

# HIGH PRECISION BAROMETRIC PRESSURE Sensor

*TBAR-UHIVS-ET*  
*TBAR-USDI12-ET*



High Precision

Customizable measurement range

Accuracy and reliability of data

# Description

TBAR-UHIVS / USDI12 is equipped with a piezoresistive-type electronic transducer with linear output. The sensor is housed into a suitable box that ensures considerable resistance against dust and liquids, preserving great functioning standards even in bad and unfavourable weather conditions. An accurate calibration process is taken by means of a climatic chamber which allows to calibrate the sensor and adapt its functioning to specific altitudes, according to the real installation environmental conditions. The whole procedure is thoroughly conducted in order to achieve a high level of accuracy and repeatability of the measurement, with respect to the operating temperature. The sensor is supplied with power and signal cable (4m).



## Main features

- **High precision**
- **Suitable for professional maritime and aeronautical applications**
- **Customizable measurement range**
- **Reduced energy consumptions**

## Technical Specifications\*

### Measurement performance

#### Pressure [hPa]

	Min	Typical	Max
Linearity		0.2	
Hysteresis	1	0.1	1
Caibration uncertainty at 20°C	0.06	0.1	0.11
Measurement range		500 ÷ 1100	
Uncertainty (RS485-Modbus / SDI12 outputs)		0.15 (-15 ÷ 50°C)	
Uncertainty (I/V outputs)		0.9 (-15 ÷ 50°C)	
Resolution		0.01	
Long-term stability ( <i>maximum variability of the measured value</i> )		0.1 a year	

### Operating conditions

Temperature	-30°C ÷ +60°C
Humidity	0% ÷ 100%
Temperature dependence	compensated -10°C ÷ 70°C

### Outputs

RS485-Modbus	Pressure [hPa]
SDI – 12	Pressure [hPa]
Tension	0 ÷ 2 V ↔ 500 ÷ 1100 hPa
Current	4 ÷ 20 mA ↔ 500 ÷ 1100 hPa

### Power supply and Consumption

Voltage supply	7 ÷ 28 Vdc		
Power consumption (mA)	Min	Typical	Max
RS485-Modbus / SDI – 12 / 0 ÷ 2 V	-	12	32
4 ÷ 20 mA	16	-	55

### Mechanical specifications

Protective body	Die cast aluminium and stainless steel screws, IP68
Weight	750 g
Dimensions	160 x 100 x 65 mm
Electrical connections	IP67 / 7 pole male connector

### Ordering codes

Current output, Tension output, RS485-Modbus serial output	PSM-T011H-TBAR-UHIVS
SDI-12 serial output	PSM-T011I-TBAR-USD112

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