

**JUMO GmbH & Co. KG**

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**JUMO Instrument Co. Ltd.**

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**JUMO Process Control, Inc.**

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## Intrinsically safe industrial transducers for humidity, temperature and derived variables

- **hygrothermal transducers measure relative humidity in air, and temperature**
- **option: calculation of dew point, absolute humidity, mixing ratio and wet bulb temperature**
- **new user-friendly, modular transducer concept**
- **intelligent interchangeable probes with storage of all calibration coefficients**
- **safe operation of the instrument as a whole in Category 1G / Zone 0 and 1D / Zone 20 areas, with protective cover**
- **retraceable to NIST (including certificate)**



**These intrinsically safe industrial transducers are the first choice for measuring humidity, temperature and derived variables**

These new, intrinsically-safe industrial transducers have been developed in response to the need of accurately monitoring humidity in hazardous areas, and without risk. The series sets entirely new standards with regard to ease of installation and user friendliness.

The modular design consists of four parts (wall bracket, housing base, electronics unit and probe) that can be detached from each other, a feature which makes installation, operation and maintenance considerably easier.

In combination with five interchangeable probes, the transducers lend themselves to the most diverse applications for almost any measurement task.

They no longer need to be recalibrated when the probes are swapped, because all the calibration coefficients are already stored within the probe itself and transferred to the central unit after connection.

Apart from this, the probe design does not differ from that of the field-proven industrial series models which are available with 2m, 5m or 10m long sensor cables. The special sensor heads are available in various styles, which permit application in vacuum or the 0 – 100bar overpressure range, and with high process temperatures up to 180°C.

The transducers are extremely rugged and incorporate the very latest sensor technology.

They can be operated safely and reliably inside areas where a Category 1 (Zone 0) explosion hazard is permanently present.

The transducers are extremely versatile, thanks to the microprocessor-based electronics and the large variety of options. The user is able to specify the transducer configuration directly when ordering. It can also be subsequently altered on site.

Using the optional software expansion, the integral microprocessor calculates humidity variables such as dew point  $T_d$  (°C), absolute humidity  $a$  (g / m<sup>3</sup>), mixing ratio  $x$  (g / kg) and wet bulb temperature  $T_w$  (°C).

The intrinsically safe transducers are equipped with an analog output (4 – 20mA) as standard. They can optionally be upgraded with a second analog output and an integrated LC display /operator panel.

When connecting up the supply voltage (12 – 28V DC) the use of safety barriers or intrinsically safe power supply units (available from outside suppliers) is mandatory for operation in locations with an explosion hazard (see Technical data).

All transducers are equipped with sensors that feature state-of-the-art thin-film technology. More than 20 years of experience have gone into their development and continuous improvement.

The sensors are distinguished by their supreme accuracy, reliability and stability.

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## Technical data

### Styles

#### Type 907023/61

Intrinsically safe humidity and temperature transducer for wall mounting,  
 operating temperature -40 to +60°C

#### Type 907023/63

Intrinsically safe humidity and temperature transducer with a small sensor head  
 on a 2m sensor cable, operating temperature -40 to +120°C

#### Type 907023/64

Intrinsically safe humidity and temperature transducer with a pressure-proof stainless steel sensor  
 head on a 2m sensor cable for process pressures from 0 – 10MPa (0 – 100bar),  
 operating temperature -40 to +180°C

#### Type 907023/65

Intrinsically safe humidity and temperature transducer with a stainless steel sensor head  
 on a 2m sensor cable,  
 operating temperature -40 to +180°C

#### Type 907023/68 and 907023/68L (long version, shaft length 400mm)

Intrinsically safe humidity and temperature transducer with a pressure-proof stainless steel sensor  
 head on a 2m sensor cable for process pressures from 0 – 4MPa (0 – 40bar),  
 sensor head with sliding clamping thread;  
 operating temperature -40 to +180°C

#### Note:

For operation in potentially hazardous surroundings, it is mandatory to connect up the supply  
 voltage (12 – 28V DC) via safety barriers (available from outside suppliers) or intrinsically safe  
 power supply units. For the operation in Category 1 (Zone 0), an intrinsically safe power supply  
 unit (e. g. type STAHL 9160/13-11-11) must be used for each channel. When operating in  
 Categories 2 + 3 (Zone 1 + 2), it is sufficient to use safety barriers (e. g. STAHL 9001/51-280-091-  
 141).

#### These devices are not supplied by JUMO!

For more details, see the operating instructions or visit  
<http://www.stahl.de/de/ex/sicherheitsbarrieren.htm>

### Measured variables

#### Relative humidity

Range 0 – 100% RH

Accuracy (taking into account non-linearity and reproducibility)  
 after calibration against highly accurate,  
 certified humidity standards

±1% RH (0 – 90% RH)  
 ±2% RH (90 – 100% RH)  
 ±2% RH (0 – 90% RH)  
 ±3% RH (90 – 100% RH)

Salt solutions (ASTM E104-85)

Response time  $t_{0,9}$  at 20°C in stationary air (with sintered filter) 15sec

Humidity sensors:

HUMICAP®180 for standard applications

HUMICAP®180L2 with substantial chemical contamination

#### Temperature ranges

-40 to +180°C (depending on the probe selected)

Accuracy of the electronics at 20°C, typically ±0.1°C

Temperature drift of electronics 0.005°C/°C

Temperature sensor

Pt1000 1/3 DIN Class B to EN 60 751

#### Derived variables (option)

	with probe	with probes
Typical ranges	907023/S61	907023/S63, .../S64, .../S65, .../S68
Dew point $T_d$	-40 to +60	-40 to +100 [°C]
Mixing ratio x	0 to 160	0 to 500 [g/kg dry air]
Absolute humidity a	0 to 160	0 to 600 [g/m <sup>3</sup> ]
Wet bulb temperature $T_w$	0 to 60	0 to 100 [°C]

(The accuracy of the derived variable depends on the accuracy of the humidity/temperature  
 measurement and the corresponding working point.)

#### Ex classifications as per CENELEC (PTB) (analog outputs)

(94/9/EC, ATEX100a)

II 1 G EEx ia IIC T4  
 PTB 00 ATEX 2112 X

Limit values

$U_i = 28V$ ,  $I_i = 100mA$ ,  $P_i = 700mW$ ,  $C_i = 1 nF$ ,  $L_i = 0 H$

Ambient conditions

$T_{amb} = -20$  to  $+60$ °C  
 $P_{amb} = 800$  to  $1100hPa$

Dust protection

II 1D (IP 65 T = 70°C)

(with protective cover)

VTT04 ATEX 023X

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<b>Outputs</b>	2 analog outputs (one comes as standard, one is optional) Accuracy of the analog outputs at 20°C Temperature drift	4 – 20mA (2-wire technique)  0.05 % of full scale 0.005 % / °C of full scale
<b>General data</b>	Supply voltage when using the service interface Operating temperature range Electronics with LC display Storage temperature range Connections Cable gland Conduit fitting Housing material Housing dimensions Housing weight EMC	12 – 28V DC 15 – 28V DC  -20 to +60°C -40 to +70°C screw terminals 0.33 – 2.0mm <sup>2</sup> Pg 11 for sensor cable with 5 – 12mm dia. Pg 11/NPT 1/2"-14 G-AlSi10 Mg (DIN 1725) L 164mm x W 115mm x H 62mm 950g as per EN 61 326-1: 1997 + Annex 1: 1998 (EN 61 000-4-5 only when using external surge voltage protectors)
<b>Probes</b>	907023/S61  907023/S63  907023/S64  907023/S65  907023/S68 und 907023/S68L  Probe cable diameter (all types) Probe cable length	probe for wall mounting for the temperature range -40 to +60°C probe, small style for the temperature range -40 to +120°C probe for high pressures for the temperature range -40 to +180°C for the pressure range 0 – 10MPa (0 – 100bar) probe for high temperatures for the temperature range -40 to +180°C probe for pressure lines for the temperature range -40 to +180°C for the pressure range 0 – 4MPa (0 – 4bar) 5.5mm 2m (standard) 5m or 10m (option)
<b>Options</b>	Second analog output Housing with display/operator panel Character size (1st line/2nd line) Extension for derived variables  Sensor protection	4 – 20mA (2-wire technique) 2-line LC display 12mm/10mm dew point temperature T <sub>d</sub> , mixing ratio x, absolute humidity a, wet bulb temperature T <sub>w</sub> sintered filter 38µm from acid-resistant, non-rusting stainless steel AISi 316L (Mat. Ref. 1.4404), stainless steel grid AISi 316L (Mat. Ref. 1.4404), PPS grid with non-rusting stainless steel mesh AISi 316 (Mat. Ref. 1.4436), PPS grid

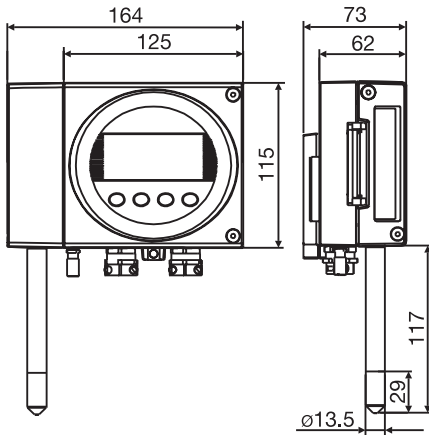
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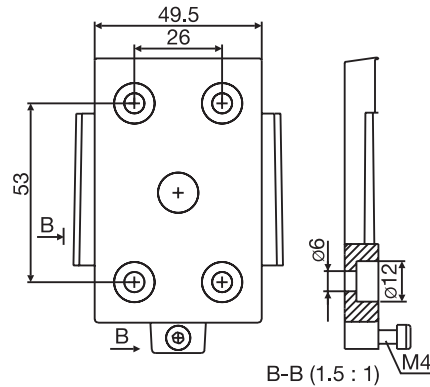
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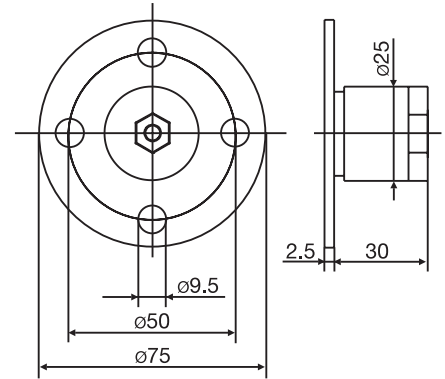
## Dimensions



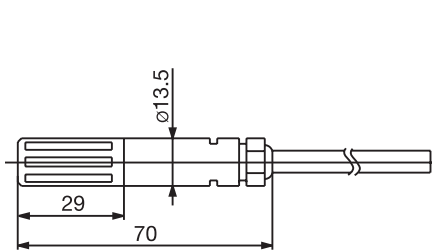
**Central unit with probe 907023/S61**  
 Type 907023/61



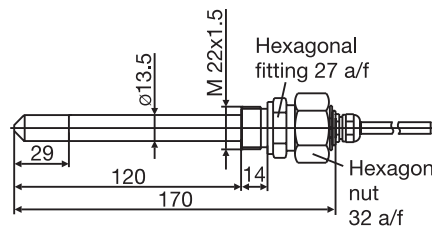
**Mounting bracket**



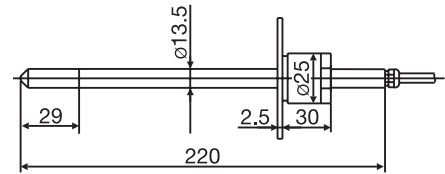
**Installation kit and mounting flange**



**Probe 907023/S63**

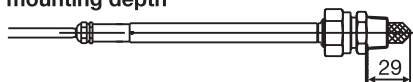


**Probe 907023/S64**

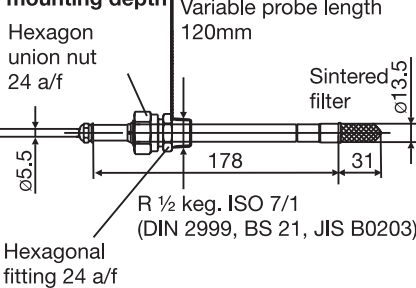


**Probe 907023/S65 including mounting flange (option)**

### Minimum mounting depth



### Maximum mounting depth



**Probe 907023/S68 and .../S68L**

All dimensions in mm.

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**Order details:**      **Intrinsically safe industrial transducers  
 for humidity, temperature and derived variables  
 with Ex approval as per ATEX 100a 94/9/EC (PTB)**

**(1) Basic version**

907023/61      Intrinsically safe humidity and temperature transducer for wall mounting,  
 operating temperature -40 to +60 °C

**(2) Output variables**

x      11      RH + T  
 x      15      RH + T + Td + a + Tw + x

**(3) Analog output variables, channel 1 (and channel 2, optional)**

x      . 0      If normally only one channel is used, then choose 0 for channel 2!  
 x      1 1      RH      0 – 100% RH  
 x      2 2      T      (see Temperature ranges)  
 x      3 3      Td<sup>2</sup>      -40 to +60 °C  
 x      4 4      a<sup>2</sup>      0 – 160g/m<sup>3</sup>  
 x      5 5      Tw<sup>2</sup>      0 to 60 °C  
 x      6 6      x<sup>2</sup>      0 – 160g/kg dry air  
 x      9 9      special scaling (details in plain text)

**(4) Temperature ranges**

x      472      -40 to +60 °C  
 x      632      -20 to +60 °C  
 x      807      0 to 60 °C  
 x      999      special range (details in plain text)

**(5) Probe shaft/filter**

x      2      120mm probe shaft length (60 °C), PPS plastic grid filter with stainless steel mesh

**(6) Extra codes**

x      000      no extra code  
 x      427      conduit fitting NPT 1/2" (for installation tube)  
 x      777      non-metric unit (°F)  
 x      789      integrated LC display/operator panel  
 x      801      PPS plastic grid filter with PTFE membrane  
 x      803      sintered stainless steel filter  
 x      805      PPS plastic grid filter without stainless steel mesh  
 x      823      special sensor for high chemical concentrations  
 x      826      2 analog output channels (channel 1 and channel 2), 4 – 20mA  
 x      828      operating instructions in English

	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	
<b>Order code</b>							, ... <sup>1</sup>
<b>Order example</b>	907023/61	-	11	-	12	-	472
					-	2	/
						000	

<sup>1</sup> List extra codes in sequence, separated by commas.

<sup>2</sup> The operands Td, a, Tw and x are only available if Option 15 has been selected under Output variables.

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 with Ex approval as per ATEX 100a 94/9/EC (PTB)**

**(1) Basic version**

907023/63      Intrinsically safe humidity and temperature transducer  
 with a small sensor head on a 2m sensor cable,  
 operating temperature -40 to +120°C

**(2) Output variables**

x      11      RH + T  
 x      15      RH + T + Td + a + Tw + x

**(3) Analog output variables, channel 1 (and channel 2, optional)**

.10      If normally only one channel is used, then choose 0 for channel 2!  
 x      1      RH      0 – 100% RH  
 x      2      T      (see Temperature ranges)  
 x      3      Td<sup>2</sup>      -40 to +100°C  
 x      4      a<sup>2</sup>      0 – 500g/m<sup>3</sup>  
 x      5      Tw<sup>2</sup>      0 to 100°C  
 x      6      x<sup>2</sup>      0 – 500g/kg dry air  
 x      9      special scaling (details in plain text)

**(4) Temperature ranges**

x      474      -40 to +80°C  
 x      478      -40 to +120°C  
 x      635      -20 to +80°C  
 x      643      -20 to +120°C  
 x      814      0 to 100°C  
 x      999      special range (details in plain text)

**(5) Sensor cable lengths (probe shaft/filter)**

x      2      2m shaft length 60mm (120°C), PPS plastic grid filter with stainless steel mesh  
 x      5      5m shaft length 60mm (120°C), PPS plastic grid filter with stainless steel mesh  
 x      10      10m shaft length 60mm (120°C), PPS plastic grid filter with stainless steel mesh

**(6) Extra codes**

x      000      no extra code  
 x      427      conduit fitting NPT 1/2" (for installation tube)  
 x      777      non-metric unit (°F)  
 x      783      duct installation kit  
 x      789      integrated LC display/operator panel  
 x      823      special sensor for high chemical concentrations  
 x      826      2 analog output channels (channel 1 and channel 2), 4 – 20mA  
 x      828      operating instructions in English

**Order code**      (1)      (2)      (3)      (4)      (5)      (6)  
**Order example**      907023/63      -      11      -      12      -      474      -      2      /      000<sup>1</sup>, ...

<sup>1</sup> List extra codes in sequence, separated by commas.

<sup>2</sup> The operands Td, a, Tw and x are only available if Option 15 has been selected under Output variables.

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**(1) Basic version**

907023/64      Intrinsically safe humidity and temperature transducer  
 with pressure-proof stainless steel sensor head  
 on a 2m sensor cable, for process pressures from 0 – 10MPa (0 – 100bar)  
 operating temperature -40 to +180°C

**(2) Output variables**

x      11      RH + T  
 x      15      RH + T + Td + a + Tw + x

**(3) Analog output variables, channel 1 (and channel 2, optional)**

.0      If normally only one channel is used, then choose 0 for channel 2!  
 x      1 1      RH      0 – 100% RH  
 x      2 2      T      (see Temperature ranges)  
 x      3 3      Td<sup>2</sup>      -40 to +100°C  
 x      4 4      a<sup>2</sup>      0 – 500g/m<sup>3</sup>  
 x      5 5      Tw<sup>2</sup>      0 to 100°C  
 x      6 6      x<sup>2</sup>      0 – 500g/kg dry air  
 x      9 9      special scaling (details in plain text)

**(4) Temperature ranges**

x      474      -40 to +80°C  
 x      478      -40 to +120°C  
 x      485      -40 to +180°C  
 x      635      -20 to +80°C  
 x      643      -20 to +120°C  
 x      648      -20 to +180°C  
 x      814      0 to 100°C  
 x      830      0 to 180°C  
 x      999      special range (details in plain text)

**(5) Sensor cable lengths (probe shaft/filter)**

x      2      2m shaft length 150mm (180°C), sintered stainless steel filter  
 x      5      5m shaft length 150mm (180°C), sintered stainless steel filter  
 x      10      10m shaft length 150mm (180°C), sintered stainless steel filter

**(6) Extra codes**

x      000      no extra code  
 x      427      conduit fitting NPT 1/2" (for installation tube)  
 x      777      non-metric unit (°F)  
 x      789      integrated LC display/operator panel  
 x      804      PPS plastic grid filter with stainless steel mesh  
 x      823      special sensor for high chemical concentrations  
 x      826      2 analog output channels (channel 1 and channel 2), 4 – 20mA  
 x      828      operating instructions in English

	(1)	(2)	(3)	(4)	(5)	(6)	
<b>Order code</b>							, ... <sup>1</sup>
<b>Order example</b>	907023/64	- 11	- 12	- 474	- 2	/ 000	

<sup>1</sup> List extra codes in sequence, separated by commas.

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907023/65      Intrinsically safe humidity and temperature transducer  
 with stainless steel sensor head on a 2m sensor cable,  
 operating temperature -40 to +180°C

**(2) Output variables**

x      11      RH + T  
 x      15      RH + T + Td + a + Tw + x

**(3) Analog output variables, channel 1 (and channel 2, optional)**

.10      If normally only one channel is used, then choose 0 for channel 2!  
 x      1      1      RH      0 – 100% RH  
 x      2      2      T      (see Temperature ranges)  
 x      3      3      Td<sup>2</sup>      -40 to +100°C  
 x      4      4      a<sup>2</sup>      0 – 500g/m<sup>3</sup>  
 x      5      5      Tw<sup>2</sup>      0 to 100°C  
 x      6      6      x<sup>2</sup>      0 – 500g/kg dry air  
 x      9      9      special scaling (details in plain text)

**(4) Temperature ranges**

x      474      -40 to +80°C  
 x      478      -40 to +120°C  
 x      485      -40 to +180°C  
 x      635      -20 to +80°C  
 x      643      -20 to +120°C  
 x      648      -20 to +180°C  
 x      814      0 to 100°C  
 x      830      0 to 180°C  
 x      999      special range (details in plain text)

**(5) Sensor cable lengths (probe shaft/filter)**

x      2      2m shaft length 150mm (180°C), sintered stainless steel filter  
 x      5      5m shaft length 150mm (180°C), sintered stainless steel filter  
 x      10      10m shaft length 150mm (180°C), sintered stainless steel filter

**(6) Extra codes**

x      000      no extra code  
 x      427      conduit fitting NPT 1/2" (for installation tube)  
 x      777      non-metric unit (°F)  
 x      785      mounting flange, aluminium  
 x      786      mounting flange, stainless steel  
 x      789      integrated LC display/operator panel  
 x      804      PPS plastic grid filter with stainless steel mesh  
 x      823      special sensor for high chemical concentrations  
 x      826      2 analog output channels (channel 1 and channel 2), 4 – 20mA  
 x      828      operating instructions in English

	(1)	(2)	(3)	(4)	(5)	(6)						
<b>Order code</b>							, ... <sup>1</sup>					
<b>Order example</b>	907023/65	-	11	-	12	-	474	-	2	/	000	

<sup>1</sup> List extra codes in sequence, separated by commas.

<sup>2</sup> The operands Td, a, Tw and x are only available if Option 15 has been selected under Output variables.



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**Order details:**      **Intrinsically safe industrial transducers  
 for humidity, temperature and derived variables  
 with Ex approval as per ATEX 100a 94/9/EC (PTB)**

**(1) Basic version**

907023/68      Intrinsically safe humidity and temperature transducer  
 with pressure-proof stainless steel sensor head on a 2m sensor cable,  
 for process pressures from 0 – 4MPa (0 – 40bar),  
 sensor head with sliding clamping thread;  
 operating temperature -40 to +180°C

**(2) Output variables**

x      11      RH + T  
 x      15      RH + T + Td + a + Tw + x

**(3) Analog output variables, channel 1 (and channel 2, optional)**

x      .10      If normally only one channel is used, then choose 0 for channel 2!  
 x      1 1      RH      0 – 100% RH  
 x      2 2      T      (see Temperature ranges)  
 x      3 3      Td<sup>2</sup>      -40 to +100°C  
 x      4 4      a<sup>2</sup>      0 – 500g/m<sup>3</sup>  
 x      5 5      Tw<sup>2</sup>      0 to 100°C  
 x      6 6      x<sup>2</sup>      0 – 500g/kg dry air  
 x      9 9      special scaling (details in plain text)

**(4) Temperature ranges**

x      474      -40 to +80°C  
 x      478      -40 to +120°C  
 x      485      -40 to +180°C  
 x      635      -20 to +80°C  
 x      643      -20 to +120°C  
 x      648      -20 to +180°C  
 x      814      0 to 100°C  
 x      830      0 to 180°C  
 x      999      special range (details in plain text)

**(5) Sensor cable lengths (probe shaft/filter)**

x      2      2m shaft length 178mm (180°C), sintered stainless steel filter  
 x      5      5m shaft length 178mm (180°C), sintered stainless steel filter  
 x      10      10m shaft length 178mm (180°C), sintered stainless steel filter

**(6) Extra codes**

x      000      no extra code  
 x      427      conduit fitting NPT 1/2" (for installation tube)  
 x      777      non-metric unit (°F)  
 x      787      ball valve installation kit  
 x      789      integrated LC display/operator panel  
 x      823      special sensor for high chemical concentrations  
 x      826      2 analog output channels (channel 1 and channel 2), 4 – 20mA  
 x      828      operating instructions in English

**Order code**      **(1)**      **(2)**      **(3)**      **(4)**      **(5)**      **(6)**  
**Order example**      907023/68      -      11      -      12      -      474      -      2      /      000      , ...<sup>1</sup>

<sup>1</sup> List extra codes in sequence, separated by commas.

<sup>2</sup> The operands Td, a, Tw and x are only available if Option 15 has been selected under Output variables.

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**Order details:**      **Intrinsically safe industrial transducers  
 for humidity, temperature and derived variables  
 with Ex approval as per ATEX 100a 94/9/EC (PTB)**

**(1) Basic version**

907023/68L      Intrinsically safe humidity and temperature transducer  
 with pressure-proof stainless steel sensor head (long version)  
 on a 2m sensor cable for process pressures from 0 – 4MPa (0 – 40bar),  
 sensor head with sliding clamping thread;  
 operating temperature -40 to +180°C

**(2) Output variables**

x      11      RH + T  
 x      15      RH + T + Td + a + Tw + x

**(3) Analog output variables, channel 1 (and channel 2, optional)**

x      .10      If normally only one channel is used, then choose 0 for channel 2!  
 x      1 1      RH      0 – 100% RH  
 x      2 2      T      (see Temperature ranges)  
 x      3 3      Td<sup>2</sup>      -40 to +100°C  
 x      4 4      a<sup>2</sup>      0 – 500g/m<sup>3</sup>  
 x      5 5      Tw<sup>2</sup>      0 – 100°C  
 x      6 6      x<sup>2</sup>      0 – 500g/kg dry air  
 x      9 9      special range (details in plain text)

**(4) Temperature ranges**

x      474      -40 to +80°C  
 x      478      -40 to +120°C  
 x      485      -40 to +180°C  
 x      635      -20 to +80°C  
 x      643      -20 to +120°C  
 x      648      -20 to +180°C  
 x      814      0 to 100°C  
 x      830      0 to 180°C  
 x      999      special range (details in plain text)

**(5) Sensor cable lengths (probe shaft/filter)**

x      2      2m shaft length 400mm (180°C), sintered stainless steel filter  
 x      5      5m shaft length 400mm (180°C), sintered stainless steel filter  
 x      10      10m shaft length 400mm (180°C), sintered stainless steel filter

**(6) Extra codes**

x      000      no extra code  
 x      427      conduit fitting NPT 1/2" (for installation tube)  
 x      777      non-metric unit (°F)  
 x      787      ball valve installation kit  
 x      789      integrated LC display/operator panel  
 x      823      special sensor for high chemical concentrations  
 x      826      2 analog output channels (channel 1 and channel 2), 4 – 20mA  
 x      828      operating instructions in English

	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>	<b>(5)</b>	<b>(6)</b>	
<b>Order code</b>							, ... <sup>1</sup>
<b>Order example</b>	907023/68L	-	11	-	12	-	474
					-	2	/
						000	

<sup>1</sup> List extra codes in sequence, separated by commas.

<sup>2</sup> The operands Td, a, Tw and x are only available if Option 15 has been selected under Output variables.

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**Order details:** Replacement probes for intrinsically safe industrial transducers for humidity, temperature and derived variables with Ex approval as per ATEX 100a 94/9/EC (PTB)

**(1) Basic versions**

907023/S61	Probe for intrinsically safe central unit for wall mounting, operating temperature -40 to +60°C
907023/S63	Probe with a flexible sensor cable and small sensor head, operating temperature -40 to +120°C
907023/S64	Probe for process pressures from 0 – 10MPa (0 – 100bar), operating temperature -40 to +180°C
907023/S65	Probe for high process temperatures, operating temperature -40 to +180°C
907023/S68	Probe for the variable installation in pressure lines from 0 – 4MPa (0 – 40bar), operating temperature -40 to +180°C
907023/S68L	Probe for the variable installation in pressure lines from 0 – 4MPa (0 – 40bar), long version with 400mm shaft length, operating temperature -40 to +180°C

**(2) Sensor cable length (probe shaft)**

	2	120mm	probe shaft
X	2	2m	shaft length 60mm (120°C)
X	5	5m	shaft length 60mm (120°C)
X	10	10m	shaft length 60mm (120°C)
	2	2m	shaft length 150mm (180°C)
X	5	5m	shaft length 150mm (180°C)
X	10	10m	shaft length 150mm (180°C)
	2	2m	shaft length 150mm (180°C)
X	5	5m	shaft length 150mm (180°C)
X	10	10m	shaft length 150mm (180°C)
	2	2m	shaft length 178mm (180°C)
X	5	5m	shaft length 178mm (180°C)
X	10	10m	shaft length 178mm (180°C)
	2	2m	shaft length 400mm (180°C)
X	5	5m	shaft length 400mm (180°C)
X	10	10m	shaft length 400mm (180°C)

**(3) Humidity sensor**

X	000	humidity sensor (standard)
X	823	special sensor for high chemical concentrations

**(4) Sensor protection / filter**

X	801	PPS plastic grid filter with PTFE membrane
X	803	sintered stainless steel filter
X	804	PPS plastic grid filter with stainless steel mesh
X	805	PPS plastic grid filter without stainless steel mesh

**(5) Installation kits**

X	000	no installation kit
X	783	duct installation kit
	785	mounting flange, aluminium
	786	mounting flange, stainless steel
X	787	ball valve installation kit

<b>Order code</b>	(1)	(2)	(3)	(4)	(5)
<b>Order example</b>	907023/S61	2	000	805	000

**Note:** The replacement probes can be universally combined with the central unit of the intrinsically safe industrial transducers!

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**Order details:** Accessories for intrinsically safe industrial transducers  
 for humidity, temperature and derived variables  
 with Ex approval as per ATEX 100a 94/9/EC (PTB)

<b>(1) Basic versions</b>	
907023/90	Filter ( 13.5mm dia.)
907023/91	Replacement humidity sensor
907023/92	Replacement temperature sensor
907023/93	Humidity sensor checks
907023/94	Duct installation kit
907023/95	Mounting flange
907023/96	Ball valve installation kit
907023/88	Interface cable (service interface) <sup>1</sup>
	<b>(2) Filter ( 13.5mm dia.)</b>
x	801 PPS plastic grid filter with PTFE membrane
x	803 sintered stainless steel filter
x	804 PPS plastic grid filter with stainless steel mesh
x	805 PPS plastic grid filter without stainless steel mesh
	<b>(2) Replacement humidity sensor</b>
x	814 HUMICAP® 180
	<b>(2) Replacement temperature sensor</b>
x	816 Pt 1000 1/3 DIN Class B to EN 60 751
	<b>(2) Humidity sensor checks</b>
x	820 33% RH magnesium chloride
x	821 53% RH magnesium nitrate
x	822 76% RH sodium chloride
	<b>(2) Duct installation kit</b>
x	783 duct installation kit (for type 907023/63)
	<b>(2) Mounting flange</b>
x	785 aluminium (for type 907023/65)
x	786 stainless steel (for type 907023/65)
	<b>(2) Ball valve installation kit</b>
x	787 ball valve installation kit (for type 907023/68 and .../68L)
	<b>(2) Interface cable</b>
x	817 interface cable for service interface

**Order code**  
**Order example**

(1)	-	(2)
907023/90	-	804

<sup>1</sup> Generally, the interface cable may only be used outside the hazardous area, and only temporarily for instrument operation! Its use for data transmission from a hazardous location is not permissible, because of the increased safety requirements of EN 50 284 for Category 1 devices!

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**Stock versions:**

**Accessories for intrinsically safe industrial transducers  
 for humidity, temperature and derived variables  
 with Ex approval as per ATEX 100a 94/9/EC (PTB)**

(1)	-	(2)	Sales No.
907023/90	-	801	90/00378136
907023/90	-	803	90/00342673
907023/90	-	804	90/00343462
907023/90	-	805	90/00342672
907023/92	-	816	90/00387458
907023/93	-	820	90/00332758
907023/93	-	821	90/00332759
907023/93	-	822	90/00332760
907023/94	-	783	90/90590560
907023/95	-	785	90/90590561
907023/95	-	786	90/90590562