

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, CM20 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 dicoTEMP 100

Smart tube for temperature measurement

Special features

- Diverse¹ temperature measurement for increased process reliability
- Combination of a platinum-chip temperature sensor with a thermostat or dial thermometer in a fitting
- Reduced planning and installation work because only one measuring point is required
- Maximum flexibility for data usage; various output signals, such as resistance, analog, or digital, are available

Brief description

The smart tube enables diverse temperature measurement to be implemented with a thermostat or dial thermometer and a platinum-chip temperature sensor. This occurs at only one measuring point. The resistance signal can be converted into an analog or digital signal via a transmitter.

The smart fitting for temperature measurement combines the strengths of several JUMO devices. The new solution allows the user to continue using the devices (thermostats and dial thermometers) that are already part of the process at the same measuring point and, at the same time, functionally extend them with electrical temperature measurement.



¹ "diverse" means that with this solution, two different measuring principles (electrical and mechanical) are used, each of which has a different effect on external interference factors

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, CM20 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



Technical data

General Information

Prozessanschlüsse smooth pipe smooth pipe G 1/2 TA24 TA24	With optional accessories: G 1/2 or G1 threaded fitting (see chapter on dimensions)			
	G 1/2 G 1			
Pipe diameter				
Outer diamer „D“ in mm	11.0	13.0	15.0	
Inner diameter „di“ in mm	6.2	8.2	10.2	For the insertion of typical probe or immersion tube diameters with 6, 8, or 10 mm
Fastening on the device	Combination:			
Capillary line version	x	x		Possible with probe diameter 6 and 8 mm including capillary line from 1.0 to 2.2 mm
Coupling version		x		Possible with immersion tube diameter 8 mm including coupling version (see chapter on dimensions)
Threaded fitting version	x	x	x	Possible with smooth immersion tube outside diameters of 6, 8, and 10 mm
Material	Stainless steel (TA24: Stainless steel, brass, FKM)			
Measuring insert Pt100 Pt1000	Temperature sensor according to DIN EN 60751:2009/IEC 60751:2008 in four-wire circuit with selectable tolerance classes: B, A, AA			
Capacity Thermowell ^a	Temperature in °C	Pipe diameter in mm		
		11	13	15
		Maximum admissible pressure in bar		
	100	74	62	50
	150	71	59	48
	200	67	56	45
	260	58	48	39
Electrical connection	Machine connector M12 × 1 mm, 4-pole, according to IEC 60947-5-2			

^a Pressure data from table not valid, process connection is intended for pressureless use.

Environmental influences

Maximum admissible temperatures Medium, process Environment Storage and transport	-40 to +260 °C (TA24: -40 to +150 °C) -40 to +85 °C -40 to +85 °C				
Process media	Liquid and gaseous				
Response times of the thermowell without combination device	Measured in	t ₀₅ [s]	t ₀₆₃ [s]	t ₀₉ [s]	Diameter „D“ of the protection tube [mm]
	Water 0.4 m/s	4	6	13	11
		5	7	17	13
		11	14	38	15
	Air 3.0 m/s	70	95	205	11
		75	105	215	13
95		125	255	15	
Installation position	Any				
Weight	Approx. 250 g (with 200 mm insertion length)				
Protection type with mating connector and mounted combination device	IP66, IP67, IP69 according to DIN EN 60529				

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, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

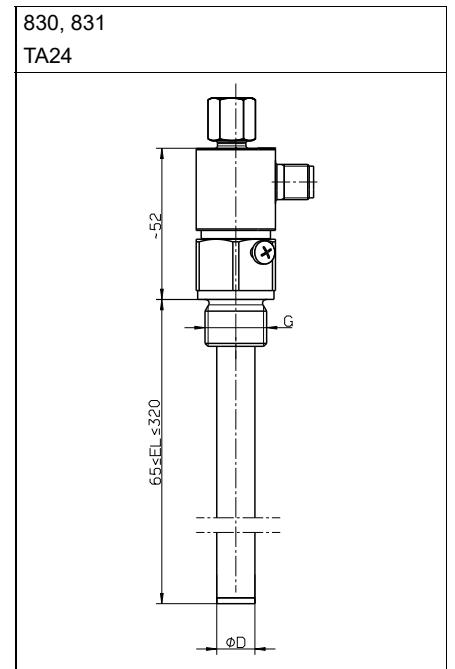
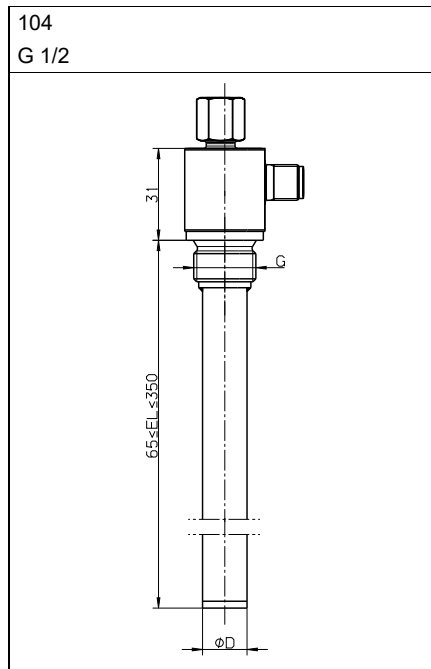
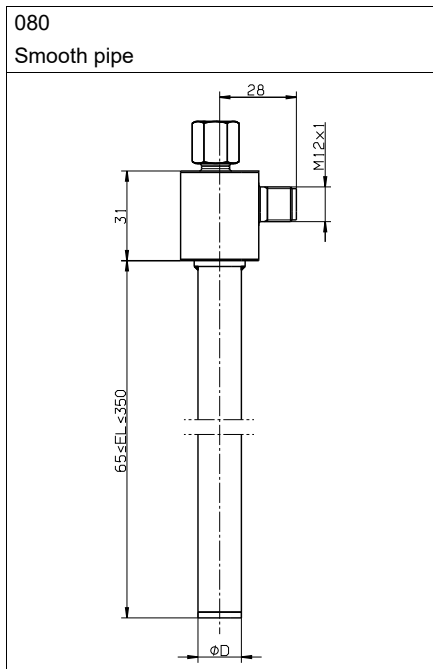
JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



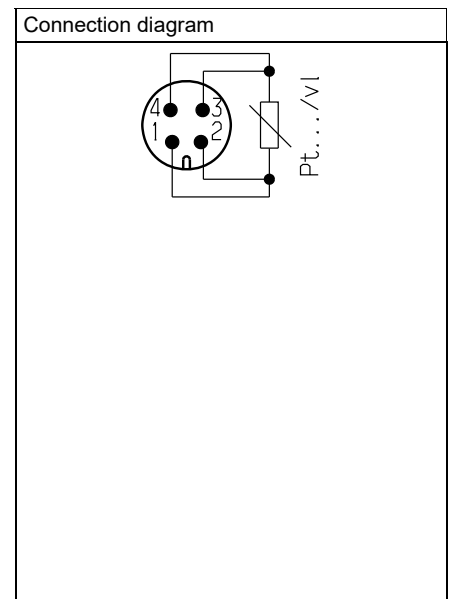
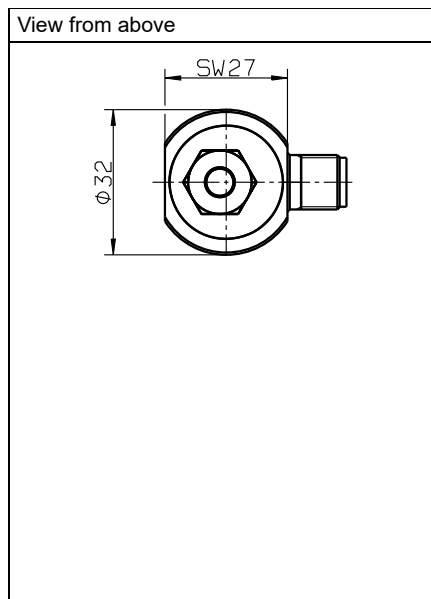
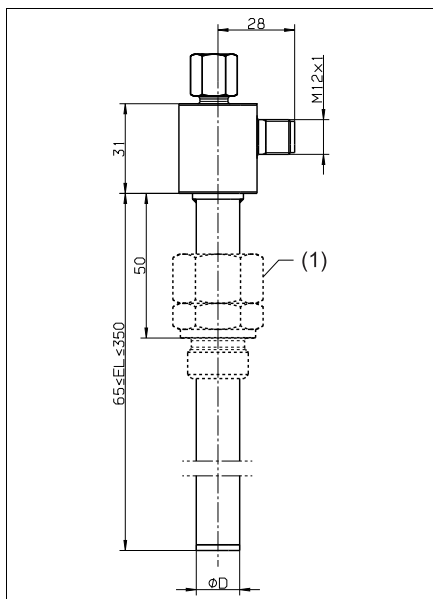
Dimensions

Process connection

Illustrations with examples of threaded fitting version



Process connection mounting example, view from above, connection diagram



(1) Smooth pipe with accessories: G1/2 or G1 Threaded fitting

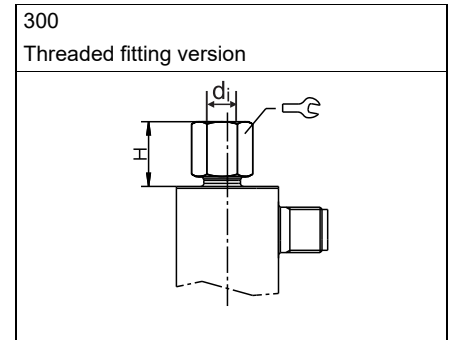
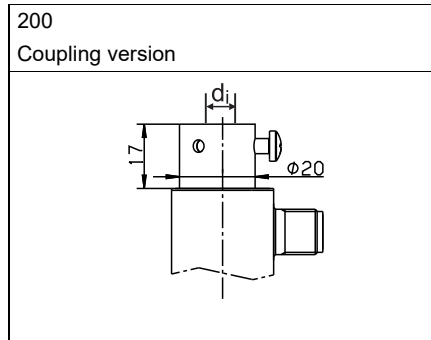
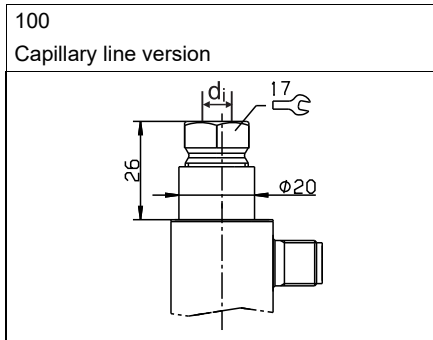
JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

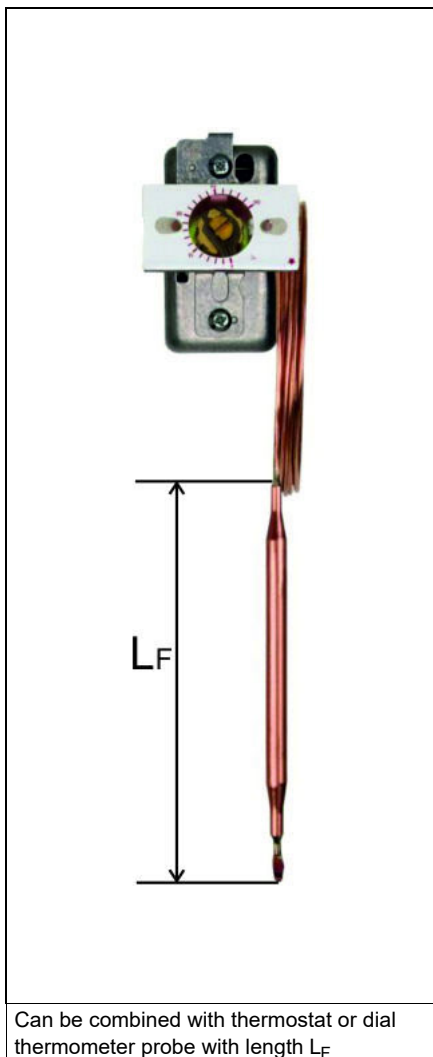
JUMO Process Control, Inc.
 6733 Myers Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Fastening on the device



Possible combination devices



Length specification of the combination devices

$L_F \leq EL - 5 \text{ mm}$

$L_K \leq EL + 24 \text{ mm}$

$L_T \geq EL + 31 \text{ mm} + H$

The insertion length EL refers to the JUMO dicoTEMP 100, see order code.

For process connection TA24, all preset lengths must be extended by 20 mm (e.g. $L_F \leq EL + 15 \text{ mm}$).

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

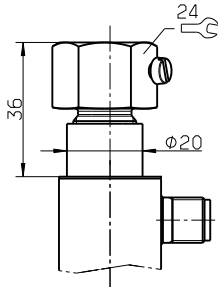
JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

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



Accessories

Mounting ATH thermostat
(fastening on the device capillary line
required)



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, CM20 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



Order details

	(1) Basic type	
608740	JUMO dicoTEMP 100 – Smart tube for temperature measurement	
	(2) Basic type extensions	
10	Thermowell with resistance signal	
	(3) Fastening on the device	
100	Capillary line version (1)	
200	Coupling version (2)	
300	Threaded fitting version (3)	
	(4) Measuring insert	
1011	1x Pt100 in four-wire circuit	
1013	1x Pt1000 in four-wire circuit	
	(5) Tolerance class according to DIN EN 60751	
1	Class B	
2	Class A	
3	Class AA	
	(6) Process connection	
080	Smooth pipe ^a	
104	Screw connection G 1/2	
830	Screw connection TA24 G 1/2	
831	Screw connection TA24 G 1	
	(7) Outer diameter of thermowell (D)	
11	11 mm (6 mm probe)	
13	13 mm (8 mm probe)	
15	15 mm (10 mm probe)	
	(8) Material	
20	CrNi (stainless steel)	
	(9) Insertion length (EL) in mm	
065	65	
100	100	
120	120	
150	150	
200	200	
250	250	
300	300	
350	350	
	(10) Extra codes	
000	None	
374	Inspection certificate 3.1, DIN EN 10204 (material)	
774	DAKks calibration (specify in plain text)	

^a With optional accessories: Threaded fitting G 1/2 or G 1 (see chapter on dimensions)

Order code (1) / (2) - (3) - (4) - (5) - (6) - (7) - (8) - (9) / (10) , ...^a
 Order example 608740 / 10 - 100 - 1013 - 1 - 104 - 11 - 20 - 100 / 000

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

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, CM20 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



Stock versions

Order code	Part no.
608740/10-100-1013-1-080-11-20-150/000	60003446
608740/10-300-1011-1-080-13-20-150/000	60003449
608740/10-200-1011-1-830-13-20-150/000 ^a	60003452
608740/10-200-1011-1-831-13-20-150/000 ^b	60003453

^a with G 1/2 screw connection for JUMO transformer thermometers 608005, 608520, 608540

^b with G 1 screw connection for JUMO transformer thermometers 608005, 608520, 608540

Accessories

Article			Part no.		
Stainless steel threaded fittings, with stainless steel clamping ring (see data sheet 909750)	Outer diameter Thermowell	D = 11 mm	G 1/2 threaded fitting	00402801	
		D = 13 mm		00717258	
		D = 15 mm		00048311	
			D = 11 mm	G 1 threaded fitting	00717265
			D = 13 mm		00717266
			D = 15 mm		00717269
Connection cables	JUMO M12 connecting cable	5-pole	0.5 m	00638312	
			1.5 m	00638313	
	PVC connecting cable			00404585	
Cable sockets to assemble yourself	Straight cable socket			00419130	
	Angled cable socket			00419133	
Sheet flange (see data sheet 909750)	Flange made from zinc-plated steel for outer diameter Thermowell	D = 11 mm			00038513
Cable transmitter (see data sheet 707090)	707090/8-1011/000	4 to 20 mA			00725428
	707090/8-1013/000				00725430
	707091/8-1011/000	IO-Link			00725432
	707091/8-1013/000				00725433

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, CM20 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



Article	Part no.
Mounting ATH thermostat	00738162

