

Thermohygrometer VTP37 Airport

- meets the highest demands as to reliability and accuracy
- Ventilated, heated air-thermometer
- Automatically regulated mechanical cleaning of the dew point mirror for maintenance-free operation
- Connectable to PC, Modem, GSM

VTP37 Airport has additional ability to detect Fog. Fog detection is made by measuring oversaturated water content, and reported in 3 Steps:

1=danger of fog

2=light fog (visibility ~150...300m)

3=heavy fog (visibility <150m)



Thermohygrometer VTP37 Airport

The VTP37 is a ventilated, heated thermometer combined with a mirror-type dew point hygrometer. The instrument is designed for field Operation and meets the highest demands as to reliability and accuracy even under the most severe environmental conditions.

Its special features include:

Cyclic operation which allows automatic control and regulation of the most important functions. The VTP37 measures the air temperature and dew point temperature about ten times within 40 seconds every ten minutes. The instrument delivers the average values together with their standard deviations, allowing the quality of the data to be checked.

- For special applications, continuous operation can be selected by software command.
- The influence of moisture (psychrometric effect), radiation, icing, wind and electromagnetic interference (from radio transmitters) have been virtually eliminated.

- Low power consumption permits battery operation (without heater).
- Automatically regulated mechanical cleaning of the dew point mirror allows maintenance-free operation.
- Automatic differentiation between ice and water films on the mirror. The type of deposit is distinguished in the calculation of the relative humidity.
- The humidity measurements are supplied either as relative humidity over water or as dew point/frost point (selection by software command).
- Control identifier indicates the operating state of the sensor.
- VTP37 is using exactly the same measurement system as the VTP6 which is recommended as a working reference by World Meteorological Organization (WMO)
- The VTP37 is available with MeteoBus or RS232 interface

Technical data

Measuring instrument

Temperature range	-50°C to +50°C
Dew point range	-65°C to +50°C
max. Dew point depression at 20°C	40 K
Sensor type	copper constantan thermoelements
Temperature resolution	0.1 K
Relative humidity resolution	0.1 %
Accuracy	± 0.15 K from -20°C to +50°C ± 0.25 K from -65°C to -20°C
Operating Voltages	10... 15 V DC / 48 VAC
Weight	9.5 kg

Data Storage

Data memory	approx. 3500 data records (corresponding to 10 minute measurements for 24 days)
Modes of operation	4 diff. operating modes for convenient data access.

Power supply

Mains supply	12 VDC, 350 mA peak 140 mA mean value 48 VAC max. 3.6 A for heating
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Control commands

Set the internal clock
Check the sensor status
Switch from normal to continuous operation
Check for special messages
Change address of the instrument

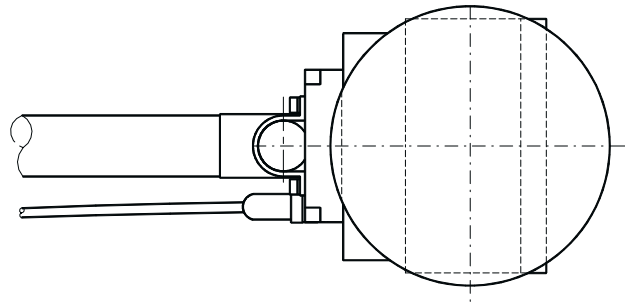
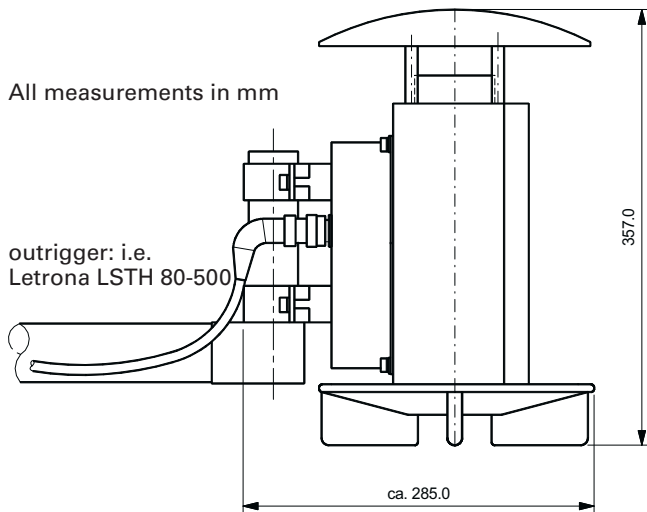
Interfaces

Baudrate	2400 bps (constant)
Norm	RS232 electrically isolated without hardware-handshake or RS485 electrically isolated (please specify when ordering)

EMV

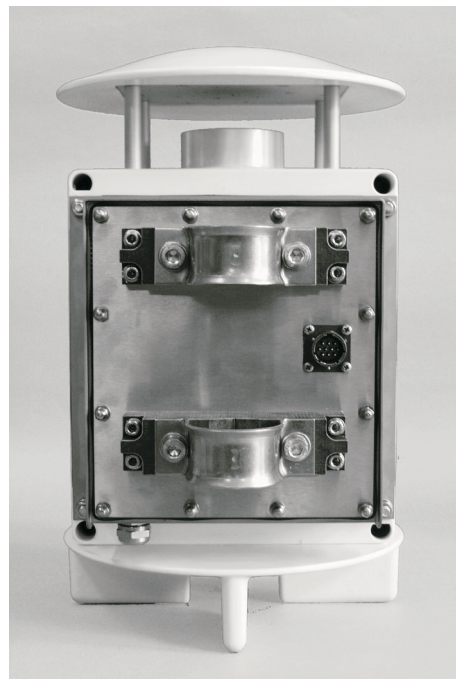
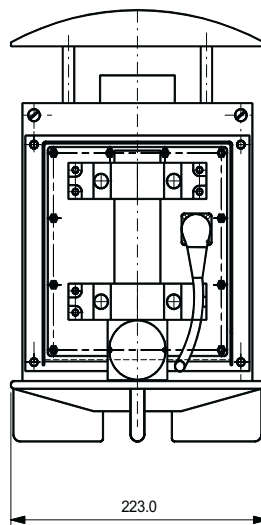
ESD	EN61000-4-2 8 kV contact-discharge 15 kV discharge through the air
Burst	EN61000-4-4 2 kV, 5/50 ns, 5 kHz
Surge	EN61000-4-5 Installation class 4

Dimensions



Details for ordering

- Thermo-Hygrometer VTP37, RS485:
MGE-VTP37/00
- Thermo-Hygrometer VTP37, RS232:
MGE-VTP37/01
- VTP37-Airport, RS485:
MGE-VTP37/03
- VTP37-Airport, RS232:
MGE-VTP37/02
- replacement fan including heating
BGM-METEO/TP0169



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