



Mouth area 200 cm²

High precision

Automatic correction of cumulative measurement (-E versions)

Integrated diagnostic functions: inclinometer, accelerometer (-E versions)

Available with heater

Description

The TP200 is a rain gauge with a collection area of 200 cm² and a tilting pan. It is extremely accurate and also suitable for latitudes where high intensity rainfall is the norm (monsoons or tropical rains).

The sensor consists of an oscillating tipping bucket whose fulcrum, shaped like a knife blade, rests on a V-shaped seat in order to minimize friction, thus facilitating the tipping of the bucket and ensuring high accuracy even at high precipitation intensities. The sensor body is made of aluminum alloy and is hot-coated with a special UV-resistant paint that guarantees high durability and resistance to atmospheric agents.

The TP200 is available in two versions: the TP200-N with pulse output without any type of signal conditioning, and the TP200-E equipped with signal conditioning electronics that reduce measurement uncertainties at high precipitation intensities, both for intensity and cumulative values. The TP200-E version provides contact output (cumulative precipitation), current output (cumulative precipitation), or Modbus and SDI-12 serial output (both intensity and cumulative) on a single connector.

The sensor in the TP200-N version only is also available with the option of a heater powered by 24 V DC or AC, and is supplied complete with power and signal cable (12 m).



Caratteristiche Principali

- **Mouth area 200 cm²**
- **Measurable intensity up to 500 mm/h**
- **Accurate even at high rainfall intensities**
- **Automatic measurement correction (versions -E)**
- **Integrated diagnostic functions: inclinometer, accelerometer (versions -E)**
- **Protected against power surges**
- **Available with heater**

Technical Specifications*

Measurement performance			
Collecting area	200 cm ²		
Conversion constant	0.2 mm/impulse		
Amount resolution	0.2 mm		
Intensity resolution (TP200-E)	0.1 mm/h		
Amount range	0 ÷ ∞ mm		
Intensity range (TP200-E)	0 ÷ 500 mm/h		
Amount accuracy (TP200-N)	±2% @ 10 ÷ 70 mm/h ±5% @ 70 ÷ 150 mm/h ±7% @ 150 ÷ 200 mm/h ±10% @ 200 ÷ 300 mm/h Accuracy: < 3% (0 - 500 mm/hr) by datalogger correction		
Amount accuracy (TP200-E)	±2% @ < 300 mm/h		
Intensity accuracy (TP200-E)	±2% @ < 300 mm/h		
Operating conditions			
Temperature	0°C ÷ +70°C		
Temperature (heated version)	-20°C ÷ +70°C		
Rainfall intensity	0 ÷ 500 mm/h		
Outputs			
Reed contact	0.2 mm/impulse		
RS485-Modbus / SDI-12	Adjusted intensity [mm/h], Adjusted amount [mm]		
Tension (optional)	0 ÷ 2 V ↔ 0 ÷ 500 mm/h		
Current (optional)	4 ÷ 20 mA ↔ 0 ÷ 500 mm/h		
Power supply and Consumption (-E version)			
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	90 W @ 24 Vdc		
Mechanical specifications			
Materials	Corrosion-resistant metal alloys and stainless steel fasteners		
Weight	2.2 kg		
Dimensions	Ø = 165 mm; Height: = 345 mm		
Electrical connections	IP67 / 7 pole male connector		
Finishing touch	RAL 9003 thermosetting polyester powder varnishing		
Ordering codes			
Reed contact output	PSM-t027a-TP200-N		
Heated version, Reed contact output	PSM-t028a-TP200R-N		
Version with electronic correction. Available outputs: RS485-Modbus or SDI-12, contact, optional current and voltage.	PSM-t027q-TP200-E		

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