

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

**JUMO Instrument Co. Ltd.**  
JUMO House  
Temple Bank, Riverway  
Harlow, Essex CM 20 2TT, UK  
Phone: +44 1279 635533  
Fax: +44 1279 635262  
e-mail: sales@jumo.co.uk  
Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**  
8 Technology Boulevard  
Canastota, NY 13031, USA  
Phone: 315-697-JUMO  
1-800-554-JUMO  
Fax: 315-697-5867  
e-mail: info@jumo.us  
Internet: www.jumo.us



## Hygro/hygrothermal transducers (capacitive) for climate monitoring

- for measuring relative humidity in air and temperature
- for building automation, storage rooms, climate and ventilation control
- as indoor, wall and duct versions
- special miniature rod version for OEM applications
- with current or voltage outputs as well as passive temperature output
- hygrometers as table-top or wall-mounting units

These humidity transducers have been developed especially for HVAC applications. Their special features are outstanding long-term stability, high measuring accuracy, excellent high-humidity response and good chemical resistance.

Indoor, wall and duct models as well as a miniature rod model – all in attractively designed housings – are ideally suited to take care of almost any air-conditioning task.

In addition to humidity transducers, combined units for humidity and temperature with current or voltage outputs and passive temperature outputs can also be supplied.

Applications are found throughout the entire air-conditioning and ventilation system – in domestic and office buildings, storage areas, and greenhouses. Version A transducers, which also achieve excellent measurement results in meteorology, have proved particularly successful in meeting the exacting requirements of indoor swimming pools and stables. And, in conjunction with the connector provided for version A and the mounting plate, the new optional snap-in mounting flange ensures that the transducer can be changed quickly and easily, for routine maintenance, for example.

Furthermore, the special rod model can be used for integrating humidity measurement into existing systems where space is tight, thus making it particularly suitable for OEM applications.

The indoor variant, complete with mounting bracket and battery, serves as a table-top or wall-mounting indicator.



### Technical data

<b>Humidity sensor</b>	capacitive, condensation permitted
<b>Humidity range</b>	0 to 100% RH
<b>Humidity working ranges</b>	10 to 95% RH: table-top or wall-mounting indicator 0 to 95% RH: indoor version 10 to 95% RH: wall or duct version (version B) 0 to 100% RH: wall or duct version (version A); rod version
<b>Humidity accuracy at 20°C</b>	± 2% RH: indoor version and indicator in the humidity range from 40 to 60% RH ± 3% RH: wall or duct version (version B), indoor version in the remaining humidity range ± 3% RH: rod version in the humidity range from 0 to 95% RH ± 2% RH: wall or duct version (version A) in the humidity range from 0 to 90% RH ± 3% RH: wall or duct version (version A) in the remaining humidity range
<b>Temperature error at 45% RH</b>	typically -0.05% RH per °C
<b>Temperature sensor</b>	Pt1000 platinum-chip temperature sensor (passively also Pt100) to EN 60 751, tolerance class A
<b>Temperature ranges</b>	-5 to +55°C: table-top or wall-mounting indicator 0 to 50°C: indoor version; wall or duct version (version B) -20 to +80°C: wall or duct version (version A) -40 to +60°C: rod version

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

**JUMO Instrument Co. Ltd.**  
JUMO House  
Temple Bank, Riverway  
Harlow, Essex CM 20 2TT, UK  
Phone: +44 1279 635533  
Fax: +44 1279 635262  
e-mail: sales@jumo.co.uk  
Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**  
8 Technology Boulevard  
Canastota, NY 13031, USA  
Phone: 315-697-JUMO  
1-800-554-JUMO  
Fax: 315-697-5867  
e-mail: info@jumo.us  
Internet: www.jumo.us



<b>Temperature accuracy at 20°C</b>	± 0.25°C: indoor version: voltage output ± 0.4°C: indoor version: current output ± 0.3°C: wall or duct version (version A); table-top or wall-mounting indicator ± 0.5°C: wall or duct version (version B); rod version
<b>Output signals</b>	4 – 20mA, 0 – 1V, 0 – 5V, 0 – 10V (instrument version according to order details)
<b>Supply</b>	2 x 1.5V DC alkaline batteries: table-top or wall-mounting indicator 15 – 35V DC; 24V AC ± 20%: instruments with voltage output 20 – 28V DC: instruments with current output 4.5 – 30V DC with rod version only
<b>Electromagnetic compatibility</b>	to EN 61 000-6-1 and EN 61 000-6-3
<b>Housing</b>	PC plastic
<b>Connection</b>	screw terminals up to 1.5mm <sup>2</sup>
<b>Cable gland</b>	M 16x1.5 (optionally plug connector) wall/duct version
<b>Protection</b>	IP20: indoor version, table-top/wall-mounting indicator IP65: wall/duct/rod version
<b>Load resistance</b>	R <sub>L</sub> 500 ohm max. with current output
<b>Internal power supply</b>	20mA max., 5mA with rod version
<b>Ambient temperature</b>	-5 to +50°C: indoor/wall/duct version (version B) and table-top/wall-mounting indicator -40 to +60°C (sensor head +80°C): wall/duct version (version A) -40 to +60°C: rod version
<b>Storage temperature</b>	-25 to +60°C
<b>Weight</b>	approx. 100g for indoor version and table-top/wall-mounting indicator approx. 150g for wall version approx. 250g for duct version approx. 50g for rod version

## Accessories

<b>Dust filter</b>	<b>Membrane filter:</b> (standard) for low-level pollution in HVAC (indoor application) <b>Sintered bronze filter:</b> with mechanical stress and very dusty atmospheres <b>Sintered stainless steel filter:</b> extremely effective with mechanical and thermal stress, as well as corrosive media <b>Metal mesh filter:</b> for high humidity, risk of condensation or rapidly changing humidity cycles
<b>Humidity sensors</b>	Type: HC 101 for rod version nominal capacity 200 ± 20pF Type: HC 200 for wall/duct version (version B) nominal capacity 200 ± 20pF Type: HC 1000 for indoor/wall/duct version (version A) nominal capacity 500 ± 50pF
<b>Temperature sensor</b>	platinum-chip temperature sensor produced in thin-film technique to EN 60 751, tolerance class A nominal value 1000 ohm at 0°C (with passive output also 100 ohm) dimensions in mm (W x L x H) 2.0 x 5.0 x 1.3
<b>Humidity sensor checks</b>	Humidity sensor checks can be carried out to check the accuracy of humidity transducers. The checking procedure is described in detail in DIN 50 008, IEC publication 260, ISO/R 483-1966. The underlying principle hereby is that a certain climate forms in the air above an aqueous, saturated salt solution. Sensor check sets with the values 33 %, 53 % and 76 % RH are available from stock.

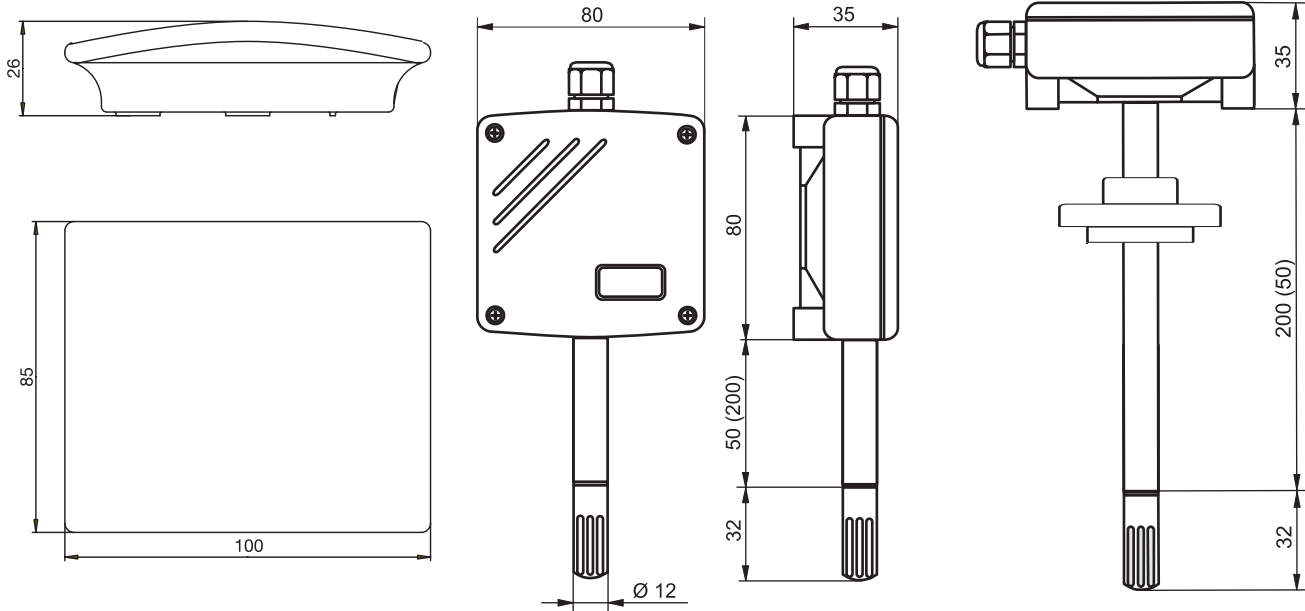
**JUMO GmbH & Co. KG**  
 Delivery address: Mackenrodtstraße 14,  
 36039 Fulda, Germany  
 Postal address: 36035 Fulda, Germany  
 Phone: +49 661 6003-0  
 Fax: +49 661 6003-607  
 e-mail: mail@jumo.net  
 Internet: www.jumo.net

**JUMO Instrument Co. Ltd.**  
 JUMO House  
 Temple Bank, Riverway  
 Harlow, Essex CM 20 2TT, UK  
 Phone: +44 1279 635533  
 Fax: +44 1279 635262  
 e-mail: sales@jumo.co.uk  
 Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**  
 8 Technology Boulevard  
 Canastota, NY 13031, USA  
 Phone: 315-697-JUMO  
 1-800-554-JUMO  
 Fax: 315-697-5867  
 e-mail: info@jumo.us  
 Internet: www.jumo.us



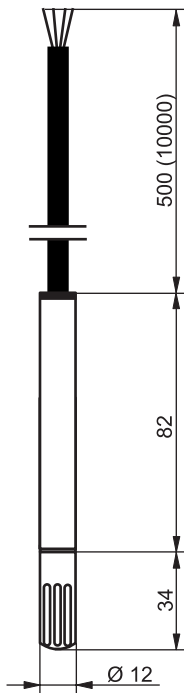
**Dimensions**



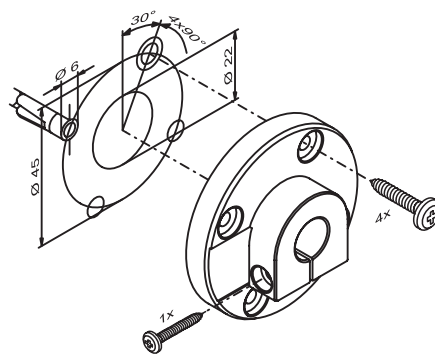
**Indoor version**  
 Type 907021/11  
 and table-top/wall-mounting indicator  
 Type 907021/12

**Wall versions**  
 Type 907021/20  
 Type 907021/21

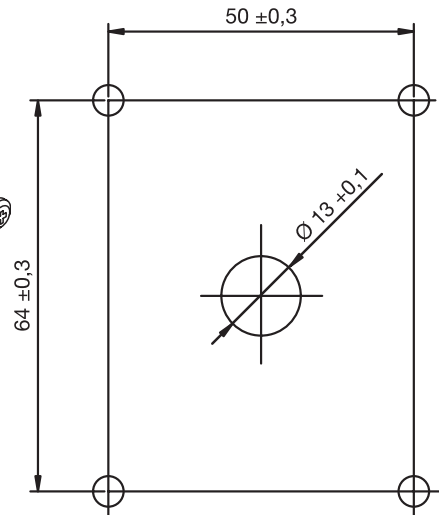
**Duct versions**  
 Type 907021/30  
 Type 907021/31



**Rod version**  
 Type 907021/40



**Mounting flange**  
 for duct versions



**Drilling template**  
 for wall/duct versions

Dimensions in mm.

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

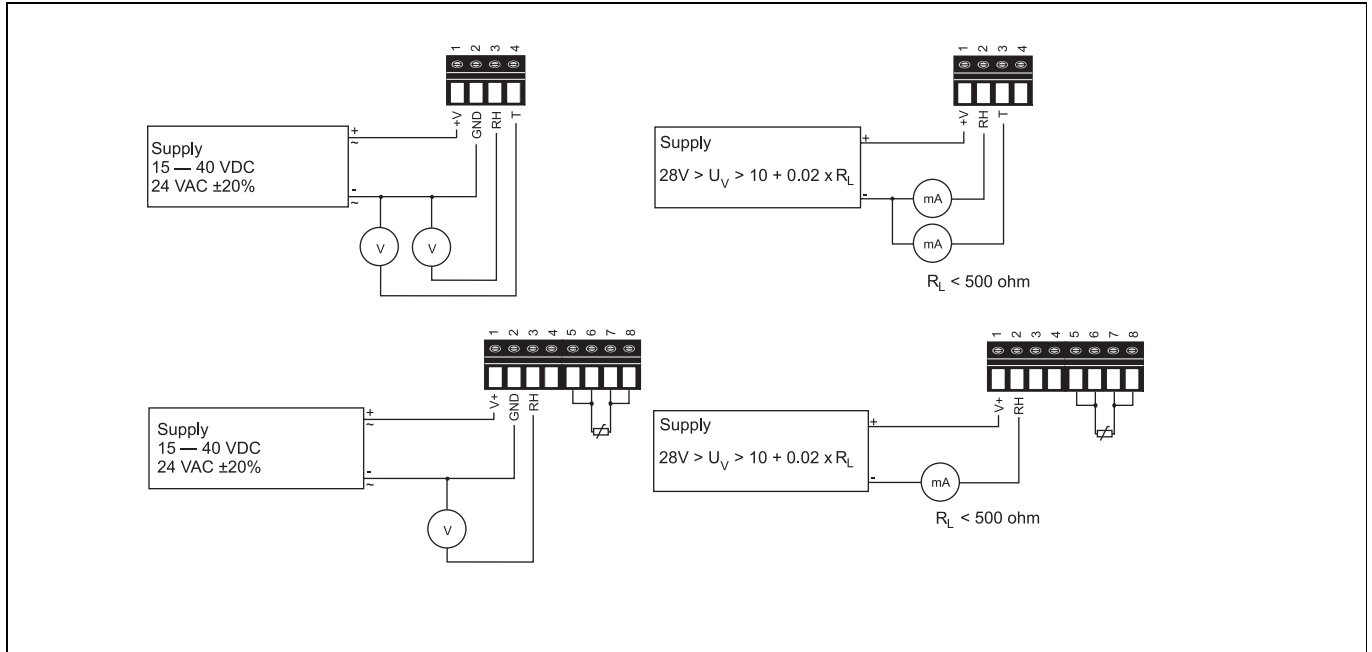
**JUMO Instrument Co. Ltd.**  
 JUMO House  
 Temple Bank, Riverway  
 Harlow, Essex CM 20 2TT, UK  
 Phone: +44 1279 635533  
 Fax: +44 1279 635262  
 e-mail: sales@jumo.co.uk  
 Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**  
 8 Technology Boulevard  
 Canastota, NY 13031, USA  
 Phone: 315-697-JUMO  
 1-800-554-JUMO  
 Fax: 315-697-5867  
 e-mail: info@jumo.us  
 Internet: www.jumo.us

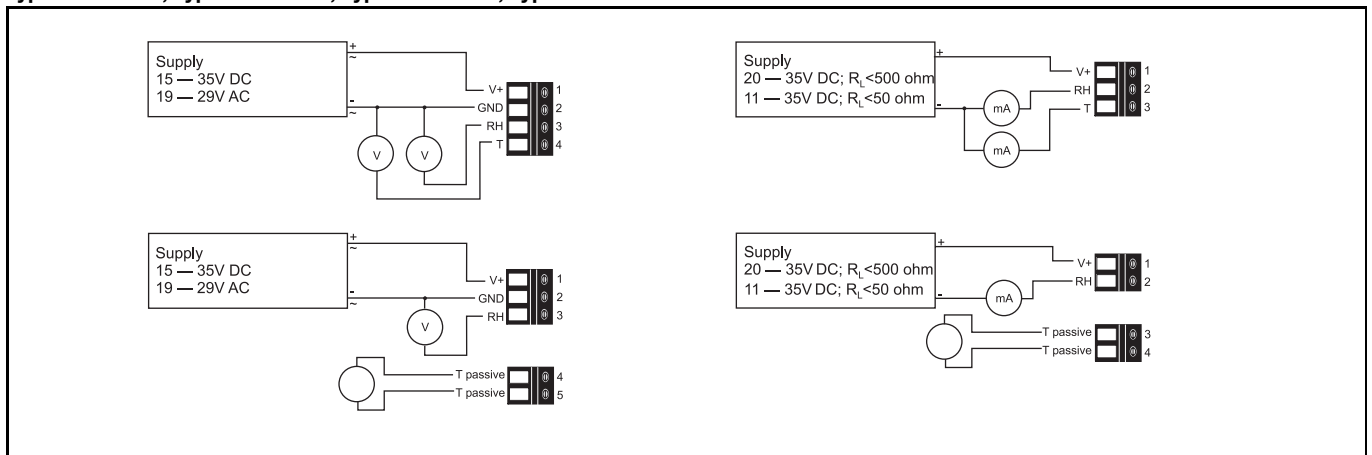


## Connection diagram

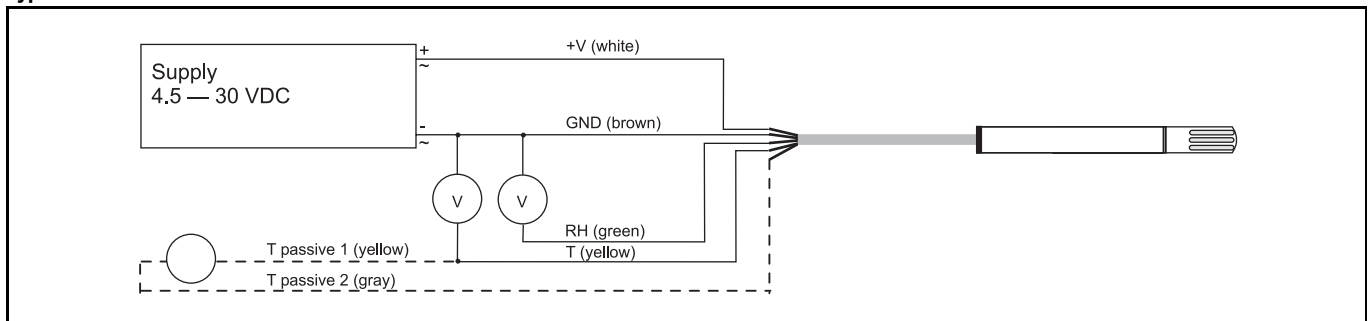
### Indoor version Type 907021/11



### Wall/duct version Type 907021/20, Type 907021/21, Type 907021/30, Type 907021/31



### Rod version Type 907021/40



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

**JUMO Instrument Co. Ltd.**  
 JUMO House  
 Temple Bank, Riverway  
 Harlow, Essex CM 20 2TT, UK  
 Phone: +44 1279 635533  
 Fax: +44 1279 635262  
 e-mail: sales@jumo.co.uk  
 Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**  
 8 Technology Boulevard  
 Canastota, NY 13031, USA  
 Phone: 315-697-JUMO  
 1-800-554-JUMO  
 Fax: 315-697-5867  
 e-mail: info@jumo.us  
 Internet: www.jumo.us



**Order details: Hygro/hydrothermal transducers (capacitive) for climate monitoring**

**(1) Basic version**

	907021/11	Hygro/hydrothermal transducer, indoor version
	907021/12	Hygrothermometer, table-top/wall-mounting indicator
	907021/20	Hygro/hydrothermal transducer, wall version (version A)
	907021/21	Hygro/hydrothermal transducer, wall version (version B)
	907021/30	Hygro/hydrothermal transducer, duct version (version A)
	907021/31	Hygro/hydrothermal transducer, duct version (version B)
	907021/40	Hygro/hydrothermal transducer, rod version

X	X	X	X	X	X	1	humidity
X	X	X	X	X	X	2	humidity and temperature
X	X	X	X	X	X	3	humidity and temperature, passive

**(3) Measuring ranges<sup>1</sup>**

X	X	X	X	33	10 to 95% RH; -5 to +55°C
X	X	X	X	34	0 to 100% RH; 0 to 50°C
X	X	X	X	10	0 to 100% RH; -20 to +80°C
X	X	X	X	14	0 to 100% RH; -40 to +60°C
X	X	X	X	22	0 to 100% RH; -30 to +70°C

**(4) Output signals**

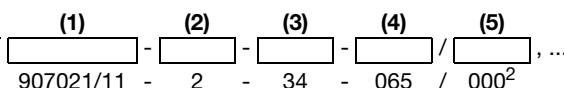
X	X	X	X	X	005	4 – 20mA
X	X	X	X	X	006	4 – 20mA / temperature, passive, Pt100 Class A
X	X	X	X	X	007	4 – 20mA / temperature, passive, Pt1000 Class A
X	X	X	X	X	051	0 – 1V
X	X	X	X	X	052	0 – 1V / temperature, passive, Pt100 Class A
X	X	X	X	X	053	0 – 1V / temperature, passive, Pt1000 Class A
X	X	X	X	X	057	0 – 5V
X	X	X	X	X	065	0 – 10V
X	X	X	X	X	066	0 – 10V / temperature, passive, Pt100 Class A
X	X	X	X	X	067	0 – 10V / temperature, passive, Pt1000 Class A
X	X	X	X	X	000	no output, indication only

**(5) Extra codes**

X	X	X	X	X	X	000	no extra code
X	X	X	X	X	X	793	integrated LC display (for humidity and temperature, alternating indication)
X	X	X	X	X	X	794	integrated LC display (as above, but temperature in °F)
X	X	X	X	X	X	764	snap-in mounting flange (mounting plate and plug connector)
X	X	X	X	X	X	796	measurement probe - short version for duct model (50mm)
X	X	X	X	X	X	845	longer connecting cable, length 1.5m
X	X	X	X	X	X	846	longer connecting cable, length 2m
X	X	X	X	X	X	847	longer connecting cable, length 3m
X	X	X	X	X	X	848	longer connecting cable, length 5m
X	X	X	X	X	X	849	longer connecting cable, length 10m

Order code

Order example



1. Please take note of the humidity working ranges under Technical data!  
 2. List extra codes in sequence, separated by commas.

**JUMO GmbH & Co. KG**

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

**JUMO Instrument Co. Ltd.**

JUMO House  
Temple Bank, Riverway  
Harlow, Essex CM 20 2TT, UK  
Phone: +44 1279 635533  
Fax: +44 1279 635262  
e-mail: sales@jumo.co.uk  
Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**

8 Technology Boulevard  
Canastota, NY 13031, USA  
Phone: 315-697-JUMO  
1-800-554-JUMO  
Fax: 315-697-5867  
e-mail: info@jumo.us  
Internet: www.jumo.us

**Stock versions**

(1)	-	(2)	-	(3)	-	(4)	Sales No.
907021/11	-	1	-	34	-	005	90/00436297
907021/11	-	2	-	34	-	005	90/00436298
907021/20	-	1	-	10	-	005	90/00388170
907021/20	-	2	-	10	-	005	90/00388171
907021/21	-	1	-	34	-	005	90/00388172
907021/21	-	2	-	34	-	005	90/00388173
907021/30	-	1	-	10	-	005	90/00388174
907021/30	-	2	-	10	-	005	90/00388175
907021/31	-	1	-	34	-	005	90/00388176
907021/31	-	2	-	34	-	005	90/00388177
907021/40	-	1	-	14	-	051	90/00388179
907021/40	-	2	-	14	-	051	90/00388180

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

**JUMO Instrument Co. Ltd.**  
 JUMO House  
 Temple Bank, Riverway  
 Harlow, Essex CM 20 2TT, UK  
 Phone: +44 1279 635533  
 Fax: +44 1279 635262  
 e-mail: sales@jumo.co.uk  
 Internet: www.jumo.co.uk

**JUMO Process Control, Inc.**  
 8 Technology Boulevard  
 Canastota, NY 13031, USA  
 Phone: 315-697-JUMO  
 1-800-554-JUMO  
 Fax: 315-697-5867  
 e-mail: info@jumo.us  
 Internet: www.jumo.us



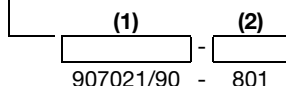
**Order details: Accessories**

**(1) Basic version**

	907021/90	Filter
	907021/91	Humidity sensor, capacitive
	907021/92	Temperature sensor
	907021/93	Humidity sensor check set
X	801	<b>(2) Filter</b> Membrane filter (standard)
X	802	Sintered bronze filter
X	803	Sintered stainless steel filter
X	804	Metal mesh filter
	806	<b>(2) Humidity sensor</b> HC 1000
X	807	HC 200
X	808	HC 101
	004	<b>(2) Temperature sensor</b> Pt100
X	005	Pt1000
	820	<b>(2) Humidity sensor check set</b> 33 % RH magnesium chloride
X	821	53 % RH magnesium nitrate
X	822	76 % RH sodium chloride

Order code

Order example



**Stock versions**

(1)	(2)	Sales No.
907021/90	801	90/00388181
907021/90	802	90/00388182
907021/90	803	90/00388183
907021/90	804	90/00389114
907021/91	806	90/00388184
907021/91	807	90/00388185
907021/91	808	90/00388193
907021/92	004	90/00387455
907021/92	005	90/00358359
907021/93	820	90/00332758
907021/93	821	90/00332759
907021/93	822	90/00332760