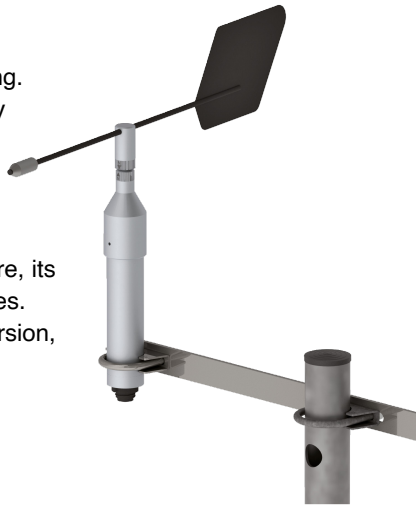
100 years
Since 1925

SIAP+MICROS
Environmental Monitoring Solutions

WIND DIRECTION
Sensor
t033 TDV-ET

- High precision
- Robust and easy to install
- Equipped with heating system (optional)

Description



TDV has been thoroughly designed to ensure high standards of performance in wind direction monitoring. The sensing element consists of a balanced vane connected to a magnet, whose position is detected by a Hall effect sensor. The whole system allows to investigate with very reliable precision the orientation of the wind by detecting the movement of the wind vane from its original position.
Wind vane and the lightness of its material have been accurately chosen in order to obtain a very low mechanical inertia and consequently achieve a high sensitivity.
The robust structure of the sensor gives an adequate resistance even at high wind speeds. Furthermore, its simple and compact design facilitates the installation and makes easier the on-site maintenance activities.
The sensor is supplied with power and signal cable (12m), and it is available upon request on heated version, powered at 24V (alternating or direct current).

Main features

- **High angular resolution**
- **High accuracy**
- **Robust and easy to install**
- **Equipped with heating system (optional)**

Technical Specifications*

Measurement performance			
Wind direction [°]			
Transducer	Magnet and Hall effect direction sensor		
Measurement range	0 ÷ 359.9 (read also 0÷360)		
Starting threshold	< 0.5 m/s		
Onset speed	< 0.4 m/s		
Gust survival	60 m/s (more than 30 minutes)		
Resolution	0.1		
Sensitivity of the transducer	< 0.1		
Sensor uncertainty	± 1		
Operating conditions			
Temperature	-30°C ÷ +60°C		
Humidity	0% ÷ 100%		
Outputs			
Tension	0 ÷ 2 V ↔ 0 ÷ 359.9 [°]		
Current	4 ÷ 20 mA ↔ 0 ÷ 359.9 [°]		
RS485-Modbus	Wind Direction [°]		
SDI-12	Wind Direction [°]		
Power supply and Consumption			
Voltage supply	7 ÷ 30 Vdc		
Heating system voltage supply	12 ÷ 24 V [DC o AC]		
Consumption *(mA)*	Min	Typical	Max
RS485-Modbus / SDI-12 / 0 ÷ 2 V	-	1	3
4 ÷ 20 mA	5	-	25
Heating system power		40 W @ 24 V	
Mechanical specifications			
Protective body	Alluminium alloy and stainless steel screws		
Weight	930 g		
Dimensions	$Ø_{MAX}$ = 520 mm, Height = 385 mm		
Electrical connections	IP67 / 7 pole male connector		
Ordering codes			
Current output, Tension output, RS485-Modbus serial output	PSM-t033a-TDV-IVS		
SDI-12 serial output	PSM-t033d-TDV-12		
Heated version, Tension output	PSM-t034b-TDVR-V		

*Changes on technical performances can be applied upon request of specific calibration

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