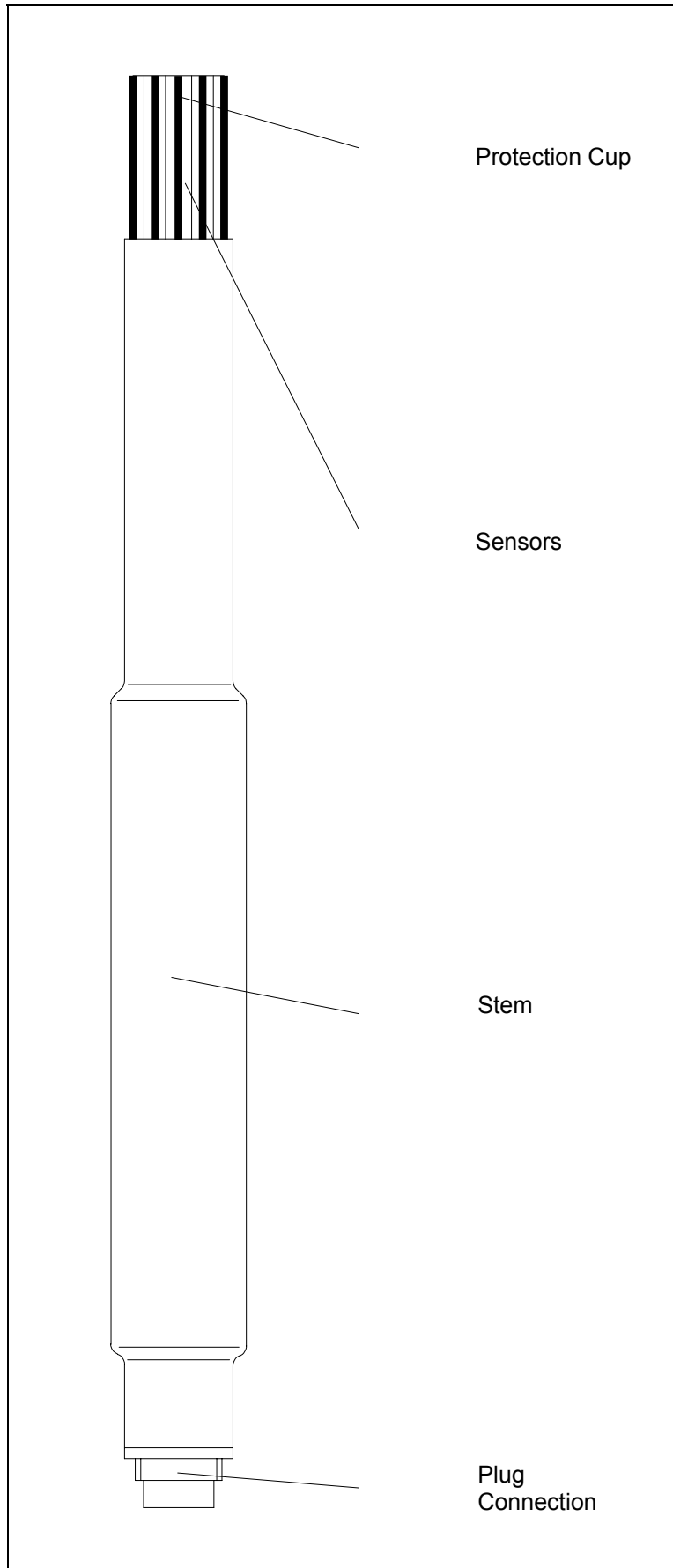


Hygro - Thermo Transmitter

with Weather and Thermal Radiation Shield and Sensor Mount



Instruction for Use 1.1005.48.960



General Informations

The hygro-thermotransmitter measures relative humidity and temperature. The sensors guarantee precise measurements with short adaption times.

Construction

The combined measuring head is constructed of non-corrosive material (synthetic and aluminum) and the surface is protected. All electronic components are soldered to a printed circuit board in the stem of the instrument. The sensors are situated in the upper part which is covered by a synthetic cap. Electrical connection via a waterproof 8-pole binder plug connection. A flexible control line LIYCY with the corresponding number of cores of 0.25mm² each must be soldered to the enclosed plug. (See Connection Diagram)

Calibration and Maintenance

The measuring probe should be checked and re-calibrated at regular intervals (for example once a year). It is recommendable to return the hygro-thermotransmitter to the factory for this.

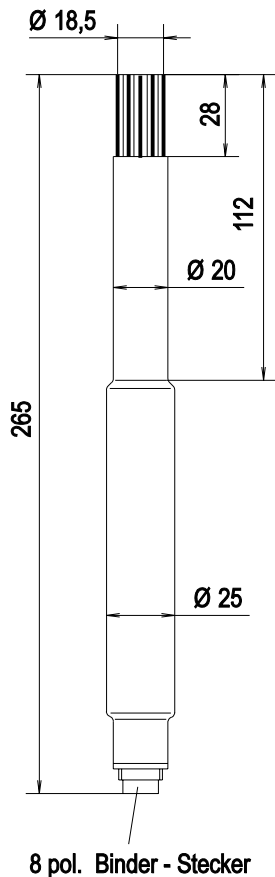
Changing the humidity sensor HUMICAP:

Remove the protective cap and pull out the damaged sensor. Carefully insert the new sensor. The operating life of the sensor can be negatively influenced by certain chemicals and gases. We will be glad to inform you of the maximum allowable values for different substances.

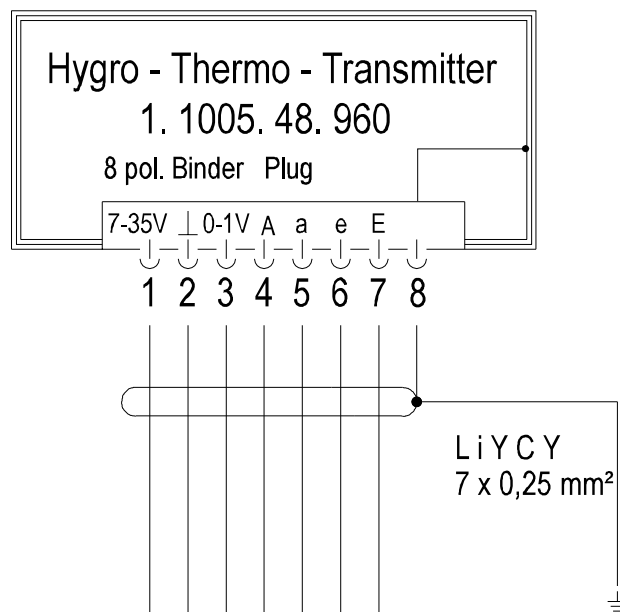
Technical Data

Measuring range	: 0...100% r.h.
Output signal range	: 0...1 V DC (corr. to 0...100% r.h.)
Accuracy (at 20°C): (including nonlinearity and hysteresis)	
against factory references	: □ 1% r.h.
against field references	: □□ 2% r.h. (0...90% r.h.) : □ 3% r.h. (90...100% r.h.)
Temperature dependence	: □ 0,05 % r.h / °C
Typical long-term stability	: better than 1% r.h. per year
Response time (at 20°C, 90%-response)	: 15 s with membrane filter
Setting time	: 1 s
Humidity sensor	: HUMICAP 180-Sensor
Temperature sensor	: Pt 100 (IEC 751 , 1/3 class B) four wire connection
Operating voltage	: 7... 35 V
Current consumption	: < 4 mA
Operating temperature	: -40...+60°C
Sensor protection	: chromium-plated Plastic cap
Protection	: IP 65
Housing material	: chromium-plated ABS-plastic
Electrical connection	: 8 pole Connection IP 67
Weight	: 0,3 kg

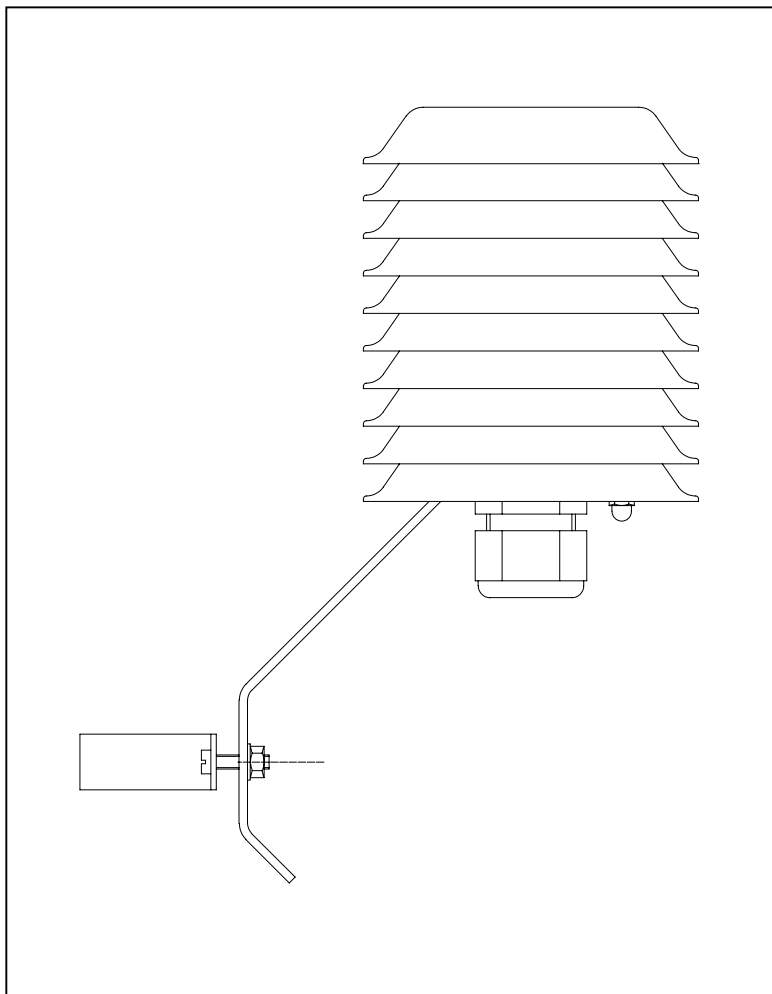
Dimensions



Connection diagram



Weather and Thermal Radiation Shield - compact



Range of Application

Radiation and precipitation can falsify measurement data to an unacceptable extent if the temperature sensors and humidity sensors are inadequately protected or perhaps not protected at all.

Moreover, the use of unprotected sensors increases the risk of mechanical damage.

The use of the **Weather and Thermal Radiation Shield - compact** in an appropriate combination with suitable temperature and humidity sensors reduces to a minimum the possibility of radiation, precipitation or damage influencing the data in a negative manner.

Owing to its outstanding technical properties as well as the compact form of construction, the **Weather and Thermal Radiation Shield - compact** is predestined for use in professional measurement.

Set - Up

The white UV-proof lamella prevent direct and reflected radiation from striking the sensor. Due to the appropriate geometric arrangement of the lamella, the flow of air around the sensors is hardly affected.

The lamella material exhibits very good reflective properties, low heat conductivity and excellent weather-resistance.

A solid angular sheet-metal holder makes it possible to mount the **Weather and Thermal Radiation Shield-compact** to mast tubes, and, after the clamp is removed, also to plane surfaces.

The appropriate sensor is mounted by means of clamping screws (WO 36).

Please note that all forms of particle contamination (dirt) on the surfaces of the lamella can reduce the reflective property.

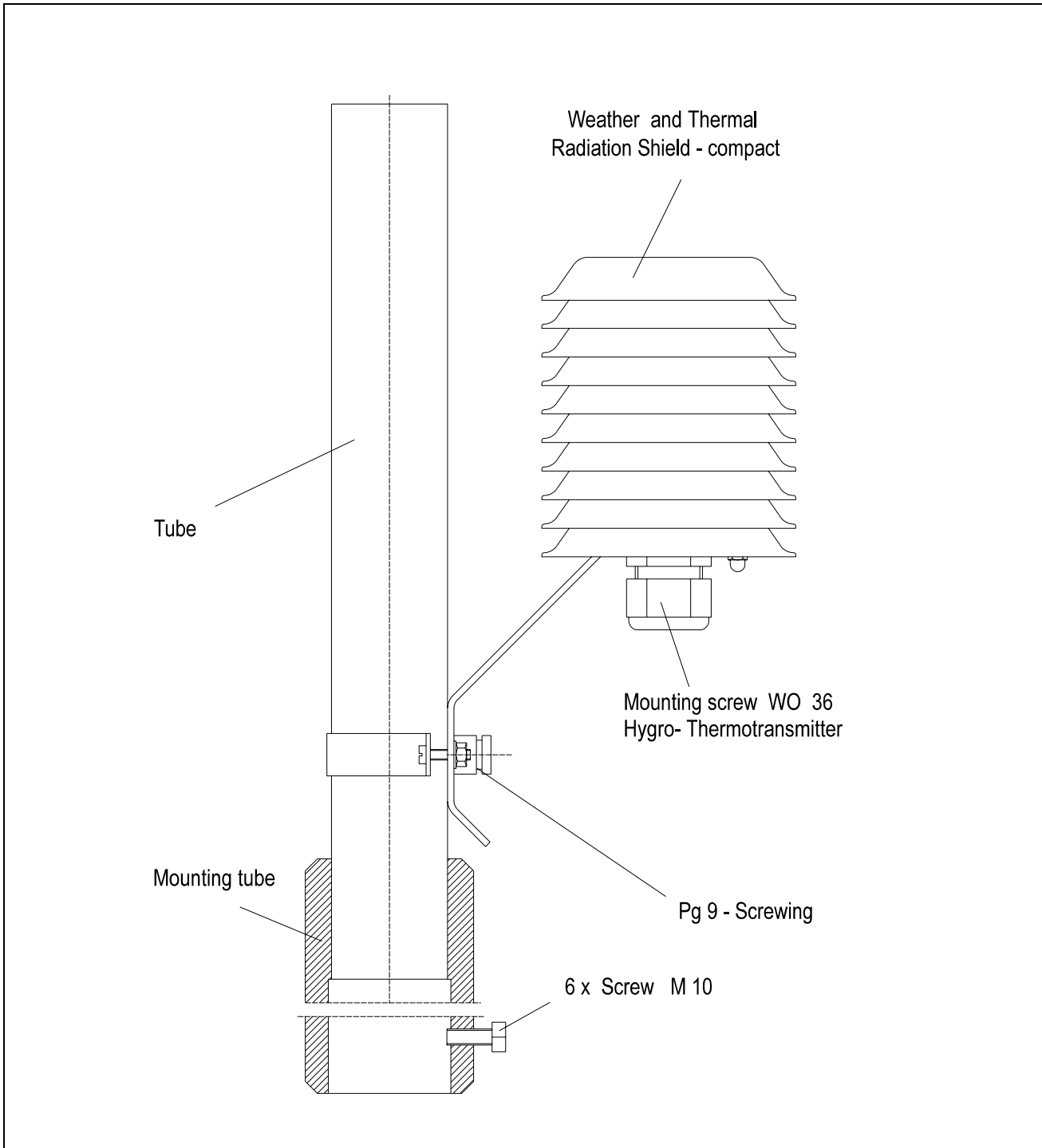
Technical Data

Dimensions of the lamella	: Ø 120 mm x 140 mm
Total height	: 275 mm (with holding plate)
Synthetic lamella	: white UV - resistant
Sensor types	: Humidity and temperature sensors Ø 20 mm
Mounting	: to a mast tube Ø 30 - 50 mm / wall mounting
Weight	: 0.65 kg

Sensor Mount

for Weather and Thermal Radiation Shield

Comb. Wind Transmitter and Hygro-ThermoTransmitter



General Information

The sensor mount is designed to hold weather sensors such as the combined wind transmitter and the hygro-thermotransmitter with weather and thermal radiation shield.

Mounting the Combined Wind Transmitter

Mount the Wind Transmitter to the tubing ($\text{Ø}48 \text{ mm}$) of the sensor mount. Connect the wind transmitter electrically with a plug from below. Thread the electrical cable through the tube. After the electrical connection has been successfully completed, the wind transmitter must be aligned and then mounted to the tube with the two hexagonal M8 screws.

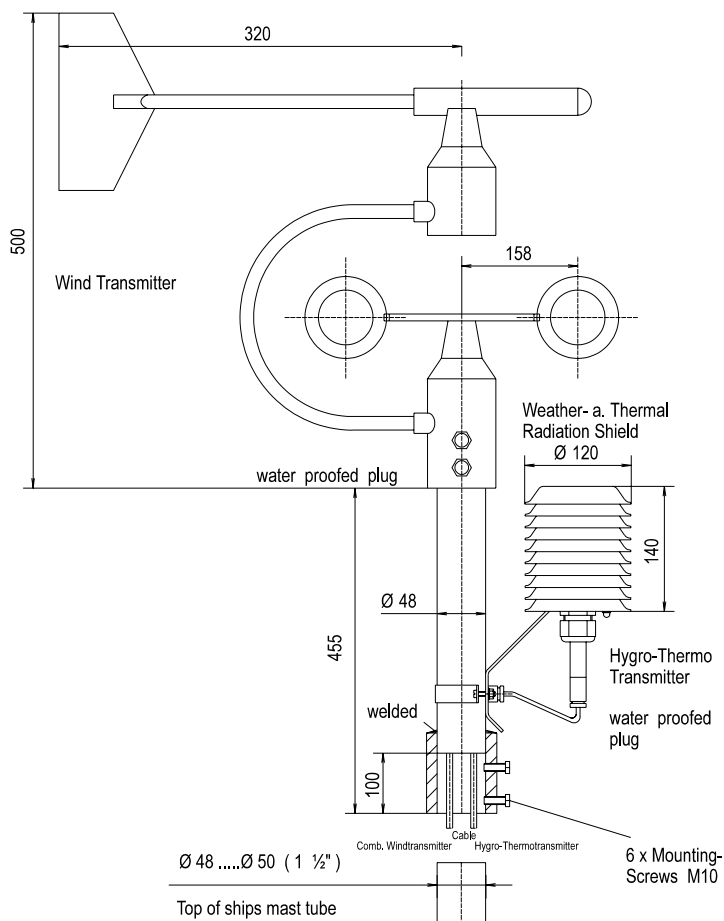
Mounting the Hygro-Thermo Transmitter

Insert the humidity and temperature sensor from below into the mounting screw WO 36 of the weather and thermal radiation shield and the sensor will be screwed. Electrical connection with the wired plug. (See Connecting Diagram). Thread the electrical cable through the tube.

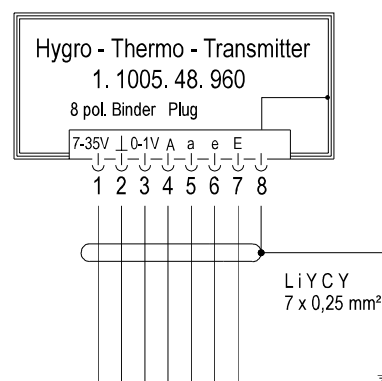
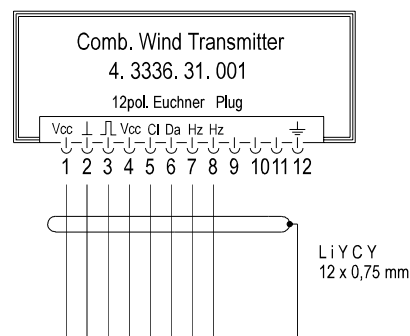
Mounting Site

Site selection depends for the most part on the specific task at hand. In general, wind measurement instruments should be able to measure wind conditions over a large area and thus should not be influenced by local obstructions. The sensor mount can be mounted onto a ship's mast tube with a diameter of 48 - 50 mm. After the mount has been aligned, screw the sensor mount with the 6 M10 screws to the mast tube.

Dimensions



Connecting Diagram





ADOLF THIES GmbH & Co. KG

Hauptstraße 76 37083 Göttingen Germany
P.O. Box 3536 + 3541 37025 Göttingen
Phone ++551 79001-0 Fax ++551 79001-65
www.thiesclima.com info@thiesclima.com



- Alterations reserved -