

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 E-mail: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex CM20 2DY, UK
 Phone: +44 1279 635533
 Fax: +44 1279 635262
 E-mail: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: 315-437-5866
 1-800-554-5866
 Fax: 315-437-5860
 E-mail: info.us@jumo.net
 Internet: www.jumousa.com



Dial Thermometer

Type 608225

Special features

- Class 1
- Display ranges from -40°C to +600°C
- Temperature indicator as built-in or add-on device
 Stainless steel case with bayonet connection
- Case size: Ø 100 mm and Ø 160 mm
- Protection type IP 65

Brief description

Dial thermometers are universal devices used for temperature measurement 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 overall system is extremely warp resistant due to the direct connection of the indicator to the measuring system. Oscillations are transferred to the indicator only to a limited degree.



Type 608225/
1016

Technical data

Case	Stainless steel case with bayonet connection (1.4301)
Protection type	IP 65 according to DIN EN 60529
Front pane	Glass with extra code 434 made of polycarbonate
Scale	White, with black lettering
Display	Class 1 according to DIN EN 13190
Strain relief spring	For capillary devices on the case and the temperature probe
Display correction	On the rear (no display correction with design type 01)
Limit value temperatures	For transport and storage -20°C to +70°C (for display range 0 to +60°C up to max. 65°C)
Rated position (NL)	Any

	Liquid filling	Gas filling
Measuring system	Display range (AB) ≤ 350°C	Display range (AB) ≥ 400°C
Time constant τ _{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.
Influential effect of the ambient temperature	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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Display range (AB)	Display range in °C	Measuring range in °C	Tolerance in K (+/-)
643	-20 to +120	0 to +100	2.0
357	-50 to +50	-40 to +40	1.0
810	0 to +80	+10 to +70	1.0
814	0 to +100	+10 to +90	1.0
818	0 to +120	+20 to +100	1.0
826	0 to +160	+20 to +140	2.0
832	0 to +200	+20 to +180	2.0
834	0 to +250	+30 to +220	2.5
840	0 to +300	+30 to +270	5.0
854	0 to +500	+50 to +450	5.0

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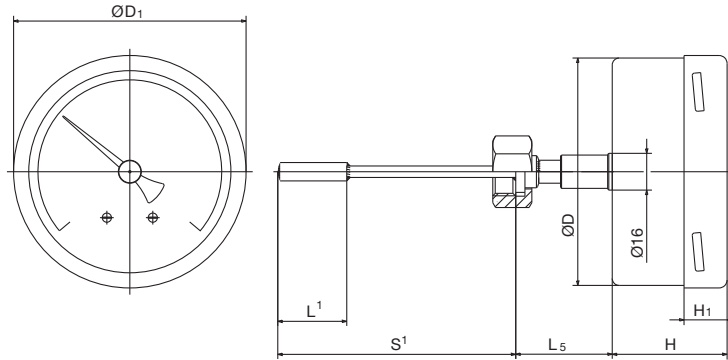
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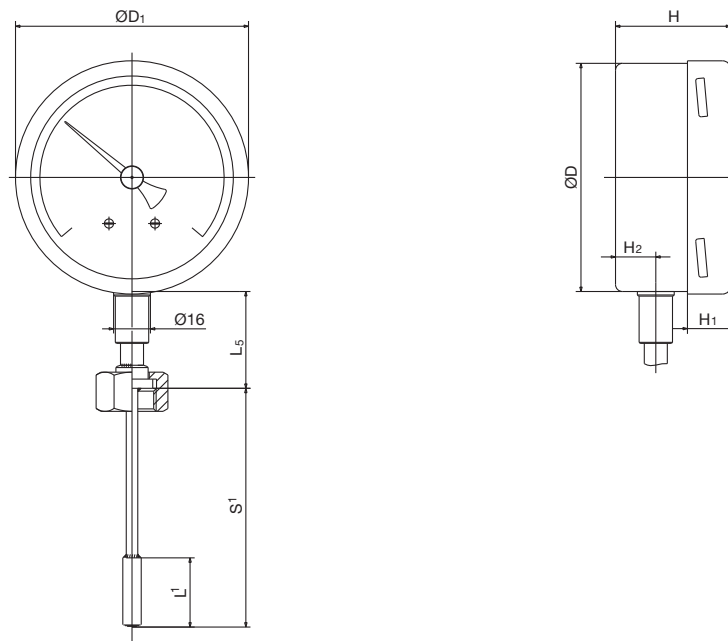


Dimensions

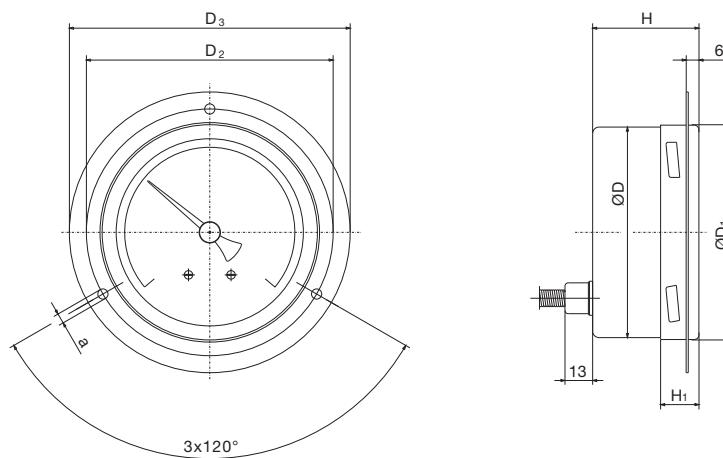
Types: 608225/0110
 608225/0116



Types: 608225/1010
 608225/1016



Types: 608225/2010
 608225/2016



For length specifications, see data sheet 608730

Panel cut-out for case
 $\varnothing 100 \text{ mm} = 105.5^{+0.5} \text{ mm}$
 $\varnothing 160 \text{ mm} = 165.5^{+0.5} \text{ mm}$

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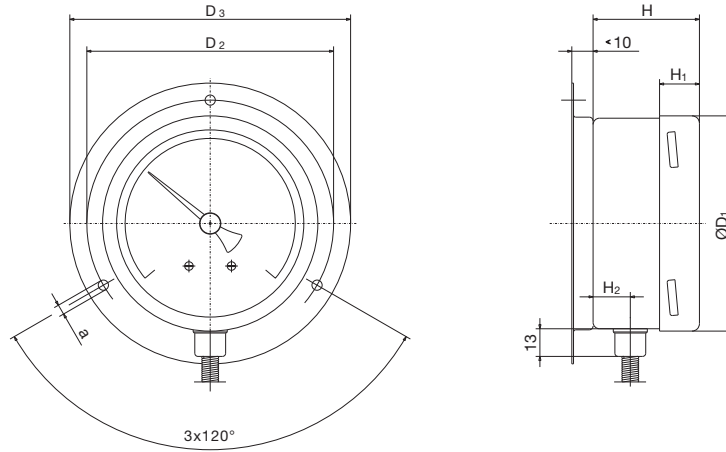
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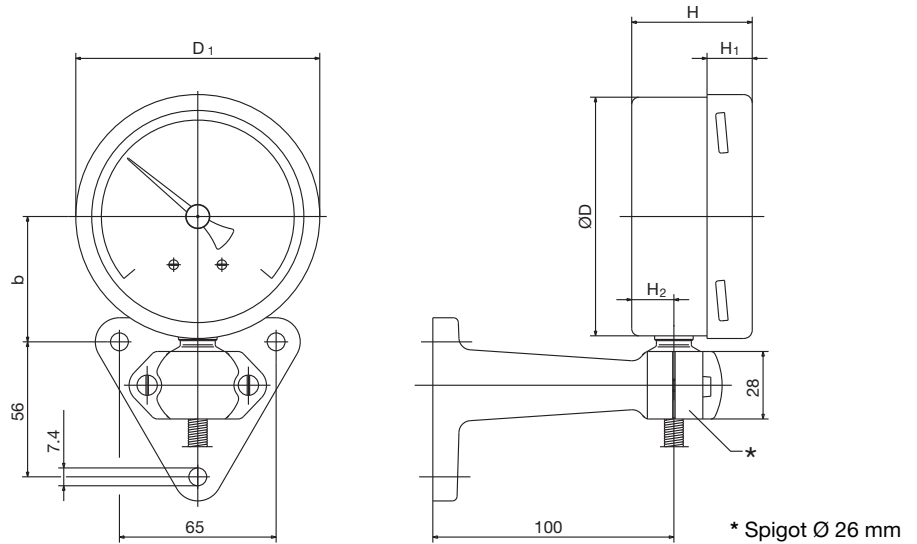


Dimensions

Types: 608225/2210
 608225/2216



Types: 608225/2310
 608225/2316



Bracket for measuring device according to DIN 16281

Case ϕ	H	H ₁	H ₂	D	D ₁	D ₂	D ₃	a	b	L ₅
100	50	19	17.5	99	101.5	116	132	4.8	52	40 ¹
160	50	21		159	161.5	178	196	5.8	82	

¹ With protection tube connection type TA 02, L₅ is \leq 69 mm

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Order details

Dial thermometer, class 1, type 608225

Order code	(1) Basic type	
608225	Mechanical dial thermometer	
	(2) Basic type extension	
0110	Design type: 01; case size: ø 100 mm	
0116	Design type: 01; case size: ø 160 mm	
1010	Design type: 10; case size: ø 100 mm	
1016	Design type: 10; case size: ø 160 mm	
2010	Design type: 20; case size: ø 100 mm	
2016	Design type: 20; case size: ø 160 mm	
2210	Design type: 22; case size: ø 100 mm	
2216	Design type: 22; case size: ø 160 mm	
2310	Design type: 23; case size: ø 100 mm	
2316	Design type: 23; case size: ø 160 mm	
	(3) Display range (AB)	
469	-40 to +40°C;	
566	-30 to +50°C;	
807	0 to +60°C;	
810	0 to +80°C;	
814	0 to +100°C;	
818	0 to +120°C;	
826	0 to +160°C;	
832	0 to +200°C;	
834	0 to +250°C;	
840	0 to +300°C;	
843	0 to +350°C;	
848	0 to +400°C;	
854	0 to +500°C;	
	(4) Capillary type (FL)¹	
00	Without (with rigid connection)	
04	FL04 Stainless steel capillary (1.4571), ø 2.2 mm	
	(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)	
	(6) Process connection (PC)¹	
750	TF01 Temperature probe with stepped support tube	
753	TF05 Temperature probe with plane support tube	
752	TF11 Temperature probe without support tube	
843	TA02 Protection tube with union nut and loose screw connection ²	
161	TA03 Protection tube with loose union nut (with TF01)	
846	TA04 Protection tube with fixed hexagon male connector ²	
847	TA06 Displaceable threaded fitting on support tube ²	
891	SH05 Screw-in sleeve, multi-sectional ² (only with ø 14 mm)	
913	SH07 Screw-in sleeve, multi-sectional, with clamping piece and fixing screw ²	

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Order details

Dial thermometer, class 1, type 608225

Order code	(7) Diameter of process connection (PC)¹
6	ø 6 mm
8	ø 8 mm
10	ø 10 mm
14	ø 14 mm (only for SH05)
	(8) Thread type of process connection (PC)¹
000	Without thread (for TF 01, TF 05 and TF 11)
103	Screw connection G 3/8
104	Screw connection G 1/2
105	Screw connection G 3/4
	(9) Material of process connection (PC)¹
26	Stainless steel (1.4571)
97	Stainless steel (1.4571) – TF / Brass – TA, SH
	(10) Insertion length, process connection (PC)¹ (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)
	(11) Extra codes (TZ)
000	Without extra code
362	Ex protection according to directive 2014/34/EU
434	Drag indicator can be adjusted with a screwdriver, protected by a cover
522	Customized scale

Special versions upon request!

Order code:

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

608225 / ... - ... - .. - - ... - .. - ... - .. - ... / ... , ...

Order example:

608225 / 2010 - 818 - 04 - 2000 - 750 - 8 - 000 - 26 - 100 / 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.