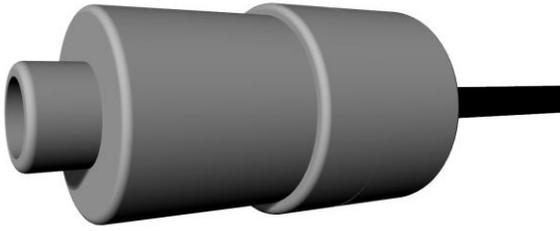


AQUAMETA PG420-0.5VFU

Glue in pressure transducer for UPVC/CPVC pipe fittings.



The PG420 series of 4-20mA pressure transducers are a cost effective and robust solution designed to be glued into UPVC or CPVC pipe fittings using the appropriate solvent cement and methods. It is suitable for use with chemicals such as Sodium Hypochlorite, Sulfuric and Hydrochloric acid. It may be used with other chemicals that are compatible with its wetting materials which are UPVC/CPVC, Viton, FEP and PTFE. Different choice of seals is available for other chemicals. The PG420-0.5VFU is suitable for pressure application of 0.5 bar. A 1 bar option is available. The PG420 series is a fully sealed device that can be submerged. This makes it ideal for use within bundled locations where the possibility exists that the transducer may become submerged. Typically the PG420 series transducer is glued into a flanged fitting that is part of a ball valve, this means that the transducer can be isolated to facilitate installation and maintenance.

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.

The outer diameter of the probe is 26.67mm suitable to be glued into ¾" pipe fittings.

Venting takes place via the transducer cable.

Features

- UPVC housing to suit ¾" pipe fittings.
- 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
- Spigot flange to protect pressure sensing surface from run off glue
- Rounded front shoulder to prevent glue being scraped off the fitting as the transducer is inserted
- Compact unit, suitable for use in confined spaces.

Output Signals

The PG420 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.

Ordering

PG420-0.5VPU

Housing: U = UPVC, C = CPVC
Cable: P=PVC, F=FEP
Seals: V=Viton, N=Nitrile, K=Kalrez, E= EPDM
Pressure: 0.5, 1, 10 bar

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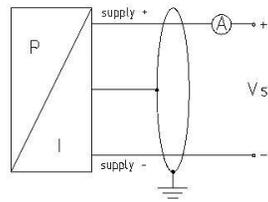
Specifications PG420-0.5VFU and 1.0VFU

Input pressure range		
Nominal pressure gauge [bar]	0.5	1
Level [mH ₂ O]	5	10
Overpressure [bar]	1	2
Burst pressure ≤ [bar]	2	4

Output signal / Supply		
Standard	2-wire: 4... 20 mA/Vs = 9 ... 35V _{dc}	
Performance		
Accuracy	≤ ± 0.5% FSO	
Permissible load	R _{max} = [(Vs – 9)/0.02A]Ω	
Influence effects	supply: 0.05 % FSO/10V load: 0.05 % FSO /kΩ	
Long term stability [%FS/year]	≤ ± 0.3 @ 25 [°C]	
Response time	≤ 5ms	
Thermal Effects(Offset and Span)		
Thermal error	≤ 0.007/10 [°C]	
Permissible temperatures		
Permissible temperatures	medium:	-25/+65[°C]
	storage:	-40/+135[°C]
Electrical protection		
Short-circuit protection	Permanent	
Reverse polarity protection	No damage – no function	
Norms compliance	Radiated electromagnetic field IEC/EN 61000-4-3(2006) Electrical fast transition burst IEC/EN 61000-4-4(2004) RF conducted disturbances IEC/EN 61000-4-6(2006)	
RoHS compliance	RoHS	
Electrical connection		
Cable with sheath material	FEP (0 ... 65°C) black	
Standard cable length	2m (Custom cable lengths available)	
Materials(media wetted)		
Housing	U-PCV grey	
Seals	Viton	
Diaphragm	PTFE	
Miscellaneous		
Current consumption	Min 3.8mA Max 20.4mA	
Weight	± 135g (without cable)	
Ingress protection	IP 68	
Country of origin	Australia	
Warranty	3 Years	

Aust. Pat. App. No. 2014902496

Wiring diagram 2-wire-system (current)



Pin configuration

Supply +	Red
Supply -	Black
Shield	Ground wire bare

