

## Package Type

Oversea-safe transportation box with foam inlet

## Content Sensor

- WeatherSens MP-Series with HS brand and type plate
- HS Calibration and test-certificate (FAT)
- Installation Guide HS WeatherSens

## Available Versions

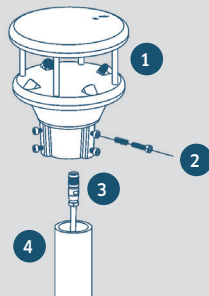
- 2 Parameter (Wind): AR200:
- 5 Parameter (W/T/RH/P): MP500
- 5 P + Radiation or Precipitation: MP 600/601/650/700
- 1 Parameter (R/P): MPS100/MPR100/MPR101

## Factory Settings

- SDI-12 V 1.3 or RS485-protocol ASCII upon article No.
- RS485 for settings by key user command

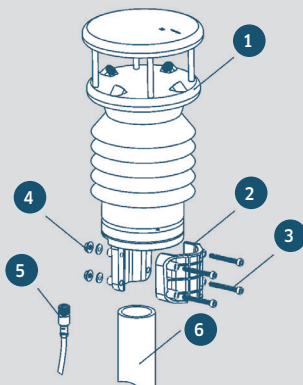
### Tube 1

- 1 Sensor
- 2 M6 screw and spring
- 3 Cable and plug
- 4 Fixing rod (OD50mm)



### Tube 2

- 1 Sensor
- 2 Bracket
- 3 Screws
- 4 Nuts
- 5 Cable and plug
- 6 Fixing rod (min OD50mm)



## Mounting Method & Alignment

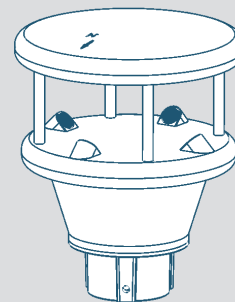
### Alignment Method

- The measurement of wind direction is closely related to the mounting position of the weather sensor. During mounting, align the indicator arrow „N“ at the top of the sensor with 0° phase.
- Before fixing the instrument, the sensor should be aligned in such a way that the indicator arrow “N” points to the North - South direction of the earth’s geographic meridians.
- The North can be referred either to true north, which uses the earth’s geographic meridians, or to the magnetic north, which is read with a magnetic compass. The magnetic declination is the difference in degrees between the true north and magnetic north. When aligning to the magnetic North, the declination (variation) must be taken into account.

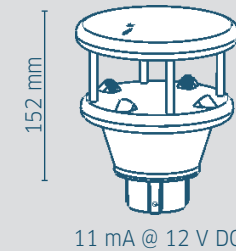
### Procedure

1. If the sensor is already installed, loosen both nuts evenly until you can turn the sensor easily
2. Using the compass, identify the North and fix a point of reference on the horizon
3. Position the sensor in such a way that the South and North sensors are in alignment with the fixed point of reference in the North

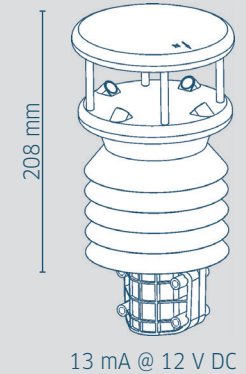
### Alignment Method



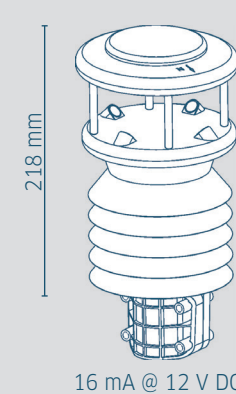
**WS200**  
Ø126 mm / 0.5 kg



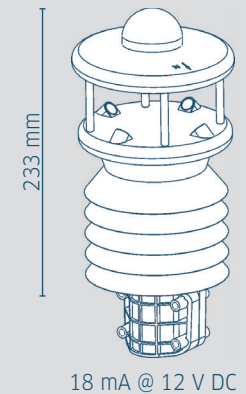
**WS500**  
Ø126 mm / 0.6 kg



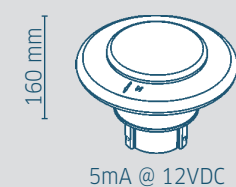
**WS600**  
Ø126 mm / 0.7 kg



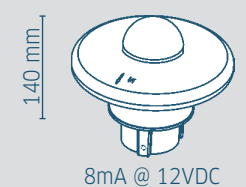
**WS650**  
Ø160 mm / 0.7 kg



**MPR-100**  
Ø160 mm / 1.2 kg



**MPS-100**  
Ø160 mm / 1.0 kg



## Serial Interface

Serial interfaces can be selected either SDI-12 or RS485 by key user commands through RS485/USB converter connected to PC by standard terminal SW

Function	Sets	Commands	Detail
Switch to SDI-12 protocol under any protocol	1	\$AACFG 1<CR><LF>	AA:address,Default:00,1:Back to ASCII mode
	2	\$AAQ 4<CR><LF>	Select SDI-12 protocol
Switch to MODBUS-RTU Floating protocol under any protocol	1	\$AACFG 1<CR><LF>	AA:address,Default:00,1:Back to ASCII mode
	2	\$AAQ 2<CR><LF>	Select MODBUS-RTU Floating protocol

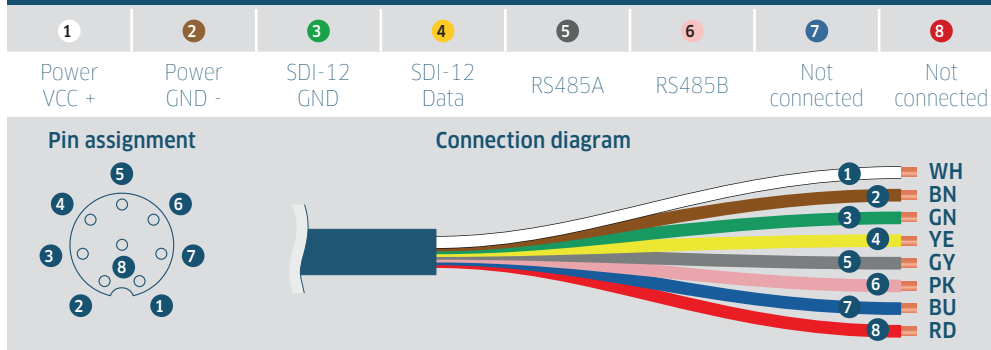
## Sensor Connection and Cable Assignments

- All non-heated HS WeatherSens MP-Series devices are equipped with M12-8pol connector (male)
- Connection towards data-logger and power supply to be applied with corresponding accessories sensor cables type M12 SAC-8pol

### ⚠ Caution: Un-proper or false connection can damage the instrument.

Illustration and drawings below do demonstrate the sensor cables only. Shield to be connected to PE inside control cabinet or data logger by booth end grounding.

## Sensor Cable M12 SAC-8pol



## Technical Specifications

Wind speed	Range: 0 to 60 m/s - Accuracy: +- 0,3 m/s or +-3%
Wind direction	Range: 0 to 360 ° - Accuracy: +-3°
Temperature	Range: -40 to +80°C - Accuracy: +-0.5°C
Humidity	Range: 0 to 100% RH - Accuracy: +-3%
Air-Pressure	Range: 10 to 1100 hPa - Accuracy: +-0.5 hPa
Solar radiation	Range: 300 to 2100 nm - 0 to 2000 W/m <sup>2</sup> - Accuracy: 3%
Precipitation MPR100/101	Range: 0 to 200 / 400 mm/h - +-5%
Operating Voltage	10 to 30 VDC
Power consumption @12VDC	AR200:11 mA; MP 500/600/601/650: 13 ... 18 mA; MP700: 70 mA; MPS100: 8 mA; MPR100: 5 mA; MPR101: 45 mA
Interfaces	SDI-12 / RS 485 (selectable)
Protocols	SDI-12 V 1.3 or RS485 (MODBUS-RTU, ASCII; NMEA 0183, UMB)
Optional sensor cables	M12 SAC-8pol: 10 m sensor cable
Operating temperature range	-40 to +70°C - non-heated - non-icing conditions and without snow cumulation
IP Class	IP 66
Connector and Cable	Connector M12-8pol; cable PUR 5 m or 10 m (other length on request)