

HYTEC

established since 1986



HYDRAULIC & TRANSPORT EQUIPMENT | FOUNDATION & PILING EQUIPMENT

TEST & MEASUREMENT EQUIPMENTS



CONDITION MONITORING



With Webtec instrumentation components, It has never been easier to analyse a hydraulic circuit. Select from a wide range of hydraulic sensors, pressure transducers, temperature sensors, speed sensors, pressure test kits, hydraulic data acquisition and digital display systems. Max flow is 1500lpm up to a pressure of 480 bar.

Flow, Temperature, Measure, display, switch, transmit - FlowHUB Series



The FlowHUB is ideal for condition monitoring, test stands and closed loop control applications both for fluid power and lubrication systems. The FlowHUB can measure and display flow and temperature readings as well as switch and transmit flow values. This enables a system designer to trigger alarms, shutoffs and transmit real-time values to a PLC using just one component, instead of up to six which might have been required conventionally. This represents a significant cost saving in terms of reduced complexity of wiring and far fewer components.

Flow: 360 L/min, 95 US gpm | **Pressure:** 420 bar, 6000 psi | **Designed for permanent installation** (few wearing parts) | **Easy to operate, 4 digit LED display, 3 large keys** | **Temperature measurement built-in** | **Easy installation** | **Allows reverse flow.**

Flow Hours Counter - RFS



Ideal for recording the time that the equipment is operational in the hire market, apportioning use of shared hydraulic tools between many users or accurately monitoring the service interval of attachments. The run time meter is activated by the passage of hydraulic fluid and allows precise monitoring of system usage. Perfect for system and safety critical applications so that maintenance can be conducted on a work done basis rather than machine hours

Flow: 200 lpm, 52 USgpm | **Pressure:** Up to 420 bar, 6000 psi | **Trigger point factory set at 10 lpm, 2.6 USgpm** | **Anti-tamper design for security** | **IP66 sealing of sensitive components** | **Temperature range:** -20 to +100 °C, -4 to 212 °F

Hydraulic flow / Case Drain Monitor - WP Series



The WPC series in-line case drain monitors are designed as a low cost alternative to using a high pressure flow meter for case drain applications. It is ideal for monitoring pump performance and identifying required maintenance. Due to the sharp edge orifice technology the units have excellent viscosity stability which means it is suitable for a wide operating temperature range. A varied choice of materials and seals can make it suitable for a wide range of fluids.

Flow: up to 550 lpm (145 US gpm) | **Pressure:** up to 420 bar (3500 psi) | **Accuracy:** 4% of full scale | **Range of porting options** | **No batteries required** | **Low pressure drop**

Reversible flow Indicator - RFI Series



The RFI reversible flow indicator is designed for continuous monitoring or intermittent use commissioning and servicing hydraulic systems up to 420 bar, 6000 psi. These direct acting flow indicators can be installed in hazardous areas or on applications where no power is available. The flow indicator design ensures good reliability and minimises the effects of contamination.

Flow: up to 200 lpm (54 US gpm) | **Pressure:** up to 420 bar (6000 psi) | **Accuracy:** 4% of full scale | **Porting:** 1# ports size - BSP / SAE | **No batteries required** | **Thermometer optional**

In-Line Flow Indicator - FI750 Series



Flow Indicators are designed for continuous monitoring or intermittent use commissioning and servicing hydraulic systems up to 420 bar, 6000 psi. These direct acting flow indicators can be installed in hazardous areas or on applications where no power is available. The flow indicator design ensures good reliability and minimises the effects of contamination.

Flow: up to 180 lpm (48 US gpm) | **Pressure:** up to 420 bar (6000 psi) | **Accuracy:** 4% of full scale | **Porting:** 0.75# port size - BSP / SAE / NPSF | **No batteries required** | **Thermometer optional**

In-Line Flow Indicator - FI1500 Series



Flow Indicators are designed for continuous monitoring or intermittent use commissioning and servicing hydraulic systems up to 350 bar, 5000 psi. The large clear 63mm diameter dial ensures that quick checks can be made to determine pump performance and setting of flow control valves. They can be used on mobile and industrial hydraulic circuits. Also lubrication and coolant systems using oil.

Flow: up to 400 lpm (100 US gpm) | **Pressure:** up to 350 bar (5000 psi) | **Accuracy:** 4% of full scale | **Porting:** 1.5# port size - BSP / SAE | **No batteries required** | **Thermometer optional**

Turbine flow meters with conditioned output - CT Series



The CT turbine flow meter with conditioned output provides a complete solution to the flow measurement of hydraulic systems on test stands, machine tools and other fixed or mobile applications. The flow meter can be installed anywhere in the hydraulic circuit for production testing, commissioning, development testing and analysis of control systems. The compact design allows the CT series flow meters to be installed where space is limited.

Flow: 1-1500 lpm, 0.25 - 400 US gpm | **Pressure:** Up to 480 bar, 7000 psi | **Temperature:** built-in temperature sensor | **Porting:** BSPP or SAE, Bi-directional operation | **Output:** SAE J1939 CAN compatible (configured to customer's specification) | **Optional pressure transducers:** 0 to 1000 bar, 0 - 14500 psi



PORTABLE TEST EQUIPMENT



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Dataloggers

Hand-held pressure gauges - HPM110 Series



The HPM110 offers an economical solution to monitoring pressure and peak pressure with a simple visual display. The hand-held unit can be installed when required using a standard test point or left permanently connected in a system. Since the HPM110 is battery powered it requires no external wiring. The HPM110 now comes with an optional data logger version with real time clock records both current measured values and the min and max values. Stored data is transferred to a computer or laptop via USB interface in a CSV file format.

Accuracy: $\pm 0.5\%$ Full Scale | **Pressure:** Up to 600 bar, 8700 psi | **Porting:** BSPP, SAE | **IP Rating:** HPM110: IP67 standard version, HPM110-DL: IP65 data logger version | **Power Supply:** 2 x1.5 V batteries (AA) included | **Peak pressure 100 ms scan rate** | **Measurements of up to 24 hours**

Hand-held Hydraulic data logger - HPM4000 series



The HPM4000 series is a highly versatile entry-level portable hydraulic data logger, ideal for pre-dispatch inspection, preventative maintenance and simple diagnostic fault-finding. There are two models, Sensor Recognition (SR) & Intelligent Digital (ID). The HPM4000 is the ideal entry level product for hydraulic fault prevention and diagnostics. It enables a service engineer to connect either two or three sensors simultaneously, depending on the version, and display, data log and export results to HPMComm for further analysis.

Operating temperature: 0 to 50 °C | **IP Rating:** HPM4020 - IP54 (EN60529), HPM4030 - IP67 (EN60529) | **Connection type:** Micro-USB socket, Type B, +5 VDC max 1000mA

Hand-held Hydraulic data logger - HPM7000 series



The HPM7000 series, is a highly versatile portable hydraulic data logger. It is ideal for diagnostic testing of hydraulic systems, use on hydraulic test benches, pre-dispatch inspection or for Research and Development (R&D). The HPM7000 features a unique modular system which means two input Modules can be added or changed by the user, allowing you to upgrade the device over time to meet the needs of the most demanding application.

Operating temperature: -10 to 50 °C | **IP Rating:** IP65 | **Connection type:** Micro-USB socket, Type B, +5 VDC max 1000mA | **Memory:** 12GB | **External Power Supply:** 110/240 Vac - 24 Vdc/3750 mA

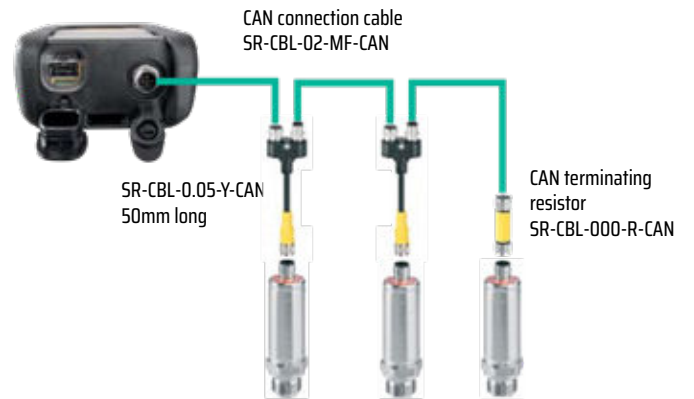
HPM4020

Connection of Webtec Analogue sensors



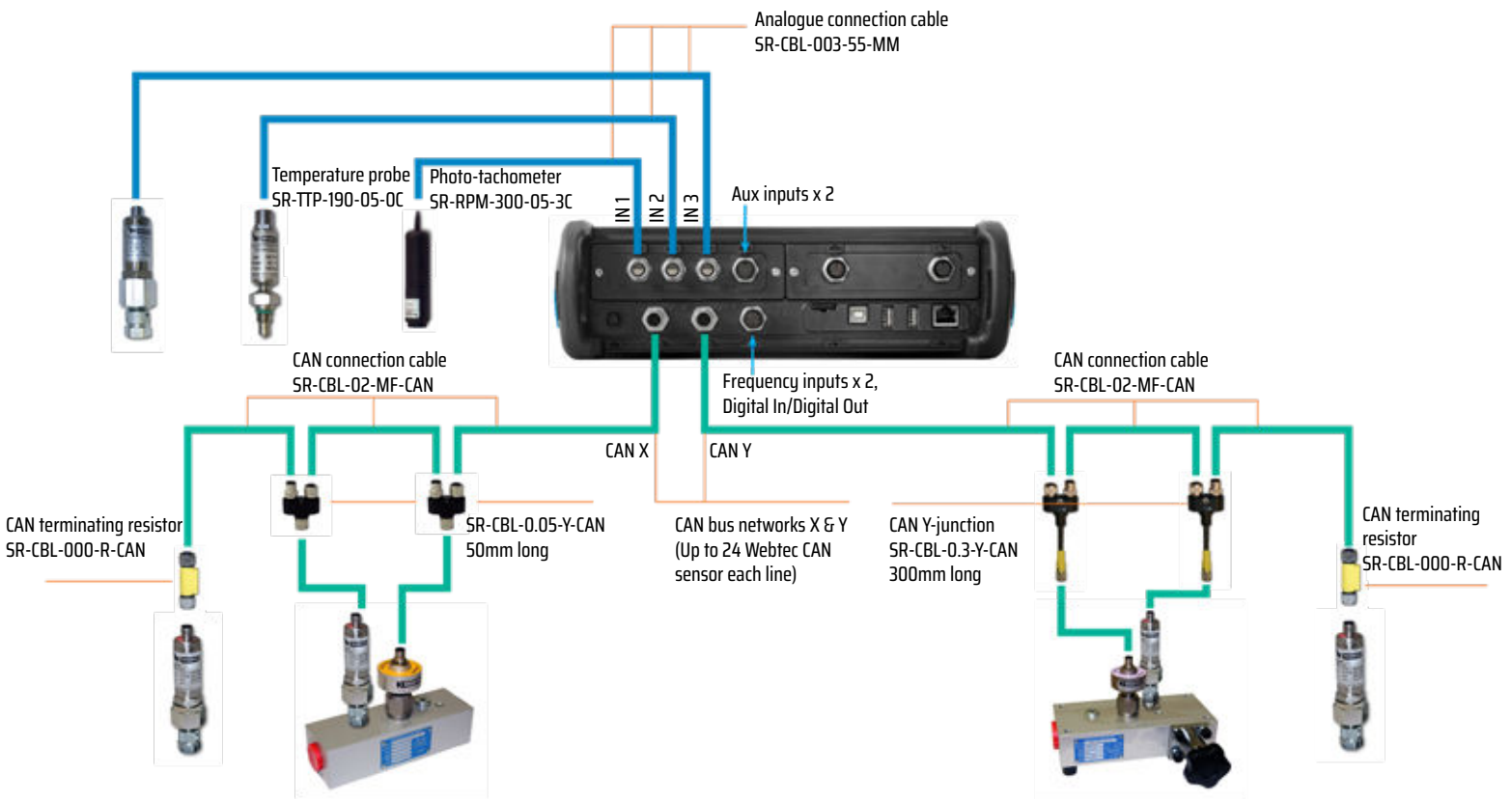
HPM4030

Connection of Webtec CAN sensors



HPM7000

Connection of Webtec Analogue/CAN sensors





All-in-One Testers

Mechanical Hydraulic Tester - RFIK Series - Measure Flow, Pressure, Temperature



The RFIK mechanical hydraulic tester provides the ideal solution for servicing and commissioning hydraulic circuits on agricultural and other mobile machinery. The kit comprises of a direct acting flow indicator with built in thermometer, a loading valve and a pressure gauge all built into a strong steel case with a removable lid. The test kit provides the service engineer with quick, accurate and simple performance testing of pumps, motors, valves, steering systems, cylinders and complete hydraulic circuits.

Flow: Up to 200 L/min, 53 US gpm | **Pressure:** Up to 420 bar, 6090 psi | **Porting:** BSPP, UN | **Fluid Temperature Range:** 20 to 80°C, 68 to 176°F | **Accuracy:** Flow: $\pm 4\%$ FS, Pressure: $\pm 1.6\%$ FS, Temperature: $\pm 2.5^\circ\text{C}$, $\pm 5^\circ\text{F}$

Analogue Hydraulic Testers - HT 2 Series - Measure Flow, Pressure, Temperature



The HT 2 Series Analogue Hydraulic Testers are designed for testing hydraulic pumps, motors, valves and hydrostatic transmissions. This easy to use diagnostic unit can pin point hydraulic system faults, reducing downtime and help in preventive maintenance. Accurately measuring flow, pressure and temperature, testers are ideal for conveniently checking, hydraulic system performance or locating faults while operating directional control valves or adjusting valve settings.

Flow: 10-800 lpm, 2.5-210 US gpm | **Pressure:** 480 bar, 7000 psi | **Porting:** BSPP, UN | **Accuracy:** Flow: $\pm 1\%$ of full scale, Pressure: $\pm 1.6\%$ full scale, Temperature: $\pm 2^\circ\text{C}$ ($\pm 4^\circ\text{F}$), Speed: $\pm 2\%$ of full scale

Digital Hydraulic Testers - DHT 1 Series - Measure Flow, Pressure and Temperature Simplified Controls



The DHT1 Series is a simplified digital hydraulic tester with a single ON / OFF switch. Measure flow, temperature and pressure in one robust unit. This easy-to-use diagnostic tester has simplified controls and can pinpoint hydraulic system faults which reduces machinery downtime. The tester consists of a turbine flow block and a large easy-to-read digital display that indicates both flow and temperature. The tester has a built-in loading valve to simulate the working pressure during normal machine operation.

Flow: 10-800 lpm, 2.5-210 US gpm | **Pressure:** 480 bar, 7000 psi | **Porting:** BSPP, UN | **Accuracy:** Flow: $\pm 1\%$ of full scale, Pressure: $\pm 1.6\%$ full scale, Temperature: $\pm 2^\circ\text{C}$ ($\pm 4^\circ\text{F}$)

Digital Hydraulic Multimeter - DHM 4 Series

Measure Flow, Pressure, Peak Pressure, Temperature, Power and Volumetric Efficiency.
Record Data & Wireless Transfer



The DHM 4 Series Digital Hydraulic Multimeter is an all-in-one unit designed to test the performance of hydraulic pumps, motors, valves, and hydrostatic transmissions with the added benefit of Bluetooth functionality.


This new generation of testers, aimed at hydraulic field service engineers everywhere, enables you to easily measure the true performance of your hydraulic system, pinpoint faults, and lets you quickly email a test report in just a few presses of your iOS smartphone, using Smart Bluetooth™ functionality and the free-to-download Webtec QuickCert™ App. This truly portable solution means you no longer have to return to the office to send your report as all of this can be achieved while working in a field, a quarry, a construction site, a mine, or just on the factory floor.

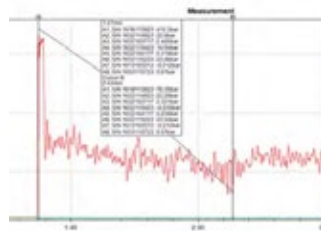
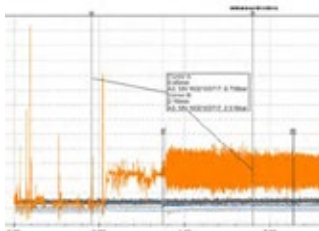


Example test report

Flow: 10-800 lpm, 2.5-210 US gpm | **Pressure:** 480 bar, 7000 psi | **Porting:** BSPP, UN | **Accuracy:** Flow: ± 1% of indicated reading (15 to 100% of range), Pressure: ± 0.5% full scale, Temperature: ± 1°C (± 2°F), Power: Below 100KW (134HP) ± 3KW (± 4HP) Above 100KW (134HP) ± 5KW (± 6.7HP), Volumetric efficiency: ± 1% | **IP Rating:** IP54



Free  app available from:



TEST STAND INSTRUMENTATION



With Webtec instrumentation components, It has never been easier to analyse a hydraulic circuit. Select from a wide range of hydraulic sensors, pressure transducers, temperature sensors, speed sensors, pressure test kits, hydraulic data acquisition and digital display systems. Max flow is 1500lpm up to a pressure of 480 bar.



Flow, Temperature, Measure, display, switch, transmit
FlowHUB Series



Turbine flow meters with conditioned output
CT Series



Hydraulic data logger
HPM7000 series

Tachometer probe - TH3



The TH3 tachometer probe is a high speed modulated retroreflective sensor for use with Webtec range of hydraulic testers. It features single lens optics which eliminates the need for sensitivity controls. The modulated infrared beam provides high ambient light immunity with improved sensing repeatability.

Ambient temperature: 5 to 40°C | **Connection type:** 5 pin DIN plug | **Cable length:** 5 meters

Positive displacement flow meters with conditioned output - GF Series



The GF series are positive displacement flow meters with a conditioned output, that are designed for measuring flows on hydraulic and lubrication systems, on test stands, machine tools and other fixed or mobile applications. The GF flow meters offer high accuracy and excellent viscosity stability and can be installed anywhere in the circuit for monitoring, production testing, commissioning, development testing and analysis of control systems. The compact design allows the GF series flow meters to be installed where space is limited.

Fluid temperature: - 40 to 120 °C | **Fluid Viscosity:** 1 to 10000 cSt | **Accuracy, analogue signal:** 15 to 100% of range: 0.5% of indicated reading, Below 15% fixed accuracy of 0.5% of 15% of full scale. | **Degree of protection*:** IP65 (EN60529) *With cable connected

Speed Sensor - SP-TTL Series



The SP-TTL speed sensor is capable of detecting passing ferrous objects including a gear tooth to enable shaft speed to be calculated. The unit conditions the signal and is ideal for measuring pump/ motor speed

Speed sensor with TTL output | 0-2kHz magnetic pickup | **Ideal for measuring pump / motor speed** | **Connects directly into C2000**

Temperature Sensors - TP125 Series



Rugged temperature sensor in a high pressure capsule ideal for hydraulic applications. Linear output makes it ideal for connecting into proprietary displays and data acquisition systems.

Ambient temperature: 5 to 40°C | **Accuracy:** ±1°C (±2°F) | **Scaled range:** 0 to 150°C | **Max pressure:** 480 bar (7000 psi) | **Current output:** 4-20 mA | **Voltage output:** 0 -5 VDC

SR & Intelligent Digital (CAN-open) sensors and accessories for use with HPM Series meters and in generic CAN bus environments

CAN ID



The pressure sensors are available in six different ranges up to 1000 bar and all measure temperature as well. All Intelligent Digital (ID) sensors use the CAN-open protocol that makes a plug-and-play system with the HPM meters. These sensors are compliant with the CAN-open standard and are fully supported for integration in third party systems. The SR sensors are also plug-and-play, are compatible with the current range of HPM meters and backwards compatible with previous meters.



SR-5V

PRESSURE: -1 to 1000 bar | **Power supply:** CAN: 8 - 40 VDC SR: 7-15 VDC SR | **Ambient temperature:** -25 to 85 °C | **Accuracy:** Pressure: ± 0.5% full scale, **Temperature:** ± 3 °C (SR-PTT-* ONLY) | Degree of protection*: SR - IP54 (EN60529), CAN - IP66 (EN60529) *With cable connected

WIKA-mA



The WIKA pressure sensors are designed for continuous monitoring of oil, gas, water, hydraulic and other pressure media in mobile equipment, industrial hydraulics, compressors and process control equipment. The compact construction makes it ideal for installing where space is at a premium. Combined with one of the wide range of Webtec digital readouts both continuous and peak pressures can be measured.

Maximum Rated Pressure: Up to 600 bar | **Operating Temperature Range:** -40 to 100°C | **Accuracy:** ≤ ±1% Full Scale | **Mounting:** BSPP, SAE | **IP Rating:** IP67 | **Current Output:** 4- 20 mA, 2 wire loop, max load ≤ (VS - 8V) / 0.02A



ID connection cable

600 bar ID pressure transducer

ID Y cable



ID termination resistor

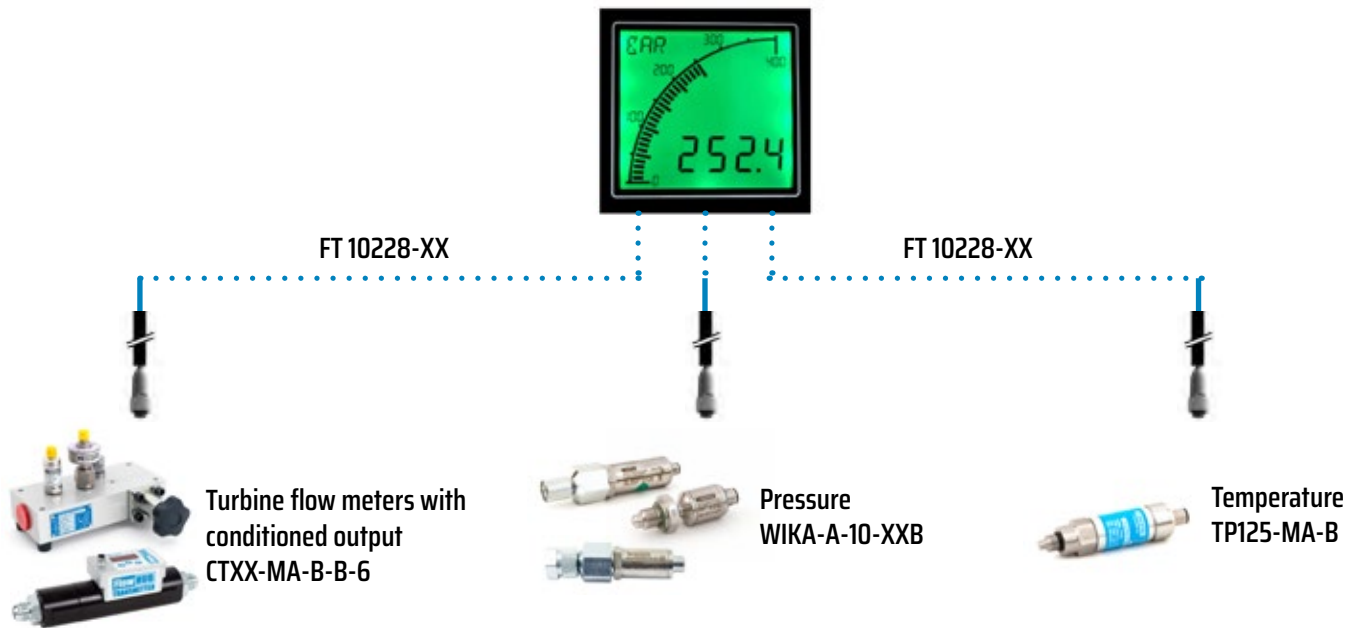
Panel mount readouts - APM series



The APM Series Digital Readouts provide accurate and economical measurement. These devices can be implemented on hydraulic test stands, machinery and other control systems. The digital readouts together with our range of digital flowmeters, temperature and pressure transducers, provide the instrumentation needed to analyse the performance of pumps, motors, valves and hydrostatic transmissions.

Inputs: 4-20mA, 0-10V or 0-5V | **Accuracy:** better than 0.1% input | **Operating Temperature:** -10 to +60 °C | **IP rating (from the front):** IP65 |

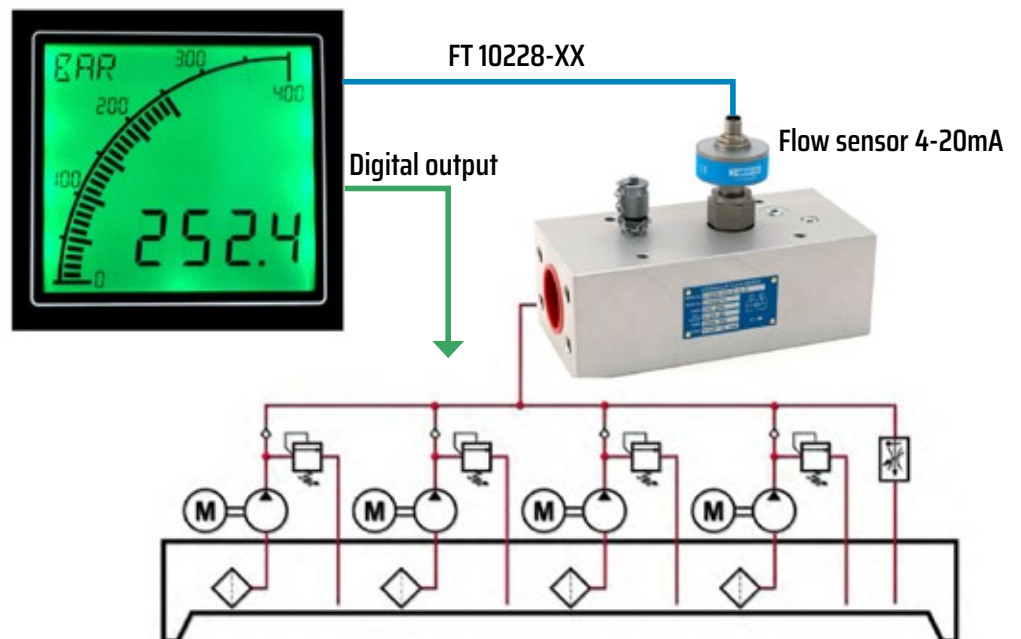
APM Panel Meter - Connection Diagrams



Flow Rate Application Example



Red flashing backlight at high setpoint





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