MSFM MULTI-CHANNEL GPRS DATA LOGGER

AN ENERGY EFFICIENT, RELIABLE GPRS DATA LOGGER ENABLING REAL-TIME INFORMATION TO BE ACCESSED FROM ANYWHERE, AT ANY TIME.

HOW IT WORKS

The data logger has the capacity to acquire measurements from a variety of sensors and transmit them via GPRS. Data is transmitted to Detectronic’s cloud-based data portal which is well equipped with a powerful suite of online data collection, monitoring, analysis and reporting tools.
KEY FEATURES

GPRS MODEM QUAD BAND
900MHz, 1800 MHz / 850MHz, 1900MHz - integral antenna.

CLOCK
Crystal controlled calendar clock with leap year adjustment.
Accuracy: 100 seconds per month maximum error over operating temperature range.
Synchronisation: option to synchronise clock to GSM network for greater accuracy.

RECORDING
Logging interval: programmable between 1 second and 1 hour.
Data storage: rotating store or store until full.

ENVIRONMENTAL
Operating ambient temperature: -20°C to +50°C.
Protection classification: IP68 (submersion at 1m depth for > 24 hours).

LOCAL SERIAL PORT
Full duplex, asynchronous.
Data rate: 1200, 2400, 4800, 9600 bps diagnostics.

SUPPLY
Internally powered by a user-replaceable lithium cell (internal back up cell maintains logging and local communications when main battery pack is discharged).
Typical battery life: >5 years, depending on mode of use.

ALARM DIAL-OUT
High/low threshold alarms with option to update data on alarm and more frequently thereafter.
Optional profile alarms can be set when sufficient historical data is available.

CONNECTORS
Military specification, compatible with MIL-C-26482.

WIRING OPTIONS
Direct cable or optional 8-channel interface for simpler and easier connection.
## TECHNICAL SPECIFICATION

### INPUTS

<table>
<thead>
<tr>
<th>NUMBER OF CHANNELS</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHANNEL TYPES</td>
<td>Voltage, analogue, event, state, count, frequency (independently selected on each channel).</td>
</tr>
<tr>
<td>INPUT IMPEDANCE</td>
<td>&gt;300k.</td>
</tr>
<tr>
<td>INPUT PROTECTION</td>
<td>Protected against reverse connection and over voltage.</td>
</tr>
<tr>
<td>VOLTAGE INPUT</td>
<td>Range 0 to 2.5 volts, 0.0002 volt accuracy and resolution.</td>
</tr>
<tr>
<td>ANALOGUE INPUT</td>
<td>Range 0-20 mA or 4-20 mA, 0.002 mA accuracy and resolution.</td>
</tr>
<tr>
<td>EVENT INPUT</td>
<td>Switch closure or logic pulse, date and time of event stored. Resolution 1 second or 10 seconds.</td>
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<tr>
<td>STATE INPUT</td>
<td>Switch closure or logic state. On state change, date, time and new state are stored. Resolution 1 second or 10 seconds.</td>
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<tr>
<td>COUNT INPUT</td>
<td>Switch closures or logic pulses, maximum rate Channel 1, 4, 5, 6, 7, 8 = 10 per second, Channel 2 and 3 = 45 per second (counted over and recorded at preset intervals). 16,000 maximum per logging interval.</td>
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<tr>
<td>FREQUENCY INPUT</td>
<td>Switch closures or logic pulses, maximum frequency 16 kHz, programmable sampling period of 1 to 250 seconds, independent of recording rate. Resolution 0.01% maximum.</td>
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</table>

### OUTPUTS

| 2 INDEPENDENT DIGITAL OUTPUTS | For transducer power control and alarm signalling (0 and 3 volt levels, active low, 100k output impedance). |
| 1 FIXED OUTPUT               | For ‘open collector’ signal bias (3 volts, 33k output impedance). |