

# ***Instruction Manual***

***Windvane model 444***

***Anemometer model 555***

April 2003

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## 1. INTRODUCTION

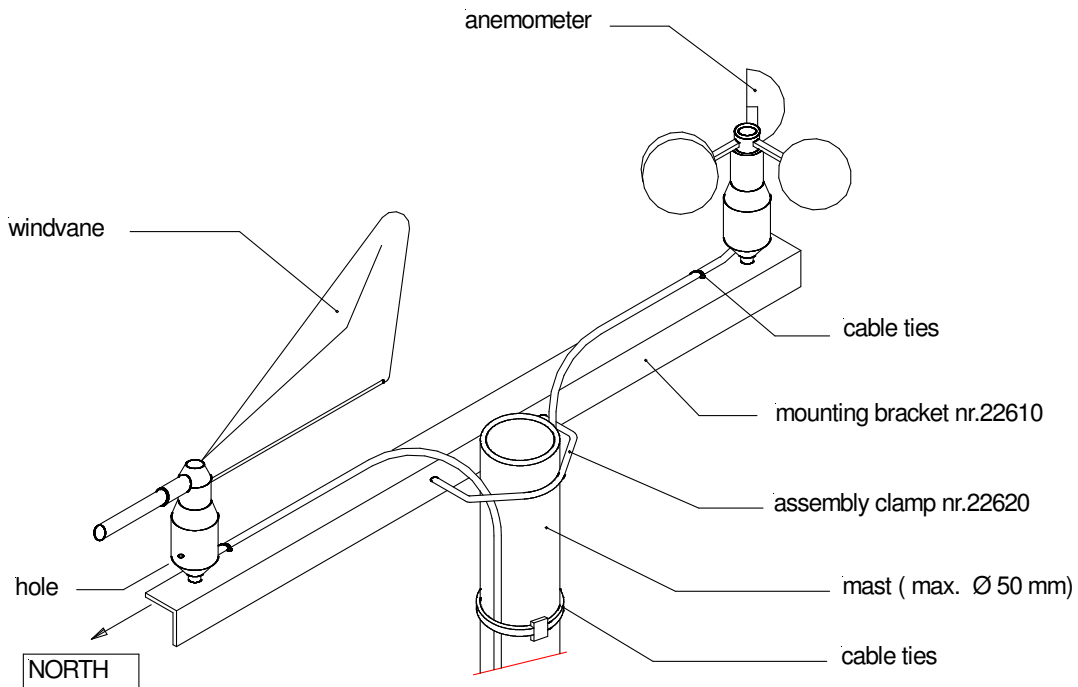
Installation includes:

- Windvane model 444
- Anemometer model 555
- Mounting bracket model 105 for sensors
- Fixing clamp for mounting bracket

## 2. MOUNTING INSTRUCTIONS

- 1) Mount the anemometer to the bracket and fix it with the nut on the bottom side.
- 2) Mount the vane at the same way but note that the small hole must point to the end of the mounting bracket.
- 3) Fix both cables to the mounting bracket with cable wraps.
- 4) Mount the bracket loosely to the pole with the fixing clamp.
- 5) Aim the bracket in such way that the windvane side of the bracket points north. Use a compass for that and fix it firm.
- 6) Fix the cables down to the side of the pole.

See figure A.



### 3. WINDVANE MODEL 444

#### 3.1 CONNECTION DIAGRAM WINDVANE MODEL 444

Cable: LiYY 7 x 0,14 mm<sup>2</sup>

| Color | Signal         |
|-------|----------------|
| White | WD2            |
| Brown | Ground         |
| Green | WD0            |
| Gray  | WD3            |
| Pink  | +V ( 8..12Vdc) |
| Blue  | WD1            |

#### 3.2 GRAY CODE TABLE

| Winddirection | Degrees (°) | WD3 | WD2 | WD1 | WD0 |
|---------------|-------------|-----|-----|-----|-----|
| N             | 0           | 0   | 0   | 0   | 0   |
| NNE           | 22,5        | 0   | 0   | 0   | 1   |
| NE            | 45          | 0   | 0   | 1   | 1   |
| ENE           | 67,5        | 0   | 0   | 1   | 0   |
| E             | 90          | 0   | 1   | 1   | 0   |
| ESE           | 112,5       | 0   | 1   | 1   | 1   |
| SE            | 135         | 0   | 1   | 0   | 1   |
| SSE           | 157,5       | 0   | 1   | 0   | 0   |
| S             | 180         | 1   | 1   | 0   | 0   |
| SSW           | 202,5       | 1   | 1   | 0   | 1   |
| SW            | 225         | 1   | 1   | 1   | 1   |
| WSW           | 247,5       | 1   | 1   | 1   | 0   |
| W             | 270         | 1   | 0   | 1   | 0   |
| WNW           | 292,5       | 1   | 0   | 1   | 1   |
| NW            | 315         | 1   | 0   | 0   | 1   |
| NNW           | 337,5       | 1   | 0   | 0   | 0   |

#### 3.3 SPECIFICATIONS WINDVANE MODEL 444

|                        |  |
|------------------------|--|
| Measurement principle: | Optical  |
| Measurement range:     | 0..360°  |
| Resolution:            | 22,5°  |
| Supply:                | 8 - 12 VDC   |
| Output signals:        | Open Emitter, 4-bits parallel Grey-code, (place pull-down resistor 4K7 ) |
| Material:              | PVC en stainless steel.  |
| Dimensions:            | 155 x 220 x 28 mm  |
| Cablelength:           | 20 meter standard, able to enlarge up to max. 100 meter.                 |
| Positioning:           | Vertical freestanding. Markhole in sensor at north side.                 |

## 4. ANEMOMETER MODEL 555

### 4.1 CONNECTION DIAGRAM ANEMOMETER MODEL 555

Cable: LiYY 3 x 0,14 mm<sup>2</sup>

| Color | Signal         |
|-------|----------------|
| White | +V ( 8..12Vdc) |
| Brown | Ground         |
| Green | WSpeed (pulse) |

### 4.2 WINDSPEED TABLE

| Frequence (in Hz) | Windspeed (in m/s) |
|-------------------|--------------------|
| 0                 | 0                  |
| 45                | 3                  |
| 90                | 6                  |
| 135               | 9                  |
| 180               | 12                 |
| 225               | 15                 |
| 270               | 18                 |
| 315               | 21                 |
| 360               | 24                 |
| 405               | 27                 |
| 450               | 30                 |

### 4.3 SPECIFICATIONS ANEMOMETER MODEL 555

|                        |  |
|------------------------|--|
| Measurement principle: | Optical ( photo interruptor ) ( 12 pulses per revolution ) |
| Measurement range:     | 0 - 30 m/sec   |
| Resolution:            | 0,06 meter windspeed                                       |
| Supply:                | 8 - 12 VDC   |
| Output signal:         | Frequency 0 – 450Hz @ 0 – 30m/sec (Pulse 8 Volt)           |
| Material:              | PVC en stainless steel.                                    |
| Dimensions:            | 85 x 120 x 120 mm  |
| Cablelength:           | 20 meter standard, able to enlarge up to max. 100 meter.   |
| Positioning:           | Vertical freestanding.                                     |