

M20 Radiosonde



Meteomodem reinvents its radiosonde with the **M20**. Improve the quality of your PTU and Wind measurements while reducing your radiosonde costs. With its weight of only 36 grams, the **M20** can be used without a parachute and allows a gas saving of 20%.

- Humidity sensor with integrated heating to limit condensation and icing situations
- External ON/OFF power switch and authorization to release indicated on the radiosonde
- Pressure calculated from the GNSS altitude, concept introduced by Meteomodem, this method is now recommended by the WMO
- Barometer option (More accurate pressure measurements in the lower layers)
- Option: Additional analog and digital inputs (XDATA), compatible CFH sensors, ECC Ozone, ...
- Process facilitated by a fully automatic preparation (frequency change, calibration, BITE) and a simplified balloon train
- Compatible with the **Robotsonde**, automatic balloon launcher system (up to 24 radiosondes)



Compatible with the **EDSCAN software :**



M20 Radiosonde

Technical specifications

GENERAL

Dimensions : 98 x 63 x 42 mm
Weight : 36 g (including battery)

TEMPERATURE

Sensor type : Thermistor
Measurement range : +60 °C to -100 °C
Resolution : 0.01 °C
Absolute accuracy : 0.3 °C
Repeatability : 0.1 °C
Reproducibility : 0.2 °C
Response time : <1 s
Measurement rate : 1 Hz

HUMIDITY

Sensor type : Capacitor
Measurement range : 0 % to 100 %
Resolution : 0.1 %
Absolute accuracy : 3 %
Repeatability : 2 %
Reproducibility : 2 %
Response time : <0.3 s (1000 hPa, 20 °C)
Measurement rate : 1 Hz
Heated sensor : Icing prevention

PRESSURE

Calculated from GPS altitude / **barometer (option)**
Range : 1100 hPa to 3 hPa
Resolution : 0.1 hPa
Accuracy : <1.0 hPa / **<0.4 hPa**
from 1100 hPa to 100 hPa
: 0.3 hPa from 100 hPa to 10 hPa
: 0.1 hPa <10 hPa
Reproducibility : 0.2 hPa at 100 hPa
: 0.05 hPa at 10 hPa

BATTERIES

Technology : 3 V lithium
Autonomy : >4 h in flight
Package : 1 battery
Storage : >3 years

GEOPOTENTIAL HEIGHT

Altitude range : >45 km
Position accuracy : ±5 m
Position resolution : 0.01 m

WIND MEASUREMENT

Horizontal wind accuracy : 0.15 m/s
Wind direction accuracy : 1 °
Horizontal wind resolution : 0.01 m/s
Wind direction resolution : 0.1 °
Measurement rate : 1 Hz

TRANSMITTER

Compliant with european standard ETSI EN 302054
Frequency range : 400 MHz to 406 MHz
Frequency step : 200 kHz (option 100 kHz)
Frequency setting : By infrared
Maximum drift : 1 kHz
Typical output power : 150 mW
Modulation : PSK
Transmission rate : 1 Hz

CALIBRATION

Factory calibration : Stored on flash memory
Groundcheck : Prior to launch

OPTIONS

Barometer
Additional captor : (XDATA, OZONE, LOAC, ...)

Messages

- Edition of WMO messages (**TEMP FM35**, **TEMP SHIP FM36**, **TEMP MOBIL FM38**, **TEMP DROP FM37**, **PILOT FM32**, **PILOT SHIP FM33**, **PILOT MOBIL FM34**, **CLIMAT TEMP FM75**, **BUFR 309052**, **BUFR HR 309052**, **BUFR DROP 309053**, **BUFR HR DROP 309053**, **BUFR PILOT PRESSURE 309050**, **BUFR PILOT ALTITUDE 309051**)
- Edition of STANAG messages (**METCM** - 4082, **METB2/3** - 4061, **METCFL**, **METTA** - 4140, **METK3** - 4082, **METFM** - 2103, **MET11**, **METSR**, **EACMM**)