HWM Global

Innovations that keep critical resources flowing.

hwmglobal.com
+44 (0)1633 489479

Sentinel 2

Advanced Pressure Controller

Sentinel 2 is an effective two-point controller which, through the inclusion of our innovative modem (capable of connecting via LTE-M, NBIoT, 4G and 2G) benefits from the latest data logging and telemetry capability to deliver full data reporting and the ability to change settings remotely.

The unit switches between high/low pressure, by time or flow, to provide simple, effective pressure optimisation when demand changes. Sentinel 2 also logs input and output pressure, together with flow if a meter is available. The advanced logging capabilities of Sentinel 2 includes Pseudo and fast logging capability.

Two-point control is commonly used when simple switching is sufficient to provide savings and when the network situation is not suitable, or does not justify full control via Pegasus 2.

Applications

Time-Based PRV Control - control a PRV to reduce pressure at night, minimising leakage and reducing pipe bursts during low usage periods. A Flow meter is not essential for this time-based control technique.

Flow-Based PRV Control - used with a Flow input, which can be used separately, or to override the time-based control when unexpected demands are detected by the Flow meter.

Data Logging with Alarms and Telemetry - can log both upstream and downstream pressures in addition to Flow (similar to triple input Multilog). Advanced telemetry can be used for alarms or to change the Solenoid state remotely.

Key Features

- **Telemetry:** NBIoT/LTE-M based cellular communication as standard with fallback 2G capability.
- **Two-point control:** switching HI/LO on time or flow, with full telemetry reporting and remote control.
- **One output channel:** for controlling a latching type pilot solenoid or electrical relay.
- **Failsafe:** hydraulic circuit is designed to avoid the main PRV from closing completely, or permitting extra pressure.
- **Compatible with DataGate, PressView and Radwin software:** for data trending, reporting, analysis and archiving.
- **Fully waterproof:** the IP68 rating has been tested at 10m depth over a 24 hour period.
- **Long-term monitoring:** typical 5 year battery life.
- **Flexible:** pressure can be changed from High to Low or vice versa.
- **Large memory:** primary recordings 179,760 readings.

HWM Global

Innovations that keep critical resources flowing.

hwmglobal.com
+44 (0)1633 489479

Sentinel 2

Advanced Pressure Controller

Input Options

2 x Digital:	2x Uni- or 1x bi-directional pulse. Count or Event logging modes.
2 x Analogue: (additional third channel on request)	Internal Pressure Transducer. External pressure. 4-20mA (optional). 0-20 bar / 0-200 meters head / 0-300psig, 0.1% repeatability / please note that the logger is calibrated to 10 bar as standard. (20 bar calibration must be specified at time of order if required). Leak noise, 0-10V, 0-1V, temperature or 4-20 mA variants.

Hydraulic

Solenoid Output:	Solenoid output for Hydroswitch, which is required to control water flow.

Controlling Features

Clock:	Clock is programmable for seasonal time changes.
Time Based Control:	Up to 96 table entries for 7 individual days per week or setting based on Week Days or Weekends. Calendar special event table also available.
Flow Based Control:	Flow based control, or Flow override option.
Fail Safe:	Default Fail Safe can be configured to 'Set' or 'Release' the latching solenoid upon error (e.g faulty sensor/no flow) or revert to time profiles if flow fails or revert to fixed pressure (operator selected).

Communication

Internal Cellular Modem:	Cellular modem supporting 2G/3G/4G/NBIoT/LTE-M (Cat-1) - contact HWM Global for available options.
Serial:	RS232 or USB interface for programming and integration with PC/Laptop or Windows Tablet using IDT software. Programmable up to 19,200 b.p.s.

Specifications

Frequency:	Variable logger sample rate from 1s to 24hrs (this may affect battery life and communication costs).
Logger/ Site ID:	7 alphanumeric characters. Readable factory set serial number in firmware.
Ingress Protection:	IP68 submersible.
Dimensions:	315H x 153W x 87D (mm) - 12.4" x 6.0" x 3.4"
Construction:	Aluminium alloy casing.
Weight:	Approx 2.0kg.
Operating Temp:	-20 to +60°C (-5 to +140°F).
Power:	Lithium-thionyl chloride cell operational for 5 years under typical operating conditions.
Alarms:	Multiple alarm options including Rate of Change, Profile, Minimum Night Flow and Threshold. 16 alarms per logger. Can be programmed to auto dial up to 8 telephone numbers on alarm. Over 16 alarms per logger depending on channel configuration.
Memory:	Primary recording 179,760 readings (Cyclic or Block).

ISO 9001 QUALITY MANAGEMENT · ISO 14001 ENVIRONMENTAL MANAGEMENT · ISO 27001 INFORMATION SECURITY MANAGEMENT · ISO 45001 HEALTH & SAFETY MANAGEMENT · CYBER ESSENTIALS