

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
Email: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.

JUMO House
Temple Bank, Riverway
Harlow, Essex CM 20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.

6733 Myers Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



JUMO heatTHERM P100

Panel-mounted thermostat

Special features

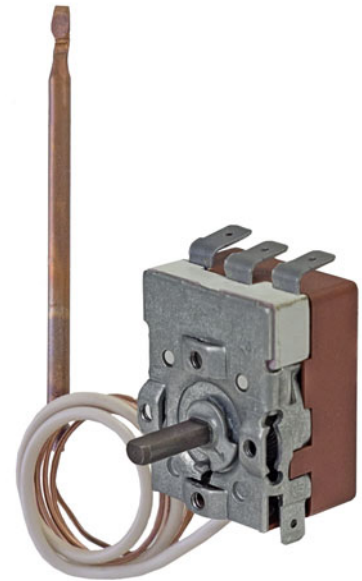
- Temperature controller (TR)
- Entry-level class
- Simple mounting

Brief description

Thermostats control and monitor thermal processes.

The JUMO heatTHERM P100 is available as a temperature controller (TR). The panel-mounted thermostat operates according to the liquid expansion principle. The electrical switching element is a snap-action switch.

The panel-mounted thermostat is RoHS-compliant and cadmium-free.



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Technical data

Switching functions

Temperature controller (TR)	If the temperature on the temperature probe exceeds the setpoint value, the microswitch is activated by the transmission mechanics and the electrical circuit is opened or closed. If the temperature falls below the selected setpoint value (by the amount of the switching differential), the microswitch is reset to its initial position.
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General information

Capillary	Minimum bending radius of the capillary 5 mm, capillary Ø 1.4 mm
Material	Copper (Cu)
Length	935 mm or 2000 mm
Protective hose	315 mm
Temperature probe	Ø 6 mm, length 96±5 mm
Material	Copper (Cu)
Process connection	See data sheet 606710 (plain cylindrical probe "10")
Max. probe temperature	15% or at least 25K of the limit value
Mean ambient temperature influence	When the ambient temperature on the switching head and/or the capillary deviates from the calibration ambient temperature of 22 °C, a switching point offset occurs. Higher ambient temperature = lower switching point Lower ambient temperature = higher switching point
Protection type	IP00, according to DIN EN 60529

Housing

Upper part of the housing	Steel sheet, zinc-plated
Fastening	2 M4 screws, spacing 28 mm
Rated position (NL)	Any
Weight	Approx. 80 g, depending on version
Protective conductor grounding	Fixing bracket — Standard Tab connector connection

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**Electrical connection**

TR	Switching capacity AC 230 V Inductive load in (x.x)	Overvoltage category	Max. Umgebungstemperatur am Schaltkopf	Electrical connection
Normally closed contact (N/C)	16 A (2.5 A) cos $\varphi = 1$ (0.6)	II	80 °C	Tab connector 6.3 mm
Normally open contact (N/O)	4 A (1.0 A) cos $\varphi = 1$ (0.6)			
Normally closed contact with normally open contact				
Mode of operation	2BL			
Pollution degree	2			
Protection rating	I			

Environmental influences

Max. admissible ambient temperature	For transport -15 to +55 °C	For storage 5 to +55 °C	
Time constant $t_{0.632}$	< 45 s, measured in water	< 60 s, measured in oil	< 120 s, measured in air

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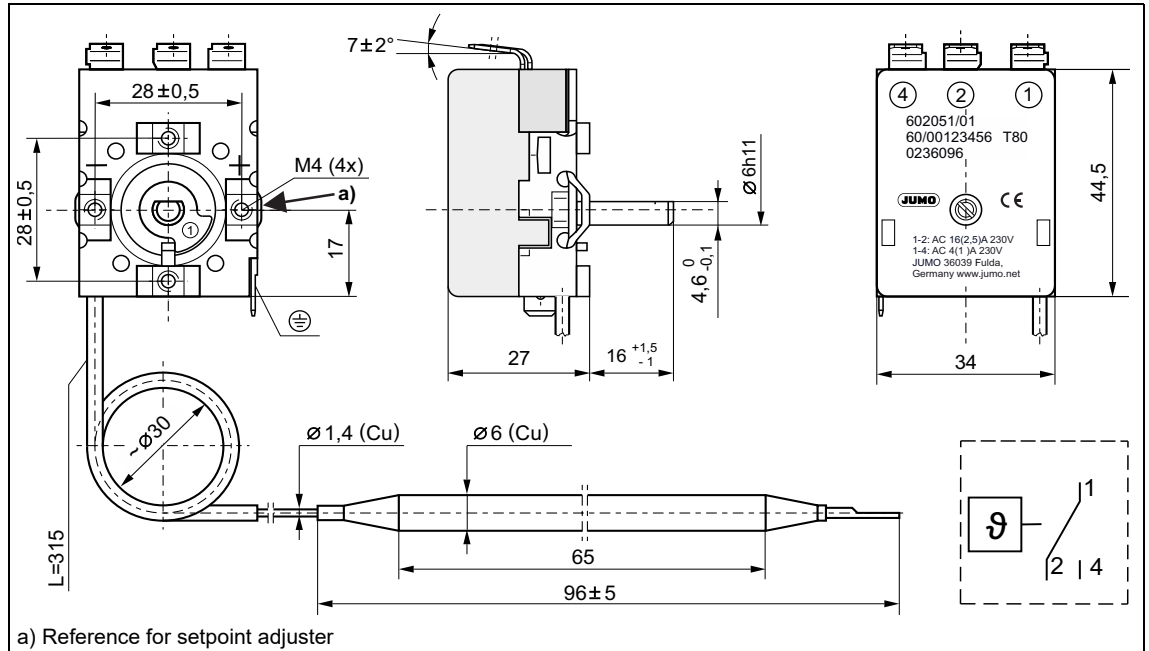
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Dimensions

Type 602051



Type 602051/01-050

Temperature range	30 to 90 °C	
Switching differential	6+/-5 K	
Switching point accuracy	At the end of the control range +/-9 K	
Max. admissible probe temperature	90 +15% °C	
Length of the capillary	935 mm 2000 mm	

Type 602051/01-334

Temperature range	30 to 120 °C	
Switching differential	5+/-4 K	
Switching point accuracy	At the end of the control range +/-9 K	
Max. admissible probe temperature	120 +15% °C	
Length of the capillary	935 mm 2000 mm	


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Order details

Order code	(1)	Basic type	
602051		Panel-mounted thermostat	
	(2)	Basic type extension	
01		Temperature controller (TR)	
	(3)	Control range °C	
050		30 to 90	
334		30 to 120	
	(4)	Switching differential	
51		5+/-4 K (at 30 to 120 °C)	
61		6+/-5 K (at 30 to 90 °C)	
	(5)	Capillary length in mm	
935		935	
2000		2000	
	(6)	Capillary material	
40		Copper (Cu)	
	(7)	Process connection (PC)	
10		Plain cylindrical probe	
	(8)	Temperature probe Ø in mm	
6		6.0	
	(9)	Temperature probe material	
40		Copper (Cu)	
	(10)	Capillary insulation length in mm	
315		315	
	(11)	Extra codes	
000		None	

Order code (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11)^a
 Order example 602051 / 01 - 050 - 61 - 935 - 40 - 10 - 6 - 40 - 315 / 000

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

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Stock version

Order code	Control range	Capillary	Switching differential	Switching point accuracy	Part no.
602051/01-050-61-935-40-10-6-40-315/000	30 to 90 °C	935 mm	(6 ±5 K)	At the end of the control range ± 9 K	00696592
602051/01-050-61-2000-40-10-6-40-315/000		2 000 mm			00704768
602051/01-334-51-935-40-10-6-40-315/000	30 to 120 °C	935 mm	(5 ±4 K)		00696594
602051/01-334-51-2000-40-10-6-40-315/000		2 000 mm			00704767

Stock versions from 150 pieces.
 Special versions from 3 000 pieces.

Accessories

Setpoint adjuster	Control range	Part no.	
For type 602051/01	30 to 90 °C	00705334	
	30 to 120 °C	00705337	