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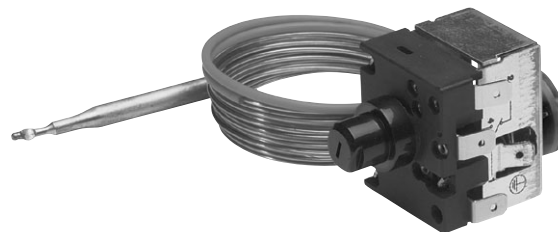
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JUMO heatTHERM

Type 602031

- Protection temperature limiter, as a panel-mounting thermostat
- Compensated for ambient temperature



Brief description

Thermostats control and monitor thermal processes. The JUMO heatTHERM, type 602031, is a protection temperature limiter STB.

The panel-mounting thermostat operates on the principle of liquid expansion. The electrical switching device is a snap-action switch.

Switching action

Protection temperature limiter STB with lock-out and self-monitoring facility

If the temperature at the probe exceeds the set limit, the snap-action switch is operated through a transmission mechanism, the circuit is opened and the snap-action switch is locked out mechanically.

After the temperature has fallen below the limit by about 10% of the limit value, the snap-action switch can be reset manually.




Failure of the measuring system, i.e. a leakage of the expansion liquid, will cause the pressure under the diaphragm to drop, thus permanently opening the circuit. The thermostat can no longer be reset.

If the probe cools down to below -20°C (approx.), the same circuit will open, but will close again when the temperature rises.

Temperature compensation

A deviation of the ambient temperature at the switch head and capillary from the +22°C calibration ambient temperature will result in a shift of the switching point. The temperature compensation reduces this switching point shift to a minimum.

Approvals

DIN Reg. No.	Tests				
STB 116904	 ³	 ²	PED 97/23/EC ²	 ¹	You will find the Declarations of Conformity at: www.jumo.net or ask for them to be sent.

¹ applied for

² limit: 180°C max.

³ mode of operation as per EN 60 730-2-9: Type 2BFHKLP

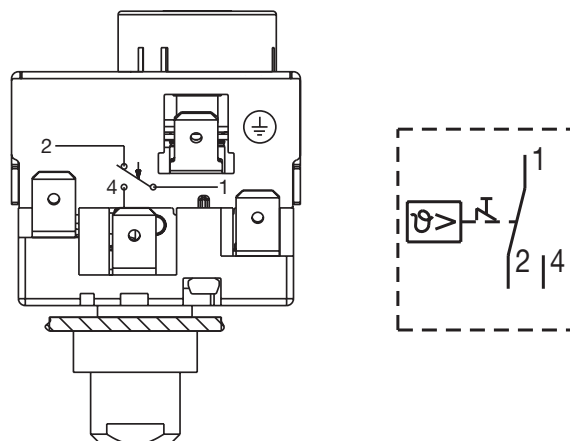
Technical data

Housing	sheet steel, zinc-plated
Base	black polyester resin compound
Fixing	M 10x1, with hexagon nut and protective cap
Enclosure protection	IP00 to EN 60 529
Limit temperatures	for transport and storage: -50 to +50°C in use: +80°C max.
Nominal position (NL)	unrestricted
Weight	approx. 0.12 kg
Ambient temperature effect	A deviation from the ambient temperature at the switch head and capillary from the +22°C calibration ambient temperature will result in a switching point shift of about $-0.1^{\circ}\text{C}/^{\circ}\text{C}$ (measured at +120°C limit, permanently set, and with 3000 mm capillary length)
Electrical contact	<p>Contact type: snap-action switch with single-pole (n.c.) break contact, lock-out and signal contact</p> <p>Contact rating:</p> <p>break contact (contacts 1-2): 16 (2.5) A, 230 V AC +10%, p.f. = 1 (0.6) 0.25A, 230 V DC +10%</p> <p>signal contact (contacts 1-4): 2 (0.4) A, 230 V AC +10%, p.f. = 1 (0.6) 0.25A, 230 V DC +10%</p> <p>gold-plated snap-action switch, code 702: 0.1A, 24 V AC/DC,</p>
Connection	A 6.3-0.8 to DIN 46244
Switching point accuracy	see order details
Switching reliability	To ensure maximum switching reliability, we recommend a minimum loading of: AC/DC = 24 V, 20 mA with silver contacts AC/DC = 10 V, 10 mA with gold-plated contacts (code 702)

Probe length L in mm



Limit value	95°C	100°C	110°C	120°C	350°C	70 to 130°C	95 to 120°C	120 to 150°C	150 to 180°C
Probe dia.									
4 mm									
6 mm		72					72		

Connection diagram



Order details

Panel-mounting thermostat JUMO heatTHERM, type 602031

Order code	(1) Basic type
602031	Panel-mounting thermostat JUMO heatTHERM, with single-pole snap-action switch
	(2) Basic type extensions
80	Protection temperature limiter (STB), permanently set, with (n.c.) break contact, lock-out and signal contact
81	Protection temperature limiter (STB), adjustable, with (n.c.) break contact, lock-out and signal contact
	(3) Limit value
	Max. probe temperature
095	+ 95°C +0/-5°C +145°C
100	+100°C +0/-5°C +145°C
110	+110°C +0/-5°C +145°C
120	+120°C +0/-5°C +145°C
350	+350°C +0/-20°C +405°C
671	+ 70 to +130°C +0/-15°C +150°C (freely adjustable) ¹
666	+ 95 to +120°C +0/-5°C +145°C (adjustable, notch positions 95, 100, 110, 120°C) ¹
672	+120 to +150°C +0/-10°C +175°C (freely adjustable) ¹
673	+150 to +180°C +0/-10°C +210°C (freely adjustable) ¹
	(4) Capillary length
1000	1000 mm
2000	2000 mm
2500	2500 mm
3000	3000 mm
...	special length (specify in plain text, in 1000 mm steps, max. length: 5000 mm)
	(5) Material of capillary
40	Cu (copper) 1.25 mm dia.
	(6) Insulation of capillary
00	without
13	with
	(7) Insulation length (starting from housing)
0	none
450	450 mm
950	950 mm
	(8) Process connection (PA)²
10	A = plain cylindrical probe 
20	U = temperature probe, no support tube 
	(9) Thread of process connection
00	no thread (process connection A)
13	external thread G 1/2
	(10) Material of process connection
00	only with process connection A
46	CuZn (brass)
01	St (steel)
20	CrNi (stainless steel 1.4571)

Order details

Panel-mounting thermostat JUMO heatTHERM, type 602031

Order code	(11) Fitting length S (immersion tube length)
000	no pocket
100	100mm
150	150mm
200	200mm
300	300mm
400	400mm
....	special length (specify in plain text)

	(12) Diameter of process connection
4	4 mm
6	6 mm
8	8 mm

	(13) Extra codes (TZ)
000	no extra code
702	gold-plated snap-action switch contacts
708	snap-action switch without signal contact

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Order code	602031	/		-		-		-		-		-	
Order example	602031	/	80	-	110	-	2000	-	40	-	13	-	450
		-	10	-	00	-	00	-	000	-	6	-	000

¹ only with basic type extension 81
² see data sheet 60.6710 for additional probe mountings