

Total Rain weighing Sensor

TRwS214/514/215/415

Total Rain weighing Sensor TRwS with its original mechanical and electronic design is excellent tool to measure all types of precipitation within wide temperature range, harsh wind and snow conditions. TRwS is most sensitive and very accurate rain gauge. Simple mechanical construction together with very sophisticated firmware can guarantee perfect performance. TRwS is available with apertures of **200cm²**, **400cm²** and **500cm²**.

Rain and snow precipitation gauge

Measurement

- Solid and liquid precipitation
- One minute intensity
- Total sum of precipitation
- Rain duration

Elimination of

- Wind vibration
- Particles
- Unreal step change of weight
- Evaporation
- Temperature fluctuation

Output signals

- Contact
- Serial RS485 / SDI 12

Options

- Air temperature measurement
- Rain detector
- Wind speed assessment
- Corrected data eliminating wind influence



Features

- **Extra low consumption < 45mW**
- **Easy maintenance**
- **Evaluation and control of accuracy "in situation"**
- **Autodiagnostic and self check**
- **Orifice heating included**
- **Direct replacement of tipping bucket rain gauge**
- **Heating for icing elimination included**
- **Fulfills all WMO recommendations**



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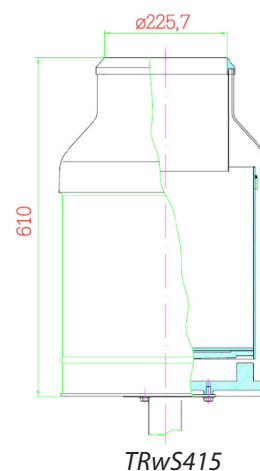
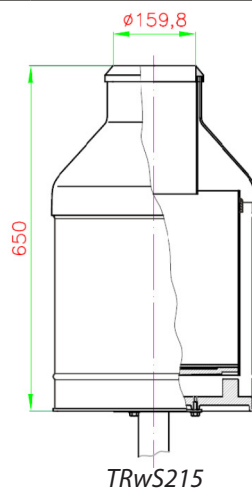
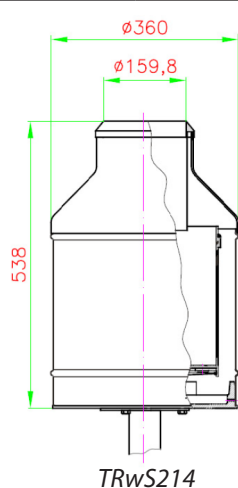
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Technical Specification

	TRwS214	TRwS514	TRwS215	TRwS415
Orifice area	200 cm ²	500 cm ²	200 cm ²	400 cm ²
Range of precipitation	750 mm	250 mm	1500 mm	750 mm
Accuracy	0.1 %			
Maximum rain intensity	120 mm / min			
Resolution	0.001 mm			
Measuring element	strain-gauge bridge			

Mechanical

Dimensions	Ø 360 x 540 mm	Ø 360 x 380 mm	Ø 385 x 650 mm	Ø 385 x 610 mm
Weight	8 kg		9.5 kg	
Materials (3 different)	top part: UV stabilized fiberglass	bottom part: stainless steel	base aluminum alloy	



Electrical & Interface

Power supply	8 to 24 VDC / max 15 mA
Heating supply	12 V / 1 A (option 24 V / 1A)
Output contact (1/0.1/0.01 mm)	$U_{max} = 30 V, I_{max} = 300 mA$
Serial output	RS485 / SDI 12

Environmental

Operating temperature range	- 40 °C to 70 °C
Operating humidity range	0 to 100 %
Degree of protection	IP65

Options

Air temperature measurement	- 40 °C to 70 °C
Wind speed estimation	Extra value
Wind correction	yes
Wind shield	yes

Sample measurement

