



## METEOROLOGICAL EQUIPMENT

### ED CUP ANEMOMETER

#### FEATURES

- Very high accuracy
- Fast Response
- Very high wind speeds >80m/s
- Low starting threshold speed
- Side or bottom mounted Lemo plug connection
- 2-Wire transmission
- 3-Wire transmission with ED-261
- Wind Tunnel calibration (option)
- Pulse output or linear current output

#### APPLICATIONS

- Research and scientific measurements
- Wind farms
- Environmental monitoring and warning
- Agriculture - Industry - Aviation
- Meteorological Stations

#### TECHNICAL CHARACTERISTICS

The ED Cup Anemometer has been used worldwide during the last 25 years by meteorological institutes, scientific- and research laboratories, and the Industry for measuring of meteorological data, producing of Wind Atlas, and measuring of produced energy from wind turbines.

The Anemometer is designed for a high professional quality, easy to operate, and meets the requirements of different applications.

As option the Anemometer can be delivered with a Wind Tunnel calibration report.

Three versions of sensor transducer are made to generate the 2-pulse output signal per revolution. The Reed Switch version is very suit-



able for equipment with a low current consumption, and the ED-260 opto version is used for equipment with a wanted low maintenance rate. The ED-261 transducer is an opto version with separate power and pulses from 0V to VCC or an open collector output for directly connection to data acquisition equipment without further interface. The ED-260-I transmitter is made for industrial standard current signal. The output signal is a linear current signal 4-20mA vs. Wind speed (defined when ordered).

With a body of painted brass, the carbon 3-cup rotor for more than 80m/s, and the ball bearings and shaft of stainless steel, the Anemometer is very suitable for environment with salinity, high wind speeds and wide temperature range.

**TECHNICAL SPECIFICATIONS**  
**ED CUP ANEMOMETER**

|                                     |  |
|-------------------------------------|--|
| <b>Measuring Range</b>              | 0 - >80 m/s  |
| <b>Threshold Speed</b>              | about 0.2 m/s  |
| <b>Distance Constant</b>            | 2 m  |
| <b>Non-linearity</b>                | Within 0.05 m/s above 2 m/s  |
| <b>Wind Speed Formular</b>          | $U = A * F + B$ (m/s)<br>A = 0.6298 (2 Pulses per revolution)<br>B = 0.142<br>F = Output Frequency |
| <b>Sensor Transducer type</b>       |  |
| 1: Reed switch                      | 2 Pulses per revolution.   |
| 2: ED-260 Opto transmitter          | 2 Pulses per revolution.   |
| 3: ED-260-I Current transmitter     | 2 Pulses per revolution  |
| 4: ED-261 Opto transmitter          | 2 Pulses per revolution  |
| <b>Sensor Output Signal</b>         |  |
| 1: Reed switch                      | On/off contact with 1K in serial.  |
| 2: ED-260 Opto transmitter          | 4-20 mA for low/high pulse.  |
| 3: ED-260-I Current transmitter     | Analog 4-20mA linear signal  |
| 4: ED-261 Opto Transmitter          | 0V-VCC for low/high pulse (Optional—Open collector)  |
| <b>Operating Temperature</b>        | -40 to +70°C<br>(ED-260-I: -30 to +60°C)   |
| <b>Electrical Connections</b>       |  |
| Transmitter 1, 2 and 3:             | LEMO triaxial plug<br>Terminal 1: Signal<br>Terminal 2: GND  |
| Transmitter 4:                      | LEMO 3 pin plug<br>Terminal 1: GND<br>Terminal 2: VCC (5-24VDC)<br>Terminal 3: Signal              |
| <b>Materials</b>                    | Body of brass, primed and painted.<br>Cup of Carbon fibre (Utility Model no: 9400271).             |
| <b>Mechanical Specifications</b>    |  |
| Height                              | 295mm  |
| Diameter of Cup                     | 190mm  |
| Weight                              | 1.2 Kg   |
| Mounting Hole                       | Ø 25mm   |
| <b>Accessories included</b>         | Lemo triaxial plug or Lemo 3 pin plug according order  |
| <b>Options</b>                      |  |
| Opto Transmitter                    | 1: 1 Pulse per revolution.   |
| Calibration                         | 2: Wind tunnel calibration.  |
| Plug connection                     | 3: Bottom mounted plug.  |
| Opto Transmitter                    | 4: 12 Pulses per revolution  |
| <b>EU Declaration of Conformity</b> | EN61000-6-3 Emission.<br>EN61000-6-2 Immunity.   |
| <b>Warranty</b>                     | One Year against faulty materials or workmanship.  |
| <b>Maintenance</b>                  |  |
| Annually                            | Check of cable, plug, ball bearings, cup and body.   |
| Every Second Year                   | Annually check and change of ball bearings.  |

**Serial no.:** \_\_\_\_\_

**Transducer:** \_\_\_\_\_

**Measuring Range**  
**ED-260-I (4-20mA):** 0.2- \_\_\_\_\_ m/s.

**Options:** \_\_\_\_\_

**Calibration Report:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Sign:** \_\_\_\_\_