



Laser precipitation disdrometer measuring all precipitation types

- **Parameters measured** Precipitation type, intensity, drop size distribution, radar reflectivity
- Measurement technology Laser (optical)
- Product highlights Simultaneous measurement of 32 classes for particle sizes and velocities
- Interfaces SDI-12 / RS-485, pulse
- Article number 70.210.001.3.0

The OTT Parsivel² is a modern laser disdrometer for comprehensive measurement of all precipitation types. The Parsivel² captures both the size and speed of falling particles, classifying them into one of 32 separate size and velocity classes. The raw data are used to calculate the type, amount, intensity and kinetic energy of the precipitation, the visibility in the precipitation, and the equivalent radar reflectivity

Device	Laser-optical disdrometer
Optical sensor, laser diode	
Wavelength	650 nm













Technical Data

OTT Parsivel² - Laser Weather Sensor



Output power (peak)	0.2 mW
Laser Class	1 (IEC/EN 60825-1:2014)

Measuring ranges	
Particle size	Liquid precipitation: 0.2 8 mm
	Solid precipitation: 0.2 25 mm
Particle velocity	0.2 20 m/s

Classification	
Size and velocity classes	32
Measurement accuracy	± 1 size class (0.2 2 mm)
	± 0.5 size class (> 2 mm)

Types of precipitation	
Number	8
Types	Drizzle, drizzle/rain, rain, mixed rain/snow, snow, snow grains,
	sleet, hail

Outputs	
Reports	WMO 4680/4677 (SYNOP),
	4678 (METAR/SPECI) and NWS tables
Differentiation of precipitation	Drizzle, rain, hail, snow > 97 %
types	(compared to a weather observer)
Snow depth intensity	Volume equivalent

Intensity and accuracy	
Precipitation intensity	0.001 1,200 mm/h
Accuracy	±5 % (liquid) /± 20 % (solid)

Radar reflectivity Z	-9.999 99.999 dBz
Kinetic energy	0 999.999 J/(m²h)

Visibility in precipitation (MOR)	0 20,000 m
De-icing protection	Microprocessor controlled heating

Electrical data	
Power supply electronics	10 28 V DC, reverse polarity protection
Sensor head heating system	Optimum heating output can be guaranteed with a power supply
	voltage of at least 20 V DC
Power consumption (without	65 mA @ 24 V DC
heating)	
Heating capacity sensor heads	50 W (default)
	100 W (adjustable)
Lightning protection	Integrated













Technical Data

OTT Parsivel² - Laser Weather Sensor



Interfaces (configurable)	
RS-485	For all values incl. spectral data
	(EIA-485; 1,200 57,600 Baud)
SDI-12	For calculated values
Ausgaberelais	For pulse output of the precipitation amount in 0.1 mm/pulse
	with max. 2 Hz pulse rate
USB	For PC connection (configuration and service)

Mechanical data	
Material	Powder-coated aluminium housing
Weight	Max. 6.4 kg
Dimensions (H x W x D)	670 x 600 x 114 mm
Installation	2 inch pipe, Ø 50 62 mm

Environmental conditions	
Temperature range	-40 +70 °C
Relative humidity	0 100 %
Protection	IP65, resistant to salt spray

Standards	EN 61326-1: 2013, CE compliant 2014/30/EU, CE compliant
ASDO configuration software	
supplied (basic version)	









