WSWD SONIC Anemometer

MESA

GENERAL

The WSWD Sonic Anemometer accurately measures wind speed and wind direction without any moving parts. This rugged all electronic, microprocessor design offers unmatched sensitivity for up to 75m/s windspeed and 0..359° wind direction. Periodic maintenance is not necessary. Counting the duration time of a sonic burst travelling between two transducers at high frequency leads to a precise value for wind speed and direction. Measured values and the WSWD´s operational conditions are communicated over a braod range of serial interfaces, however user programmable current or voltage readings are available as well. Automatically controlled heating pipes for all transducers are integrated in the basic version, for low mountain range or servere environmental conditions the all over body heating version is recommended. WSWD sensor is a very precise and rugged sensor suitable for meteorological application and windpower stations likewise. Power requirement is 9..36V DC, it draws about 20 W when transducer heating is switched on, when maximum heating is activated a totally icy WSWD is ice-free in less than 1 minute and provides precise and reliable measurement data.

BENEFITS

- ❒ no bearing to wear out or replace
- ❒ rugged, reliable, no service required
- ❒ industrial and military version available
- ❒ no re-calibration necessary
- ❒ offers all analog (user settings) and digital interfaces (RS485/422, CAN, Modbus)
- ❒ very efficient transducer heating integrated
- ❒ smart power heating optional available
- ❒ housing made of special stainless steel

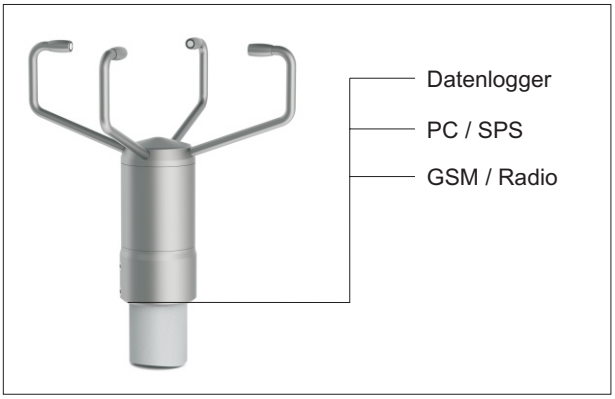
APPLICATIONS

- ❒ Building services technology (Heating-, climate-, ventilation controll)
- ❒ Power plants and photovoltaics (long term monitoring)
- ❒ Sunblind and fassade engineering (awning control systems)
- ❒ Road- / bridge condition monitoring, ski resorts (safety aspects)
- ❒ Meteorology and agricultural engineering (maintenance free monitoring at extrem conditions e.g. buoy, alps, remote area)
- ❒ Environmental networks and mobile observation stations (automatic monitoring of metorological parameters)
- ❒ Windpower stations, antenna engineering (monitoring), ships and off shore
- ❒ Ships and off shore platforms

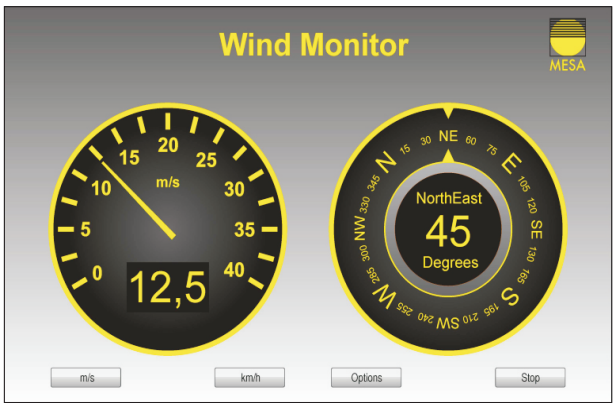
SPECIFICATION

Power supply	9..36VDC/0,1A (heat. off)
Serial interface Analog interface	RS422/485, CAN, Modbus 0..10V + 0..20mA/RS485 range, offset programable
Dimensions / Material	Ø220x221mm / V2A / V4A
Protection class Weight Connector Mounting Heating Transducer Heating xxxxxxxx1..-3) (option)	IP 67 1,4kg Binder 8-pin Ø48-50mm (pipe mount.) 24V@20W (basic version) ca. 85/125 or 230W depends on application
Operating temepature	-40..70ºC (basic version) -55..70°C (230W version)
Data format	ASCII Protocoll/NMEA
Wind velocity Wind direction Virtuelle temperature	0..40, 0..75 (0..85m/s opt.) 0..359° or 0..539° analog -50..70°C
Resolution	0,01m/s and 0,1º / 0,1K
Accuracy (+/-)	v=0,1m/s (@<5m/s) v=2% of read (@ >5m/s) D=0,5º @ v>0,6m/s T=0,5K

Sonic Anemometer on a buoy, Halibut Bay



READOUT / VISUALISATION



TYPES / ACCESSORIES

The WSWD SONIC Anemometer is to be deliverd in various types. Furthermore already preconfigured and testet cables are available at your convenience.

0100100x	WSWD SONIC Anemometer basic version, RS485, RS422 out
0100101x	WSWD1 SONIC Anemometer like WSWD, but with analog out
0100102x	WSWD2 SONIC Anemometer like WSWD, but with CAN open out
0100103x	WSWD3 SONIC Anemometer like WSWD, but with Modbus
09000250	Wind Monitor display, analysis, cofiguration
31111452	M16 plug connector, IP 67 scope of delivery (if no cable ordered)
09101105	M16 plug connector with 5m cable tail
09101110	M16 plug connector with 10m cable tail
xxxxxxx0	Heating for transducers (basic version)
xxxxxxx1	Heating for transducers, brackets, cover
xxxxxxx2	Heating for transducers, brackets
xxxxxxx3	Heating for transducer, brackets, cover and body

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