

JUMO GmbH & Co. KG

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JUMO Instrument Co. Ltd.

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JUMO Process Control, Inc.

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JUMO dicoTEMP 800

Dial thermometer with microswitch

Special features

- Low mounting depth
- Class 1.5
- Display ranges from -50 to +500 °C
- Temperature controller with actual value display with panel mount, stainless steel case
- 1 microswitch
- Case size Ø 80 mm

Brief description

Dial thermometers with microswitches are universal temperature controllers with an 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.

Series 608530 dial thermometers with microswitches are RoHS-compliant and cadmium-free.



Type 608530/2180

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Technical data

Housing and front panel	Stainless steel (1.4301)
Protection type	Front IP54, rear IP00 according to DIN EN 60529
Front pane	Acrylic glass (PMMA)
Chassis	Die-cast
Scale	White, with black lettering
Display	Class 1.5 similar to DIN EN 13190
Strain relief spring	For capillary devices on the housing and temperature probe
Switching capacity	Max. 5 A, 230 V/optional max. 10 A, 230 V
Setpoint value adjustment	By setpoint adjuster in the front pane
Limit value temperatures	For transport, storage, and operation -30 to +70 °C
Weight	Approx. 350 g
Rated position (NL)	Any

Display range (AB)	Display range in °C	Measuring range in °C	Tolerance in K (±)
818	0 to 120	20 to 100	3
834	0 to 250	30 to 220	5
926	50 to 250	70 to 230	4
927	50 to 300	80 to 270	5

	Liquid fill	Gas fill
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 display range (relative to the deviation from the reference value 23 °C)	
On housing	0.15% of display range Per K ambient temperature change	0.05% of display range Per K ambient temperature change
On capillary (per m)	0.03% of display range Per K ambient temperature change	No influence
	At higher ambient temperature – higher temperature display – lower switching point	

Electrical contact	Standard	Optional
Contact type	Single-pole microswitch with mechanically actuated changeover contact	
Switching capacity	AC 230 V, +10%, $\cos \varphi = 1$ (0.6) 5 (1.5) A	10 (3) A
Switching contact	Must be fused accordingly	
Switching differential	Approx. 1.5% of display range	1.5 to 3% of display range
Switching point accuracy	±0.5% of the display range referring to the switch-off point with rising temperature	
Switching reliability	To ensure the maximum possible switching reliability, we recommend a minimum voltage of 24 V and a minimum current of 100 mA.	

Electrical connection	Standard: screw terminals, connection cross section up to 2.5 mm ²
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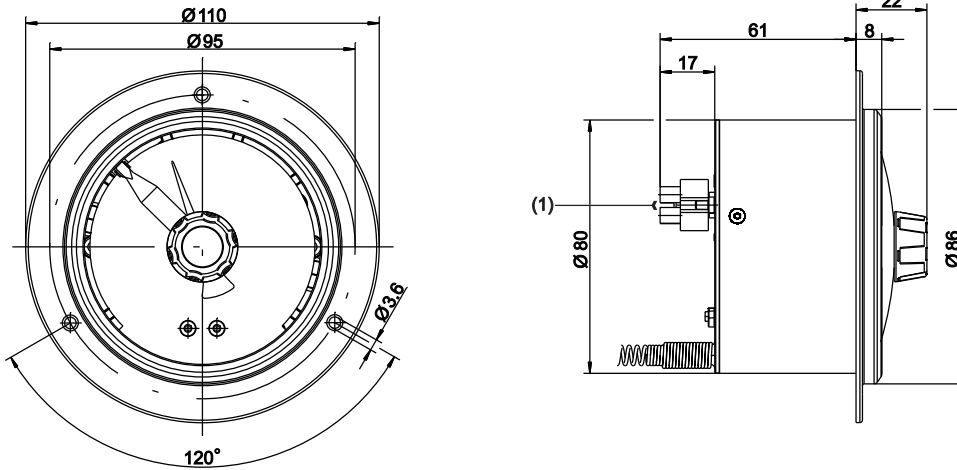
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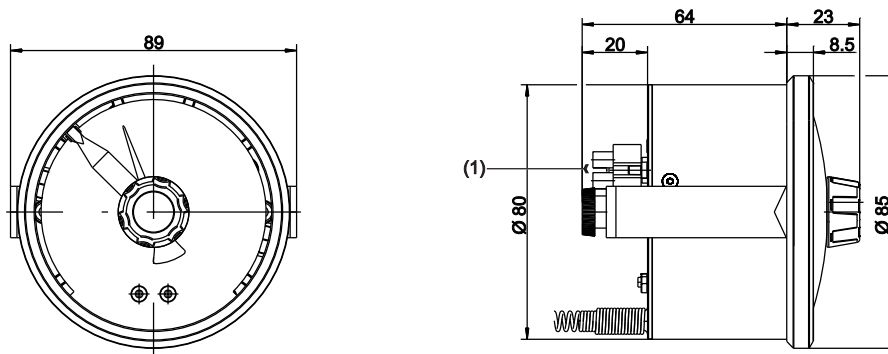
Dimensions

Type 608530/2080



(1) Screw terminal for electrical connection

Type 608530/2180



(1) Screw terminal for electrical connection

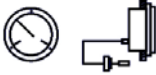


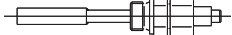
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Order details

Order code	(1) Basic type		
608530	JUMO dicoTEMP 800 Dial thermometer with 1 microswitch, class 1.5		
	(2) Basic type extension	Case size Ø	
2080	Design type 20		80 mm
2180	Design type 21		80 mm
	(3) Display range (AB) in °C		
818	0 to 120		
834	0 to 250		
926	50 to 250		
927	50 to 300		
	(4) Switching capacity		
11	AC/DC 24 V, 0.1 A		
26	AC 230 V, 5(1.5) A, cos = 1(0.6)		
27	AC 230 V, 10(3) A, cos = 1(0.6)		
	(5) Capillary type (FL)		
17	FL 17 Stainless steel capillary, approx. 1.5 mm Ø		
21	FL 21 Cu capillary, approx. 1.0 mm Ø (up to AB end value 120 °C)		
22	FL 22 Cu capillary, approx. 1 mm Ø		
	(6) Capillary length		
1000	1 000 mm		
2000	2 000 mm		
...	Special length (specifications in plain text: 1 000 mm increments, maximum length 6 000 mm)		
	(7) Process connection (PC)		
750	TF 01 Temperature probe with offset support tube		
848	TA 25/TF 11 Displaceable threaded fitting on capillary		
	(8) Thread type of process connection (PC)		
000	without (for TA 01 and TF 11)		
103	Screw connection G 3/8		
104	Screw connection G 1/2		

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(9) Probe and support tube material	
26	Stainless steel (CrNi, 1.4571)
96	Copper (Cu)/Brass (CuZn) (up to 200 °C)
(10) Material process connection	
00	None
26	Stainless steel (CrNi, 1.4571)
46	Brass (CuZn)
(11) Diameter "D" (immersion tube diameter)	
6	6 mm
8	8 mm
(12) Insertion length of process connection (PC)	
0	Minimum insertion length TF 11 (active probe dimension)
50	50 mm
100	100 mm
...	Special length (specifications in plain text, 50 mm increments)
(13) Switching output	
20	SA20 with 1 microswitch
(14) Extra codes (TZ)	
000	None
518	Limit stop for min. or max. setpoint value limitation, default setting
520	Switching point is a default setting
522	Customized scale

Special versions upon request!

Order code (1) / (2) - (3) - (4) - (5) - (6) - (7) - (8) - (9) - (10) - (11) - (12) - (13) - (14)^a
 Order example 608530 / 2180 - 818 - 11 - 17 - 1000 - 750 - 000 - 26 - 26 - 6 - 100 - 20 / 520

^a List extra codes in sequence and separate using commas.