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JUMO Process Control, Inc.
6733 Myers Road
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Bimetal Dial Thermometer

Industry version

Special features

- Class 1
- Display ranges from -50°C to +500°C
- Stainless steel case
- Case sizes ∅: 60 mm, 80 mm and 100 mm
- Protection type IP54, also available IP65

Brief description

The locally displaying industrial thermometers work according to the principle of a bimetal coil. The measuring principle is based on the fact that the bimetal coil is exposed to the medium temperature in a stainless steel or brass protection tube. The coil rotates as the temperature increases or falls. The rotation acts directly on the indicator via an axis. The pointer indicator is therefore proportional to the change of temperature.

All versions of the JUMO bimetal dial thermometer 608002 comply with DIN EN 13190, class 1.



Type 608002/1810 **Type 608002/0110**

Technical data

Basic type extension	0160, 0180, 0110, 1860, 1880, 1810
Case	Case and bezel made of stainless steel; bracket made of aluminum (design 18)
Protection type	IP 54 according to DIN EN 60529 (IP 65 in the case of extra code 404)
Front pane	Glass with extra code 404 made of acrylic glass (PMMA)
Scale	Polished aluminum, with black lettering
Display	Linear, class 1 similar to DIN EN 13190
Time constant $t_{0.632}$	Approx. 20 s, measured in flowing water with a probe Ø of 10 mm made of stainless steel
Influential effect of the ambient temperature	No influence
Limit value temperatures	-30 to +80°C (storage and transport -30 to +80°C)
Rated position	Any

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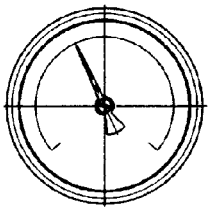
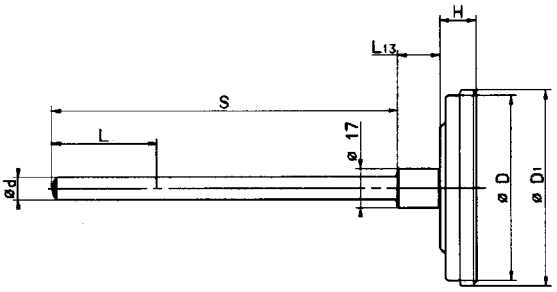
Technical data (cont.)

Display range (AB)	Display range in °C	Measuring range in °C	Tolerance in K (+/-)
632	-20 to +60	-10 to +60	1.0
643	-20 to +120	0 to +100	2.0
469	-40 to +40	-30 to +30	1.0
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
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
848	0 to +400	+50 to +350	5.0
854	0 to +500	+50 to +450	5.0

Dimensions

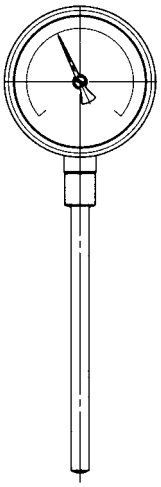
Types:
608002/0160
608002/0180
608002/0110

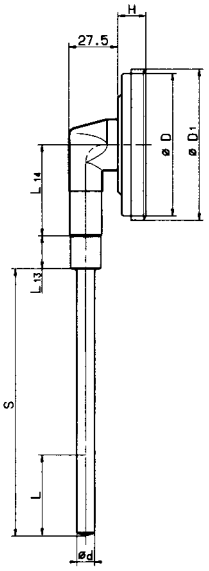




Type	Ø D	Ø D_1	H
608002/0160	60	65	17.5
608002/0180	80	85	18.5
608002/0110	100	106	18.5

Types:
608002/1860
608002/1880
608002/1810

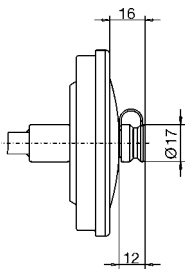




For dimensional specifications about Ø d and L_{13} see data sheet 608730.

Type	Ø D	Ø D_1	H	L_{14}
608002/1860	60	65	17.5	26
608002/1880	80	85	18.5	51
608002/1810	100	106	18.5	51

Extra codes **434**



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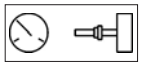
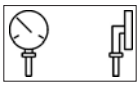
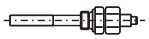
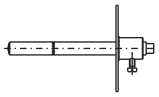
Order details

Order code	(1)	Basic type	
		Mechanical dial thermometer, industrial version, class 1	
		Design type 01	Case size Ø
608002/0160			60 mm
608002/0180			80 mm
608002/0110			100 mm
		Design type 18	Case size Ø
608002/1860			60 mm
608002/1880			80 mm
608002/1810			100 mm

	(2)	Display range (AB) in °C
632		-20 to +60
643		-20 to +120
469		-40 to +40
357		-50 to +50
810		0 to +80
814		0 to +100
818		0 to +120
832		0 to +200
834		0 to +250
840		0 to +300
848		0 to +400
854		0 to +500

	(3)	Process connection (PC) [b]		
010		TA 01	Protection tube with collar	
844		TA 02	Protection tube with union nut and loose screw connection [a]	
845		TA 03	Protection tube with loose union nut	
841		TA 04	Protection tube with fixed hexagon [a]	
847		TA 06	Protection tube with displaceable threaded fitting (max. 20 bar)	
018		TA 08	Protection tube with displaceable mounting plate made of zinc-plated steel and fixing screw	
858		SH 04	Single-section screw-in protection tube	
891		SH 05	Multi-sectional screw-in protection tube	
913		SH 07	Multi-sectional screw-in protection tube with fixing screw	
820		SH 09	Multi-sectional weld-in protection tube with fixing screw	

[a] Screw-in spigot according to DIN 3852 form A (not for NPT threads)
[b] For description and particularities refer to data sheet 608730.

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	(4)	Ø Process connection (PA) [b]	
6		6 mm	(not with display ranges 628, 564, 807)
10		10 mm	
12		12 mm	(only with SH 05, SH 07)
14		14 mm	(only with SH 05, SH 07, SH 09)
17		17 mm	(only with SH 04)

	(5)	Thread type of process connection (PC) [b]
000		Without thread (only TA 01)
103		Screw connection G 3/8
104		Screw connection G 1/2
105		Screw connection G 3/4
144		Screw connection 1/2-14NPT

	(6)	Probe material
26		Stainless steel (CrNi, 1.4571)

	(7)	Material of process connection (PC) [b]
26		Stainless steel (CrNi, 1.4571)

	(8)	Insertion length, process connection (PC) dimension "S"
100		100 mm
150		150 mm
200		200 mm
. . .		Special length (specifications in plain text – 50 mm increments)

	(9)	Extra code (TZ)
000		Without extra code
404		IP 65 (only with basic type extension 0160, 0110, 1860, 1810) not with TZ 430
430		Drag indicator (only with basic type extension 0160, 0180, 0110, 1860, 1880, 1810 – display range min. 100 K)
434		Drag indicator can be adjusted with a screwdriver, protected by a cover
522		Customized scale

Special versions upon request!

[a] Screw-in spigot according to DIN 3852 form A (not for NPT threads)
[b] For description and particularities refer to data sheet 608730.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		
Order code	608002/	-		-		-		-		-		-		-		/		,	. . .
Order example	608002/0180	-	818	-	845	-	10	-	104	-	26	-	26	-	100	/	000 [c]	,	. . .

[c] List extra codes in sequence, separated by commas.

Stock versions

Part no.	Type	Display range °C	ø / dimension "S" or "EL"
80001185	608002/0180-818-847-6-104-26-26-200/000	0 to +120	6 x 200
80001186	608002/0180-834-847-6-104-26-26-200/000	0 to +250	6 x 200

Delivery within 3 working days after receipt of order