Postal address: Phone: Fax: Email: Internet<sup>.</sup>

Delivery address: Mackenrodtstraße 14 36039 Fulda, Germany 36035 Fulda, Germany +49 661 6003-0 +49 661 6003-607 mail@jumo.net www.jumo.net

JUMO Instrument Co. Ltd. JUMO House Temple Bank, Riverway Harlow, Essex, CM20 2DY, UK +44 1279 63 55 33 Phone: +44 1279 62 50 29 Fax: 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 +1 315 437 5860 Fax: Email: info.us@jumo.net Internet: www.jumousa.com



Data Sheet 902820

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# JUMO PROCESStemp

# RTD temperature probes for process technology with Ex approval

- For temperatures from -200 to +600 °C
- With protection tubes made of stainless steel, titanium, tantalum, Inconel, and HASTEL-I OY®
- Available with two-wire transmitter (4 to 20 mA/HART®) in Ex version
- 🐵 II 1/2 G Ex ia IIC T1...T6 Ga/Gb
- ₪ II 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db 🐼 II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb ₪ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C
- With interchangeable measuring insert (not for Ex basic types)

# Brief description

RTD temperature probes for process technology (in chemical plants, petrochemical industry, pressure vessels, etc.) are predominantly used for temperature measurement in liquids and gases

The RTD temperature probes consist of a protection fitting according to DIN 43772 with various process connections, a terminal head, and an interchangeable measuring insert. The protection fitting is made of material 1.4571 as standard. Other materials are available for special applications.

All fittings are produced according to the German pressure vessel regulation ("Druckbehälterverordnung") and subjected to a pressure and leak test. The measuring insert is fitted with a Pt100 temperature sensor as a standard feature according to DIN EN 60751:2009 / IEC 60751:2008 (temperature coefficient  $\alpha$  = 3.850 × 10<sup>-3</sup>° C<sup>-1</sup>), Class B in two-wire circuit; versions with two Pt100 measuring circuits can also be supplied, as well as three and four-wire circuits.

An analog or programmable transmitter with standard signal 4 to 20 mA can be installed for the transmission of measured values. Alternatively a HART® interface can be used.

Versions with flameproof enclosure or intrinsic safety are available for temperature measurement in potentially explosive areas.

For documentation purposes, the device parameters (measurement tolerance, material, etc.) can be confirmed with factory test certificates.

Push-in and screw-in RTD temperature probes with connection line and Ex approval are available upon request.

### Note:

The specified operating temperatures are maximum values based on the applied sensing element. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5)

An RTD temperature probe that is installed in a separating wall between zone 0/1 (gas) and 20/ 21 (dust) and which does not have a protection tube with a zone separation of 1 mm stainless steel (extra code 292) requires the user to make sure that the complete measuring circuit corresponds to the intrinsically safe "ia" ignition protection type.

### Explosion protection:

The maximum product-specific explosion protection depends on the design type of the RTD temperature probe. For an exact classification of the RTD temperature probe, please refer to the operating manual.

# Approvals and approval marks





Postal address: Phone: Fax: Email: Internet:

Delivery address: Mackenrodtstraße 14 36039 Fulda, Germany 36035 Fulda, Germany +49 661 6003-0 +49 661 6003-607 mail@jumo.net 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 Fax: Email: info.us@jumo.net Internet: www.jumousa.com



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# **Technical data**

Terminal head	Form B DIN EN 50446, aluminum die-cast, M20 × 1.5; IP65, ambient temperature -40 to +100 °C									
	Form BUZ, aluminum die-cast, M20 × 1.5; IP65, ambient temperature -40 to +100 °C									
	Form BUZH with or without LED display, aluminum die-cast, M20 × 1.5; IP65, ambient temperature -40 to +100 °C (with LED display -20 to +80 °C)									
	Form BUZH with LED display and Ex approval, aluminum die-cast, M20 $\times$ 1.5; IP65, ambient temperature 0 to 60 $^\circ\text{C}$									
	Form BBKS, plastic (PA 6), M20 × 1.5; IP54, ambient temperature -30 bis +130 °C									
	Form BEGF, stainless steel 1.4541, M20 × 1.5, IP65, ambient temperature -40 to +100°C									
	Form XD "Ex d IIC"/"Ex tb IIIC" with or without LED display, stainless steel or aluminum die-cast, M20 × 1.5; IP66, ambient temperature -50 to +100 °C (with LED display -20 to +80 °C)									
	Caution: reduced ambient temperature when using transmitters, data sheets 707010, 707030, 707050, 707060, and 707080									
	Insofar as the design type allows it, yellow terminal heads are used for SIL and PL applications (extra codes 658 or 659). Exceptions to this are probes for use in alkaline environments and probes that are strictly required to be PWIS-free.									
Extension tube	Stainless steel 1.4571									
Process connection	Thread, stainless steel 1.4571									
	Flange, stainless steel 1.4571									
	Thermowell, stainless steel 1.4571 or steel 1.7335									
	Highly corrosion-resistant materials and coatings are optionally available									
Protection tube	Stainless steel 1.4571, Ø 6 mm, Ø 9 mm, Ø 11 mm, or Ø 12 mm									
	Highly corrosion-resistant materials and coatings are optionally available									
Measuring insert	Exchangeable, Pt100 temperature sensor according to DIN DIN EN 60751:2009 / IEC 60751:2008, Class B, two-wire circuit									
Response times	t <sub>0.9</sub> approx. 50 s, flow velocity in water 0.2 m/s, Ø 9 mm									
Vibration resistance	20 g (peak-to-peak) at the tip of the measuring insert									
Transmitters	Programmable transmitter, data sheet 707010									
	Analog transmitter, data sheet 707030 (not for the Ex area)									
	Programmable transmitter, data sheet 707050 (not for the Ex area)									
	Programmable two-channel transmitter with HART®/SIL, data sheet 707080									
	Programmable Wtrans B head transmitter with wireless data transmission, data sheet 707060 (not for the Ex area, suitable Wtrans receivers according to data sheet 902931)									
Accessories	Thermowells, data sheet 909710									

# **Functional safety**

With this product, JUMO provides a number of different possibilities in terms of functional safety to realize a completely or partially certified solution.

If you require consulting with regard to the safety integrity level (SIL) or performance level (PL), you can contact us at sil@jumo.net to arrange a personal appointment.

The safety data (MTBF, MTTFD, and FIT values) can also be accessed on demand for this item under sensors@jumo.net.



Postal address: Phone: Fax: Email: Internet:

Delivery address: Mackenrodtstraße 14 36039 Fulda, Germany 36035 Fulda, Germany +49 661 6003-0 +49 661 6003-607 mail@jumo.net 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



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# Approvals and approval marks

ATEX	
Test facility	Eurofins Electrosuisse Product Testing AG
Certificate/test no.	SEV 15 ATEX 0118
Inspection basis	EN 60079-0 + A11, EN 60079-1, EN 60079-11, EN 60079-26, EN 60079-31
Valid for	Extra code 362
IECEx	
Test facility	Eurofins Electrosuisse Product Testing AG
Certificate/test no.	IECEx SEV 15.0006
Inspection basis	IEC 60079-0, IEC 60079-1, IEC 60079-11, IEC 60079-26, IEC 60079-31
Valid for	Extra code 362
SIL QUALIFIED	
Test facility	-
Certificate/test no.	-
Inspection basis	-
Valid for	Extra codes 658/659 in conjunction with declaration of manufacturer
PL QUALIFIED	
Test facility	-
Certificate/test no.	-
Inspection basis	-
Valid for	Extra codes 658/659 in conjunction with declaration of manufacturer

# **Standardized versions**

Basic type	Design type	D in mm	L2 in mm	EL in mm	Thread in inches	
902820/10	Form 2G according to DIN 43772	Form B1 according to DIN 43765	9	-	160	G 1/2
		Form B2 according to DIN 43765	9	-	250	G 1/2
		Form B3 according to DIN 43765	9	-	400	G 1/2
		Form C1 according to DIN 43766	11	-	160	G 1
		Form C2 according to DIN 43766	11	-	250	G 1
902820/11	Form 3G according to DIN 43772	Form G1 according to DIN 43771	9	-	160	G 1
		Form G2 according to DIN 43771	9	-	220	G 1
		Form G3 according to DIN 43771	9	-	280	G 1
902820/50	Form 4 according to DIN 43772	Form D1 according to DIN 43771	12.5	140	65	-
		Form D2 according to DIN 43771	12.5	200	125	-
		Form D3 according to DIN 43771	12.5	200	65	-
		Form D4 according to DIN 43771	12.5	260	125	-

Note: DIN 43772 contains information for evaluating the mechanical and thermal resistance of cylindrical and conical protection tubes in industrial thermometers.

Postal address: Phone: Fax: Email: Internet:

Delivery address: Mackenrodtstraße 14 36039 Fulda, Germany 36035 Fulda, Germany +49 661 6003-0 +49 661 6003-607 mail@jumo.net 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

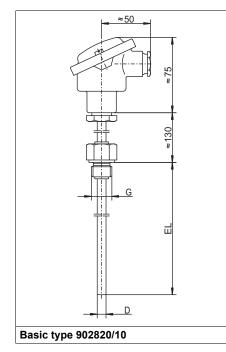


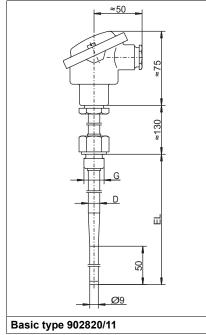
Data Sheet 902820

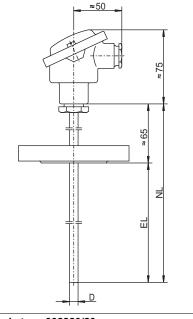
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# **Dimensions**

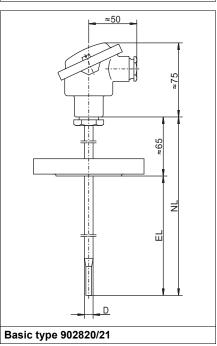
# **RTD** temperature probe dimensions

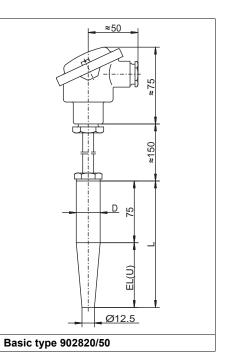


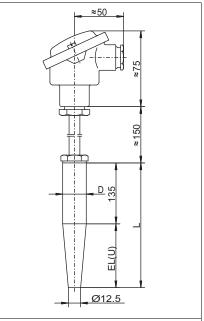




Basic type 902820/20







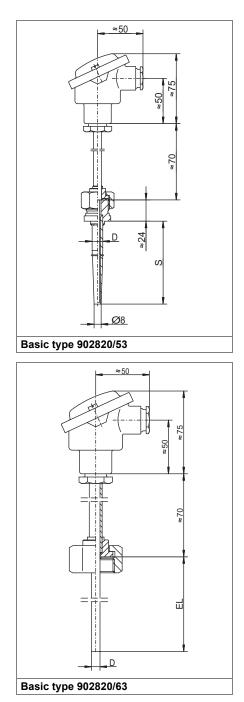
Delivery address:Mackenrodtstraße 14<br/>36039 Fulda, GermanyPostal address:36035 Fulda, GermanyPhone:+49 661 6003-0Fax:+49 661 6003-607Email:mail@jumo.netInternet:www.jumo.net

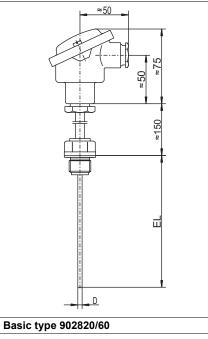
JUMO Instrument Co. Ltd. JUMO House Temple Bank, Riverway Harlow, Essex, CM20 2DY, UK Phone: +44 1279 63 55 33 Fax: +44 1279 62 50 29 Email: sales@jumo.co.uk Internet: www.jumo.co.uk JUMO Process Control, Inc. 6733 Myers Road East Syracuse, NY 13057, USA Phone: +1 315 437 5866 Fax: +1 315 437 5860 Email: info.us@jumo.net Internet: www.jumousa.com

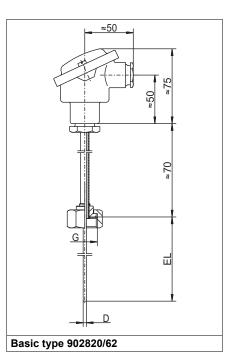


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Insofar as the design type allows it, yellow terminal heads are used for SIL and PL applications (extra codes 658 or 659). Exceptions to this are probes for use in alkaline environments and probes where it is strictly necessary that they are PWIS-free.

 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

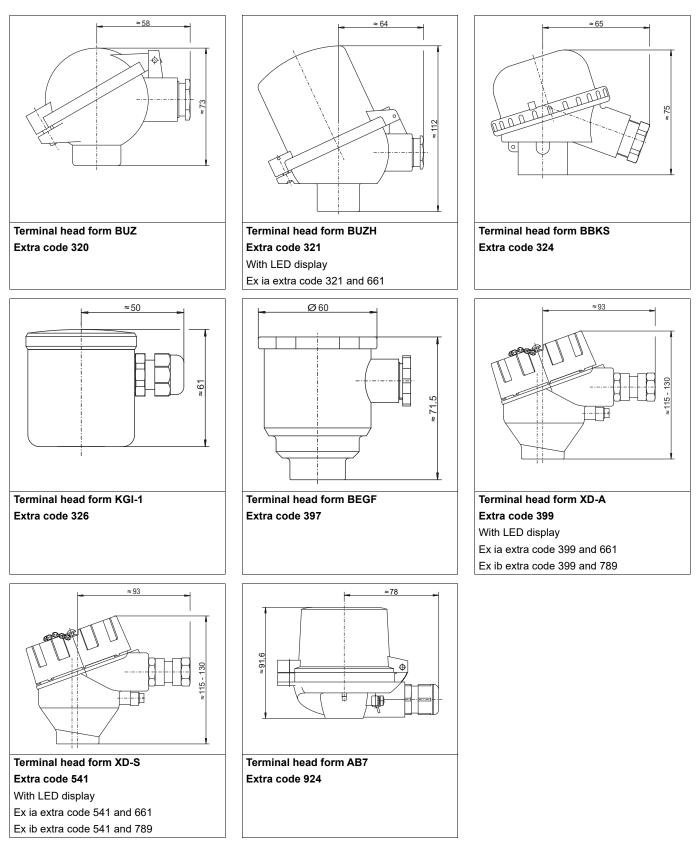
 JUMO Instrument Co. Ltd. JUMO House Temple Bank, Riverway Harlow, Essex, CM20 2DY, UK Phone: +44 1279 63 55 33 Fax: +44 1279 62 50 29 Email: sales@jumo.co.uk Internet: www.jumo.co.uk JUMO Process Control, Inc. 6733 Myers Road East Syracuse, NY 13057, USA Phone: +1 315 437 5866 Fax: +1 315 437 5860 Email: info.us@jumo.net Internet: www.jumousa.com



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# Dimensions of the terminal heads



 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 Fmail: info.us@jumo.net Internet: www.jumousa.com



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# Wtrans B – head transmitter with wireless data transmission

The Wtrans B head transmitter with wireless data transmission (data sheet 707060) is used in conjunction with a Wtrans receiver (data sheet 902931) for stationary or mobile acquisition of temperatures with RTD temperature probes or thermocouples.

The measured values are transmitted wirelessly to the receiver of the Wtrans measuring system. The measured values are displayed on the receiver and are available in digital format on the RS485 interface and as analog outputs. Alternatively, different alarms can be signaled with two relay outputs.

This head transmitter, designed for industrial applications, comprises a transmitter with integrated transmission unit and an antenna-battery housing. The transmitter is designed for mounting in form B terminal heads and works in an ambient temperature range of -30 to +85  $^{\circ}$ C.

The radio frequency of the Wtrans measuring system is 868.4 MHz. This frequency is largely impervious to external interference and allows data to be transmitted even in harsh industrial environments. When using the antenna holder for wall mounting with the 3 m antenna cable for the receiver, the open air range is 300 m.

A 3.6 V, 2.2 Ah (size AA) lithium battery is used for the head transmitter voltage supply.

A setup program is available as an accessory for easy configuration and parameterization of the head transmitter and the Wtrans receiver on a PC. The OnlineChart function can be used optionally to record the measured values on a PC.



Postal address: Phone: Fax: Email: Internet:

Delivery address: Mackenrodtstraße 14 36039 Fulda, Germany 36035 Fulda, Germany +49 661 6003-0 +49 661 6003-607 mail@jumo.net 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 Family: Info used/immo.net Email: info.us@jumo.net Internet: www.jumousa.com



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# **Order details**

		(1)	Basic type
	902820/10		Screw-in RTD temperature probe with continuous protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	9		Ø9×1mm
х	11		Ø 11 × 2 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	104		Screw connection G 1/2
х	106		Screw connection G 1
х	144		Screw connection 1/2-14 NPT
х	146		Screw connection 1-11.5 NPT
		(8)	Protection tube material
х	26	( )	Stainless steel 1.4571
х	60		Titanium, upon request
х	80		Tantalum, upon request
x	81		Inconel, upon request
x	82		HASTELLOY®, upon request
~		(9)	Extra codes
х	000	(-)	None
x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)

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



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х	925	Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
Х	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
Х	330	1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	331	1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
х	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
х	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 004888887)
х	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)	_	(2)	_	(3)	_	(4)	_	(5)	_	(6)		(7)	_	(8)	_	(9)	_
Order code		-		-		-		-		-		-		-		/		, <sup>a</sup>
Order example	902820/10	-	402	-	1001	-	1	-	9	-	250	-	104	-	26	/	000	
<sup>a</sup> Liet extra codes in sequence and separate using commas																		

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



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		(1)	Basic type
	902820/11		Screw-in RTD temperature probe with reduced protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	9		Ø 9 × 1 mm reduced to Ø 6 mm
х	12		Ø 12 × 2.5 mm reduced to Ø 9 mm
		(6)	Insertion length EL in mm (EL up to 700 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	104		Screw connection G 1/2
х	106		Screw connection G 1
х	144		Screw connection 1/2-14 NPT
х	146		Screw connection 1-11.5 NPT
		(8)	Protection tube material
х	26		Stainless steel 1.4571
х	60		Titanium, upon request
х	80		Tantalum, upon request
х	81		Inconel, upon request
х	82		HASTELLOY®, upon request
		(9)	Extra codes
х	000		None
х	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
x	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)

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х	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	330	1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	331	1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
х	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
х	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
x	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		] -		-		/		, <sup>a</sup>
Order example	902820/11	-	402	-	1001	-	1	-	12	-	250	-	104	-	26	/	000	

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		(1)	Basic type
	902820/20		Push-in RTD temperature probe with continuous protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	9		Ø9×1 mm
х	11		Ø 11 × 2 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	000	.,	None
х	642		Flange B DN 25/PN 40, DIN EN 1092-1
х	644		Flange B DN 40/PN 40, DIN EN 1092-1
		(8)	Protection tube material
х	26	( )	Stainless steel 1.4571
х	60		Titanium, upon request
х	80		Tantalum, upon request
x	81		Inconel, upon request
x	82		HASTELLOY®, upon request
	-	(9)	Extra codes
x	000	(•)	None
x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)

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х	330	1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	331	1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
х	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
x	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material
	A	

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		
Order code		-		] -		] -		-		] - [		] - [		] -		/		, <sup>a</sup>	
Order example	902820/20	-	402	-	1001	-	1	-	9	-	250	-	642	-	26	/	000	-	
• • •																			

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		(1)	Basic type
	902820/21		Push-in RTD temperature probe with reduced protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1	( )	Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	9	(-)	Ø 9 × 1 mm reduced to Ø 6 mm
x	12		Ø 12 × 2.5 mm reduced to Ø 9 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
		(-)	Specification in plain text
		(7)	Process connection (additional versions upon request)
х	000	(-)	None
x	642		Flange B DN 25/PN 40, DIN EN 1092-1
x	644		Flange B DN 40/PN 40, DIN EN 1092-1
~		(8)	Protection tube material
х	26	(•)	Stainless steel 1.4571
x	60		Titanium, upon request
x	80		Tantalum, upon request
x	81		Inconel, upon request
x	82		HASTELLOY®, upon request
~		(9)	Extra codes
х	000	(0)	None
x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
x	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
x	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4
			wires, e.g., 1003, 1011, or 2003)

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х	330	1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	331	1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
х	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
x	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		
Order code		-		- [		] -		-		] - [		] - [		] -		/		, <sup>a</sup>	
Order example	902820/21	-	402	-	1001	-	1	-	12	-	250	-	642	-	26	/	000	-	
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		(1)	Basic type
	902820/50		Screw-in RTD temperature probe with thermowell DIN 43772, form 4
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1	( )	Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
x	3		Class AA (0 to 150 °C)
~		(5)	Protection tube diameter D in mm (additional versions upon request)
х	24	(•)	Ø 24 mm reduced to Ø 12.5 mm
~	<b>2</b> 7	(6)	Thermowell dimensions (insertion length/total length)
х	205	(0)	65 mm/140 mm (previously form D1 according to DIN 43767)
x	325		125 mm/200 mm (previously form D2 according to DIN 43767)
^			Upon request (Code: U + L)
		(7)	Thermowell material
v	26	(7)	Stainless steel 1.4571 (operating temperature 600 °C)
X	36		Stanless steel 1.4571 (operating temperature 500°C) Steel 1.7335 (operating temperature 540 °C)
х	30	(8)	Protection tube material
v	26	(0)	
х	20	(0)	Stainless steel 1.4571
	000	(9)	Extra codes
x x	000 658		None SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
x	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
x	330		1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	331		1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)

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х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
x	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
x	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		- [		-		-		-		- [		/		, <sup>a</sup>
Order example	902820/50	-	402	-	1001	-	1	-	24	-	205	-	26	-	26	/	000	

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		(1)	Basic type
	902820/51	(.)	Screw-in RTD temperature probe with thermowell DIN 43772, form 4
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
Х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	24		Ø 24 mm reduced to Ø 12.5 mm
		(6)	Thermowell dimensions (insertion length/total length)
х	265		65 mm/200 mm (previously form D4 according to DIN 43767)
х	385		125 mm/260 mm (previously form D5 according to DIN 43767)
			Upon request (Code: U + L)
		(7)	Thermowell material
х	26		Stainless steel 1.4571 (operating temperature 600 °C)
х	36		Steel 1.7335 (operating temperature 540 °C)
		(8)	Protection tube material
х	26		Stainless steel 1.4571
		(9)	Extra codes
х	000	.,	None
x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	330		1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	331		1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)

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х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
x	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
x	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		- [		-		-		-		-		/		, <sup>a</sup>
Order example	902820/51	-	402	-	1001	-	1	-	24	-	265	-	26	-	26	/	000	

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		(1)	Basic type
	902820/53		Screw-in RTD temperature probe with weld-in sleeve
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	12	. ,	Ø 12 mm reduced to Ø 8 mm
		(6)	Insertion length S (80 to 500 mm)
х	80	.,	80 mm, steel
х	140		140 mm, steel
х	170		170 mm, steel or stainless steel
х	200		200 mm, steel or stainless steel
		(7)	Process connection
х	815	( )	Welding protective sleeve with external thread, fastening with union nut
		(8)	Welding protective sleeve material
х	01	( )	Steel 1.0345
х	26		Stainless steel 1.4571
		(9)	Extra codes
х	000	( )	None
х	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	330		1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)

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х	331	1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333	1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	334	2 analog transmitters (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring in- sert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
х	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
х	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
х	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
x	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
x	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		
Order code		-		] -		- [		- [		-		-		-		/		, <sup>a</sup>	
Order example	902820/53	-	402	-	1001	-	1	-	12	-	80	-	815	-	26	/	000	-	
• • •																			

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		(1)	Basic type
	902820/60		Screw-in RTD temperature probe for thermowell with internal thread
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	6		Ø6mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
		.,	Specification in plain text
		(7)	Process connection (additional versions upon request)
х	126		Screw connection M18 × 1.5
		(8)	Protection tube material
х	26		Stainless steel 1.4571
		(9)	Extra codes
х	000		None
x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	330		1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring inser 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
х	331		1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333		1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring inser 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)

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х	334	2 analog transmitters (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring in- sert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
x	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
х	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		-		/		, <sup>a</sup>
Order example	902820/60	-	402	-	1001	-	1	-	6	-	250	-	126	-	26	/	000	_

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Data Sheet 902820

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		(1)	Basic type
	902820/62		Screw-in RTD temperature probe with union nut and replaceable measuring insert for thermowell with external thread
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	6		Ø 6 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	165		Union nut, thread G 3/4
		(8)	Protection tube material
х	26		Stainless steel 1.4571
		(9)	Extra codes
х	000		None
x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
x	330		1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	331		1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333		1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)

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



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x	334	2 analog transmitters (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring in- sert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
x	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
х	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		-		/		, <sup>a</sup>
Order example	902820/62	-	402	-	1001	-	1	-	6	-	250	-	165	-	26	/	000	

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



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		(1)	Basic type
	902820/63		Screw-in RTD temperature probe with union nut and non-replaceable measuring insert for thermowell with external thread
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	386		-50 to +260 °C (thin film temperature sensor)
х	402		-50 to +400 °C (thin film temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in 3-wire circuit
х	1003		1× Pt100 in 2-wire circuit
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in 2-wire circuit
х	2011		2× Pt100 in four-wire circuit (only in conjunction with terminal head 321)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008 (additional versions upon request)
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	6		Ø 6 mm
х	9		Ø 9 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	165		Union nut, thread G 3/4
		(8)	Protection tube material
х	26		Stainless steel 1.4571
		(9)	Extra codes
х	000		None
х	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
Х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 330, 331, 333, 334, 335, 336, 337, 550, 551, 859, 866, and 867)
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	324		Terminal head form BBKS
х	326		Terminal head form KGI-1
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 866 or 867)
х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 866 or 867)
х	424		Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	330		1 analog transmitter (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)
x	331		1 programmable transmitter (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	333		1 analog transmitter (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 1× Pt100 in two or three-wire circuit, not in conjunction with extra codes 658 or 659)

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



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х	334	2 analog transmitters (type 707031 according to data sheet 707030), output 4 to 20 mA, (only for measuring in- sert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	335	2 programmable transmitters (type 707014 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable transmitter (type 707011 according to data sheet 707010), output 4 to 20 mA and HART® in- terface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	337	2 analog transmitters (type 707033 according to data sheet 707030), output 0 to 10 V, (only for measuring insert 2× Pt100 in two or three-wire circuit and with extra code 321, not in conjunction with extra codes 658 or 659)
x	550	1 programmable transmitter (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00574959)
x	551	2 programmable transmitters (type 707050 according to data sheet 707050), output 4 to 20 mA/20 to 4 mA (USB), (only for measuring insert 2× Pt100 and with extra code 321, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00574959)
х	859	1 programmable head transmitter Wtrans B with wireless data transmission (type 707060 according to data sheet 707060), (not in conjunction with extra codes 658 or 659, suitable setup program part no. 00488887)
х	866	1 programmable two-channel transmitter with HART® (type 707080 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	867	1 programmable two-channel transmitter with HART®/SIL (type 707081 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		-		/		, <sup>a</sup>
Order example	902820/63	-	402	-	1001	-	1	-	6	-	250	-	165	-	26	/	000	

Delivery address:Mackenrodtstraße 14<br/>36039 Fulda, GermanyPostal address:36035 Fulda, GermanyPhone:+49 661 6003-0Fax:+49 661 6003-607Email:mail@jumo.netInternet: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



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- ⓑ II 1/2 G Ex ia IIC T1...T6 Ga/Gb
- ⓑ II 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db
- ⓑ II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C

		(1)	Basic type
	902820/10		Screw-in RTD temperature probe with continuous protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)
х	1003		1× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	9		Ø 9 × 1 mm (for use in zone 0 or 20, upon request)
х	11		Ø 11 × 2 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
	101	(7)	Process connection (additional versions upon request)
х	104		Screw connection G 1/2
х	106		Screw connection G 1
X	144		Screw connection 1/2-14 NPT
х	146	(0)	Screw connection 1-11.5 NPT
	20	(8)	Protection tube material
X	26		Stainless steel 1.4571
X	60		Titanium, upon request
X	80 81		Tantalum, upon request
x x	82		Inconel, upon request HASTELLOY®, upon request
^	02	(9)	Extra codes
x	658	(9)	SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac-
			cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)
х	362		Ex-protection Ex according to Directive 2014/34/EU (ATEX)
х	292		Separation element according to IEC 60079
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	326		Terminal head form KGI-1
х	397		Terminal head form BEGF
х	399		Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum
х	541		Terminal head form XD-S "Ex D IIC" and "Ex tb IIIC" made from stainless steel

 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



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-		
х	547	Terminal head form BUZH with LED display
х	924	Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)
х	925	Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)
х	661	LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)
х	789	LED display Ex "ib" (only in conjunction with extra code 399 or 541)
х	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
x	331	1 programmable Ex transmitter (type 707015 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable Ex transmitter (type 707016 according to data sheet 707010), output 4 to 20 mA and HART® interface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	868	1 programmable two-channel transmitter with HART/EX (type 707085 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
x	869	1 programmable two-channel transmitter with HART/EX/SIL (type 707086 according to data sheet 707080), out- put 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		-		/	362	, <sup>a</sup>
Order example	902820/10	-	415	-	1001	-	1	-	9	-	250	-	104	-	26	/	362	

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

## Additional information:

In which zone is the device used?

### Caution:

For application in zones 20, 21, and 22, only a terminal head with protection type IP65 is possible.

## Note:

The precise Ex identification marking is provided upon delivery on the nameplate and in the operating manual.

The specified operating temperatures are maximum values based on the applied sensing element. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

The specified operating temperatures of the thermowell materials are maximum values based on the pressure resistance of the material used. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

Due to the complexity of the possible versions, not all variants can be illustrated. Please note that certain combinations cannot be supplied for all categories according to Ex.

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



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- 🐼 II 1/2 G Ex ia IIC T1...T6 Ga/Gb
- ⓑ II 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db
- ⓑ II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C

		(1)	Basic type
	902820/11		Screw-in RTD temperature probe with reduced protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)
х	1003		1× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	12		Ø 12 × 2.5 mm reduced to Ø 9 mm (for use in zone 0 or 20 upon request)
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	104		Screw connection G 1/2
х	106		Screw connection G 1
х	144		Screw connection 1/2-14 NPT
х	146		Screw connection 1-11.5 NPT
		(8)	Protection tube material
х	26		Stainless steel 1.4571
х	60		Titanium, upon request
х	80		Tantalum, upon request
х	81		Inconel, upon request
х	82		HASTELLOY®, upon request
		(9)	Extra codes
х	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)
х	362		Ex-protection Ex according to Directive 2014/34/EU (ATEX)
х	292		Separation element according to IEC 60079
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	326		Terminal head form KGI-1
х	397		Terminal head form BEGF
х	399		Terminal head form XD-A "Ex D IIC" and "Ex tb IIIC" made from die-cast aluminum
х	541		Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steel
х	547		Terminal head form BUZH with LED display

Delivery address:Mackenrodtstraße 14<br/>36039 Fulda, GermanyPostal address:36035 Fulda, GermanyPhone:+49 661 6003-0Fax:+49 661 6003-607Email:mail@jumo.netInternet: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



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х	924	Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)
<	925	Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)
х	661	LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)
х	789	LED display Ex "ib" (only in conjunction with extra code 399 or 541)
х	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	331	1 programmable Ex transmitter (type 707015 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable Ex transmitter (type 707016 according to data sheet 707010), output 4 to 20 mA and HART® interface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	868	1 programmable two-channel transmitter with HART/EX (type 707085 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	869	1 programmable two-channel transmitter with HART/EX/SIL (type 707086 according to data sheet 707080), out- put 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		] -		-		-		-		1	362	, <sup>a</sup>
Order example	902820/11	-	415	-	1001	-	1	-	12	-	250	-	104	-	26	/	362	

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

#### Additional information:

In which zone is the device used?

## Caution:

For application in zones 20, 21, and 22, only a terminal head with protection type IP65 is possible.

#### Note:

The precise Ex identification marking is provided upon delivery on the nameplate and in the operating manual.

The specified operating temperatures are maximum values based on the applied sensing element. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

The specified operating temperatures of the thermowell materials are maximum values based on the pressure resistance of the material used. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

Due to the complexity of the possible versions, not all variants can be illustrated. Please note that certain combinations cannot be supplied for all categories according to Ex.

 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



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ⓑ II 1/2 G Ex ia IIC T1...T6 Ga/Gb

 $\circledast$  II 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db

ⓑ II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C

x 150 x 415	2820/20		Push-in RTD temperature probe with continuous protection tube
x 415	0		
x 415	0	(2)	Operating temperature (additional versions upon request)
	•		-200 to +600 °C (wire-wound temperature sensor)
	5		-50 to +600 °C (thin film temperature sensor)
1 1		(3)	Measuring insert (additional versions upon request)
x 100	01		1× Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)
x 100	03		1× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
x 101	11		1× Pt100 in 4-wire circuit
x 200	01		2× Pt100 in 3-wire circuit
x 200	03		2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008
x 1			Class B (standard) (-50 to +500 °C)
x 2			Class A (-30 to +300 °C)
x 3			Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
x 9			Ø 9 × 1 mm (for use in zone 0 or 20, upon request)
x 11			Ø 11 × 2 mm
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
x 000	0		None
x 642	2		Flange B DN 25/PN 40, DIN EN 1092-1
x 644	4		Flange B DN 40/PN 40, DIN EN 1092-1
		(8)	Protection tube material
x 26	i		Stainless steel 1.4571
x 60	I		Titanium, upon request
x 80			Tantalum, upon request
x 81			Inconel, upon request
x 82			HASTELLOY®, upon request
		(9)	Extra codes
x 658	8		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)
x 659	9		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)
× 362	2		Ex-protection Ex according to Directive 2014/34/EU (ATEX)
x 292	2		Separation element according to IEC 60079
x 320	0		Terminal head form BUZ
x 321	1		Terminal head form BUZH
x 326	6		Terminal head form KGI-1
x 397	7		Terminal head form BEGF
x 399	9		Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum
x 541	1		Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steel
x 547	7		Terminal head form BUZH with LED display



Delivery address:Mackenrodtstraße 14<br/>36039 Fulda, GermanyPostal address:36035 Fulda, GermanyPhone:+49 661 6003-0Fax:+49 661 6003-607Email:mail@jumo.netInternet: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



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х	924	Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)
<	925	Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)
х	661	LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)
х	789	LED display Ex "ib" (only in conjunction with extra code 399 or 541)
х	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	331	1 programmable Ex transmitter (type 707015 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x	336	1 programmable Ex transmitter (type 707016 according to data sheet 707010), output 4 to 20 mA and HART® interface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	868	1 programmable two-channel transmitter with HART/EX (type 707085 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	869	1 programmable two-channel transmitter with HART/EX/SIL (type 707086 according to data sheet 707080), out- put 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		-		/	362	, <sup>a</sup>
Order example	902820/20	-	415	-	1001	-	1	-	9	-	250	-	642	-	26	/	362	

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

#### Additional information:

In which zone is the device used?

## Caution:

For application in zones 20, 21, and 22, only a terminal head with protection type IP65 is possible.

#### Note:

The precise Ex identification marking is provided upon delivery on the nameplate and in the operating manual.

The specified operating temperatures are maximum values based on the applied sensing element. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

The specified operating temperatures of the thermowell materials are maximum values based on the pressure resistance of the material used. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

Due to the complexity of the possible versions, not all variants can be illustrated. Please note that certain combinations cannot be supplied for all categories according to Ex.

 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



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🐼 II 1/2 G Ex ia IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db

ⓑ II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C

		(1)	Basic type
	902820/21		Push-in RTD temperature probe with reduced protection tube
		(2)	Operating temperature (additional versions upon request)
х	150		-200 to +600 °C (wire-wound temperature sensor)
х	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
х	1001		1× Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)
х	1003		1× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Protection tube diameter D in mm (additional versions upon request)
х	12		Ø 12 × 2.5 mm reduced to Ø 9 mm (for use in zone 0 or 20 upon request)
		(6)	Insertion length EL in mm (EL up to 1000 mm)
			Specification in plain text
		(7)	Process connection (additional versions upon request)
х	000		None
х	642		Flange B DN 25/PN 40, DIN EN 1092-1
х	644		Flange B DN 40/PN 40, DIN EN 1092-1
		(8)	Protection tube material
х	26		Stainless steel 1.4571
х	60		Titanium, upon request
х	80		Tantalum, upon request
х	81		Inconel, upon request
х	82		HASTELLOY®, upon request
		(9)	Extra codes
х	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)
х	362		Ex-protection Ex according to Directive 2014/34/EU (ATEX)
х	292		Separation element according to IEC 60079
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	326		Terminal head form KGI-1
х	397		Terminal head form BEGF
х	399		Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum
х	541		Terminal head form XD-S "Ex D IIC" and "Ex tb IIIC" made from stainless steel
х	547		Terminal head form BUZH with LED display
х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)

Delivery address:Mackenrodtstraße 14<br/>36039 Fulda, GermanyPostal address:36035 Fulda, GermanyPhone:+49 661 6003-0Fax:+49 661 6003-607Email:mail@jumo.netInternet: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

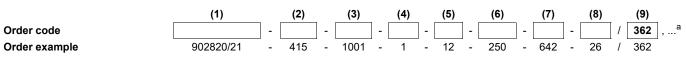


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x g	925	Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)
x 6	661	LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)
x 7	789	LED display Ex "ib" (only in conjunction with extra code 399 or 541)
x 4	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
x 3	331	1 programmable Ex transmitter (type 707015 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
x 3	336	1 programmable Ex transmitter (type 707016 according to data sheet 707010), output 4 to 20 mA and HART® interface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х 8	368	1 programmable two-channel transmitter with HART/EX (type 707085 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х 8	369	1 programmable two-channel transmitter with HART/EX/SIL (type 707086 according to data sheet 707080), out- put 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
x 5	562	Parts in contact with medium with PTFE covering, upon request
x 5	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
x 3	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
x 3	367	Inspection certificate 3.1 DIN EN 10204 pressure test
x 3	368	Inspection certificate 3.1 DIN EN 10204 leak test
x 3	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.



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

## Additional information:

In which zone is the device used?

#### Caution:

For application in zones 20, 21, and 22, only a terminal head with protection type IP65 is possible.

## Note:

The precise Ex identification marking is provided upon delivery on the nameplate and in the operating manual.

The specified operating temperatures are maximum values based on the applied sensing element. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

The specified operating temperatures of the thermowell materials are maximum values based on the pressure resistance of the material used. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

Due to the complexity of the possible versions, not all variants can be illustrated. Please note that certain combinations cannot be supplied for all categories according to Ex.

 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



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ⓑ II 1/2 G Ex ia IIC T1...T6 Ga/Gb

₪ II 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db

🐼 II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C

cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659         SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362         Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292         Separation element according to IEC 60079         x       320         Terminal head form BUZ         x       326         Terminal head form BUZH         x       397         Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541         Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steel         x       547         Terminal head form BUZH with LED display         x       924         Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       547         Terminal head form BUZH with LED display         x       924         Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925         Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869) <t< th=""><th></th><th></th><th>(1)</th><th>Basic type</th></t<>			(1)	Basic type
X         150         -200 to +600 °C (win-wound temperature sensor)           X         415         -50 to +600 °C (thin film temperature sensor)           (3)         Measuring insert (additional versions upon request)           X         1001         1 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           X         1001         1 × Pt100 in 4-wire circuit           X         2001         2 × Pt100 in 3-wire circuit           X         2001         2 × Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           X         2003         2 × Pt100 in 3-wire circuit           X         200         Class A (0 to 50° C)           X         2         Class A (0 to 50° C)           X         2         2 4         0 2 + nm reduced to 0 12 S           X         24         0 2 + nm reduced to 0 12 S         mm           X         25         65 mm/140 mm (previously form D1 accordi		902820/50		with thermowell DIN 43772, form 4
x         415         -50 to +600 °C (thin film temperature sensor)           x         415         -50 to +600 °C (thin film temperature sensor)           x         1001         1x P100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         1003         1x P1100 in two-wire circuit           x         2001         2x P1100 in 3x-wire circuit           x         2003         2x P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2x P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2x P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2x P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2x P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2x P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         200         Class A (30 to 150 °C)           x         2         Class A (30 to 150 °C)           x         2         Class A (30 to 150 °C)           x         2         Class A (30 to 150 °C)           x         24         Ø 24 mm reduced to Ø 12.5 mm			(2)	Operating temperature (additional versions upon request, for restrictions see DIN 43772)
(3)         Measuring insert (additional versions upon request)           x         1001         1 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         1001         1 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         1011         1 × Pt100 in 3-wire circuit           x         2001         2 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         2001         2 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         2001         2 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         2003         2 × Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)           x         2005         Class A(-30 to +500 °C)           x         2         Class A(-20 to +500 °C)           x         24 mm reduced to 2 12.5 mm           (6)         Thermowell dimensions (insertion length/total length)           x         205         65 mm/t40 mm (previously form D according to DIN 43767)           x         25	х	150		-200 to +600 °C (wire-wound temperature sensor)
x       1001       1 × P100 in three-wire circuit (not in conjunction with transmitter 331 or 336)         x       1003       1 × P100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       1011       1 × P100 in 4-wire circuit (not in conjunction with transmitter 331 or 336)         x       2001       2 × P1100 in 3-wire circuit (not in conjunction with transmitter 331 or 336)         x       2003       2 × P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2003       2 × P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2 × P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2 × P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2 × P1100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2 × Class A4 (30 to +300 °C)         x       2 < Class A4 (00 to 150 °C)	х	415		-50 to +600 °C (thin film temperature sensor)
x       1003       1 × Pt100 in 4-wire circuit (not in conjunction with transmitter 331 or 336)         x       1011       1 × Pt100 in 4-wire circuit         x       2001       2 × Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2003       2 × Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       2003       2 × Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)         x       1       Class B (standard) (-50 to +500 °C)         x       2       Class A (0 to 150 °C)         x       3       Class A (0 to 150 °C)         x       24       06 24 mm reduced to 0 12.5 mm         x       205       65 mm/40 mm (previously form D1 according to DIN 43767)         x       325       125 mm/200 mm (previously form D1 according to DIN 43767)          Upon request (Code: U + L)       (7)         x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 600 °C)         x       26       Stainless steel 1.4571         (9)       Extra codes       Stainless steel 1.4571         x       26       Stainless steel 1.4571         x       26       Stainless steel 1.4571 </td <td></td> <td></td> <td>(3)</td> <td>Measuring insert (additional versions upon request)</td>			(3)	Measuring insert (additional versions upon request)
x       1011       1 × PI100 in 4-wire circuit         x       2001       2× PI100 in 3-wire circuit         x       2003       2× PI100 in 1wo-wire circuit (not in conjunction with transmitter 331 or 336)         (4)       Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008         x       1       Class A (30 to 4300 °C)         x       3       Class A (0 to 150 °C)         x       2       Class A (0 to 150 °C)         x       (5)       Thermowell diameter D in mm (additional versions upon request)         x       24       Ø 24 mm reduced to Ø 12.5 mm         (6)       Thermowell dimensions (insertion length/total length)         x       225       65 mm/140 mm (previously form D1 according to DIN 43767)         x       226       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Stainless steel 1.4571         y       26       Stainless steel 1.4571         (9)       Extra codes       Stal. and PL compatible (only in conjunction with dTMANS Tole temperature limiters and monitors according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       26       Stainless steel 1.4571         (9)       Extra codes       Stal. and PL compatible (only in conjunction with dtTANAS Tole temperature limiters and monitors acco	х	1001		1× Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)
x         2001         2× Pt100 in 3-wire circuit           x         2003         2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)           x         1         Class according to DIN EN 60751:2008 / IEC 60751:2008           x         1         Class B (standard) (50 to +500 °C)           x         2         Class A (10 to 150 °C)           x         3         Class A (20 to +500 °C)           x         3         Class A (20 to +500 °C)           x         24         Ø 24 mm reduced to Ø 12.5 mm           x         24         Ø 24 mm reduced to Ø 12.5 mm           x         205         65 mm/140 mm (previously form D1 according to DIN 43767)           x         325         125 mm/200 mm (previously form D1 according to DIN 43767)           x         26         Stainless steel 1.4571 (operating temperature 600 °C)           x         36         Stainless steel 1.4571           y         90         Extra codes           x         658         SIL and PL compatible (only in conjunction with dTRANS T06 temperature limiters and monitors according to data sheet 70150, not in conjunction with actra codes 331, 336, 668, and 669)           x         362         Ex-protection Ex according to DIC* 2014/34/EU (ATEX)           x         362         Ex-protection Ex	х	1003		1× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
x     2003     2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)       x     1     Class B (standard) (-50 te +500 °C)       x     2     Class A (-30 te +300 °C)       x     3     Class A (-30 te +300 °C)       x     3     Class A (-30 te +300 °C)       x     24     Ø 24 mm reduced to Ø 12.5 mm       (6)     Thermowell diameter D in mm (additional versions upon request)       x     24     Ø 24 mm reduced to Ø 12.5 mm       (6)     Thermowell diameter D in zoording to DIN 43767)       x     325     125 mm/140 mm (previously form D1 according to DIN 43767)       x     226     Stainless steel 1.4571 (operating temperature 600 °C)       x     26     Stainless steel 1.4571 (operating temperature 600 °C)       x     26     Stainless steel 1.4571       (9)     Extra codes     *       x     26     Stainless steel 1.4571       (9)     Extra codes     *       x     658     SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701701, not in conjunction with ATRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with ATRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with ATRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with ATRANS T06 temperature transmitter according to	х	1011		1× Pt100 in 4-wire circuit
(4)       Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008         ×       1       Class B (standard) (-50 to +500 °C)         ×       2       Class A (-30 to +300 °C)         ×       3       Class A (-30 to +300 °C)         ×       3       Class A (-30 to +500 °C)         ×       3       Class A (-30 to +500 °C)         ×       24       Ø 24 mm reduced to Ø 12.5 mm         (6)       Thermowell diameter D in mm (additional versions upon request)         ×       24       Ø 24 mm reduced to Ø 12.5 mm         205       65 mm/140 mm (previously form D1 according to DIN 43767)         ×       225       125 mm/200 mm (previously form D2 according to DIN 43767)         ·        Upon request (Code: U + L)          Upon request (Code: U + L)          (7)       Thermowell material         ×       26       Stainless steel 1.4571 (operating temperature 600 °C)         ×       36       Steel 1.7336 (operating temperature 540 °C)          (9)       Extra codes         ×       26       Stainless steel 1.4571         ×       26       Stainless steel 1.4571         ×       26       Stainless steel 1.000 junction with dxtra codes 331, 336, 868, and	х	2001		2× Pt100 in 3-wire circuit
x       1       Class B (standard) (-50 to +500 °C)         x       2       Class A (-30 to +300 °C)         x       3       Class AA (0 to 150 °C)         x       3       Class AA (0 to 150 °C)         x       24       Ø 24 mm reduced to Ø 12.5 mm         x       24       Ø 24 mm reduced to Ø 12.5 mm         x       25       65 mm/140 mm (previously form D1 according to DIN 43767)         x       205       65 mm/200 mm (previously form D2 according to DIN 43767)         x       226       Stainless steel 1.4571 (operating temperature 600 °C)         x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       26       Stainless steel 1.4571         x       26       Stainless atseel 1.4571         x       26       Stainless steel 1.4571         x       28       Stainless steel 1.4571         x       26	х	2003		2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
x       2       Class A (30 to +300 °C)         x       3       Class AA (0 to 150 °C)         x       24       Ø 24 mm reduced to Ø 12.5 mm         x       24       Ø 24 mm reduced to Ø 12.5 mm         x       205       65 mm/140 mm (previously form D1 according to DIN 43767)         x       325       125 mm/200 mm (previously form D1 according to DIN 43767)         x       326       125 mm/200 mm (previously form D2 according to DIN 43767)          Upon request (Code: U + L)          (7)       Thermowell material          x       26       Stainless steel 1.4571 (operating temperature 540 °C)         (8)       Protection tube material          x       26       Stainless steel 1.4571         (9)       Extra codes          x       658       SIL and PL compatible (only in conjunction with yIUMO SIL-certified safety temperature limiters and monitors according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       659       SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       320       Terminal head form BUZ         x       320       Terminal head form BU			(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008
x       3       Class AA (0 to 150 °C)         x       (5)       Thermowell diameter D in mm (additional versions upon request)         x       24       Ø 24 mm reduced to Ø 12.5 mm         (6)       Thermowell dimensions (insertion length/total length)         x       205       65 mm/140 mm (previously form D1 according to DIN 43767)         x       325       125 mm/200 mm (previously form D2 according to DIN 43767)          Upon request (Code: U + L)          (7)       Thermowell material          x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 540 °C)         (8)       Protection tube material          x       26       Stainless steel 1.4571         (9)       Extra codes          x       658       SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 70150, not in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       320       Terminal head form BUZ         x       321       Terminal head	х	1		Class B (standard) (-50 to +500 °C)
(5)       Thermowell diameter D in mm (additional versions upon request)         x       24       Ø 24 mm reduced to Ø 12.5 mm         (6)       Thermowell dimensions (insertion length/total length)         x       205       65 mm/140 mm (previously form D1 according to DIN 43767)         x       325       1125 mm/200 mm (previously form D2 according to DIN 43767)          Upon request (Code: U + L)         x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 540 °C)         x       26       Stainless steel 1.4571         x       658       SilL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       352       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       326       Terminal head form BEGF         x       399       Terminal head form B	х	2		Class A (-30 to +300 °C)
x     24     Ø 24 mm reduced to Ø 12.5 mm       x     205     65 mm/140 mm (previously form D1 according to DIN 43767)       x     325     125 mm/200 mm (previously form D2 according to DIN 43767)        Upon request (Code: U + L)       (7)     Thermowell material       x     26     Stainless steel 1.4571 (operating temperature 600 °C)       x     36     Steel 1.7335 (operating temperature 540 °C)       (8)     Protection tube material       x     26     Stainless steel 1.4571       (9)     Extra codes       (7)     Stainless steel 1.4571       (9)     Extra codes       x     658       SI and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)       x     362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)       x     320       Terminal head form BUZ       x     326       Terminal head form BUZ       x     399       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum       x     547       Terminal head form BUZH with LC D log-in display (only in conjunction with extra code 868 or 869)       x     924       Terminal head form BUZH with LC D log-in	х	3		Class AA (0 to 150 °C)
(6)         Thermowell dimensions (insertion length/total length)           x         205         65 mm/140 mm (previously form D1 according to DIN 43767)           x         325         125 mm/200 mm (previously form D2 according to DIN 43767)            Upon request (Code: U + L)           (7)         Thermowell material           x         26         Stainless steel 1.4571 (operating temperature 600 °C)           x         36         Steel 1.7335 (operating temperature 540 °C)           x         26         Stainless steel 1.4571           x         658         SIL and PL compatible (only in conjunction with atra codes 331, 336, 668, and 869)           x         659         SIL and PL compatible (only in conjunction with atra codes 331, 336, 868, and 869)           x         320         Terminal head form BUZ           x         320         Terminal head form BUZH           x         321         Terminal head form BUZH           x         324			(5)	Thermowell diameter D in mm (additional versions upon request)
x       205       65 mm/140 mm (previously form D1 according to DIN 43767)         x       325       125 mm/200 mm (previously form D2 according to DIN 43767)          Upon request (Code: U + L)         (7)       Thermowell material         x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 500 °C)         (8)       Protection tube material         x       26       Stainless steel 1.4571         (9)       Extra codes         x       26         Stainless steel 1.4571         (9)       Extra codes         x       26         Stainless steel 1.4571         (9)       Extra codes         x       26         Stainless steel 1.4571         (9)       Extra codes         x       26         Stainless steel 1.4571         (9)       Extra codes         x       26         Stainless steel 1.4571         x       26         Stainless steel 1.4571         x       26         Stainless steel 1.4571         x       26         Stain PL compatible (only in conjunction with	х	24		Ø 24 mm reduced to Ø 12.5 mm
x       325       125 mm/200 mm (previously form D2 according to DIN 43767)          Upon request (Code: U + L)         (7)       Thermowell material         x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 540 °C)         x       36       Protection tube material         x       26       Stainless steel 1.4571         (9)       Extra codes         x       658         SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701701, not in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       326       Terminal head form BUZ         x       397       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from stainless steel         x       547       Terminal head form AD-A "Ex D IIC" and "Ex to IIIC" made from stainless steel			(6)	Thermowell dimensions (insertion length/total length)
Upon request (Code: U + L)         (7)       Thermowell material         x       26         Stainless steel 1.4571 (operating temperature 600 °C)         x       36         Steel 1.7335 (operating temperature 540 °C)         (8)       Protection tube material         x       26         Stainless steel 1.4571         (9)       Extra codes         x       658         SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659         SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362         Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292         Separation element according to IEC 60079         x       320         Terminal head form BUZ         x       397         Terminal head form BUZH         x       399         Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541         Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" ma	х	205		65 mm/140 mm (previously form D1 according to DIN 43767)
(7)       Thermowell material         x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 540 °C)         (8)       Protection tube material         x       26       Stainless steel 1.4571         (9)       Extra codes         (9)       Extra codes         (9)       Extra codes         cording to data sheet 701150, not in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659         SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362         Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292         Separation element according to IEC 60079         x       320         Terminal head form BUZ         x       321         Terminal head form BUZ         x       397         Terminal head form XD-A "Ex D IIC" and "Ex th IIIC" made from die-cast aluminum         x       541         Terminal head form XD-S "Ex D IIC" and "Ex th IIIC" made from stainless steel <td< td=""><td>х</td><td>325</td><td></td><td>125 mm/200 mm (previously form D2 according to DIN 43767)</td></td<>	х	325		125 mm/200 mm (previously form D2 according to DIN 43767)
x       26       Stainless steel 1.4571 (operating temperature 600 °C)         x       36       Steel 1.7335 (operating temperature 540 °C)         (8)       Protection tube material         x       26       Stainless steel 1.4571         (9)       Extra codes         x       658         SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659         SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362         Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292         Separation element according to IEC 60079         x       320         Terminal head form BUZ         x       326         Terminal head form KGI-1         x       399         Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541         Terminal head form MD-A "Ex D IIC" and "Ex to IIIC" mate from stainless steel         x       547         Terminal head form BUZH with LED display         x       924<				Upon request (Code: U + L)
x       36       Steel 1.7335 (operating temperature 540 °C)         (8)       Protection tube material         x       26       Stainless steel 1.4571         (9)       Extra codes         x       658       SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659       SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       397       Terminal head form KGI-1         x       397       Terminal head form EGF         x       541       Terminal head form XD-A "Ex D IIC" and "Ex th IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       924       Terminal head form BUZH with LED display         x       547       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       547       Terminal head form BUZH with LED display			(7)	Thermowell material
(8)       Protection tube material         x       26       Stainless steel 1.4571         (9)       Extra codes         x       658       SilL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659       SilL and PL compatible (only in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       321       Terminal head form BUZH         x       397       Terminal head form KGI-1         x       399       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       547       Terminal head form MZH with LED display         x       542       Terminal head form BUZH with LED display         x       544       Terminal head form MZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       547       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x <t< td=""><td>х</td><td>26</td><td></td><td>Stainless steel 1.4571 (operating temperature 600 °C)</td></t<>	х	26		Stainless steel 1.4571 (operating temperature 600 °C)
x       26       Stainless steel 1.4571         (9)       Extra codes         x       658       SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659       SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       321       Terminal head form BUZH         x       397       Terminal head form BEGF         x       399       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       547       Terminal head form MZ-S "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       542       Terminal head form BUZH with LED display         x       541       Terminal head form BUZH with LED display         x       542       Terminal head form BUZH with LC plug-in	х	36		Steel 1.7335 (operating temperature 540 °C)
(9)         Extra codes           x         658         SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors according to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)           x         659         SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)           x         362         Ex-protection Ex according to Directive 2014/34/EU (ATEX)           x         292         Separation element according to IEC 60079           x         320         Terminal head form BUZ           x         326         Terminal head form BUZH           x         397         Terminal head form BEGF           x         399         Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum           x         541         Terminal head form BUZH with LED display           x         542         Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum           x         541         Terminal head form BUZH with LED display           x         924         Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)           x         925         Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869) <t< td=""><td></td><td></td><td>(8)</td><td></td></t<>			(8)	
x       658       SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)         x       659       SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       326       Terminal head form BUZH         x       397       Terminal head form BEGF         x       399       Terminal head form XD-A "Ex D IIC" and "Ex tb IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       924       Terminal head form BUZH with LED display         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction	х	26		Stainless steel 1.4571
cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)x659SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)x362Ex-protection Ex according to Directive 2014/34/EU (ATEX)x292Separation element according to IEC 60079x320Terminal head form BUZx321Terminal head form BUZHx326Terminal head form KGI-1x397Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminumx541Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steelx547Terminal head form BUZH with LED displayx924Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x661LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)			(9)	Extra codes
707071, not in conjunction with extra codes 331, 336, 868, and 869)         x       362       Ex-protection Ex according to Directive 2014/34/EU (ATEX)         x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       321       Terminal head form BUZH         x       326       Terminal head form KGI-1         x       397       Terminal head form BEGF         x       399       Terminal head form XD-A "Ex D IIC" and "Ex tb IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       547       Terminal head form XD-S "Ex D IIC" and "Ex tb IIIC" made from stainless steel         x       547       Terminal head form BUZH with LED display         x       924       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       547       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       661       LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	x	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)
x       292       Separation element according to IEC 60079         x       320       Terminal head form BUZ         x       321       Terminal head form BUZH         x       326       Terminal head form KGI-1         x       397       Terminal head form BEGF         x       399       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541       Terminal head form BUZH with LED display         x       547       Terminal head form BUZH with LED display         x       924       Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       661       LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	659		
x       320       Terminal head form BUZ         x       321       Terminal head form BUZH         x       326       Terminal head form KGI-1         x       397       Terminal head form BEGF         x       399       Terminal head form XD-A "Ex D IIC" and "Ex tb IIIC" made from die-cast aluminum         x       541       Terminal head form SUZ-S "Ex D IIC" and "Ex tb IIIC" made from stainless steel         x       547       Terminal head form BUZH with LED display         x       924       Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       661       LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	362		Ex-protection Ex according to Directive 2014/34/EU (ATEX)
x321Terminal head form BUZHx326Terminal head form KGI-1x397Terminal head form BEGFx399Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminumx541Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steelx547Terminal head form BUZH with LED displayx924Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x661LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	292		Separation element according to IEC 60079
x326Terminal head form KGI-1x397Terminal head form BEGFx399Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminumx541Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steelx547Terminal head form BUZH with LED displayx924Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x661LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	320		Terminal head form BUZ
x       397       Terminal head form BEGF         x       399       Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum         x       541       Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steel         x       547       Terminal head form BUZH with LED display         x       924       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       661       LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	321		Terminal head form BUZH
x399Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminumx541Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steelx547Terminal head form BUZH with LED displayx924Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x661LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	326		Terminal head form KGI-1
x541Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steelx547Terminal head form BUZH with LED displayx924Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x661LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	397		Terminal head form BEGF
x       547       Terminal head form BUZH with LED display         x       924       Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)         x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       661       LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	399		Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum
x924Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)x925Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)x661LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	541		Terminal head form XD-S "Ex D IIC" and "Ex to IIIC" made from stainless steel
x       925       Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)         x       661       LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	547		Terminal head form BUZH with LED display
x 661 LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)	х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)
	х	925		Terminal head form BUZH with LC plug-in display (only in conjunction with extra code 868 or 869)
	х	661		LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)
	х	789		LED display Ex "ib" (only in conjunction with extra code 399 or 541)

Delivery address:Mackenrodtstraße 14<br/>36039 Fulda, GermanyPostal address:36035 Fulda, GermanyPhone:+49 661 6003-0Fax:+49 661 6003-607Email:mail@jumo.netInternet: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



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x	424	Terminal head with M12 machine connector (can only be selected in the case of measuring inserts with max. 4 wires, e.g., 1003, 1011, or 2003)
х	331	1 programmable Ex transmitter (type 707015 according to data sheet 707010), output 4 to 20 mA/20 to 4 mA, (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup program part no. 00605080)
х	336	1 programmable Ex transmitter (type 707016 according to data sheet 707010), output 4 to 20 mA and HART® interface (only for measuring insert 1× Pt100, not in conjunction with extra codes 658 or 659, suitable setup pro- gram part no. 00605080)
х	868	1 programmable two-channel transmitter with HART/EX (type 707085 according to data sheet 707080), output 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	869	1 programmable two-channel transmitter with HART/EX/SIL (type 707086 according to data sheet 707080), out- put 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
х	562	Parts in contact with medium with PTFE covering, upon request
х	563	Parts in contact with medium with ECTFE (Halar®) coating, upon request
х	365	Inspection certificate 3.1 DIN EN 10204 insulation resistance
х	367	Inspection certificate 3.1 DIN EN 10204 pressure test
х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		-		/	362	, <sup>a</sup>
Order example	902820/50	-	415	-	1001	-	1	-	24	-	205	-	26	-	26	/	362	-

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

#### Additional information:

In which zone is the device used?

#### Caution:

For application in zones 20, 21, and 22, only a terminal head with protection type IP65 is possible.

#### Note:

The precise Ex identification marking is provided upon delivery on the nameplate and in the operating manual.

The specified operating temperatures are maximum values based on the applied sensing element. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

The specified operating temperatures of the thermowell materials are maximum values based on the pressure resistance of the material used. Operating temperatures in Ex areas are severely restricted. When determining the respective maximum operating temperature, please consult the operating manual (Chapter 5).

Due to the complexity of the possible versions, not all variants can be illustrated. Please note that certain combinations cannot be supplied for all categories according to Ex.

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



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ⓑ II 1/2 G Ex ia IIC T1...T6 Ga/Gb

 $\textcircled{\sc blue}$ ll 1/2 D Ex ia IIIC T80 °C...T400 °C Da/Db

ⓑ II 1/2 G Ex ia/d IIC T1...T6 Ga/Gb

ⓑ II 1/2 D Ex ia/tb IIIC T80 °C...T400 °C

		(1)	Basic type
	902820/51		Screw-in RTD temperature probe with thermowell DIN 43772, form 4
		(2)	Operating temperature (additional versions upon request, for restrictions see DIN 43772)
x	150	.,	-200 to +600 °C (wire-wound temperature sensor)
x	415		-50 to +600 °C (thin film temperature sensor)
		(3)	Measuring insert (additional versions upon request)
x	1001	.,	1× Pt100 in three-wire circuit (not in conjunction with transmitter 331 or 336)
x	1003		1× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
х	1011		1× Pt100 in 4-wire circuit
х	2001		2× Pt100 in 3-wire circuit
х	2003		2× Pt100 in two-wire circuit (not in conjunction with transmitter 331 or 336)
		(4)	Tolerance class according to DIN EN 60751:2009 / IEC 60751:2008
х	1		Class B (standard) (-50 to +500 °C)
х	2		Class A (-30 to +300 °C)
х	3		Class AA (0 to 150 °C)
		(5)	Thermowell diameter D in mm (additional versions upon request)
х	24		Ø 24 mm reduced to Ø 12.5 mm
		(6)	Thermowell dimensions (insertion length/total length)
х	265		65 mm/200 mm (previously form D4 according to DIN 43767)
х	385		125 mm/200 mm (previously form D2 according to DIN 43767)
			Upon request (Code: U + L)
		(7)	Thermowell material
х	26		Stainless steel 1.4571 (operating temperature 600 °C)
х	36		Steel 1.7335 (operating temperature 540 °C)
		(8)	Protection tube material
х	26		Stainless steel 1.4571
		(9)	Extra codes
х	658		SIL and PL compatible (only in conjunction with JUMO SIL-certified safety temperature limiters and monitors ac- cording to data sheet 701150, not in conjunction with extra codes 331, 336, 868, and 869)
х	659		SIL and PL compatible (only in conjunction with dTRANS T06 temperature transmitter according to data sheet 707071, not in conjunction with extra codes 331, 336, 868, and 869)
х	362		Ex-protection Ex according to Directive 2014/34/EU (ATEX)
х	292		Separation element according to IEC 60079
х	320		Terminal head form BUZ
х	321		Terminal head form BUZH
х	326		Terminal head form KGI-1
х	397		Terminal head form BEGF
х	399		Terminal head form XD-A "Ex D IIC" and "Ex to IIIC" made from die-cast aluminum
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х	924		Terminal head form AB7 with LC plug-in display (only in conjunction with extra code 868 or 869)
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х	661		LED display Ex "ia" (only in conjunction with extra code 321, 399, or 541)
х	789		LED display Ex "ib" (only in conjunction with extra code 399 or 541)

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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



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x	869	1 programmable two-channel transmitter with HART/EX/SIL (type 707086 according to data sheet 707080), out- put 4 to 20 mA, (not in conjunction with extra codes 658 or 659, suitable software available for free – Device Type Manager (DTM) for PACTware)
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х	368	Inspection certificate 3.1 DIN EN 10204 leak test
х	374	Inspection certificate 3.1 DIN EN 10204 material

Note: For extra code transmitter please specify measuring range and, if applicable, output signal in plain text.

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
Order code		-		-		-		-		-		-		- [		/	362	, <sup>a</sup>
Order example	902820/51	-	415	-	1001	-	1	-	24	-	265	-	26	-	26	1	362	

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

#### Additional information:

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Postal address: Phone: Fax: Email: Internet:

Delivery address: Mackenrodtstraße 14 36039 Fulda, Germany 36035 Fulda, Germany +49 661 6003-0 +49 661 6003-607 mail@jumo.net 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 +1 315 437 5860 Fax: Email: info.us@jumo.net Internet: www.jumousa.com



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# Accessories

## Accessories for programmable two-wire transmitter, type 707010

Designation	Part no.
PC interface with USB/TTL converter	00456352
Special programming (standard measuring range 0 to 100 °C)	-
Setup program on CD-ROM, multilingual	00605080

## Accessories for programmable two-wire transmitter, type 707050

Designation	Part no.
Setup program on CD-ROM, multilingual	00574959
USB cable, type A USB connector on Mini-B USB connector, length 3 m	00506252

## Accessories for programmable Wtrans B head transmitter with wireless data transmission, type 707060

Designation	Part no.
Lithium battery 3.6 V, 2.2 Ah (size AA)	00547559
PC interface with USB/TTL converter	00456352
Setup program on CD-ROM, multilingual	00488887
Setup program including OnlineChart on CD-ROM, multilingual	00549067
OnlineChart activation	00549188

## Accessories for programmable two-channel transmitter with HART®, type 707080 or programmable two-channel transmitter with HART®/SIL, type 707081

Designation	Part no.
HART® modem USB	00443447
JUMO dTRANS T07 B 707080 – Device Type Manager (DTM) software program	00687789

# **Trademark information**

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