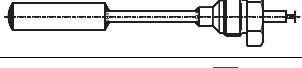
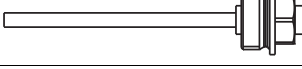
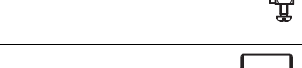
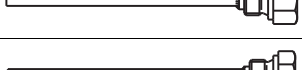
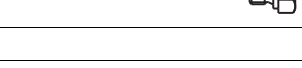
(1) Basic type	
608520	Mechanical contact dial thermometer, class 1.5
608550	Mechanical contact dial thermometer, class 1.5 – Transformer version (only basic type extension 1080)
(2) Basic type extension	
Case size Ø	
0280	Design type 02
0210	Design type 02
1080	Design type 10
1010	Design type 10
2060	Design type 20
2080	Design type 20
2010	Design type 20
2160	Design type 21
2180	Design type 21
2110	Design type 21
2280	Design type 22
2210	Design type 22
2380	Design type 23
2310	Design type 23
2572	Design type 25
2596	Design type 25
(3) Display range in °C	
469	-40 to +40
643	-20 to +120
807	0 to 60
814	0 to 100
818	0 to 120
832	0 to 200
840	0 to 300
848	0 to 400
854	0 to 500
858	0 to 600
(4) Capillary type^a	
00	Without (with rigid connection)
02	FL 02 Cu capillary with Cu textile braiding, approx. Ø 2.5 mm (up to AB end value 300 °C)
11	FL 11 Cu capillary with PE coating, approx. Ø 3.5 mm (up to AB end value 120 °C)
17	FL 17 Stainless steel capillary, approx. Ø 1.5 mm
21	FL 21 Cu capillary, approx. Ø 1.0 mm (up to AB end value 300 °C)
(5) Capillary length^b	
0	Without (with rigid connection)
1000	1000 mm
2000	2000 mm
3000	3000 mm
4000	4000 mm
5000	5000 mm

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...	Special length (specifications in plain text: 1,000 mm increments, maximum length 6,000 mm), additional lengths upon request		
(6) Process connection ^a			
750	TF 01	Temperature probe with stepped support tube	
752	TF 11	Temperature probe without support tube	
843	TA 02	Protection tube with union nut and loose screw connection ^b	
161	TA 03	Protection tube with loose screw connection	
847	TA 06	Protection tube with displaceable threaded fitting on support tube ^b	
311	TA 20	Protection tube with loose screw connection and connection collar ^b	
872	TA 21	Protection tube with loose pressure screw and conical seal (only G 3/8 possible)	
873	TA 22	Protection tube with loose pressure screw, conical seal and loose screw connection ^b	
874	TA 24	Protection tube (CuNi) with screw connection (CuZn), O-ring seal and clamping screw ^{a, b}	
401	TA 23	Protection tube with pressure screw and contact pressure spring (only M10 × 1 possible)	
913	SH 07	Screw-in protection tube, multi-sectional, with clamping piece and fixing screw (suitable for TF 01 and TF 11)	
820	SH 09	Weld-in protection tube, multi-sectional, with clamping piece and fixing screw ^b (not for FL 21 - welding collar with steel 1.4515)	
876	SH 10	Screw-in protection tube, multi-sectional ^b (suitable for TA 21)	
871	SH 11	Screw-in protection tube, multi-sectional ^b (suitable for TA 23)	
(7) Diameter of process connection ^a			
6	6 mm		
8	8 mm		
10	10 mm		
11	11 mm		
12	12 mm		
(8) Thread type of process connection ^a			
000	Without (for TA 01 and TF 11)		
103	Screw connection G 3/8		
104	Screw connection G 1/2		
105	Screw connection G 3/4		
106	Screw connection G 1		
114	Screw connection M10 × 1 (only with TA 23)		
(9) Material probe/support tube ^a			
26	Stainless steel (CrNi, 1.4571)		

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96	Copper (Cu)/Brass (CuZn) (up to 200 °C)
95	Stainless steel (CrNi, 1.4571) - probe/brass (CuZn) - support tube (from 250 °C)
(10) Process connection material^a	
00	Without (only TF 01 and TF 11)
26	Stainless steel (CrNi, 1.4571)
46	Brass (CuZn)
(11) Insertion length process connection^a (dimension „EL“ or „S“)	
0	Minimum insertion length TF 11 (active probe dimension)
50	50 mm
100	100 mm
150	150 mm
200	200 mm
...	Special length (specifications in plain text, 50 mm increments)
(12) Switching output	
20	1 changeover switch
21	2 changeover switches
22	2 changeover switches with fixed sequence
(13) Extra codes	
000	Without
426	Cover cap to protect the screw terminals against contact and spray water (standard for design types 10 and 23; not for design type 02 and 22; not in conjunction with extra code 460)
430	Drag indicator (includes extra code 477)
460	Device centering for panel cut-out 92 mm × 92 mm (only for basic type extension 2596)
477	Setpoint adjustment protected by the bolted cover, adjustment with screwdriver
518	Stop for Min.- or Max.-setpoint value limitation, default setting
522	Customized scale
650	Microswitch 10 (3) A [AC/DC 230 V, +10/-15 %, 48 to 63 Hz, cos φ = 1 (0.6)]
Special versions upon request!	

^a For the description and special features refer to data sheet 608730.

^b Screw-in spigot according to DIN 3852, form A

Order code

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

Order example 608520 / 210 - 818 - 21 - 2000 - 104 - 10 - 000 - 26 - 00 - 100 - 20 / 650

^a List extra codes in sequence, separated by commas.

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Stock versions

Delivery within 3 working days after receipt of order

Type	Display range °C	Switching output	Temperature probe, process connection	Protection tube mm	Part no.
608550/0180-643-874-8-106-50-150-20/434-522 with drag indicator	-20 to +120	20 (1 contact)	TF 05 d = 8 mm TA 24, G 1", CuZn	150	00455918
608550/0180-643-874-8-106-50-150-21/434-522 with drag indicator		21 (2 contacts)			00455919