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**JUMO Instrument Co. Ltd.**

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**JUMO Process Control, Inc.**

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# Bimetal Temperature Switch

## Special features

- Electromechanical temperature switch with a fixed switching temperature
- Max. protection type: IP67
- Simple mounting
- Switching capacity up to 2.5 kVA

## Brief description

The bimetal temperature switch is universally applicable. Areas of application include temperature monitoring, temperature control, and temperature indication in cooling and heating circuits as well as compressors and motors.

To a limited extent, the temperature switch can also be used as a temperature controller.

The temperature change is transmitted to a bimetal kinematics via the fitting. When the switching temperature is reached, the temperature switch is activated.



Type 608301/10-...-01

**ATEX version  
upon request!**



Type 608301/30-...-36



Type 608301/10-...-11

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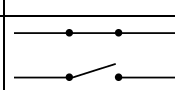


**Technical data**

Minimum order quantity 50 items

	Tab connector A 6.3-08	Connecting cable with cable gland	Encapsulated connecting cable	Connector for cable connection *	Connector M 12 x 1
<b>Fitting</b>	Brass or stainless steel; screw-in spigot similar to DIN 3852 Form A for sealing and sealing ring.				Form A for sealing and sealing ring
<b>Protection type</b>	IP 52	IP 65	IP 67	IP 65	IP 67
<b>Electrical contact snap-action switch Connection</b>	A 6.3-0,8 acc. to DIN 46244	Cable diameter approx. 6.5 mm; connection cross-section 0.75 mm <sup>2</sup>		Cable diameter 6 to 8 mm; connect terminals 1 and 2; ground terminal not connected	Connect terminals 1 and 2
Switching capacity	DC 30 V, +10 / -15 %, 5 A AC 230 V, +10/-15 %, 48 to 63Hz, 10(10) A, cos φ = 0.75				AC 250 V, 50/60 Hz (cos φ 0.95/0,6) 2.5 A/1.6 A (depending on version, max. 4 A)
	AC 115 V, +10/- 15 %, 48 to 63 Hz, 15(13.5) A, cos φ = 1 (0.75)	AC 115 V, +10/-15 %, 48 to 63 Hz, 10(10) A, cos φ = 1 (0.75)			--
Contact resistance	< 30 mΩ				< 50 mΩ
Dielectric strength	AC 1500 V/1 min				
<b>Electrical contact slow-action contact Connection</b>	-	Cable diameter approx. 4.5 mm; connection cross-section 0.5 mm <sup>2</sup>		Cable diameter 6 to 8 mm; connect terminals 1 and 2; ground terminal not connected	--
Switching capacity	-	DC 12 V, +10/-15 %, 8 A DC 24 V, +10/-15 %, 4 A DC 30 V, +10/-15 %, 3 A AC 48 V, +10/-15 %, 48 to 63 Hz, 6 A	-	DC 12 V, +10/-15 %, 8 A DC 24 V, +10/-15 %, 4 A DC 30 V, +10/-15 %, 3 A AC 48 V, +10/-15 %, 48 to 63Hz, 6 A	--
	If the bimetal temperature switch is operated at a voltage of 50 V, the fitting must be equipped with protective grounding according to VDE or the corresponding national regulations.				

\* Acc. to EN 175301-803 (DIN 43650)

	Snap-action switch	Slow-action contact	Compact snap-action switch
<b>Switching temperature</b>	+0 °C to +140 °C; 5 K increments	+10 °C to +140 °C; 5 K increments	+60 °C to +140 °C
<b>Switching differential</b>	15 to 30 K below the switching temperature	Approx. 1.5 K below the switching temperature (measured in a water bath, switching point 40 °C)	30 K to 45 K below the switching temperature
<b>Switching point accuracy</b>	Switching temperature: Up to 130 °C ± 5 K, above 130 °C ± 10 K at a temperature change rate of 1 K/min		
<b>Vibration strength</b>	13 g (vibration in the central axis direction at a frequency of 45 Hz and an amplitude of ± 1.6 mm)	--	400 m/s <sup>2</sup> half-sine / 100 m/s <sup>2</sup> 5 Hz to 2,000 Hz sine
<b>Response time</b>	t <sub>0,9</sub> value time approx. 3.5 min, measured in an agitated oil bath; brass fitting, G1/2 A	--	--
<b>Switching output (SA)</b>	Normally closed SA01 or normally open SA02	 relative to the rising temperature	
<b>Rated position</b>	Any		
<b>Weight</b>	Approx. 50 g		

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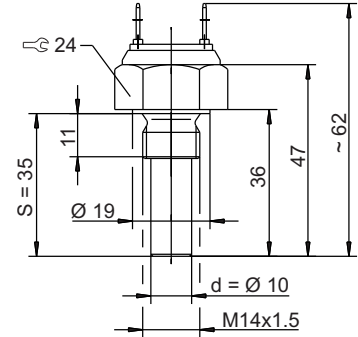
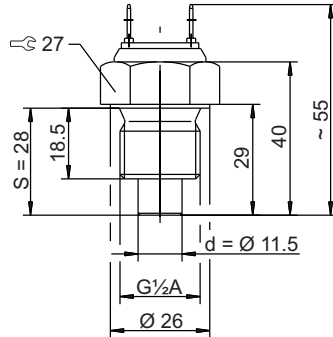
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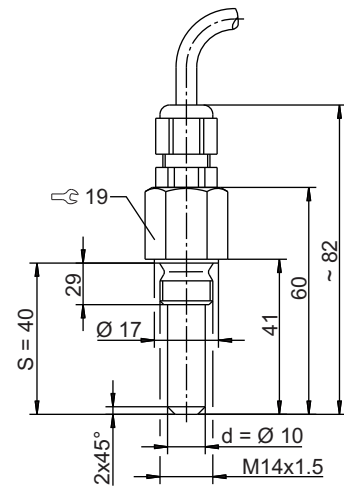
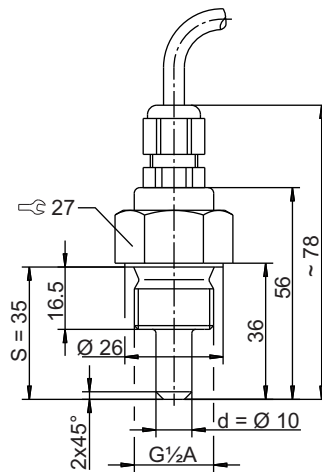


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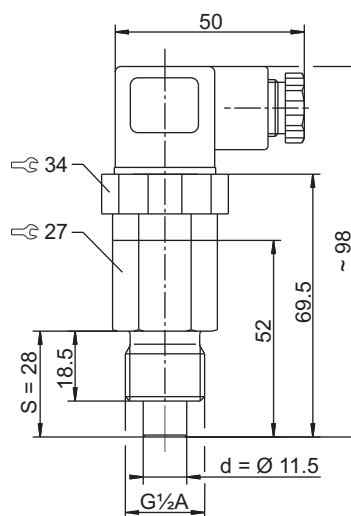
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Type: 608301/20-...-...-18



Type: 608301/10-...-...-61



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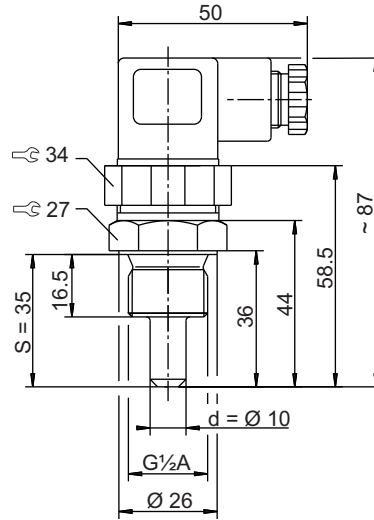
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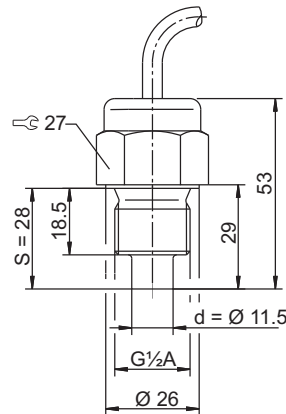


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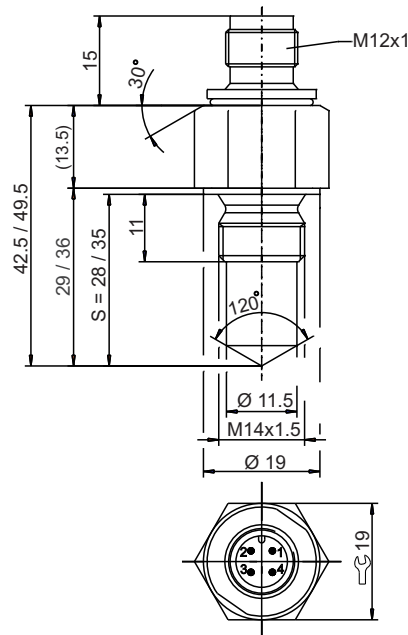
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Types: 608301/10-...-...-11



Types: 608301/30-...-...-36



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## Order details

### Bimetal temperature switch type 608301

Minimum order quantity 50 items

Order code			(1) Basic type
			608301 Electromechanical temperature switch with a fixed switching temperature setting
			<b>(2) Basic type extensions</b>
x	10		Snap-action switch
	x	20	Slow-action contact
		x	30 Compact snap-action switch
			<b>(3) Switching temperature</b>
x	...		Degree specification in the +0 °C to +140 °C range, 5 K increments
	x	...	Degree specification in the +10 °C to +140 °C range, 5 K increments
		x	for basic type extension 608301/30, from +60 °C to +140 °C, 5 K increments (e.g. 85 = + 85 °C)
			<b>(4) Switching output (SA)</b>
x	x	x	98 Normally closed (SA01)
x	x	x	99 Normally open (SA02)
			<b>(5) Electrical connection</b>
x	01		Tab connector A 6.3-0.8 DIN 46244 (not for basic type extensions and 608301/20 and 608301/30)
x	x	x	61 Connector for cable connection acc. to EN 175301-803 (DIN 43650)
	x	x	18 Connecting cable with cable gland (not for basic type extension 608301/10)
x	11		Encapsulated connecting cable (not for basic type extensions 608301/20 and 608301/30)
		x	36 Round plug M 12 x 1 (only in conjunction with basic type extension 608301/30)
			<b>(6) Material of process connection</b>
x	x	x	50 Brass (CuZn)
x	x	x	78 Stainless steel (CrNi, 1.4305)
			<b>(7) Diameter of process connection (PA), dimension "d"</b>
x	x	10	10 mm
x		x	11.5 11.5 mm
			<b>(8) Thread type of process connection (PA)</b>
x	x	x	121 M14 x 1.5 screw connection
x	x	x	104 G 1/2 screw connection
			<b>(9) Insertion length of process connection (PA), dimension "S"</b>
x	x	x	28 28 mm
x	x	x	35 35 mm
		x	40 40 mm
			<b>(10) Cable length</b>
x	x	x	0 None
x	x	x	1000 1000 mm
x	x	x	2000 2000 mm
x	x	x	3000 3000 mm
x	x	x	4000 4000 mm
x	x	x	5000 5000 mm

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## Order details


**Bimetal temperature switch type 608301**


Minimum order quantity 50 items

				(11) Extra codes (TZ)
x	x	x	000	Without extra code
x			702	Gold-plated snap-action switch (for basic type extension 608301/10) for currents from 10 to 100 mA and 6 to 30 V DC / 6 to 120 V AC
		x	840	With integrated Pt100 (for basic type extension 608301/30 only)
		x	841	With integrated Pt1000 (for basic type extension 608301/30 only)

Other versions (switching temperatures, fittings, etc.) available upon request.

Possible combinations

Basic type extensions (2) (5)	Diameter PA (7)	Thread type PA (8)	Insertion length (9)		Switching element position:
608301/10-...-01	11.5 mm	G 1/2 A	28 mm	27*	Above the thread
608301/10-...-61	10 mm	M 14 x 1.5	35 mm	24	
608301/10-...-11	11.5 mm	G 1/2 A	28 mm	27	
	10 mm	M 14 x 1.5	35 mm	22	
608301/20-...-61	10 mm	G 1/2 A	35 mm	27	Below in the probe
		M 14 x 1.5			
608301/20-...-18	10 mm	G 1/2 A	35 mm	27	
		M 14 x 1.5	40 mm	19	
608301/30-...-36	11.5 mm	M 14 x 1.5	28 mm	19	
		G 3/8 A	35 mm	24	
		G 1/2 A		27	

\* Screw-in spigot DIN 3852, form B with  24

Order code

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)												
608301	/	...	-	...	-	..	-	..	-	...	-	...	-	...	-	...	-	...	-	...	/	...

Order example

608301	/	10	-	85	-	98	-	01	-	50	-	10	-	121	-	35	-	0	/	000
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