Real-time measurement of precipitation type (Rain, snow, sleet, freezing rain, hail) and intensity, thanks to radar measurement technology. The absolutely maintenance-free smart radar rain sensor & present weather detector!

- **Parameters measured**
  Rain/precipitation quantity, rain/precipitation type (Rain, snow, sleet, freezing rain, hail)

- **Measurement range**
  24GHz Doppler radar

- **Product Highlights**
  Very fast response time, maintenance-free measurement, present weather detection

- **Interface**
  RS-485 semi-duplex two-wire, SDI-12, pulse interface / UMB protocol, Modbus

The innovative Lufft WS100 is a rain sensor with radar technology and adjustable heating. Using a 24-GHz Doppler radar, it measures the speed of all forms of condensed water. These include rain, freezing rain, hail, snow and sleet.

The low-energy sensor detects precipitation from the first drop. Its possible uses are nearly unlimited. Whether in hydrology and water management, agricultural and environmental science, building automation, meteorology or airport and traffic control: the rain gauge measures rain almost anywhere in the world.

General

Dimensions	Ø150 mm (5.9 in), height: 190 mm (7.48 in)
Weight	~0.6 kg

Electrical parameters	
Power supply	10...28 VDC
Power consumption without heating	1 VA / 0.4 VA (low power mode)
Heating power	9 VA

Operating parameters	
Operat. temp. range	-40...60 °C
Operat. humidity range	0...100 %
Protection class	IP66
Survival wind speed	75 m/s

Data transfer	
Interfaces/ protocols	RS-485 semi-duplex two-wire, SDI-12, pulse interface / UMB protocol, Modbus
(Pluggable) cable length	10 m
Transmission frequency	24 GHz

Precipitation	
Measurement surface	9 cm^2
Precipitation types	Rain, snow, sleet, freezing rain, hail, drizzle; No precipitation (SYNOP 4677)
Principle	Doppler radar
Accuracy	±0.16 mm or ±10 % of the measured value for liquid precipitation*
*)	Under laboratory conditions by means of Lufft test system: Reference drop simulator with 2.8 mm drop diameter and adjustable intensity between 10 and 200 mm/h.
Resolution liquid preciptiation	0.01 / 0 .1 / 0.2 / 0.5 / 1.0 mm (pulse interface)

Measurement ranges	
Droplet size	0.3...5.0 mm
DSD	11 drop size classes with bandwidth of 0.5 mm
Precipitation intensity	0.01...200 mm/h / 0...7.874 inch/h
Particle velocity	0.9...15.5 m/s
Solid precipitation	5.1...~30 mm