

Non-contact discharge radar



Description

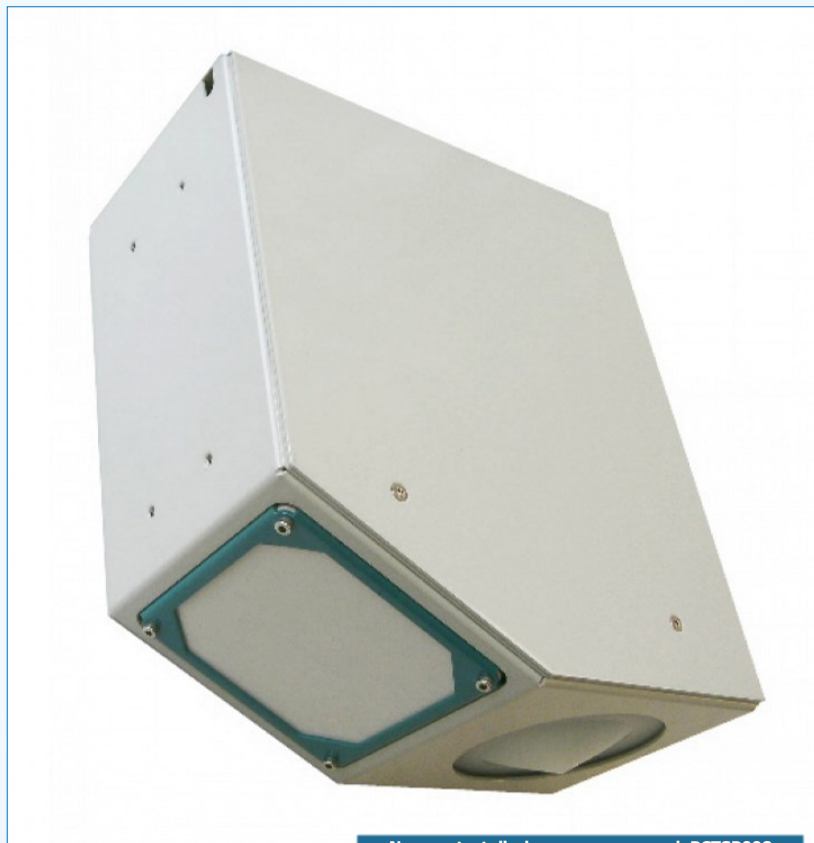
The PCTSP008 non-contact system measures the discharge by RADAR technology. The unique feature of the PCTSP008 system is the continuous capturing of flow velocity which enables an exact discharge measurement and evaluation of specific discharge situations. In case of flood the system measures the exact discharge and because of the non-contact radar technology there is no damage of the measurement system by bed loads or trees. It enables reliable measurement without the need for structural work on the water. The sensor can be simply mounted on bridges or channel superstructures. To measure any discharge situation at rivers, torrents, creeks, mountain torrents or open channels, the PCTSP008 is a unique and reliable system. Optional analogue outputs from 4 to 20mA are available for data transfer.

Properties and benefits

- Maintenance free
- No structural construction in the water needed
- Fully functional even in flood water situation
- Low power consumption allows solar cell instigation
- Detection of flow direction
- Measurement range 0.10 to 15 m/s
- Recognition of hysteresis effects
- Measurement in back water situation
- Recognition of vegetal invasion
- Measurement in tide dependent rivers
- Own measurement interval or externally triggered
- PCTSP008: analogue outputs from 4 to 20 mA

System - components

- PCTSP008 discharge sensor: Measures the flow velocity, integration of radar level sensor and calculation of the discharge
- Radar level sensor
- Protective casing for both sensors



Non-contact discharge sensor - mod. PCTSP008



Discharge sensor – typical applications

Technical specifications may be varied without prior notice

Technical features

GENERAL FEATURES	
Power supply	6 ... 30Vdc - Reverse voltage protection, overvoltage protection
Power consumption @ 12Vdc (Typ.)	Stand-by: 1mA - Active measurement: 140mA
Outputs	RS-485 ASCII / Modbus RTU SDI-12 Analog 4...20 mA (14 bit, max. load 250 Ω) Digital (low: 0V, high: Vsupply, max. 1.5 A)
Operating conditions	Temperature: -40 ... 60°C — Relative Humidity: 0 ... 100%
Protection rating	IP 67
Lightning protection	Integrated protection against indirect lightning with a discharge capacity of 0,6 kW Ppp
Housing material	Powder coated aluminum, vandalism-proof Stainless steel option available
Mounting bracket	Ø 34 ... 48mm
Size L x W x H	338 x 154 x 333mm
Weight	5,4Kg
VELOCITY	
Detectable measurement range	0,08 ... 16m/s (dipendente dalle onde)
Accuracy	0,01m/s
Resolution	1mm/s
Direction recognition	+/-
Measurement duration	5 ... 240s
Measurement interval	8s ... 5h
Measurement frequency	24 GHz (K-Band)
Radar opening angle	12°
Distance to water surface	0,50 ... 35m
Vertical inclination	Measured internally
AUTOMATIC VERTICAL ANGLE COMPENSATION	
Accuracy	± 1°
Resolution	± 0,1°
WATER LEVEL MEASUREMENT	
Measurement range (distance between level sensor and water surface)	0...15 m
Measurement frequency	80 GHz
Resolution	2mm
Accuracy	± 0.025% F.S.
Level sensor opening angle	8°

Ordering code

Non-contact discharge sensor with digital and analog (4...20mA) outputs

PCTSP008

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