

JUMO hydroTRANS S20

Humidity and temperature transmitter
with CO₂ module, wall-mounted version



Single Pair Ethernet

Operating Manual



90704212T90Z001K000

V2.00/EN/2026-05-27

Further information and downloads



qr-907042-en.jumo.info

Table of contents

1	About this documentation	6
1.1	Purpose	6
1.2	Target group	6
1.3	Definition of terms	6
1.4	Trademark information	6
1.5	Symbols	6
2	Safety	7
2.1	Intended use	7
2.2	Qualification of personnel	7
2.3	Transport and storage damage	7
2.4	Disturbances	7
2.4.1	Climatic conditions	7
2.4.2	Volatile organic compounds (VOCs)	7
2.4.3	Stabilisation time	7
3	Description	8
3.1	Structure	8
3.2	Functions	8
3.3	Nameplate	9
3.4	Approval marks and certificates	9
3.5	Scope of delivery	9
4	Technical data	10
4.1	Electrical safety	10
4.2	Electrical data	10
4.3	Inputs	10
4.3.1	Measurands	10
4.4	Interfaces	11
4.4.1	USB	11
4.4.2	SPE	11
4.5	Display	11
4.6	Environmental influences	12
4.7	Mechanical features	12
4.8	Dimensions	13
5	Mounting	14
5.1	Mounting the device	14

Table of contents

6	Electrical connection	15
6.1	Preparing the electrical connection	15
6.2	Connection elements	15
6.2.1	Terminal assignment	15
6.3	Connection diagram	16
6.4	Connecting the device	17
7	Operation	18
7.1	Display elements	18
7.1.1	Startup display	18
7.1.2	Process display	18
8	Setup program	19
9	Configuration	20
9.1	File info	20
9.2	System data	20
9.3	Display	20
9.4	Measurand correction	21
9.5	Modbus TCP	21
9.6	Network settings	21
9.7	Cloud Gateway	22
9.8	Online parameters	22
10	Modbus address tables	23
10.1	Version and fabrication number	23
10.2	Configuration	23
10.2.1	System data	23
10.2.2	Display	24
10.2.3	Measurand correction	24
10.2.4	Modbus TCP	24
10.2.5	Network settings	25
10.2.6	Actions	25
10.2.7	Measured values	25
10.2.8	Calculated values	25
10.2.9	Error messages Modbus	26
10.2.10	Analog selector	26
11	Troubleshooting	27
11.1	Process value error	27
11.2	Error messages in line with NAMUR	27

Table of contents

12	Maintenance and cleaning	29
12.1	Replacing filter cap	29
12.2	Cleaning	29
13	Shutdown	30
13.1	Dismounting	30
13.2	Returns	30
13.3	Disposal	30
14	Accessories	31
15	Open-source software	32
16	Certificates	33

1 About this documentation

1.1 Purpose

This documentation is part of the device and includes all information to ensure that it is used safely and as intended across all phases of the product lifecycle.

If you do not follow the documentation and safety information, this may result in risk to life and damage to property due to improper use.

- Read and follow the documentation and the safety information and warnings.
- Store the document in its entirety, in an easily accessible location, and so that it can be read in full at all times.
- Contact the manufacturer if you have any questions about the device and documentation.

1.2 Target group

This documentation is intended to be used by personnel for plant mechanical systems for sanitary, heating and air-conditioning technology, electrical engineering or mechanical and plant engineering throughout all phases of the product life cycle.

1.3 Definition of terms

Use in the documentation	Definition
Device, product	Humidity and temperature transmitter
CO ₂ module, CO ₂ sensor	Carbon dioxide (CO ₂) as a measurand
End device	Smartphone, tablet, laptop, PC etc.
Measured value	Process value
Product lifecycle	Overall consideration of Product identification, acceptance of the goods, storage, mounting, connection, operation, troubleshooting, maintenance to disposal

1.4 Trademark information

All trademarks and trade and company names used are the property of their rightful owners or authors.

1.5 Symbols



NOTE!

This symbol is used in tables and indicates that further information is provided after the table.



REFERENCE!

This symbol refers to **further information** in other sections, chapters, or other manuals.

2.1 Intended use

The humidity and temperature transmitter monitors the ambient air quality.

The device is suitable for wall mounting in indoor areas and weather-proofed outdoor areas.

The documentation is part of the device. The device is only intended for use according to this documentation.

2.2 Qualification of personnel

The personnel deployed must meet the following requirements in all phases of the product lifecycle:

- Members of personnel have at least completed training in the field of plant mechanical systems for sanitary, heating, and air-conditioning technology or have completed a degree in electrical engineering or mechanical and plant engineering.
- Members of personnel are familiar with this documentation and the safety information and warnings it contains.

2.3 Transport and storage damage

The device can be damaged if it is insufficiently protected during transport and/or improperly stored.

- Transport the device protected from moisture and dirt in shockproof packaging.
- Protect all electrical and mechanical connections from damage.
- Observe the admissible storage temperature of the device.
- Store the device in a dry and dust-free environment.

2.4 Disturbances

2.4.1 Climatic conditions

External factors affecting the electronic components, particularly the sensor element, can lead to measurement deviations. Appropriate measures reduce the influence of disturbances and ensure measurement accuracy:

- Protect the device from external heat sources.
- Protect the device from direct sunlight.
- Protect the device from strong drafts.

A measurement or process value is corrected using an offset.

⇒ "Measurand correction ", Page 21

2.4.2 Volatile organic compounds (VOCs)

High concentrations in the ambient air and prolonged exposure of the sensor can lead to measurement deviations. Appropriate measures prevent damage to the sensor and ensure measurement accuracy:

- Adequate ventilation of the mounting site

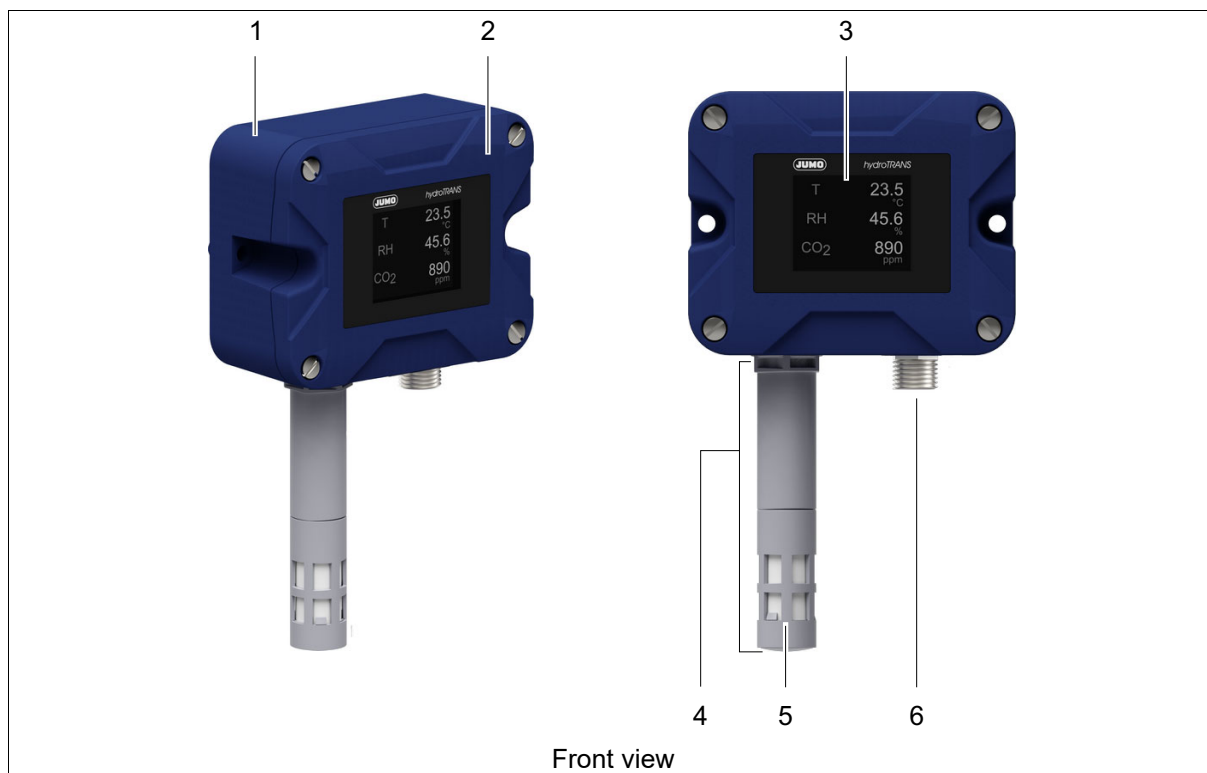
2.4.3 Stabilisation time

After the initial start-up of the device, the sensor element adapts to the environmental conditions at the installation site. Measurement deviations may occur during this stabilisation time. Measurement accuracy is ensured by taking appropriate measures:

- Observe the stabilisation time of at least 60 h.

3 Description

3.1 Structure



- 1 Housing rear
- 2 Housing front
- 3 Display (TFT display)

- 4 Probe
- 5 Filter cap
- 6 M12 plug connector

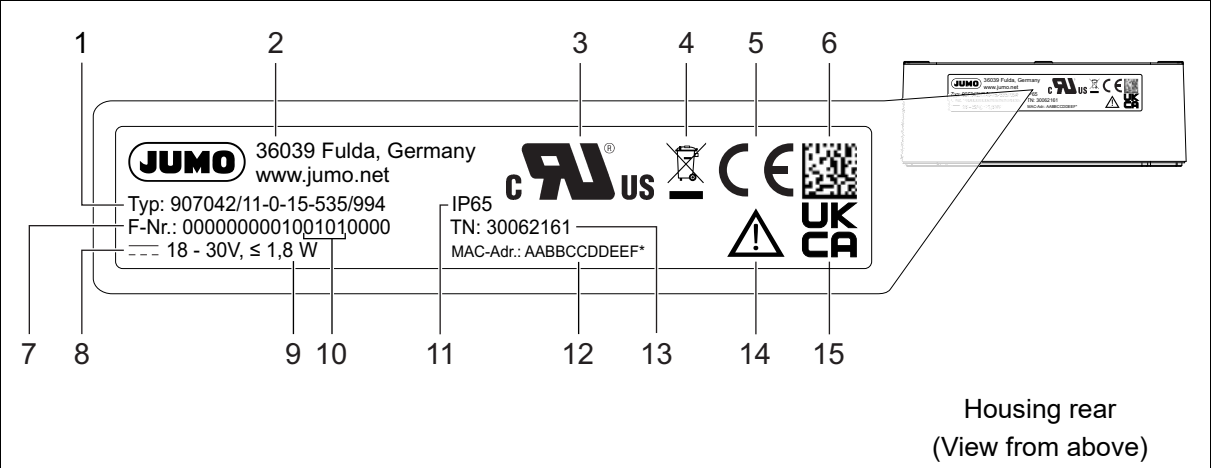
3.2 Functions

Measurand	Function principle
Relative humidity	Capacitive measurement technology
Temperature	Semiconductor measurement technology
Carbon dioxide (CO ₂)	Photoacoustic measurement technology

The process values of the measurands can be displayed on the display and issued to a higher-level system via the interfaces.

3.3 Nameplate

Example:



- | | | | |
|---|---------------------------|----|---|
| 1 | Order code | 9 | Power consumption |
| 2 | Manufacturer and address | 10 | Date of manufactur (YYww) |
| 3 | UL identification marking | 11 | Protection type according to DIN EN 60529 |
| 4 | Disposal | 12 | Hardware address |
| 5 | CE identification marking | 13 | Part no. |
| 6 | Data Matrix code | 14 | Observe device documentation! |
| 7 | Fabrication number | 15 | UKCA identification marking |
| 8 | Voltage supply (DC) | | |

3.4 Approval marks and certificates



Certificates for approved device versions are available for download on the manufacturer's website.

3.5 Scope of delivery

Device in the ordered version
Brief instructions
2 Fastening screws (socket button self-tapping screw 4.8 × 38)

4 Technical data

4.1 Electrical safety

Requirements	DIN EN IEC 61010-1:2020 The device must be equipped with an electrical circuit that meets the requirements for "Limited-energy circuits".
--------------	--

4.2 Electrical data

Voltage supply	DC 18 to 30 V, PELV
Current consumption	≤ 100 mA
Power consumption	≤ 1.8 W
Overvoltage category	II
Pollution degree	2
Protection rating	DIN EN 61140, Class III (protective low voltage)
PoDL class	Class 11, IEEE 802.3cg
PoDL classification	SCCP or Forced Mode
Electrical connection	
Connection element	M12 plug connection
M12 plug connector	IEC 63171-5
Version	2-pole
Connecting cable	IEC 61156-11, IEC 61156-13, IEC 61156-14
Version	2-core, shielded
Bandwidth	≥ 20 MHz
Line length	≤ 500 m ($\geq$ AWG 22 at $\geq$ DC 24 V supply voltage into the cable)
DC loop resistance	< 59 Ω
Temperature resistance	≥ 80 °C
For UL application	
Approved cables ^a	CYJV2/8, CYJV/7, PVVA2/8, PVVA/7

^a The cables must be suitable for the voltage, current and temperature used.

4.3 Inputs

4.3.1 Measurands

Relative humidity

Measuring range	0 to 95 % RH
Accuracy	
Stabilization time after initial start-up	≥ 60 h
Typical	± 2.0 % RH
Max.	± 2.5 % RH
Reference conditions	
Humidity	≥ 30 % RH
Sampling rate	1 s

Temperature

Measuring range	-10 to +60 °C
Accuracy	
Typical	±0.2 °C
Max.	±0.4 °C
Sampling ratio	1 s

Carbon dioxide (CO₂)

Measuring range	400 to 10000 ppm
Accuracy	±(50 ppm + 5 % of the measured value)
Reference conditions	
Ambient temperature	25 °C
Air pressure	1013 hPa
Humidity	50 % RH
Measuring range	400 to 1000 ppm
Sampling rate	30 s

4.4 Interfaces

4.4.1 USB

Function	Transfer of configuration data and device information
Communication	Via end device and setup software
Transmission standard	USB 2.0
Connector type	Micro-B
Power requirement	≤ 500 mA
Cable length	≤ 5 m

4.4.2 SPE

Function	Transfer of process data, configuration data, and device information, voltage supply via PoDL
Communication	Via end device and JUMO Cloud, via Modbus master
SPE standard	10BASE-T1L
Transmission protocol	Integrated JUMO Cloud gateway, Modbus TCP
Data transfer rate	10 Mbit/s

4.5 Display

Type	TFT display
Size	
Display range	35.04 mm × 28.03 mm
Screen size (diagonal)	1.77"
Resolution	128 × 160 RGB
Brightness	11 levels (configurable)

4 Technical data

4.6 Environmental influences

Admissible ambient temperature	-10 to +60 °C
Admissible storage temperature	-30 to +60 °C
Protection type	DIN EN 60529
Housing	IP65
Max. site altitude	5300 m above sea level
Climatic conditions	DIN EN IEC 60721-3-3
Climate class	3K24
Air temperature	-25 to +55 °C
Relative humidity	≤ 95 %, non-condensing
Electromagnetic compatibility (EMC)	DIN EN IEC 61326-2-3:2022
Interference emission	Class B ^a
Interference immunity	Industrial requirement
Oscillation ^b	DIN EN 60068-2-6
Amplitude	0.15 mm at 10 to 58.1 Hz
Acceleration	20 m/s ² at 58.1 to 150 Hz
Shock ^b	DIN EN 60068-2-27
Peak acceleration	150 m/s ²
Shock duration	11 ms

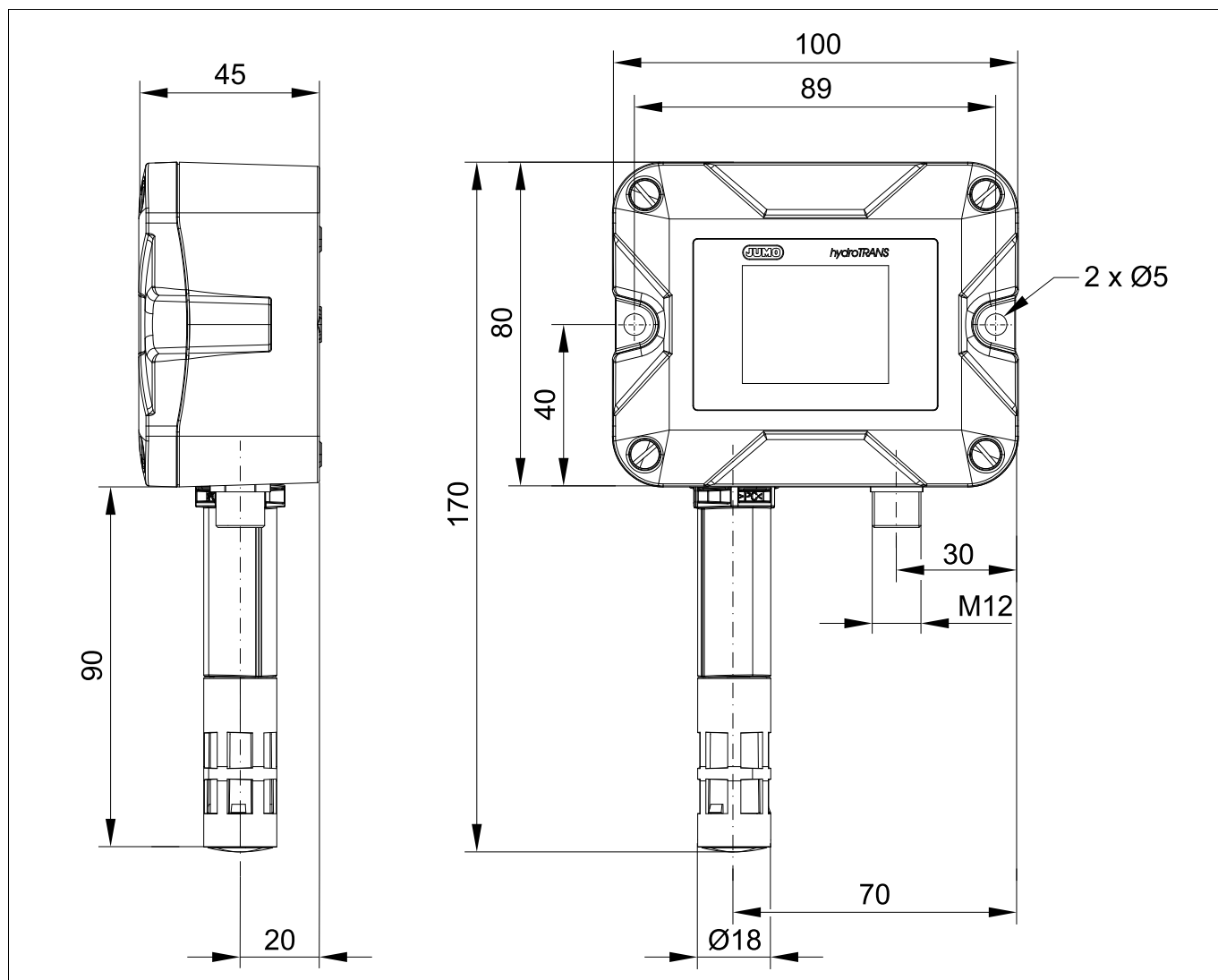
^a The product is suitable for industrial use as well as for households and small businesses.

^b The CO₂ module is sensitive to vibrations. In the event of vibrations, the measurement results could change on account of the design.

4.7 Mechanical features

Material	
Housing	PC
Display cover	PMMA
Weight	~ 200 g

4.8 Dimensions



5 Mounting

5.1 Mounting the device

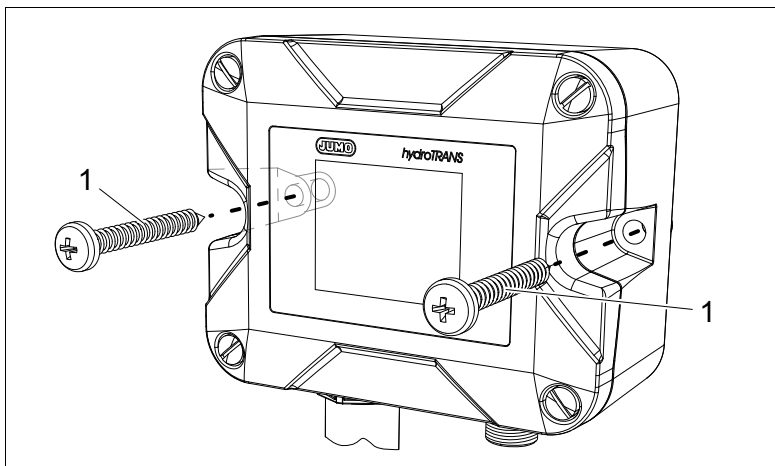
Aids	Cross-headed screwdriver
Material	2 Fastening screws (socket button self-tapping screw 4.8 × 38)

Requirements:

- The system has been de-energized and secured against being switched on again.
- The mounting holes have been drilled.

Procedure:

1. Mount the device with the fastening screws (1).



Electrical connection: ⇒ Seite 15

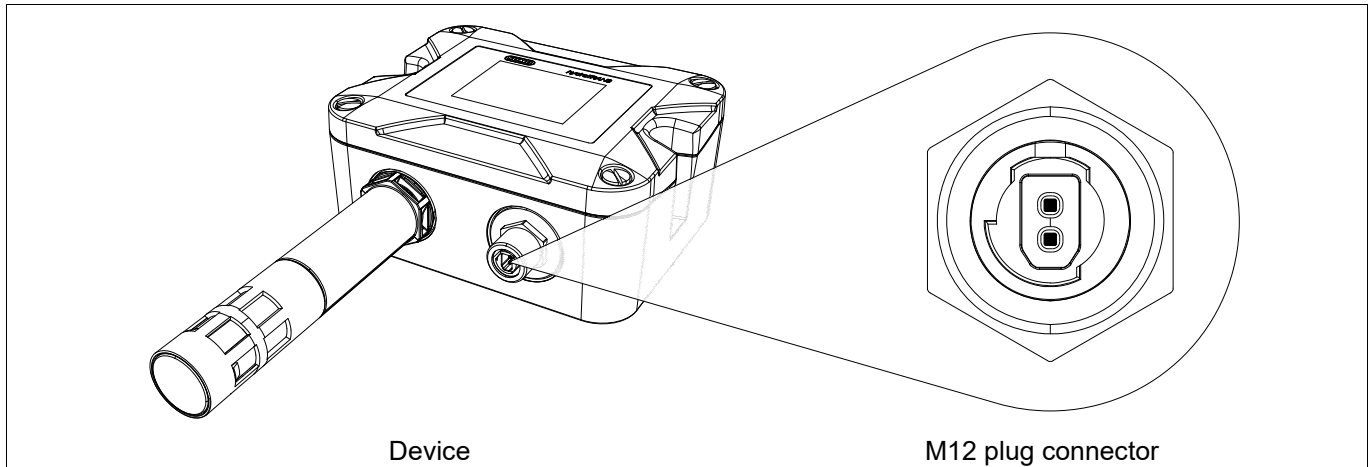
6 Electrical connection

6.1 Preparing the electrical connection

Requirements:

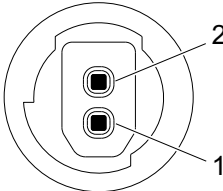
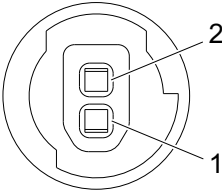
- The system has been de-energized and secured against being switched on again.
- The connections for the voltage supply and signal processing have been correctly prepared.

6.2 Connection elements



6.2.1 Terminal assignment

M12 plug connector

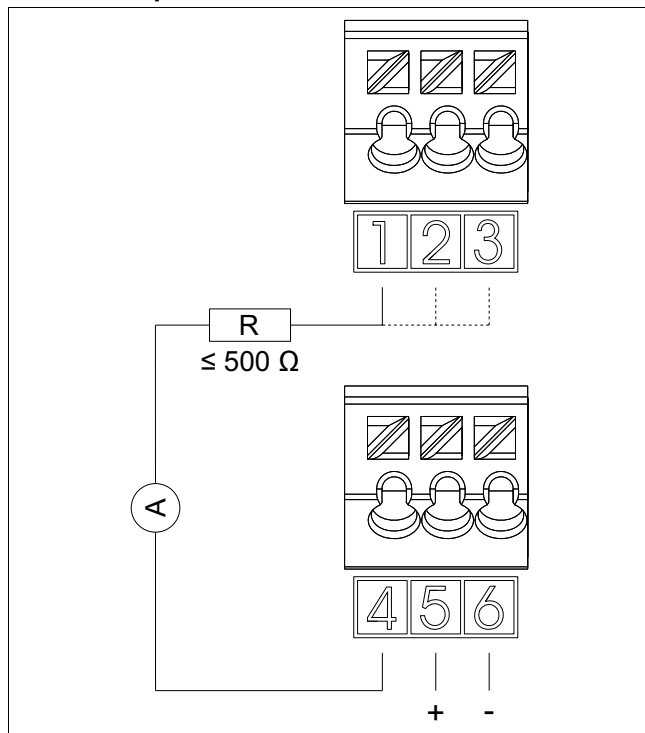
Designation	Description	Assignment		
SPE	RxTx+/PoDL+	1 WH (white)		
	RxTx-/PoDL-	2 BU (blue)		
			Device	Connecting cable

6 Electrical connection

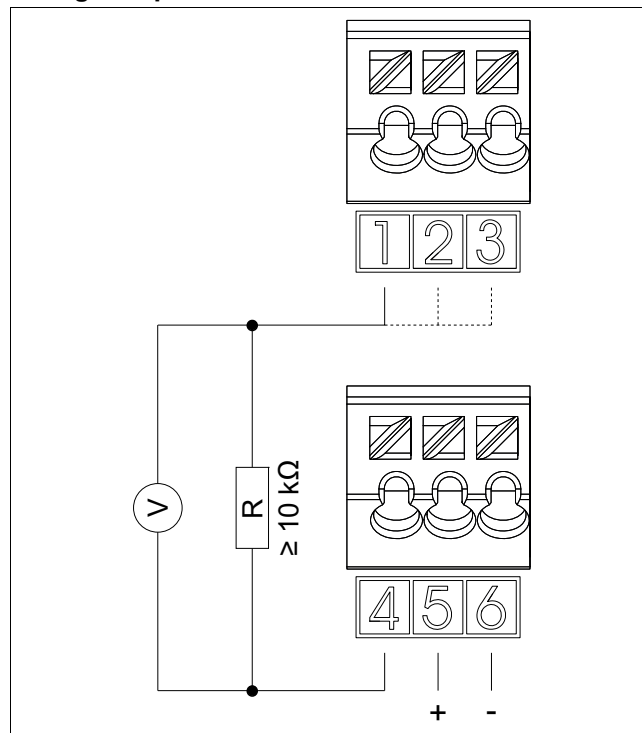
6.3 Connection diagram

Analog outputs

Current output



Voltage output



6.4 Connecting the device

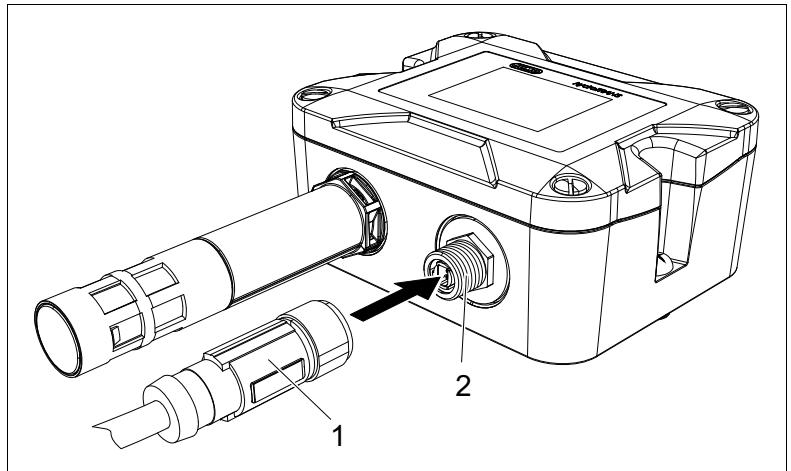
Material	Connecting cable, ⇨ "Electrical data ", Page 10
----------	---

Requirements:

- The system has been de-energized and secured against being switched on again.
- The connections for the voltage supply and signal processing have been correctly prepared.

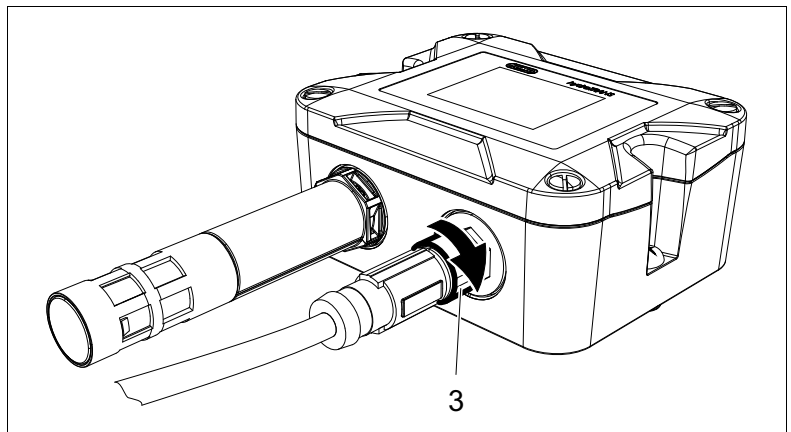
Procedure:

1. Insert the connecting cable (1) into the M12 plug connector (2).



2. Screw the union nut (3) on the connecting cable.

Tightening torque: 0.2 Nm



3. Remove the protective film from the display.

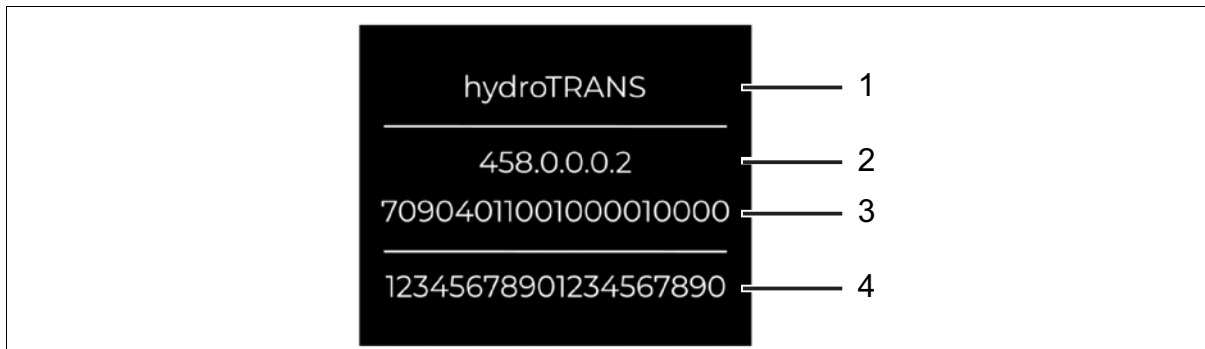
The device is ready for operation as soon as the voltage supply is established.

7 Operation

7.1 Display elements

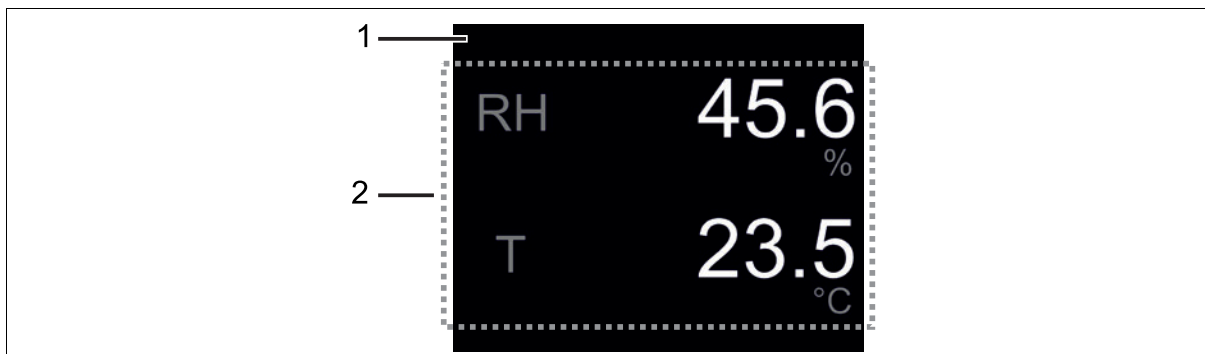
7.1.1 Startup display

The startup display appears as soon as the voltage supply to the device is established. The startup display switches to the process value display after approximately five seconds.



Pos.	Designation	Description
1	Startup display	Shows the device name.
2		Shows the device software version.
3		Shows the device hardware version.
4		Shows the device TAG number.

7.1.2 Process display



Pos.	Designation	Description
1	Process display	Shows the following values and messages: • Up to three process values • Error messages
2	Process value display	Shows the following values: • The formula symbol • The process value (measured or calculated value) • The system unit

8 Setup program

The setup program is used to configure the devices. The free 30-day test version is available for download on the manufacturer's [product website](#).

The configuration data that is created can be saved in a file and transferred between the device and set-up program.

The data is transferred serially via the USB interface. The USB interface must have a 500-mA host.

Connection of the USB interface

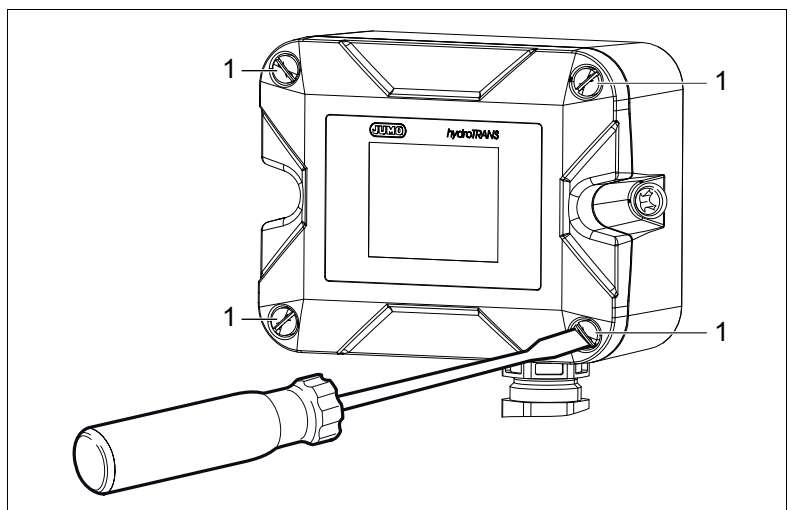
Aids	Slotted screwdriver
Material	USB cable, connector type A to Micro-B

Requirements:

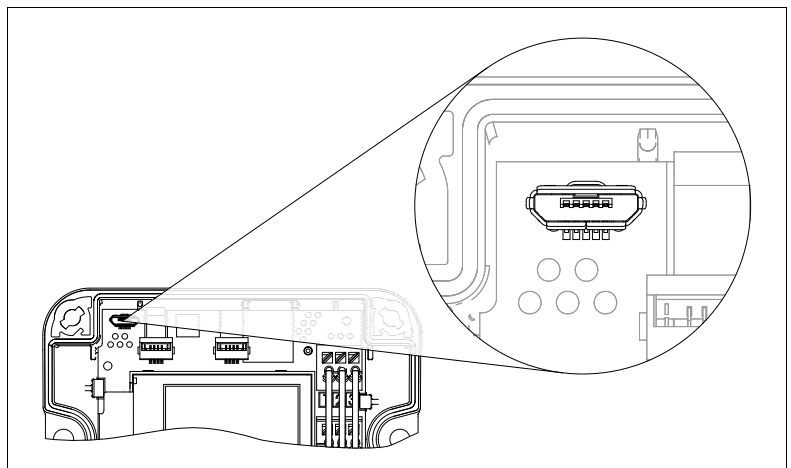
- The system has been de-energized and secured against being switched on again.

Procedure:

1. Loosen the quick-release screws (1).
2. Remove the housing front and place it down, taking care to protect it from pollutants.



3. Connect the USB cable to the USB port and connect it to the end device.
4. Start the setup program and configure the relevant settings.
5. Remove the USB cable once the data transfer is complete.



6. Place the housing front on the housing rear. Lock the quick-release screws with a quarter turn.
The housing is tightly sealed.

9 Configuration

The default settings are shown in **bold** in the following tables.

9.1 File info

In the **File info** menu you can enter information about the configuration file.

9.2 System data

Parameter	Value	Description
Language	German , English, French, Spanish	National language for the device texts of the process display.
Temperature	°C , °F	System units of the process values shown in the process value display.
Absolute humidity	g/m³ , g/ft ³	
Mixing ratio	g/kg , gr/lb	
Partial water vapor pressure	mbar , psi	
Specific enthalpy	kJ/kg , BTU/lb	For categorization purposes, e.g. to identify the installation location.
TAG number	–	
Altitude 	0 m	Refers to standard elevation zero (NHN).

Altitude

The parameter is used to calculate the ambient pressure based on the barometric formula and affects the calculation of the CO₂ concentration, mixing ratio, and specific enthalpy.

9.3 Display

Value 1st, 2nd, 3rd line > Analog selector

Parameter	Value	Description
No selection	–	The process value is not shown.
Measured values	Relative humidity (RH), Temperature (T), Carbon dioxide (CO ₂)	Process values
Calculated values	Dew point (Td), Mixing ratio (x), Absolute humidity (a), Specific enthalpy (h), Wet-bulb temperature (Tw), Frost point (Tf), Partial water vapor pressure (Pw)	Process values
Brightness	0 to 10 (5)	Brightness of the process display backlight.

9.4 Measurand correction

Parameter	Value	Description
Relative humidity	Offset	–
Temperature	Offset	–
Carbon dioxide	Offset, Automatic self-calibration	–

Relative humidity

Parameter	Value	Description
Offset	Input range: -15 to 15 % (0.0)	Process value correction, also affects the calculated values.

Temperature

Parameter	Value	Description
Offset	Input range: -15 to 15 °C (0.0)	Process value correction, also affects the calculated values.

Carbon dioxide

Parameter	Value	Description
Offset	Input range: -500 to +500 ppm (0)	Process value correction, also affects the calculated values.
Automatic self-calibration 	Active , inactive	–

Automatic self-calibration

Long-term accuracy is guaranteed if the CO₂ sensor is exposed to fresh air with an atmospheric CO₂ concentration of 400 ppm at least once a week.

If the application does not allow this:

- Set automatic self-calibration to inactive.
- Correct the offset manually.

9.5 Modbus TCP

Parameter	Value	Description
Interface	Active , Inactive	–
Port	1 to 1024 (502)	–
Temperature	°C, °F	System units of the process values shown in the process value display.
Absolute humidity	g/m³ , g/ft ³	
Mixing ration	g/kg , gr/lb	
Wasserdampfpartialdruck	mbar , psi	
Spezifische Enthalpie	kJ/kg , BTU/lb	

9.6 Network settings

Parameter	Value	Description
IP address assignment	Automatic , Manual	–
DNS server IP automatic	Yes , No	–

9 Configuration

9.7 Cloud Gateway

Parameter	Value	Description
Connection to the cloud	Inactive, Active	—

9.8 Online parameters

This function requires an active connection between the setup program and device.

Parameter	Description
Hardware/software	Version of the device hardware and software
Measurands	Test of sensor functions
Display	Test of color reproduction
Calibration constants	Calibration constants of analog outputs
Analog outputs	Test of analog outputs Measure the signal at the relevant output.

10 Modbus address tables

Transmission

All data types are transmitted in big-endian format according to Modbus standard.

Access types

- RO = Read-Only (read-only access)
- RW = Read/Write (read and write access)
- WO = Write-Only (write-only access)

Limited write cycles

The numbers of write cycles of memory modules (e.g. EEPROM, flash memory) are limited.

- Do not send write operations to save or commit actions on a non-cyclical basis.

10.1 Version and fabrication number

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
21	0x0015	String	19	RO	Software version number	–
70	0x0046	String	11	RO	Hardware version number	–
110	0x006E	String	10	RO	Fabrication number	–

10.2 Configuration

10.2.1 System data

The following unit settings affect the display on the device. The units can be set separately for the Modbus interface, ⇨ Seite 24.

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
1000	0x03E8	Selection	1	RW	Language	0: German 1: English 2: French 3: Spanish
1001	0x03E9	Selection	1	RW	Temperature	0: °C 1: °F 2: K
1002	0x03EA	Selection	1	RW	Absolute humidity	0: g/m³ 1: g/ft³
1003	0x03EB	Selection	1	RW	Mixing ration	0: g/kg 1: gr/lbs
1004	0x03EC	Selection	1	RW	Pressure	0: mbar 1: psi 2: bar
1005	0x03ED	Selection	1	RW	Enthalpy	0: kJ/kg 1: BTU/lbs
1006	0x03EE	String	10	RW	Measuring point identifier	–
1016	0x03F8	Integer	2	RW	Altitude	0 to 3000 m

10 Modbus address tables

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
1018	0x03FA	String	18	RW	Network name	–

10.2.2 Display

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
1100	0x044C	Selector	6	RW	Value 1st line	⇒ Analog selector , page 26
1106	0x0452	Selector	6	RW	Value 2nd line	
1112	0x0458	Selector	6	RW	Value 3rd line	
1118	0x045E	Integer	2	RW	Brightness	0 to 10

10.2.3 Measurand correction

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
1200	0x04B0	Float	2	RW	Offset Temperature	-15 to 15 °C
1202	0x04B2	Float	2	RW	Offset Relative humidity	-15 to 15 %
1204	0x04B4	Float	2	RW	Offset Carbon dioxide	-500 to 500 ppm
1206	0x04B6	Selection	1	RW	Automatic self-calibration	0: Off 1: On

10.2.4 Modbus TCP

The following unit settings relate to the Modbus interface. The units can be set separately for the display on the device, ⇒ Seite 24.

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
1600	0x0640	Integer	2	RW	Port Gateway	1 to 1024
1602	0x0642	Selection	1	RW	Temperature	0: °C 1: °F 2: K
1603	0x0643	Selection	1	RW	Absolute humidity	0: g/m³ 1: g/ft³
1604	0x0644	Selection	1	RW	Mixing ratio	0: g/kg 1: gr/lbs
1605	0x0645	Selection	1	RW	Pressure	0: mbar 1: psi 2: bar
1606	0x0646	Selection	1	RW	Enthalpy	0: kJ/kg 1: BTU/lbs
1607	0x0647	Boolean	1	RW	Interface active	–

10 Modbus address tables

10.2.5 Network settings

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
1700	0x06A4	Selection	1	RW	Method	0: Manually 1: Automatically
1701	0x06A5	String	8	RW	IP address	–
1709	0x06AD	String	8	RW	Subnet mask	–
1717	0x06B5	String	8	RW	Standard gateway	–
1725	0x06BD	Boolean	1	RW	Assign DNS server IP automatically	–
1726	0x06BE	String	8	RW	DNS server	–

10.2.6 Actions

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
3000	0x0BB8	Action	2	RW	Safe configuration	Safe (0xc7e7bc2e) Discard (0xf0864181) Default setting (0x34bfe138)
3200	0x0C80	Action	2	RW	Configuration mode	Activated (0xaf8bb8ce) Deactivated (0xcded8c63)

10.2.7 Measured values

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
6000	0x1770	Float	2	RO	Humidity	–
6002	0x1772	Float	2	RO	Temperature	–
6004	0x1774	Float	2	RO	Carbon dioxide	–

10.2.8 Calculated values

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
6006	0x1776	Float	2	RO	Dew point	–
6008	0x1778	Float	2	RO	Mixing ratio	–
6010	0x177A	Float	2	RO	Absolute humidity	–
6012	0x177C	Float	2	RO	Specific enthalpy	–
6014	0x177E	Float	2	RO	Wet-bulb temperature	–
6016	0x1780	Float	2	RO	Frost point	–
6018	0x1782	Float	2	RO	Partial water vapor pressure	–

10 Modbus address tables

10.2.9 Error messages Modbus

Modbus PDU address		Data type	Number of Modbus registers	Access	Data	Coding
Dec	Hex					
6400	0x1900	Boolean	1	RO	General error	–
6401	0x1901	Boolean	1	RO	Configuration faulty	–
6402	0x1902	Boolean	1	RO	Calibration faulty	–
6403	0x1903	Boolean	1	RO	Device not calibrated	–
6404	0x1904	Boolean	1	RO	Humidity sensor faulty	–
6405	0x1905	Boolean	1	RO	CO2 sensor faulty	–
6450	0x1932	Boolean	1	RO	Device restart	–
6451	0x1933	Boolean	1	RO	Configuration locked	–

10.2.10 Analog selector

Transmit the three-part hash values together in a Modbus message.

Selector	Hash value	
	Hex	Dec
No signal	0x0 – 0x0 – 0x0	0 – 0 – 0
Relative humidity	0x4e27a4cc – 0xffc2981 – 0x8c1c81c3	1311220940 – 268183937 – 2350678467
Temperature	0x4e27a4cc – 0xa21479f2 – 0x8c1c81c3	1311220940 – 2719250930 – 2350678467
Carbon dioxide	0x4e27a4cc – 0xc727cc63 – 0x8c1c81c3	1311220940 – 3341274211 – 2350678467
Dew point	0xab15b929 – 0x5d6609d0 – 0x59a918a3	2870327593 – 1566968272 – 1504254115
Mixing ration	0xab15b929 – 0x5d6609d0 – 0xc8e85566	2870327593 – 1566968272 – 3370669414
Absolute humidity	0xab15b929 – 0x5d6609d0 – 0x6b428341	2870327593 – 1566968272 – 1799521089
Specific enthalpy	0xab15b929 – 0x5d6609d0 – 0x9610edcc	2870327593 – 1566968272 – 2517691852
Wet-bulb temperature	0xab15b929 – 0x5d6609d0 – 0x8f59866	2870327593 – 1566968272 – 150313062
Frost point	0xab15b929 – 0x5d6609d0 – 0x42bef051	2870327593 – 1566968272 – 1119809617
Partial water vapor pressure	0xab15b929 – 0x5d6609d0 – 0x68909570	2870327593 – 1566968272 – 1754305904

11.1 Process value error

With error messages in line with the NAMUR classification NE 107, process value errors are supplemented by symbols and a two-line message (alternating with the process display).

Error message	Possible cause	Remedy
<<<<<	The measuring range was undershot.	Operate the device within the device specification.
>>>>>	The measuring range was exceeded.	
-----	No valid input value	
	Incorrect mathematical value	

11.2 Error messages in line with NAMUR

Access types

RO = Read-Only (read-only access)
RW = Read/Write (read and write access)
WO = Write-Only (write-only access)

11 Troubleshooting

Error messages in line with NAMUR classification NE 107 are displayed by symbols and a two-line message (alternating with the process display).

Symbol	Designation	
	Error/failure	

Error message	Possible cause	Remedy	Modbus PDU address		Data type	Number of Modbus registers	Access
–	Collective alarm	–	Dec	Hex			
Configuration fehlerhaft	The checksum of the configuration data is faulty (CRC).	Transfer the configuration data to the device again.	6400	0x1900	boolean	1	RW
Calibration data faulty	The checksum of the calibration data is faulty (CRC).	Contact the manufacturer.	6401	0x1901	boolean	1	RW
Device not calibrated	The calibration flag has not been set. There is no calibration data.		6402	0x1902	boolean	1	RW
Humidity/temperature invalid	The humidity and temperature sensor is faulty. The communication to the sensor is impaired.		6403	0x1903	boolean	1	RW
			6404	0x1904	boolean	1	RW
			6405	0x1905	boolean	1	RW
			6406	0x1906	boolean	1	RW
CO ₂ invalid	The CO ₂ sensor is faulty. The communication to the sensor is impaired.		6412	0x190C	boolean	1	RW
			6413	0x190D	boolean	1	RW

12.1 Replacing filter cap

Material	Plastic membrane filter or plastic sinter filter
----------	--

Requirements:

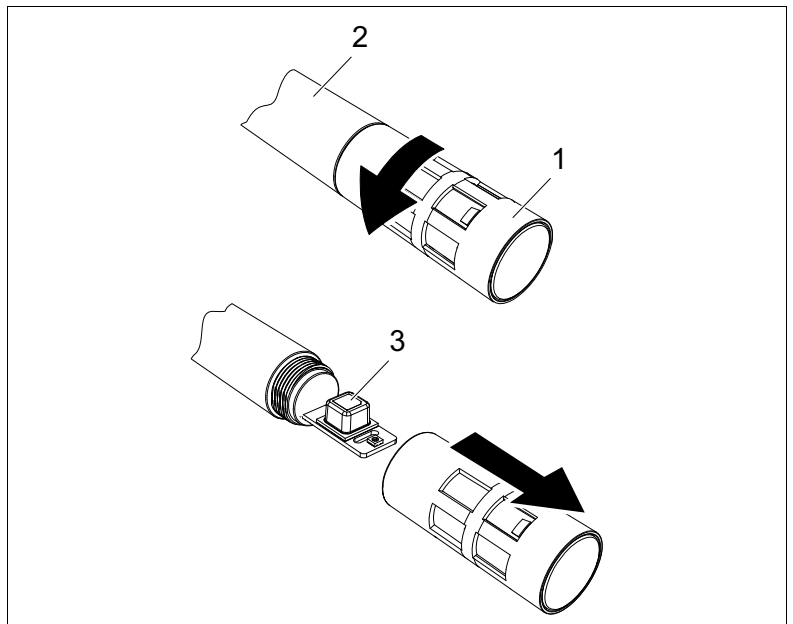
- The system has been de-energized and secured against being switched on again.
- A clean and dry storage location has been prepared.

Procedure:

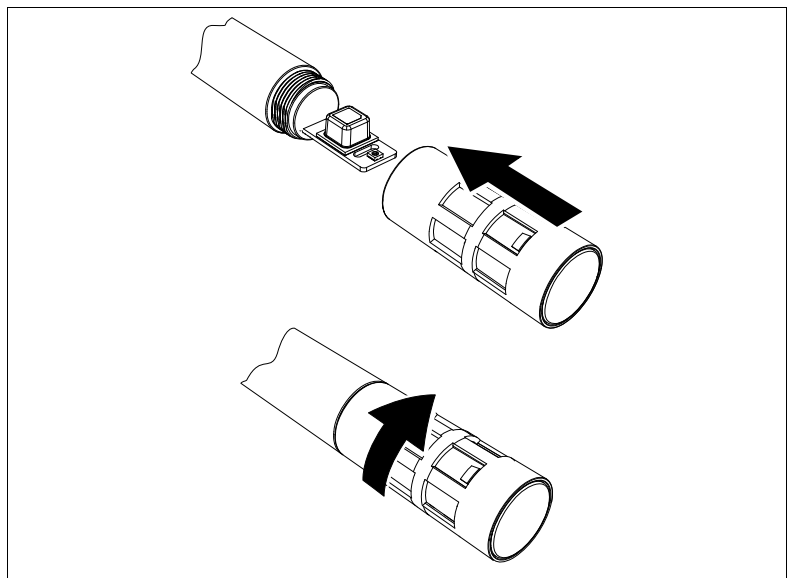
1. **CAUTION! Exposed sensor board (3). Destruction of the device electronics possible**

- ▶ Do not touch the sensor board.

Manually loosen the filter cap (1) and remove from the housing (2).



2. Guide the new filter cap over the sensor board and manually screw onto the housing.



12.2 Cleaning

Clean the device with a cloth dampened with water.

13 Shutdown

13.1 Dismounting

Aids	Screwdriver
------	-------------

Requirements:

- The system has been de-energized and secured against being switched on again.

Procedure:

1. Loosen the union nut on the connecting cable.
2. Remove the connecting cable.
3. Undo the fastening screws.
4. Dismount the device.

13.2 Returns

Procedure:

1. The [supplementary sheet for product returns](#) must first be completed correctly and signed. Then enclose it with the shipping documents and attach it to the packaging, ideally on the outside.
2. Use the original packaging or a suitably secure container for sending the device.

13.3 Disposal



- Do not dispose of the device or replaced parts in the trash after use.
- Delete programs and data stored on the device.
- Remove batteries, if any, if this can be done without damaging the device.
- Dispose of the device and the packaging material in a responsible and environmentally friendly manner.
- Observe the country-specific laws and regulations for waste treatment and disposal.

In accordance with Directive 2012/19/EU on Waste from Electrical and Electronic Equipment, manufacturers are obliged to offer the option of returning waste equipment. Request the return from the manufacturer.

Without UL approval

Designation	Part no.
USB cable, A to Micro-B	00616250
Plastic membrane filter (Ø = 18 mm)	30048149
JUMO hydroTRANS setup program	00775170
SPE network switch 4-port (10BASE-T1L)	30062113
SPE network switch 8-port (10BASE-T1L)	30062447
SPE network cable 1 m (with M12 connector)	30062458
SPE network cable 2 m (with M12 connector)	30062457
SPE network cable 5 m (with M12 connector)	30062456
SPE network cable 10 m (with M12 connector)	30062455
SPE connector according to IEC 63171-2 (IP20)	30062461
SPE data cable 2 × 0.35 GY shielded	30071873

15 Open-source software

The device software and/or device components were developed using open-source software.

Insofar as the respectively applicable license terms justify a claim on the provision of source code or other information, JUMO GmbH & Co. KG will provide the source code and the license texts on a conventional data carrier at the cost incurred for the provision of the data carrier.

This offer is valid for three years after the software is made available. This offer is valid beyond that time to the extent specified in the license terms.

For questions related to open-source software, please contact:

Address JUMO GmbH & Co. KG
License Compliance
Moritz-Juchheim-Straße 1
36039 Fulda, Germany

Email licensecompliance@jumo.net

		产品中有害物质的名称及含量						
产品组别		China EEP Hazardous Substances Information						
Product group: 907042								
部件名称								
JUMO hydro Trans S20		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)	
外壳 Housing (Gehäuse)		○	○	○	○	○	○	
螺栓 Screw (Schraube)		○	×	○	○	○	○	
印刷电路组件 printed circuit assemblies (Leiterplattenbestandteile)		○	×	○	○	○	○	
本表格依据SJ/T 11364的规定编制。 This table is prepared in accordance with the provisions SJ/T 11364. ○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。 Indicate the hazardous substances in all homogeneous materials for the part are below the limit of the GB/T 26572. ×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。 Indicate the hazardous substances in at least one homogeneous material of the part exceed the limit of the GB/T 26572.								



JUMO GmbH & Co. KG

Street address:
Moritz-Juchheim-Straße 1
36039 Fulda, Germany

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 UK LTD

JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK

Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: info.uk@jumo.net
Internet: www.jumo.co.uk

JUMO Process Control, Inc.

6724 Joy 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

