PRECIPITATION SENSOR

with tipping bucket according to Joss-Tognini

Grown by experiences...
and equipped with the features and advantages of the proven forerunners is the sensor (15189) the “class winner”! Its functionality meets exactly the demands of the classical meteorology and hydrology as well as the semi-professional industrial meteorology. The sensor (15189) and its versions are very efficient and economical investment for a lifetime.

- best price-performance ratio in its class!
- single device or part of an automatic weather station
- connectable to LAMBRECHT’s data loggers: met[LOG], Ser[LOG], PreLOG, TROPOS and SYNMET
- very reliable measuring system
- high-quality materials
- easy installation

classical meteorology and hydrology • agriculture meteorology • measuring networks of water suppliers • lysimeter systems • sewage plants • Weather services • airports

Standard Line	(15189)	Precipitation sensors
Meas. principle/ element:		tipping bucket system • precision stainless steel bucket acc. to Joss-Tognini
Meas. range/ Resolution:		2 cm^3- (~2 g) volume of tipping bucket - 0.1 mm • 0...8 mm/min 4 cm^3- (~4 g) volume of tipping bucket - 0.2 mm • 0...16 mm/min
Accuracy:		± 2 % with intensity correction
Collecting funnel:		200 cm^2/ WMO standard
Ranges of application:		unheated version: 0...+70 °C metering (frost resistant down to -20 °C) heated version: -20...+70 °C · no icing · no snowdrift
Pulse output:		reed contact · polarity protected · bounce-free signal • supply voltage 4...30 V_{DC} • current consumption max. 100 µA · typical 50 µA • load max. 30 V_{DC}/ 0.5 A
Housing/ Funnel + ring:		aluminium · anodized
Dimensions/ Weight:		H 292 mm · Ø 190 mm · for mounting pipe Ø 60 mm · approx. 3 kg
Standards:		WMO-No. 8 · VDI 3786 lf. 7 · EN 50081/82 · VDE 0100
Versions:		
00.15189.002 000	**(15189)**	**Precipitation sensor** with 2 cm^3-volume of bucket · unheated
00.15189.004 000	**(15189 W4)**	**Precipitation sensor** with 4 cm^3-volume of bucket · unheated
00.15189.402 000	**(15189 H)**	**Precipitation sensor** with 2 cm^3-volume of bucket · heated*
00.15189.404 000	**(15189 HW4)**	**Precipitation sensor** with 4 cm^3-volume of bucket · heated*
*Heating data:		electr. controlled dual-circuit heating • supply voltage 24 V_{DC} • controlled temperature of 4 ± 2 °C within a range of -20...+4 °C • heating power 150 W
Accessories:		Masts, dirt pan, protection ring, connecting cables, data logger, evaluation software
00.14966.200 000	**(1496 S62)**	**Power supply unit** for heated sensors

PRECIPITATION SENSOR

with tipping bucket acc. to Joss-Tognini

Robustness meets design...
The resistant and beautifully designed sensor has a linearised pulse output for high accuracy and easy connection to external data loggers. Its selectable analog output signal substantially simplifies the connection to PLC.
Winter-fit models and in general a long durability are guaranteed by weather-proof materials.

- selectable measuring ranges as well as absolute or gliding sum
- for the analogue output signals
- single device or part of an automatic weather station
- very reliable measuring system
- high-quality material
- easy installation
- connectable to Lambrecht's data loggers met[LOG], Ser[LOG], PreLOG, TROPOS and SYNMET

classical meteorology and hydrology • agriculture meteorology • measuring networks of water suppliers • lysimeter systems • sewage plants • Weather services • airports

Standard Line	**(15189 analog) Precipitation Sensors**
Meas. principle/ element:	tipping bucket system · precision stainless steel bucket acc. to Joss-Tognini
Meas. range/ Resolution:	2 cm^3- (2 g) volume of tipping bucket - 0.1 mm • 0...8 mm/min 4 cm^3- (4 g) volume of tipping bucket - 0.2 mm • 0...16 mm/min
Accuracy:	± 2 %
Collecting funnel:	200 cm^2/ WMO standard
Ranges of application:	unheated versions: 0...+70 °C metering (frost resistant down to -20 °C) heated versions: -20...+70 °C · no icing · no snowdrift
Analog outputs:	0...20 mA = basic setting · 4...20 mA · 0...5/10 V - selectable current consump. ≤ 40 mA • supply voltage 18...30 VDC · max. load 600 Ω
Pulse output:	for linearised, bounce-free output signal · At deactivated analog output: current consump. max. 100 µA · typical 50 µA · supply voltage 5...30 VDC · switch load max. 30 VDC/ max. 0.5 A - at pure ohm load
Housing/ Funnel + ring:	aluminium • anodized
Dimensions/ Weight:	H 292 mm · Ø 190 mm · for mounting pipe Ø 60 mm • approx. 3 kg
Standards:	WMO-No. 8 · VDI 3786 page 7 · EN 50081/82 · VDE 0100
Versions:	
00.15189.002 050	**(15189 analog)** **Precipitation sensor** with 2 cm^3-volume of bucket · unheated
00.15189.004 050	**(15189 W4 analog)** **Precipitation sensor** with 4 cm^3-volume of bucket · unheated
00.15189.402 050	**(15189 H analog)** **Precipitation sensor** with 2 cm^3-volume of bucket · heated*
00.15189.404 050	**(15189 H W4 analog)** **Precipitation sensor** with 4 cm^3-volume of bucket · heated*
	*Heating data: electr. controlled dual-circuit heating • controlled temperature of 4 ± 2 °C within a range of -20...+4 °C • heating power 150 W • supply voltage 24 VDC
Accessories:	
00.14966.200 000	**(1496 S62)** **Power supply unit** for heated sensors

PRECIPITATION SENSOR

with tipping bucket acc. to Joss-Tognini

The successful precipitation sensor...

now available with serial interface. The resistant and beautifully designed sensor has additionally a linearised pulse output for high accuracy and easy connection to external data loggers.
This sensor provides intensity adjusted measurement of precipitation with serial measurand output via RS485.

- SDI-12 protocol (at RS485) for
- universal use
- interface RS485
- LBP protocol (Lambrecht Bus Protocol)
- integrated intensity adjustment
- calculation of:
  precipitation sum since last data call,
  precipitation intensity for a slipping minute,
  precipitation intensity for a slipping hour (minute interval)

system integrators • classical meteorology and hydrology • measuring networks of water suppliers • sewage plants • traffic meteorology

Standard Line	**(15189 serial) Precipitation Sensors**
Meas. principle/ Element:	tipping bucket system • precision stainless steel bucket acc. to Joss-Tognini
Meas. range/ Resolution:	2 cm^3- (2 g) volume of tipping bucket - 0.1 mm • 0...8 mm/min 4 cm^3- (4 g) volume of tipping bucket - 0.2 mm • 0...16 mm/min
Accuracy:	± 2 %
Collecting funnel:	200 cm^2/ WMO standard
Ranges of application:	unheated versions: 0...+70 °C metering (frost resistant down to -20 °C) heated versions: -35...+70 °C · no icing · no snowdrift
Interface:	RS485 • SDI-12 protocol (at RS485) • LBP protocol (Lambrecht Bus Protocol)
Supply voltage:	10...30 V DC (12 V DC/ 24 V DC)
Housing/ Funnel + ring:	aluminium • anodized
Dimensions/ Weight:	H 292 mm · Ø 190 mm · for mounting pipe Ø 60 mm • approx. 2.5 kg
Standards:	WMO-No. 8 · VDI 3786 page 7 · EN 50081/82 · VDE 0100
Versions:	
00.15189.002 060	**(15189 serial)** **Precipitation sensor** with 2 cm^3-volume of bucket · unheated
00.15189.004 060	**(15189 W4 serial)** **Precipitation sensor** with 4 cm^3-volume of bucket · unheated
00.15189.402 060	**(15189 H serial)** **Precipitation sensor** with 2 cm^3-volume of bucket · heated*
00.15189.404 060	**(15189 H W4 serial)** **Precipitation sensor** with 4 cm^3-volume of bucket · heated*
	*Heating data: electr. controlled dual-circuit heating • controlled temperature of 4 ± 2 °C within a range of -20...+4 °C • heating power 150 W • supply voltage 24 V DC
Accessories (optional):	**00.14966.200 000 Power supply unit** for heated sensors **LAMBRECHT's data loggers** met[LOG], Ser[LOG], PreLOG, TROPOS and SYNMET