

**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 φ = 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 <sup>2</sup>
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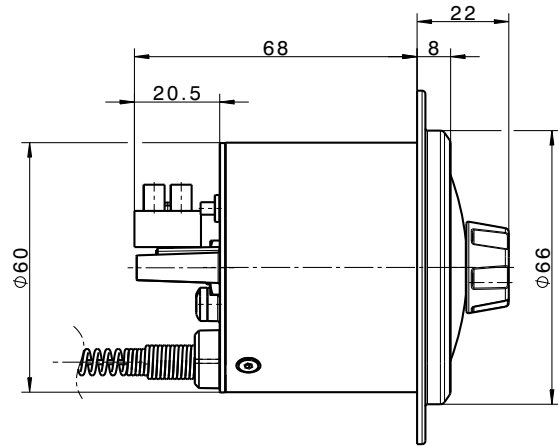
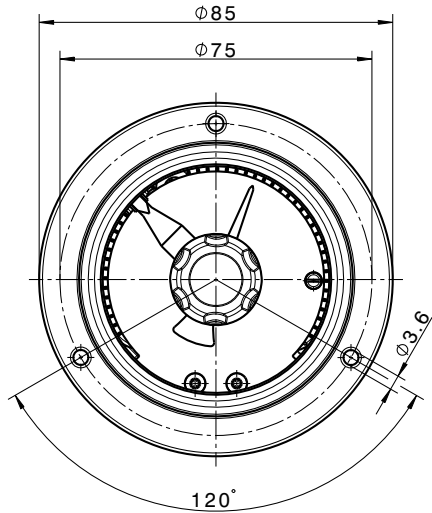
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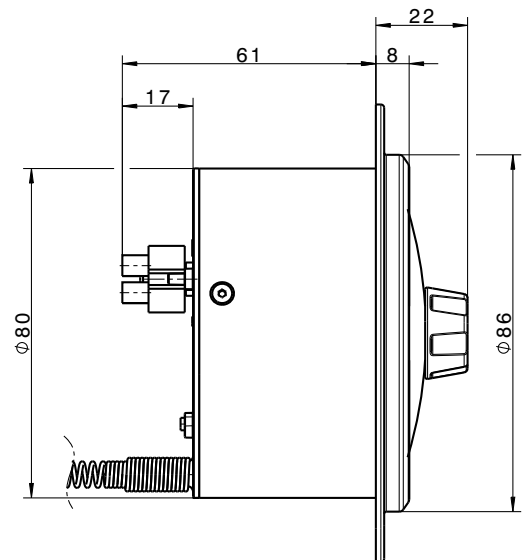
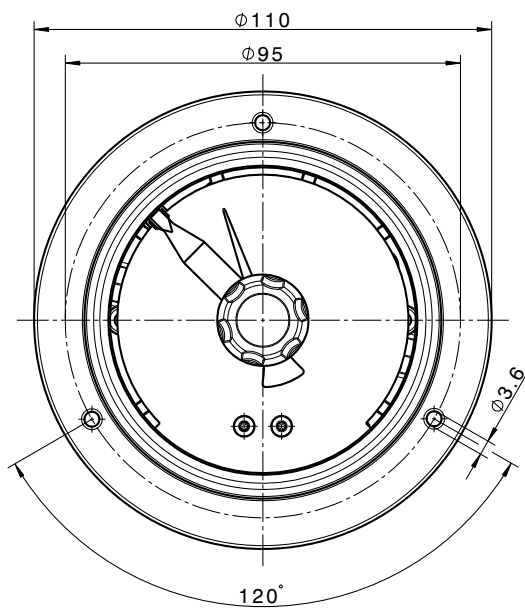


## Dimensions

Type 608530/2060



Type 608530/2080



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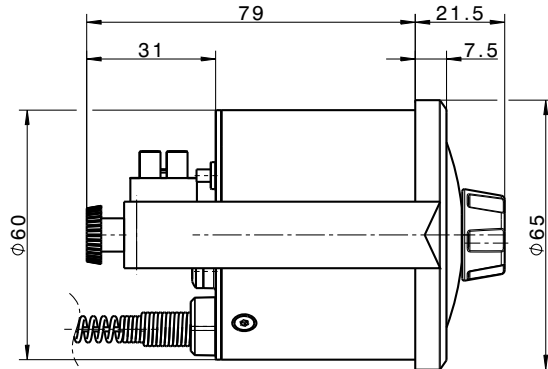
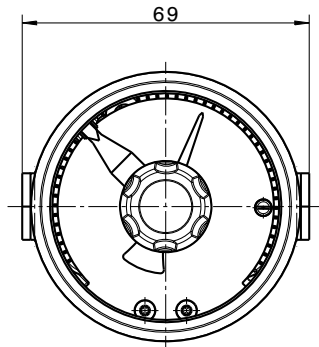
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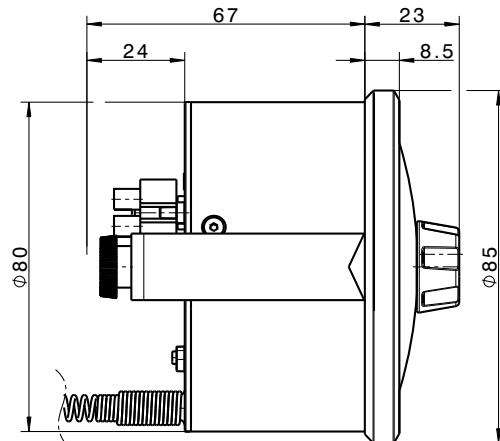
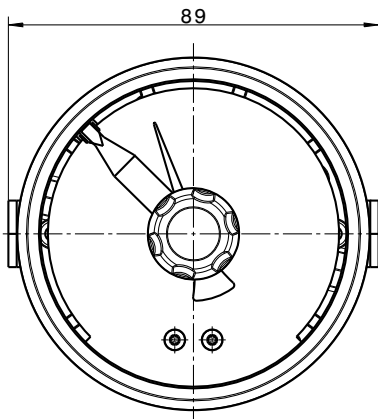
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Type 608530/2160



Type 608530/2180








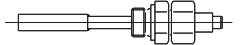
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## Order details

	<b>(1) Basic type</b>	
608530	JUMO dicoTEMP 800 – Dial thermometer with 1 microswitch, class 1.5	
	<b>(2) Basic type extensions</b>	
2060	Design type 20, housing size Ø 60 mm	
2080	Design type 20, housing size Ø 80 mm	
2160	Design type 21, housing size Ø 60 mm	
2180	Design type 21, housing size Ø 80 mm	
	<b>(3) Display range</b>	
818	0 to 120 °C	
834	0 to 250 °C	
926	50 to 250 °C	
927	50 to 300 °C	
	<b>(4) Switching capacity</b>	
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)	
	<b>(5) Capillary type</b>	
17	FL17 Stainless steel capillary, Ø 1.5 mm	
21	FL21 Cu capillary, Ø 1.0 mm	
22	FL22 Stainless steel capillary, Ø 1 mm	
	<b>(6) Capillary length</b>	
1000	1000 mm	
2000	2000 mm	
...	Special length (specifications in plain text: 1 000 mm increments, maximum length 6 000 mm)	
	<b>(7) Process connection</b>	
750	TF01, temperature probe with stepped support tube	
848	TA25, displaceable threaded fitting on capillary	
	<b>(8) Diameter</b>	
6	6 mm	
8	8 mm	
	<b>(9) Thread type of process connection</b>	
000	None	
103	Screw connection G 3/8	
104	Screw connection G 1/2	
	<b>(10) Material of probe and support tube</b>	
26	CrNi 1.4571	
96	Cu (copper) probe/CuZn (brass) support tube	

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<b>(11) Process connection material</b>	
00	None
26	CrNi 1.4571
46	CuZn (brass)
<b>(12) Insertion length</b>	
0,0	Min. insertion length TF11
50.0	50 mm
100.0	100 mm
...	Special length (specifications in plain text, 50 mm increments)
<b>(13) Switching output</b>	
20	SA20 with one micro switch
<b>(14) Extra codes</b>	
000	None
518	Limit stop for min. or max. setpoint value limitation default setting
520	Switching point default setting
522	Customized scale

Special versions upon request.

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

<sup>a</sup> List extra codes in sequence and separate using commas.

**Stock versions**

Order code	Display range	Part no.
608530/2180-926-26-22-2000-848-120-26-26-6-0-20/000	50 to 250 °C	00669249