

# AQUAMETA CR420-0.5VFU

## Hydrostatic Chemical Level Sensor



The CR420-0.5VFU pressure transducer is a cost effective and robust solution designed for continuous level measurement where a 4-20mA output is required. It may be used with liquids that are compatible with its wetting materials which are UPVC, Viton, FEP and Aluminum Oxide. Different choice of seals is available for other applications. The CR420-0.5VFU is suitable for pressure application of 0.5 bar (5.1m H<sub>2</sub>O). 1 and 10 bar options are available. The sensor includes temperature and barometric pressure compensation.

### Transducer Construction

This state of the art pressure sensor uses a flush Aluminum Oxide Ceramic diaphragm in conjunction with on-board signal conditioning to measure pressures. Pressure and temperature calibration is done electronically with the internal application-specific integrated circuit (ASIC). When pressures and temperatures change, the electronics provide an offset and span correction. It also includes aging detection and compensation. This new method guarantees good precision and long term stability.

The sensor is encapsulated in a UPVC body that is filled with an epoxy.

The sensor cable is molded into the transducer eliminating problems associated with threaded plugs. This design ensures a very high level of reliability.

### Features

- 4-20mA output
- 9 to 30V
- Temperature compensated
- Barometric pressure compensation via vented cable
- High linearity and low hysteresis values
- EMI Certified
- Excellent resistance to corrosion and abrasion
- Automated offset and span correction
- Age compensation

### Output Signals

The CR420 transducer uses a two wire 4-20mA output signal. The signal is linear with pressure. The sensor will operate with a supply voltage that can range from 9V to 30V DC. The Aquameta Junction Box may be used to extend the transducer cable with any other cable. The vented junction box has a Gortex covered opening that allows venting to atmosphere to take place whilst restricting the ingress of moisture.

### Applications

- Level measurement in above and underground tanks.
- Level monitoring of Hydrochloric and sulfuric acid and other chemicals compatible with the wetting materials.

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### Specifications CR420-0.5VFU

<b>Supply Voltage:</b>	9 to 30V DC
<b>Output:</b>	4-20mA
<b>Vacuum Capability:</b>	-0.1 bar
<b>Overload:</b>	1 bar
<b>Burst Pressure:</b>	2 bar
<b>Operating Temperature:</b>	0°C to 65°C
<b>Full Scale (FS):</b>	20mA at 0.5bar (5.1m H <sub>2</sub> O)
<b>Linearity and Hysteresis:</b>	±0.4% FS
<b>Accuracy:</b>	0.5% max at 25°C (Typical 0.25%) 2% max 0 to 65°C (typical 1%)
<b>Operating Range:</b>	0 to 0.5 bar (0 to 5.1m H <sub>2</sub> O (16.7ft))
<b>Over Pressure:</b>	Do not submerge beyond a depth of 10m as damage to sensor will occur
<b>Electronic Protection:</b>	Reverse and over voltage protection
<b>Cable Jacket:</b>	FEP
<b>Cable:</b>	4 conductors 25AWG. (Red +, Black -, Blue and White not used)
<b>Cable O.D.:</b>	7mm
<b>Cable Termination:</b>	Bare wire tinned
<b>Standard cable length:</b>	2m
<b>Wetted Materials:</b>	UPVC, Viton, Aluminum Oxide, FEP

