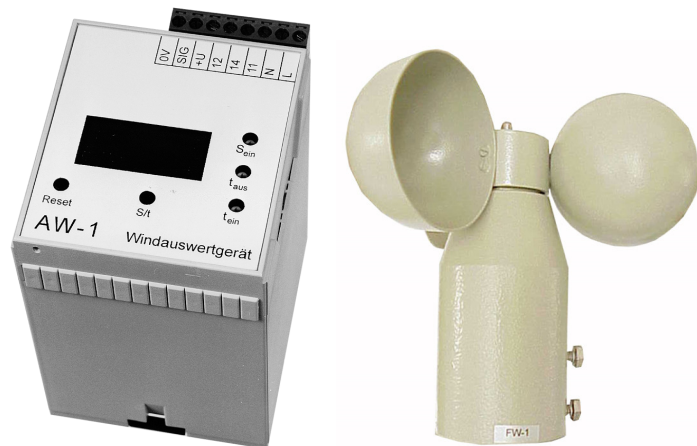


Wind-control instrument AW-1 + Wind-sensor FW-1

General information:

The wind-control instrument AW-1 is a versatile wind speed measurement system for acquisition and evaluation of the velocity of wind. The wind-sensor FW-1 generates a frequency signal to the evaluating instrument.

The transmitted frequency is proportional to the wind speed. The control instrument observes this frequency signal. Switching threshold and delay times are adjustable at the control instrument. The LC-display at the front site shows the current wind intensity, the adjusted thresholds and delay times. The output relay, with a potential-free contact, is switched on, if the wind speed is higher than the turn-on threshold (S_{ein}).



The AW-1 enclosure can be fixed on a standard DIN-rail as well as on a mounting plate in a switch cabinet. The screw-terminal strip is pluggable.

The wind-sensor FW-1 is a 3-bowl anemometer made of aluminium and it is mountable on a pole/rod with a diameter of max. 50 mm. The body of the sensor is equipped with an electrical heating to guarantee an error-free operation during winter time. The heating is powered by a separate power supply (24 V AC/DC +/- 10 %, 0.22 A, 5 W).

The cable connection between sensor and instrument should not be longer than 250 m. As cable type LiY(ST)Y 4x 0,8Lg is recommended. In case of high disturbing environment, a shielded cable is recommended. The cable shield is recommended to connect to Ground (0 V) at the control instrument.

Installation and commissioning:

Connection, installation and commissioning only by qualified and skilled person with electrical education.

Mount the control instrument and sensor at the provided position and wire according to the schematic.

Caution:

Check for correct wiring before switching on the power supply !

Wrong connecting may cause damage of the instrument and sensor !

After switching on the power supply, the display will show the unit name for two seconds. Hereafter the instrument is ready for operation.

Adjustments and readouts:

(Push-button 'S/t' not pressed)

Display row	Readout	Description	Adjustments	
1	Wind XX m/s	Current wind speed		
2	S_{ein} XX m/s	Turn-on threshold	Potentiometer S_{ein}	0...31 m/s
3	--empty--			

(Push-button 'S/t' pressed)

Display row	Readout	Description	Adjustments	
1	Wind XX m/s	Current wind speed		
2	t_{ein} XX sec	Turn-on delay time	Potentiometer t_{ein}	0...25 seconds
3	t_{aus} XX min	Turn-off delay time	Potentiometer t_{aus}	0...25 minutes

Readout for special cases

Display row	Readout	Description	Comments
1	Wind ? 0 m/s	Sensor error	Check connection of sensor
1	Wind >31 m/s	Wind speed >31 m/s	Value out of range
2	AW - 1	After power-on for 2 sec	After that ready for operation.
3	AKTIV	Relay activated (turn on)	Wind speed higher than S_{ein} .

Technical specifications wind-control instrument AW-1

Operating voltage typ.: 230 V / 50 Hz
 Input signal: 24 V square-wave signal, 0...75 Hz
 Output: change-over contact, potential-free, 230 V / 5 A (AC1)
 Display: LC- Display, 3x 12 character, character height 5 mm
 Size housing: 70 x 75 x 120 mm (WxHxD)
 Ambient temperature: 0...+70 °C

Technical specifications wind-sensor FW-1:

Measuring range: 3...31 m/s
 Output signal: 24V-square-wave signal, 0...75 Hz, 2 impulse per cycle
 (potential-free Reed-contact with protecting resistor, max. 24 V / 20 mA)
 Integrated heater: 24 V AC/DC +/-10 %, 0.22 A, 5 W
 Connection: ca. 2 m wired-ready cable, LiY 4x 0.25...0.34 mm²
 Size body: 60 x 160 mm (DxH)
 Size anemometer: 180 x 70 mm (DxH)
 Ambient temperature: -30...+80 °C

