

Heated Tipping Bucket Rain Gauge

CASELLA CEL

The heated version of the Casella Tipping Bucket Rain Gauge is now available for customers who require accurate and reliable rainfall data under extreme weather conditions.

The gauge is designed for use as part of a weather monitoring system.

GAUGE CONSTRUCTION

The body and funnel of the new gauge are manufactured from an aluminium alloy with an accurately machined septum ring at the top, giving an aperture of 400 cm².

The tipping bucket mechanism is mounted inside the body on a cast aluminium alloy base, incorporating a built-in spirit level to ensure correct positioning.

THE HEATER

Heater unit is operated via an adjustable thermostat, which controls the supply to two power resistors. The thermostat is factory-set to switch the heater on at 3°C to ensure that the mechanism is kept above freezing point.

The heater requires a 24 V AC supply, which is obtained from the isolated and fully protected mains transformer supplied. A cable carries the power to the



TECHNICAL SPECIFICATIONS

Bucket sizes	0.1, 0.2 or 0.5 mm	Heater power consumption	42 Watts
Aperture	400 cm ²	Cable rating	2 A at 24 V AC, 4-core
Accuracy	±1% at 1 litre/hour	Thermostat range	-20°C to 40°C
Capacity	Unlimited	Transducer	Magnet/Reed switch
Operating temperature range	-20°C to 85°C	Output	Contact closure
Heater supply voltage	24 V AC	Weight	2.6 kgm

ORDERING INFORMATION

Heated tipping bucket rain gauge (0.2 mm tip) 103589D-01

Your Local Distributor

PALGO

Hammarvägen 1 040 - 664 28 50
232 37 Arlööv
info@palgo.se www.palgo.se

Because of their policy of continuous product development, Casella CEL reserves the right to make changes to the specifications without notice.

CASELLA CEL

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200cm Tipping Bucket Raingauge

CASELLA
CEL



Introduction

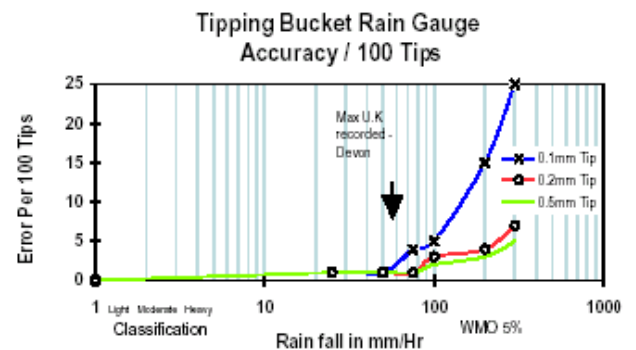
Casella Tipping Bucket Rain Gauges are reliable and extremely robust devices intended for use as stand-alone sensors operating within an existing logging or data acquisition system.

This latest 200cm² version of Tipping Bucket Rain Gauge is based on the best selling 400cm² gauge supplied by Casella CEL worldwide and has been specially designed for many applications that now require a gauge with smaller diameter for hydrometric applications.

The measuring principle complies with 'Guide to Meteorological Instruments No. 8 of the WMO'.

Features:

- Proven tipping bucket mechanism
- Catchment area of 200cm²
- Resolution of 0.2 mm
- Accuracy 1% (@26mm/hr)
- Integral Levelling screws and bulls eye level



Technical Specification

Bucket size: 0.2 mm

Aperture: 200 cm²

Accuracy: $\pm 1\%$ at 26mm/hr

Capacity: Unlimited

Transducer: Magnet/Reed switch

Operating temperature range: 1°C to 85°C

Output: Contact closure

Weight: 3.2 kg

Reed Switch Details

Double pole relay for attachment to 2 separate logging devices. Switching contact closure time is typically less than 100 milli-seconds for 0.2 mm of rain.

Maximum current rating 500 mA
Breakdown voltage 400 V D.C. minimum
Contact resistance 150 m Ω
Insulation resistance 10¹¹ Ω (100 G Ω)
Capacitance open contacts 0.2 pF
Life 10¹¹ operations.

Part Number: 100594D

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Tipping Bucket Rain Gauge That Meets the Requirements of the UK Environment Agency

CASELLA CEL

KEY FEATURES

- ❑ 0.2 & 0.5 mm bucket size
- ❑ Double output relay contacts
- ❑ 5 mm diameter drop tube
- ❑ Bucket adjusting studs increased to M6
- ❑ Retained hexagonal headed long base-mounting screws for additional security
- ❑ Bucket painted BS 14C39 green
- ❑ Quick-release terminal blocks and mil spec external connectors rated to IP67 fitted to underside for rapid exchange in the field
- ❑ Heater can be retro-fitted to pre-drilled base

INTRODUCTION

A new version of the Casella Tipping Bucket Rain Gauge is available. It has been specifically adapted to meet the requirements of the UK Environment Agency.

GAUGE CONSTRUCTION

The casing and funnel of the new gauge are manufactured from an aluminium alloy with an accurately machined septum ring at the top, giving an aperture of 400 cm²

Connection to logging equipment is via IP67 rated quick-release connectors under the base plate.



Extended mounting screws are fitted to raise the base plate above ground level.

The rain gauge calibration complies with Method 1 of BS 7483.

TECHNICAL SPECIFICATIONS

Bucket sizes	0.2 or 0.5 mm	Transducer	Magnet/Reed switch
Aperture	400 cm ²	Cable rating	2 A at 24 V AC, 4-core
Accuracy	+1% at 1 litre/hour	Connector rating	IP67
Capacity	Unlimited	Output	Contact closure
Operating temperature range	-20°C to 85°C	Bucket adjusting studs	M6
Thermostat range	-20°C to 40°C	Weight	2.6 kgm

ORDERING INFORMATION

Tipping bucket rain gauge	103755D-04 (0.2 mm tip)
	103759D-04 (0.5 mm tip)

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