



Meteomodem presents its last radiosonde, the **M20**.

Improve the quality of your upper-air measurements, while reducing your observation costs and environmental impact.

With a weight of just 36 grams, the **M20** can be used without a parachute\* and saves gas up to 20%.

- Low carbon footprint makes the **M20** the greenest radiosonde on the market.
- Humidity sensor with integrated heating to limit condensation and icing situations.
- External On/Off button giving direct authorization to release.
- Pressure calculated from the GNSS altitude, concept introduced by Meteomodem, this method is now recommended by the WMO.
- Embedded barometer for more accurate pressure measurements in the lower layers.
- Additional analog and digital inputs (XDATA), compatible CFH sensors, ECC Ozone, ...
- Automatic process makes preparation easier and more intuitive.
- Compatible with the **Robotsonde**, our automatic balloon launcher system (up to 24 radiosondes).



*\*To be verified with local authorities*

## 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) 50 s (300 hPa, -55 °C)
Measurement rate	1 Hz
Heated sensor	Icing prevention

  

WIND MEASUREMENT	
Wind speed accuracy	0.05 m/s
Wing speed resolution	0.01 m/s
Wind dircetion accuracy	0.3 °
Wind direction resolution	0.1 °
Measurement rate	1 Hz

  

GEOPOTENTIAL HEIGHT	
Altitude range	50 km
Altitude accuracy	10 m
Position accuracy	5 m
Position resolution	0.1 m

  

CALIBRATION	
Factory calibration	Stored on flash memory
Groundcheck	Prior to launch

  

PRESSURE : Calculated from GNSS altitude	
Range	1100 hPa to 3 hPa
Resolution	0.1 hPa
Accuracy barometer	0.3 hPa from 1100 to 700 hPa
Accuracy GNSS	< 1 hPa from 700 to 100 hPa 0.3 hPa from 100 to 10 hPa 0.1 hPa < 10 hPa
Reproducibility	0.2 hPa at 100 hPa 0.05 hPa at 10 hPa

  

TRANSMITTER :	
Compliant with european standard ETSI EN 302054	
Frequency range	400.15 MHz to 406 MHz
Frequency step	200 kHz (option 100 kHz)
Frequency setting	By infrared
Drift	< 5 kHz
Typical output power	110 mW
Modulation	FSK
Transmission rate	1 Hz
Bit rate	9600 bps

  

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

  

GNSS RECEIVER	
Type	GPS
Frequency	1 575,42 mHz, code L1 C/A

  

OPTIONS	
Additional sensor (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 DROP 309053, BUFR PILOT PRESSURE 309050, BUFR PILOT ALTITUDE 309051, BUFR DROP 309056, BUFR 309057**)
- Edition of STANAG messages (**MECTM - 4082, METB2/3 - 4061, METCFL, METTA - 4140, METK3 - 4082, METFM - 2103, MET11, MET44, METSR, EACMM**)