EML Environmental Measurements Limited

# UPG1000 UNIVERSAL PRECIPITATION GAUGE

**For the measurement of rain, snow, sleet, drizzle and hail**

UPG1000 universal precipitation gauge with custom wind shield (Rothera, Antarctica courtesy BAS)

- Unique aerodynamic shape for measurement accuracy.
- Aerodynamic shape eliminates the need for expensive wind shields in moderate locations. For extreme conditions a custom built wind shield is available.
- Measures liquid, mixed and solid precipitation (rain, snow, drizzle, sleet, hail).
- Low voltage electric funnel heating for snowfall measurement – no need for weighing load cells, antifreeze or periodic siphoning.

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# PRODUCT DESCRIPTION

Based on our well-established SBS series aerodynamic tipping bucket rain gauge, the UPG1000 utilises heating elements to provide a truly universal, general purpose, precipitation gauge that works across the full spectrum of precipitation. The deep aerodynamically-shaped funnel keeps outsplash to an absolute minimum facilitating not only the measurement of drizzle at high latitudes and heavy convective rainfall at the tropics but also snow and hail.

The gauge uses two silicone heating mats and four PRT100 temperature sensors to keep the funnel temperature from dropping below 3 °C (user configurable for site). These mats are powered by 24VDC at 12.5A (300W). The inside of the gauge is heated by separate heaters and PRT100 which are controlled independently from the funnel. The heaters are powered by 24VDC at 1.1A (26.4W). The internal temperature is held at 3 °C (user configurable for site).

Standard rain gauges fitted with heating systems often suffer from internal overheating which can cause evaporation problems. The UPG1000 eliminates the possibility of overheating and evaporation because the funnel and funnel heating are separate from the bucket area, funnel and bucket being controlled independently.

We are able to provide a power supply unit that can be sited up to 50 metres away from the gauge. This unit can be installed in a building with a low voltage (24VDC) cable running to the gauge. This makes the system safe for the users and other people.

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Gauge designed and developed in conjunction with TerraData, Wallingford,U.K. and manufactured under licence. Registered Design Number 3009691.

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