MS1000

Complete closed loop monitoring and environmental control panel

Alarm

Control

Heating

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).

Product code: MS1000

Data is read and transmitted by sensors compatible with the Hanwell Pro 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

Typical Applications

- ✓ Interfacing radio sensors to BMS systems
- ✓ Conservation heating systems
- ✓ Bespoke heating control
- ✓ Alarm panels

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

Instrumentation specification	
Dimension	195 x 148 x 45mm
Weight	127g
Case material temperature range:	Polyamide PA 6.6
Operating temperature range:	0°C to +50°C
Power supply	12V DC
Bus connection	RS485
Mounting	Top Hat DIN Rail

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Option 1 - Standalone solution

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

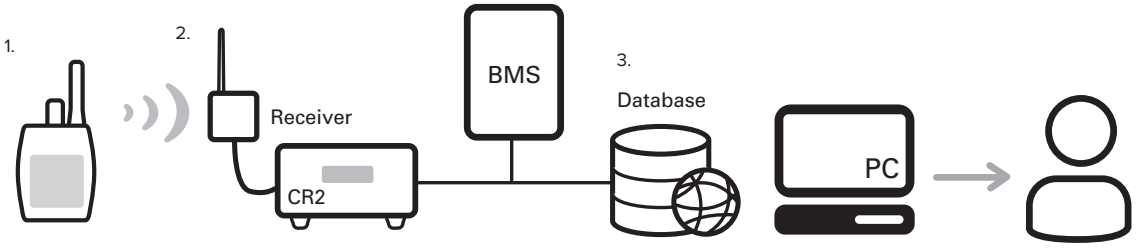
Option 2 - Monitoring & control solution

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:

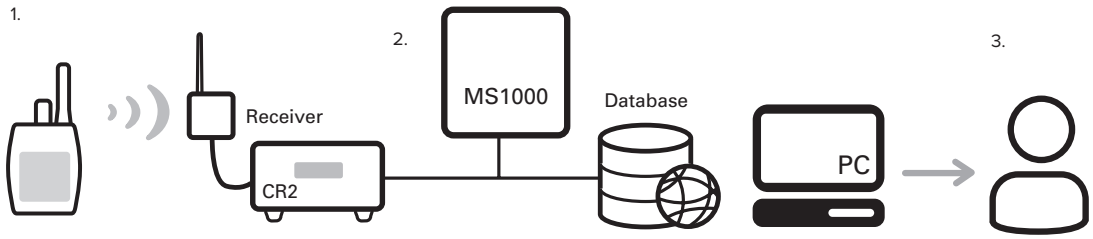
- Sensor 1's output controls Plant A
- Sensor 2's output controls Plants B&C

The schematic below details how a system can be interfaced into a local BMS



1. Transmitter records & sends data to CR2.
2. CR2 translates data and sends to a local network.
   If a sensor has breached a predetermined setting the CR2 sends a command to any electrical device to restore conditions. Eg. Electronic temperature controls.
3. Data is stored on a local network and can be accessed by multiple servers if necessary. Multiple users can access the site via their local PC/server.

The schematic below details how a system can be used for standalone control



1. Transmitter records & sends data to CR2 within MS1000.
2. CR2 translates data and sends to a local network for user access.
   If a sensor has breached a predetermined setting the CR2 sends a command to internal relays within the MS1000.
3. Data is stored on a local network and can be accessed by multiple servers if necessary. Multiple users can access the site via their local PC/server.
   The MS1000 relays switch on/off to activate a local BMS and restore conditions.
   Eg. Ventilation controls.

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