



The ms1000 system is designed to generate either latched voltages or currents corresponding to measured values in remote locations. This function is intended to allow radio sensors to directly replace wired-in sensors in applications such as building environmental control where the 3rd party BMS can directly accept analogue signals. Alternatively, it can supply relay outputs for alarm or control functions. A combination of all output types can be created within a single ms1000 system (see below).

Data is read and transmitted by sensors compatible with the Hanwell radio environmental monitoring system

There are two card types, analogue and relay:

- The analogue cards contain four outputs capable of supplying either a voltage between 0...10V at 1mA, or a current between 0...20mA (compliant at 12V). The normal output ranges are 2...10V and 4...20mA. Fault conditions are indicated by a permanent drop to zero and a low battery condition is

indicated by a brief drop to zero. The analogue cards are available with 8 or 12 bit resolution.

- The relay card contains four outputs capable of switching 0.5A at 12V DC or 24V AC. Normally open or normally closed are available as standard.

#### Option 1 - Standalone solution

Radio sensors transmit directly back to the ms1000 unit. The ms1000 control outputs are sent to the BMS.

#### Option 2 - Monitoring & control solution

Radio sensors transmit to the Radiolog cr1 or cr2 unit. The cr1/cr2 sends the data to the monitoring PC and ms1000.

The ms1000 control outputs are sent to the BMS:

- Sensor 1's output controls Plant A
- Sensor 2's output controls Plants B&C.

## Environmental Control

**Product Code** MS1000  
**Series** ms1000

#### Typical Applications

- Monitoring in:
- Interfacing radio sensors to BMS systems
  - Conservation heating systems
  - Bespoke heating control
  - Alarm panels

#### Instrument

**Dimensions:** 114.5 x 99 x 22.5 mm  
**Weight:** 127 grams  
**Case Material(s):** Polyamide PA 6.6  
**Operating Temperature Range:** 0°C to +50°C  
**Storage Conditions:** -40 to +70°C  
**Power Supply:** 12 volts DC  
**Bus Connection:** RS485  
**Mounting:** Top Hat DIN rail

#### Output

**MS1000-RM:** 4 x relay either NO or NC  
**Rating:** 24 volts AC or 12 volts DC @ 0.5A  
**MS1000-AM:** 4 x 2 to 10 volts or 4 to 20 mA  
**Accuracy:** 8 bit  
**MS1000-AM-12:** 4 x 2 to 10 volts or 4 to 20 mA  
**Accuracy:** 12 bit

