

► Rain (tipping bucket)

Technical features - MODELS



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Rain gauge

A Rain gauge is a device to measure liquid rain fall amount and intensity.

The device is composed of a rain collector cone and a double-chamber tipping bucket connected to a magnet. The magnet operates one reed switch, which generates impulses that can be counted by external meters.

Siphon: DQA230.1/231.1 versions are equipped with a siphon placed on the cone's nozzle; it has function during heavy rain, to regulate the flow into the bascule permitting all the water to fall inside the tipping bucket. This solution gives its best results where the main need is the measurement of the total amount of rain over long periods, not rain intensity.

Class A rain gauges: DQA230/231/235/236 versions have the "Class A" class accuracy as described by the UNI11452:2012 standard - this class is the most accurate class for intensity measurement.

Order numb.	DQA230#C (1)	DQA231#C (1)	DQA230.1#C (1)	DQA231.1#C (1)	DQA235 (2)	DQA236 (2)
Class A (UNI11452:2012)	YES	YES	NO	NO	YES	YES
Diameter	203 mm	203 mm	203 mm	203 mm	360 mm	360 mm
Collector area	323 cmq	323 cmq	323 cmq	323 cmq	1000 cmq	1000 cmq
Heater	NO	YES 24 Vdc/Vac (Max 60 W)	NO	YES 24 Vdc/Vac (Max 60 W)	NO	YES 24 Vdc/Vac (Max 60 W)
Siphone	NO	NO	YES	YES	NO	NO
Accuracy	Intensity 3% UNI11452-2012 (using correction formula)		Rain fall amount 0÷20 mm/hr: ± 0,2 mm 20÷240 mm/hr: 1%		Intensity 3% UNI11452-2012 (using correction formula)	
Calibration certificate	Included					
Protections	Capacitor debounce circuit.				Polarity reverse and transient. Capacitor debounce circuit.	
Operative temperature	0÷80°C	-20÷80°C	0÷80°C	-20÷80°C	0÷80°C	-40÷80°C
Cable	Not included (DWA5xx)					
Material	Housing: Aluminum Tipping spoon: teflonate plastic Base: plastic				Housing: Aluminum Tipping spoon: stain-less steel Base: PED	

Common features

Rain gauge	Principle	Tipping bucket
	Design	WMO accordance
	Output	Dry reed contact pulses (R<250 Ω)
	Pulse duration	100 msec ± 50
	Output resistance	100 m Ω / 1 m Ω
	Resolution	0,2 mm

Rain Gauge

Models		
	<p>Rain gauge</p> <p>The class DQA232 rain Gauge sensor is constituted by a cylindrical body with collection surface of 400cm² in anodized aluminium. Inside this body comes mounted a funnel shape orifice with specific filter, that directs the rain towards a stainless-steel tilting bucket, realized with a knife blade support system. A specific device (reed) feels the commutations of the tilting bucket filtering every electrical and mechanical noise. The shape of mechanical parts has been developed to reduce interferences for the water and permitting it to fall into the tilt bucket system. Available with heater for cold climatic condition (mod. DQA236.1).</p>	

Models	DQA232	
<p>Rain gauge</p>	Principle	Tipping bucket
	Design	WMO accordance
	Accuracy	±2% (±0.10mm/min)
	Intensity	0 ÷ 300 mm/h
	Collector area	400 cm ²
	Resolution	0,5 mm/tip
	Output	dry reed contact pulses (R<250Ω)
	Output resistance	100 mΩ / 1MΩ
	Pulse duration	100 msec
	Protection	polarity reverse and transient, debounce circuit
	Material	aluminium alloy, stainless steel bucket
	Calibration certificate	Included
	Cable	Not included (DWA5xx series)
	Weight	3.3 Kg
Mounting	On top of pole Ø 50 mm using DYA034.2 support	
Working temperature	0÷80°C	