

HydrINS II

Flow meter

HydrINS is an easily deployed and cost effective flow meter providing highly accurate bi-directional measurement for water distribution and raw water pipelines. Robust, watertight and compact, it features a highly accurate electromagnetic sensor and an integral transmitter enabling multiple telemetry options or simple totalizer.

The highly versatile unit is widely used throughout the world and available in various lengths to suit pipe diameters from 100mm to over 2000mm. It is equally well deployed for permanent or portable applications, inserted through standard under pressure tapping, with no interruption to supply.

Key Features and Benefits

- **Bi-directional:** Bi-directional flow measurement
- **User friendly:** Easy 'hot tap' installation. Easily deployed, moved and calibrated
- **Versatile:** Can be deployed over a large range of pipe diameters
- **Long term monitoring:** Long battery life up to 10 years
- **Accurate:** High quality digital signal processing gives accurate measurement of low velocities (up to 2cm/s at +/- 2mm/s)
- **Fully waterproof:** The IP68 rating has been tested at 10 m depth over a 24 hour period.
- **Velocity profiling:** To validate accuracy of measurement point
- **Night flow measurements:** Easily obtained for network improvements
- **Pressure measurement:** Fitting includes a push fit connector for pressure measurements



Applications

HydrINS can be used throughout the water distribution network, metering at reservoirs, treatment works, pumping stations, irrigation, water pipes, zoning and DMA implementation, night flow monitoring and meter testing.

Winfluid software (PC or PDA) provides easy programming, download and data analysis. The unit uses stainless steel electrodes to enhance measurement accuracy and avoid drift, and features a re-enforced stem with anti-ejection chain, locking nut and insertion point clamp to ensure correct and safe installation on a pressurised water network.

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Features

Measurement range	Bi-directional from 0.02 m/s to 5m/s, limited only by the stability of the probe in the flow. Fluid conductivity needs to be minimum of 20is/cm
Accuracy	Point velocity: Averaged/smoothed flow: ± 2 mm/sec or $\pm 2\%$ of value whichever is the greater.
Units	Selectable: mm, metres, feet; litres, Megalitres, m3, ft3, ImpGal, USGal, MegaImpGal, MegaUSGal; seconds, minutes, hours, days
Power	9-29 VDC. Internal lithium batteries giving 4 years optional
Internal logging	Negative volume / Positive Volume/ Cumulative
Sensor Information	Calibration, serial no, date of calibration, measurement file history
Outputs	RS232. Programmable spot velocity, average velocity, instantaneous flow, totalised volume, signal quality 2 pulse outputs, isolated open collector. Can be 1 channel positive flow and 1 channel negative flow or 1 channel volume and 2 directional. Maximum frequency 50Hz
Connector	IP68 Watertight 10 way mil spec connector
Software	Winfluid
Temperature Range	Electronics -20° to +60°C (-4°F to 140° F) Insertion element: non frozen water up to +60 °C (140°F)
Max deploy pressure	20 bar. Integral to BSP quick fit pressure connector
Ingress Rating	IP68/NEMA6 for immersion to 10m (with connectors secured)
Installation	Connection on a 1 inch hot tap BSP (25 mm). Safety chain
Insertion lengths	300mm (11.81"), 500mm (19.69"), 700mm (27.56") and 1000mm (39.37")
Dimensions	Sensor diameter 22mm (0.87"), stem diameter 19mm (0.75"), head diameter 106 x 80mm high (4.17" x 3.15")
Weight	<3.5kg (<7.7lb)
Construction	Insertion components: Stainless Steel 316. PVC No WRAS 0307509. Nitrile joints No 0470NBRFD WRAS approved. External components: Stainless Steel 316. Bronze C2121. Head is Polycarbonate ABS (OM7002) IP68 and UV Protected
Warranty	24 months
Certification	Calibrated to reference meters to COFRAC procedures and traceability.
Gauge	Internal pipe measuring gauges available. 1" diameter in either 880/1040 or 1250mm lengths, 1.5" diameter in 1250mm length or 2" diameter in 1250mm length



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