

Hygro-Thermo-Baro Transmitter Compact

This sensor is above all intended for use at meteorological measuring stations for connection to data logger systems. Thanks to its universal interface the sensor can also be used as a single solution in every application suitable for the purpose.

The interface to the device is digital and consists of an RS485 interface in half duplex mode. In conjunction with ID-based communication the interface enables operation of the sensors in a bus system.

Two data protocols are available:

- ASCII (THIES format)
- Binary (MODBUS-RTU)

In addition to the digital interface, the transmitters with article numbers 1.1006.54.x4x and 1.1006.54.x6x have 3 analogue outputs which can be configured as a current or voltage output. The digital output can be used simultaneously with the analogue outputs.

The sensor is equipped with a integrated pressure sensor, as well as a replaceable hygro-thermo module for the capture of air temperature and relative humidity.

The replaceable hygro-thermo-module and the pressure sensor are factory adjusted and calibrated. The sensor is supplied without a filter cap. The hygro-module is protected with its own white membrane. The sensor thus offers excellent dynamic behaviour. PT1000 measuring element is used for temperature measurement.

For outdoor installation we recommend the use of the weather- and thermal radiation shield.

Order no.: 1.1025.55 xxx or a forced ventilation weather and radiation protection with the order no. 1.1025.80.101.

Specification

Part number: 1.1006.54.xxx

Temperature

Measuring range	-40 ... +85 °C
Accuracy	± 0.1°C @ -40 ... +85 °C @ moved air > 2 m/s

Rel. Humidity

Measuring range	0 ... 100 % rel. Humidity
Accuracy	Typ. ± 1,5 % r. H. @ 25 °C and 80 % r. H. 1,5 % r. H. over the complete measuring range @ moved air > 2 m/s

Air pressure

Measuring range	300 ... 1200 hPa
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Accuracy	± 0.25 hPa @ -20 ... +80°C @ 800 ... 1100 hPa ± 0.50 hPa @ -20 ... +80°C @ 600 ... 800 hPa
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Interface

Output RS 485 HD; 0 ... 1 V; 0 ... 10 V; 4 ... 20 mA

Additional uncertainty Analog output $\pm 0,05\%$

Data format	8N1
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Baud rate 2400 ... 57600 Baud

Operating voltage

Battery connection	6 ... 30 V DC - type dependent
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General

Ambient conditions -40 ... +85 °C
 0 ... 100 rel. humidity, including condensation

Current load type dependent

Housing	Stainless steel
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Protection	IP 67 (applies to the total sensor)
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Dimension	Ø 20 x 166 ... 200 mm - type dependent
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Weight aprox. 0.45 kg

Versions

As per 1.1006.54.xxx, but:

Product number 1.1006.54.080

Data output digital

Electr. output THIES ASCII

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection	5m - Cable
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Product number 1.1006.54.081

Data output digital

Electr. output MODBUS RTU

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection	5m - Cable
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Product number 1.1006.54.141

Data output digital

Electr. output	THIES ASCII
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Data output analog

Chanel	3
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Type	4 ... 20 mA
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Operating voltage

Electronic	15 ... 30 V DC
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General

Electr. connection	5m - Cable
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Product number 1.1006.54.160

Data output digital

Electr. output	THIES ASCII
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Data output analog

Chanel	3
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Type	0 ... 1 V
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Operating voltage

Electronic	6 ... 30 V DC
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General

Electr. connection	5m - Cable
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Product number 1.1006.54.161

Data output digital

Electr. output	THIES ASCII
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Data output analog

Chanel	3
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Type	0 ... 10 V
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Operating voltage

Electronic	15 ... 30 V DC
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General

Electr. connection	5m - Cable
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Product number 1.1006.54.741

Data output digital

Electr. output THIES ASCII

Data output analog

Chanel 3

Type 4 ... 20 mA

Operating voltage

Electronic 15 ... 30 V DC

General

Electr. connection Plug

Product number 1.1006.54.760

Data output digital

Electr. output THIES ASCII

Data output analog

Chanel 3

Type 0 ... 1 V

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection Plug

Product number 1.1006.54.761

Data output digital

Electr. output THIES ASCII

Data output analog

Chanel 3

Type 0 ... 10 V

Operating voltage

Electronic 15 ... 30 V DC

General

Electr. connection Plug

Product number 1.1006.54.780

Data output digital

Electr. output THIES ASCII

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection Plug

Product number 1.1006.54.781

Data output digital

Electr. output MODBUS RTU

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection Plug

Product number 1.1006.54.087

Data output digital

Electr. output MODBUS RTU

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection 0,3m - Cable with plug

Product number 1.1006.64.762

Data output digital

Electr. output THIES ASCII

Data output analog

Channels 3

Type 0 ... 1 V

Operating voltage

Electronic 6 ... 30 V DC

General

Electr. connection Plug

Model mit Filterkappe gesintert

Product number 1.1006.54.175

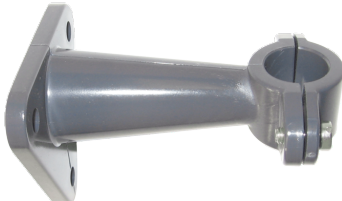
Data output digital

Electr. output THIES ASCII

Data output analog

Chanel	3
Type	0 ... 2.5 V
Operating voltage	
Electronic	6 ... 30 V DC
General	
Electr. connection	5m - Cable

Accessories

Product	Product name	Brief description										
	Wall Holder 1.1005.54.903	for mounting the temperature (2.1280.xx.xxx) or hygrothermo Sensor (1.1005..xx.xxx) onto a wall, radiation- and precipitationprotected use (for ex. indoor) General <table><tr><td>Clamping range</td><td>Ø 20 mm</td></tr><tr><td>Mounting</td><td>plate with with drillings 3 x Ø 6,5 mm</td></tr><tr><td>Material</td><td>plastic, grey flange</td></tr><tr><td>Dimension</td><td>96 mm lang</td></tr><tr><td>Weight</td><td>0.075 kg</td></tr></table>	Clamping range	Ø 20 mm	Mounting	plate with with drillings 3 x Ø 6,5 mm	Material	plastic, grey flange	Dimension	96 mm lang	Weight	0.075 kg
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	Weather and Thermal Radiation Shield, compact 1.1025.55.000	Protective case for the temperature and humidity sensors (2.1280.xx.xxx and 1.1005.54.xxx)sensor compact for outdoor installation without artificial ventilation. Material <table><tr><td>Laminations</td><td>plastic, white</td></tr><tr><td>Mast holder</td><td>stainless stell</td></tr></table> General <table><tr><td>Mounting</td><td>at tube Ø 35 ... 50 mm</td></tr><tr><td>Dimension</td><td>Ø 120 x 275 mm</td></tr><tr><td>Weight</td><td>0.8 kg</td></tr></table>	Laminations	plastic, white	Mast holder	stainless stell	Mounting	at tube Ø 35 ... 50 mm	Dimension	Ø 120 x 275 mm	Weight	0.8 kg
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Calibration hose connection adapter HTB-Transmitter 510025	Calibration hose connection adapter HTB-Transmitter Compact												
Replacement hygro-thermo measuring element 510307	Calibrated replacement measuring element for exchange												
Protective cap 510488	The protective cap is used to protect the measuring elements of the Hygro-Thermo-BaroSensor from damage.												
Sinter-filter-Cap 510877	The filter is used to protect the modules of the Hygro-Thermo-Baro sensor from dust and salt air when used outdoors. Assembly consisting of sintered filter and silicone plug in black.												

