

rain[e]314 Weighing precipitation sensor



POSSIBLE APPLICATIONS

- Precipitation measurement networks
- Flood warning systems
- Water management monitoring networks
- Classical meteorology and hydrology
- Traffic meteorology

Weighing system with automatic emptying

Like all rain gauges in the rain[e] series, the rain[e]314 uses a sensitive measuring principle and meets all requirements of WMO Guideline No. 8. Real-time measurements for the quantity and intensity of all liquid precipitation in the range of 0–720 mm/h are output accurately and reliably. The rain[e]314 has a compact, robust design and features state-of-the-art weighing technology inside. Fully automatic continuous emptying prevents overflow and measurement errors and enables maintenance-free long-term use even under extreme weather conditions.

- Output of precipitation intensity, amount, and total amount parameters in real time
- Measurement of each individual drop with amazing resolution
- Compact design with enlarged collection area
- Best connectivity thanks to a wide range of interfaces for easy system integration
- Version with highly efficient heating for low power consumption
- Easy calibration using a reference weight



PRODUCT OVERVIEW

rain[e]314 Weighing precipitation sensor

Professional Line	rain[e]314
Ident-No.	00.15184.003000 rain[e]314, unheated 00.15184.403000 rain[e]314, heated
Measuring ranges	No limit (0.0032... ∞ mm)
Amount Accuracy	0.1 mm or 1% at < 3.82 mm/min and 2% at ≥ 3.82 mm/min
Amount of dissolution	0.001 mm (pulse output: 0.01 mm)
Intensity Range	0–12 mm/min or 0–720 mm/h
Intensity Resolution	0.001 mm/min or 0.001 mm/h
Output	SDI-12; RS-485 (SDI-12 protocol, ASCII protocol, TALKER protocol) 2 pulse outputs for linearized, bounce-free output signal Status output (configurable, e.g., rain yes/no or heating on/off) Analog output 0/4...20 mA (0...2.5/5 V)
Collection area	314 cm ²
Ambient conditions	0...+70 °C (unheated), -40...70 °C (heated, no icing, no snow drifts)
Supply voltage	Unheated: 9.8...32 VDC Heated: 24 VDC / 2 heating circuits: 210 W (hopper) and 60 W (outlet / tipping bucket)
Power consumption	Max. 45 mA at 24 V supply voltage and with the analog output; Typically 7.5 mA at 24 V supply voltage with the analog output disabled; typically 12.5 mA at 12 V
Target temperature (heating)	+2 °C Surface temperature of hopper
Measuring principle	Weighing, with automatic self-emptying
Structure	Mounting mast Ø 60 mm
Dimensions	311 mm x 256 mm (H x D)
Protection class	IP67
Weight	Approx. 4 kg
Material	Housing: Aluminum, anodized, painted white Funnel: Aluminum, anodized Base: Cast aluminum, painted Collection vessel: Aluminum, black anodized
Standards and norms	WMO No. 8; VDI 3786 Sheet 7; EN 61000-2, -4; EN 61000-4-2, -3, -4, -5, -6, -11; NAMUR NE-21
Accessories (order separately)	00.15091.500XXX Tretjakov-style wind shield for measurement heights of 1 m, 1.5 m, and 2 m 32.15180.022040 Bird deterrent ring for rain[e]314 32.15184.060000 Sensor cable, 10 m, 8-pin, M12 connector 32.15184.061000 Power connection cable for sensor heating, 1 m

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