CLEAN WATER

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 and NBIoT) benefits from the latest data logging and telemetry capability to deliver full data reporting and the ability to change settings remotely.

The Sentinel 2 unit switches between high/low pressure, by time or flow, to provide simple, effective pressure optimization when demand changes. The standard unit 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 contol via Pegasus 2.

Key Features and Benefits

- **Telemetry:** NBIoT and LTE-M cellular communications available, delivering reliable data transfer
- **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

Applications

Time-Based PRV Control - Sentinel 2 is ideal for controlling a PRV to reduce pressure at night, thereby minimizing leakage and reducing the risk of pipe bursts during low usage periods. A Flow meter is not essential for this time-based control technique.

Flow-Based PRV Control - Sentinel 2 can be 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 - Sentinel 2 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 from the office.

MONITORING ASSETS, DELIVERING DATA, BRINGING CONTROL

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Sensor Input Options

2x Digital	2x Uni- or bi-directional pulse. Count or Event logging modes
2x Analogue Inputs (additional third channel available 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 Outputs	Solenoid output for Hydroswitch, which is required to control water flow.

Communication

Mobile	Cellular modem supporting NBIoT and LTE-M (Cat-1) - contact FCS 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

Controlling Features

Summer/Winter	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 solenoid upon error (e.g faulty sensor/no flow) or revert to time profiles if flow fails or revert to fixed pressure (operator selected)

Logger Features

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 fully submersible
Dimensions	315H x 153W x 87D mm (12.4" x 6.0" x 3.4")
Construction	Aluminium alloy casing
Weight	Approx 3.5kg
Operating Temp.	-20 to +60°C (-5 to +140°C)
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)

The North American HWM partner.

A Halma company.

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