

## Tipping Bucket Rain Gauge (RG12 Series)

### Features

- Stainless steel barrel & chassis
- Robust, Accurate & Reliable
- Syphon-action delivery mechanism

### Applications

- Rainfall distribution and intensity
- Catchment monitoring
- Flood mitigation programs
- Hydrology

The Envirodata RG12 Series tipping bucket rain gauges are constructed from stainless steel with a powder coated aluminium base and funnel.

The tipping mechanism is manufactured from stainless steel, ensuring that tips are accurate and consistent in volume.

The gauge is fitted with a syphon to control and maintain a constant flow-rate. This ensures reliable rainfall recording at very high rainfall intensities.

### RG12U[2] Reed Contact Model

The RG12U is supplied with a single Reed Contact as a detector. This is a simple two wire connection. A series resistor provides protection against excessive currents. The RG12U2 is identical except it has two separate Reed Contacts.

### RG12H Hall Effect Model

The RG12H is supplied with an electronic (Hall Effect) detector. This means an indefinite life and includes standard pulse stretching. There is no 'debouncing' required as there is no 'bounce' effect with the electronic detector. Each tip provides a very clean signal; a single pulse 50ms in duration, Square wave, and 5V in amplitude.



### RG12S Hall Effect with Signal Conditioning

The RG12S converts the low voltage sensor output into a higher voltage open collector output. This allows easy connection to devices that can't detect the standard 5V pulse of the RG12H model.

The output signal is an open collector pull down, current limited to 100mA and transient protected to 30V DC.

The open collector output is capable of 'sinking' up to 100 milliamps from the positive supply. Transient voltage protection is provided on both the supply input and the open collector output.

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## Specifications

### Sensing Type:

- Tipping Bucket

### Measurement Units:

- Millimetres (mm)

### Operating Range:

- Up to 450 mm/hr

### Accuracy:

- $\pm 2\%$  at low rainfall rates.
- $\pm 5\%$  at rainfall rates above 300 mm/hr.

### Resolution:

- 0.2mm per tip.

### Calibration:

Initially calibrated for individual tips of the bucket. The result is confirmed by measuring the number of tips for 0.5 litres of water.

### Reliability:

Typically a minimum of five (5) years' operation before factory re-calibration recommended.

### Housing:

Stainless steel barrel & chassis, powder coated aluminium base and funnel.

### Configurations:

### Dimensions:

- Funnel Diameter: 203mm
- Height: 315mm
- Base Diameter: 250mm
- Cable length: 8.0m

### Detector system:

- 1 or 2 Reed switch(es) or
- Hall Effect sensor

### Supply Voltage:

- 6 to 24 Volts DC Nominal

### Ordering Information:

- RG12U for single Reed Contact model
- RG12U2 for dual Reed Contact model
- RG12H for Hall Effect model
- RG12S For Hall Effect model with Signal Conditioning



Model:	RG12U	RG12H	RG12S
Detection System:	Reed Contact with 470 Ohm in series	Hall Effect (electronic) 3-wire connection	Hall Effect (electronic) 3-wire connection
Output Pulse Voltage:	0 to supply voltage (6 to 28V DC)	0 to 5V	Pull down from supply voltage (6 to 28V DC)
Debouncing:	No*	Automatic	Automatic
Pulse Stretching:	No*	Yes, 50ms	Yes, 50ms
Power Consumption:	N/A	<1.5mA	<3.0mA
Cable Type:	2-Core Shielded UV stable	3-Core Shielded UV stable	3-Core Shielded UV stable

\*Debouncing & Pulse Stretching must be done by the input device circuitry to maintain quoted accuracy

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ABN 81 010 528 471

A 27 Hi-Tech Court Eight Mile Plains QLD 4113 Australia P +617 3361 2000 F +617 3341 3949 E sales@pacdatasys.com.au W www.pacdatasys.com.au