



Pluvio² L

Applications

Climatology
Meteorological Observation
Flood warning
Hydropower



Precipitation Gauge

Using the weighing principle

The OTT Pluvio² L reliably and accurately measures both the amount and the intensity of liquid, solid, and mixed precipitation
Lifetime factory calibration, drift-free measurements, and robust protective housing eliminate field visits for instrument service
Multiple communication interfaces: SDI-12, RS-485, and Pulse Output options
Solar panel power options make the instrument ideal for remote locations
Easy software setup and a USB interface for communication with computer
Wind protection shield available for particularly exposed locations

Ready for All Conditions

In line with the standards applicable in the world, the OTT Pluvio² L is available in two versions: One has a bucket orifice of 200 cm² and a measuring capacity of 1500 mm, the other has a bucket orifice of 400 cm² with a measuring capacity of 750 mm. Both versions are optionally available with ring heating.

Suitable for Any Location

Conceived for a precipitation intensity range of 0.05 to 3,000 mm/h, the OTT Pluvio² L reliably measures heavy tropical rain and arctic snow showers. As the bucket orifice has no funnel, heavy and solid precipitation are recorded with precise timing. The OTT Pluvio² L measures precipitation continuously with the highest availability of data and without evaporation losses from heated funnels or buckets so that solid precipitation is measured correctly.

Accurate, stable long-term and robust

Developed in conjunction with technologically leading meteorological services, the OTT Pluvio² L fulfills the highest expectations and at the same time stands out with relatively low operating costs. It complies with all requirements of WMO manual No. 8.

Virtually maintenance-free

The maintenance work is limited to emptying the collecting bucket, occasional visual checks, and adding anti-freeze as necessary.

Technical Specifications

	Feature	Value
GENERAL	Recordable precipitation	Liquid, solid, and mixed
	Collecting area	Pluvio ² L 200 200 cm ²
		Pluvio ² L 400 400 cm ²
	Recordable precipitation amount	Pluvio ² L 200 1500 mm
Pluvio ² L 400 750 mm		
MEASUREMENT	Measurement method	Weighing measurement method
	Sensor element	Sealed load cell
	Measuring ranges	Precipitation: 0 ... 50 mm/min or 0 ... 3000 mm/h
		Cumulative precipitation threshold at 60 min collection time: 0.05 mm/h
		Precipitation intensity threshold: 0.1 mm/min or 6 mm/h
	Accuracy (at -25 ... +45 °C)	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: 0.01 mm, 0.01 mm/min or 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)
	Intensity output interval	1 minute
	Query interval	1 minute ... 60 minutes
	Output delay	Real-time: < 1 minute
		Non real-time: 5 minutes
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 L status	
	Heating status (if present)	
INTERFACES	Interfaces	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
		Pluvio ² L 200 typ. 2.1 A; max. 2.2 A Pluvio ² L 400 typ. 4.2 A; max. 4.4 A Pluvio ² L 200 max. 50 W at 24 VDC max. 12.5 W at 12 VDC; temperature control range 12 K (wind 0 m/s) Pluvio ² L 400 max. 100 W at 24 VDC max. 25 W at 12 VDC temperature control range 7 K (wind 0 m/s)
RIM HEATER	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)
DIMENSIONS & WEIGHT	Dimensions	Pluvio ² L 200 450 mm x 752 mm (Ø x h)
		Pluvio ² L 400 450 mm x 677 mm (Ø x h)
		Pedestal (Ø): 4"
	Weight (bucket empty)	approx. 16 kg /16.6 kg
MATERIAL	Material	Base plate: stainless steel / aluminium
		Collecting bucket: polyethylene
		Bucket support: ASA, UV-resistant
		Pipe housing: ASA, UV-resistant

Technical Specifications

	Feature	Value
ENVIRONMENTAL CONDITIONS	Temperature, in operation	- 40 ... +60 °C
	Temperature, storage	- 50 ... +70 °C
	Relative humidity	0 ... 100 % (non-condensing)
	Protection	Housing (closed): IP65
		Housing (open): IP63
	Load cell: IP68, resistant to salt fog	
EMC/EMI AND NORMS	Standards	E MC: 2004/108/EG; EN 61326-1:2013
SOFTWARE	Pluvio ² L operating software	Measured value display
		Configuration
		Diagnosis
		Firmware update
		Guided accuracy test

*RT = real-time; NRT = non real-time; units can be configured in mm or in (inch), mm/min or mm/h, in/min or in/h and °C or °F