



Pluvio² S

Applications

Climatology
Meteorological Observation
Flood warning
Hydropower



Precipitation Gauge

Compact universal weighing precipitation gauge

Compact and relatively light precipitation gauge, with a weather resistant collecting bucket for 400 mm of precipitation

Minimum space requirement - no problem to install on existing 50 cm x 50 cm concrete bases with 2-inch pedestal

The intensity and cumulative data output fulfils the WMO directive No. 308

Considerable measuring accuracy of ± 1 mm, wide measuring range, and a high data accessibility of 99%

Output of high precipitation intensities of up to 3,000 mm/h without any time delay

Various output interfaces (SDI-12, RS-485, pulse/contact), configurable through USB by means of tablet PC or notebook

State-of-the-art technology

The high-quality OTT Pluvio² S weighing precipitation gauge uses the weighing principle for dependably and precisely measuring the intensity and cumulative precipitation in each weather condition. Its compact designed collecting bucket featuring a 200 cm² collecting area accepts up to 400 mm of precipitation. The instrument is a further development of the OTT Pluvio series that has been successfully used in more than 10,000 stations worldwide and offers state-of-the-art technology in compact design. It is designed for professional use, and is suited for weather observer measuring networks as well as for urban precipitation stations or weather service measuring fields where only limited space is available.

Long service life with low maintenance

Its advanced technologies for data logging and processing including signal analysis, filtering, and noise reduction

provide highly accurate results in a broad measuring range of 0 to 3000 mm/h. The sophisticated mechanical and electronic design as well as lifetime calibration ensure long useful life with minimum maintenance requirements. Even units fitted with orifice rim heater may be used in reduced voltage operation for solar-powered stations.

Compact Design

Because of its compact design, the Pluvio² S unit needs only little space and may be installed to 2-inch pedestals. Thus, it can be used to easily replace tipping buckets or manual rain gauges in existing installations and can even be installed to their device carriers, eliminating the need for any concrete work.

Technical Specifications

	Feature	Value
GENERAL	Recordable precipitation	Liquid, solid, and mixed
	Collecting area	200 cm ²
	Recordable precipitation amount	400 mm (approx. 8 l)
MEASUREMENT	Measurement method	Weighing measurement method
	Sensor element	Sealed load cell
	Measuring range precipitation	0 ... 50 mm/min or 0 ... 3000 mm/h
	Cumulative precipitation threshold at 60 min collection time	0.03 mm
	Precipitation intensity threshold	0.1 mm/min or 6 mm/h
ACCURACY	Amount	±0.1 mm or ±1 % of measured value
	Intensity	±0.1 mm/min, ±6 mm/h or ±1 % of measured value
RESOLUTION	SDI-12 and RS-485 interface:	Amount: 0.00a mm Intensity: 0.001 mm/min or 0.01 mm/h
	Impulse output	0.05/0.1/0.2 mm (remaining amounts in 1/100 mm will be factored in during the collecting time of 60 minutes)
INTERVALS	Intensity output interval	1 minute
	Query interval	1 minute ... 60 minutes
	Output delay	Real-time: < 1 minute Non real-time: 5 minutes
OUTPUT	Measurement output	Intensity *RT, amount *RT/*NRT, amount *NRT, amount total *NRT, bucket content *RT and *NRT, temperature of load cell
	Status output	Pluvio ² S status, heating status (if present)
INTERFACES	Analogue	SDI-12 V1.3, RS-485 (2- or 4-wire) SDI-12 protocol and ASCII.txt
	Digital outputs (2 / 5 Hz)	Impulse 0.05/0.1/0.2 mm (adjustable) status 0 ... 120 impulses/min; USB 2.0 (for service mode) (no overvoltage protection)
ELECTRICAL DATA	Power supply	5.5 ... 28 VDC, typically 12 VDC secured against reverse polarity
	Current consumption (without heating)	Typically 9.2 mA at 12 VDC
	Power consumption (without heating)	≤ 110 mW
	Ring heating, optional	12 ... 28 VDC, typ. 12/24 VDC; secured against reverse polarity Max. 2.2 A; Max. 50 W at 24 VDC temperature control range 45 K (wind speed 0 m/s); Max. 12.5 W at 12 VDC temperature control range 12 K (wind speed 0 m/s)
RIM HEATER	Target temperature for orifice ring rim	+2 ... +9 °C, factory setting +4 °C
	Operating range of orifice rim heater	-40 ... +60 °C (ambient temperature)
	Modes of operation of orifice rim heater	heater control system: - disabled; - continuously enabled; - continuously enabled within a specified temperature range; - US NWS standard, time-controlled; - enabled in case of precipitation (adjustable after-run time) US NWS standard, time-controlled Enabled in case of precipitation (adjustable after-run time)
DIMENSIONS & WEIGHT	Dimensions	Pluvio ² S (Ø x h): 288 mm x 651 mm Pedestal: Ø 2" / 50 ... 60 mm
	Weight (bucket empty)	approx. 7.8 kg
MATERIAL	Base plate	Stainless steel / aluminium
	Collecting bucket	Polyethylene
	Bucket support	ASA, UV-resistant
	Pipe housing	ASA, UV-resistant
ENVIRONMENTAL CONDITIONS	Temperature, in operation	-40 ... +60 °C
	Temperature, storage	-40 ... +70 °C
	Relative humidity	0 ... 100 % rF, non-condensing
PROTECTION	Pipe housing closed	IP65
	Pipe housing open	IP63
	Load cell	IP68
STANDARDS	EMC	2004/108/EG; EN61326-1:2013
	Salt resistance	EN 60068-2-11

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