

- Measurement of relative humidity, air temperature and barometric air pressure
- High accuracy
- Long-term robustness
- Sintered filter cap
- Stainless steel housing

### Description

Hygro-Thermo-Baro transmitters COMPACT series are designed to measure relative humidity, air temperature and barometric air pressure.

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

The use of high-quality sensors for the parameters to be measured allows the sensor to achieve the following:

- High accuracy,
- high long-term stability,
- virtually linear characteristic,
- good dynamic behaviour,
- dewing resistance,
- low temperature coefficients,
- small hysteresis.

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 have three analogue outputs which can be configured as a current or voltage output. The digital output can be used simultaneously with the analogue outputs.

### Dimensional drawing (in mm)



## Specifications

Characteristic	Value
<b>Temperature</b>	
Measuring range	-40 ... +80 °C
Accuracy	±0.1 °C @ -40 ... +80 °C @ moved air >2 m/s
<b>Rel. Humidity</b>	
Measuring range	0 ... 100 % rel. Humidity
Accuracy	Typ. ±1,5 % r. H. @ 25 °C and < 80 % r. H. 2 % r. H. over the complete measuring range
<b>Air pressure</b>	
Measuring range	600 ... 1100 hPa
Accuracy	±0.25 hPa @ -20 ... +80 °C @ 800 ... 1100 hPa ±0.50 hPa @ -20 ... +80 °C @ 600 ... 800 hPa
<b>Output Digital</b>	
Interface	RS485 HD
Communication protocol	Modbus RTU (on request Thies ASCII)
Baud rate	38400 (on request 2400 ... 57600)
Device-ID	1 (on request others)
RS485 data format	8N1
<b>Output Analog 3 x 0 ... 1 V</b>	
<b>Temperature</b>	
	<b>-40 ... +80 °C</b>
Offset	-40 °C
Slope	120 °C/V
<b>Rel. Humidity</b>	
	<b>0 ... 100 %</b>
Offset	0 %
Slope	100 %/V
<b>Air pressure</b>	
	<b>600 ... 1100 hPa</b>
Offset	600 hPa
Slope	500 hPa/V
<b>Power supply</b>	
Operating voltage	6 ... 30 VDC
Current consumption	Typ. 3 mA @ 12 V / max. 8,5 mA @ 12 V
<b>General</b>	
Ambient conditions	-40 ... +85 °C
Housing	Stainless steel
Type of protection	IP 67 (applies to the total sensor)
Dimension	see dimensional drawing
Weight	approx. 0.45 kg
Manufacturer	Thies Clima
Admissible environmental conditions	-40 ... +85 °C 0 ... 100 % rel. humidity, including condensation
Filter	Sintered filter cap
Accessories	S50050 <a href="#">Weather and Radiation Shield</a>