

P25 SERIES CORROSION RESISTANT HEAVY DUTY INLINE FLOW SWITCHES



FEATURES

- DIRECTLY SWITCH PUMP MOTORS TO 1.5kW 2HP
- NO METAL PARTS IN CONTACT WITH LIQUIDS
- SUITS PIPE FROM 15mm to 25mm (1/2" to 1") DIA.
- 100 LITRES PER MINUTE FLOW RATING
- VERSATILE ALL POSITION MOUNTING
- 18 BAR (260 PSI) PRESSURE RATING
- IP67 WEATHERPROOF HOUSING
- DETECTS VERY LOW FLOWS
- MANUAL OVERRIDE BUILT IN
- ADJUSTABLE SWITCH POINT

APPLICATIONS

- LOSS OF PRIME PROTECTION FOR PUMPS
- CONSTANT PRESSURE PUMP CONTROL
- CONTROL OF TANK FILLING SYSTEMS
- LOW YIELD BORE PUMP PROTECTION
- WATER TREATMENT MONITORING
- INDUSTRIAL PROCESS CONTROL
- METERING PUMP CONTROL
- MECHANICAL SERVICES
- IRRIGATION CONTROL



AUSTRALIAN MADE

DESCRIPTION

The P25 Inline flow switch is a rugged flow actuated sensor that can detect the flow of liquids in 15mm (1/2") to 25mm (1") diameter pipes. The switch can detect very low flows yet has a low head loss high flow through rating. It can be used to sense either continuous or pulsed flows. The P25 finds a myriad of applications in industrial, rural and domestic piping systems. It is particularly well suited to pressure boosting applications and in the control of constant pressure pumps, due to its ability to detect and switch at extremely low flows. In addition the P25 finds application in the protection of low yield bore pumps, and in remote tank filling systems. There are no metal parts in contact with liquids within the switch, so it is ideal for use in aggressive liquids such as groundwater, seawater, acids and in many chemical solutions.

The standard switch is supplied complete with pipe sockets and unions, for direct fitting into PVC, ABS or Poly pipework. The heart of the P25 flow switch is a 500Volt 20Amp single pole double throw switch with Tungsten contacts capable of directly controlling single-phase pump motors up to 2 Horse Power 1.5kW. A manual override switch is built into the body of every P25 flow switch. This feature allows pumping systems to be manually activated at any time for normal starting or for priming testing or commissioning.

OPERATING PRINCIPLE

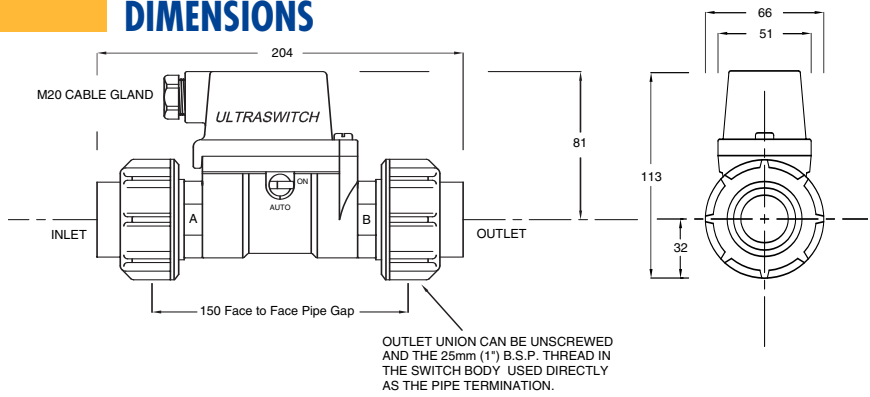
The body of the P25 flow switch houses a free fitting piston. Any flow, either pulsed or continuous, causes the piston to be pushed back within the switch body to a point where liquid can pass around it and out of the switch. When pushed back by flow, the piston actuates a magnetically linked switch. When flow stops, the piston is pushed back to the off position by magnetic repulsion. There are no springs or metal parts in contact with the process liquid, and the magnetically isolated piston provides an exceptionally reliable corrosion proof mechanism. The sensitivity and set point of the P25 flow switch is adjustable over two overlapping flow ranges, by interchanging the inlet and outlet fittings on the switch. For fine tuning the switching point, a set screw located in the switch housing is provided.

TECHNICAL DATA

CONSTRUCTION

The standard P25 flow switch is made from glass reinforced polypropylene, with neoprene o-ring seals. The piston return mechanism and the electrical switching action within the sensor are achieved using high power magnets operating through the solid body of the switch. The electrical housing is hoseproof & weatherproof to IP67, and is supplied with a 20mm cable gland, for conduit or cable entry. All of the parts of the P25 flow switch are available as spare parts.

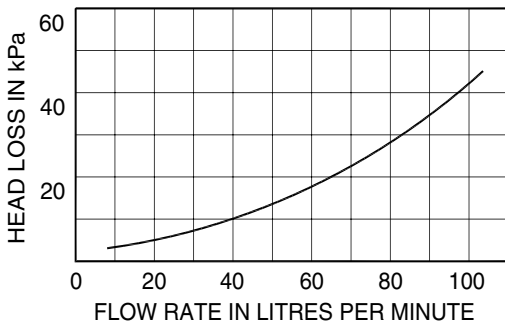
DIMENSIONS



MODELS AVAILABLE

Model	Description
P25-15	Switch supplied with 25mm Unions and 15NB PVC pipe sockets
P25-20	Switch supplied with 32mm Unions and 20NB PVC pipe sockets
P25-25	Switch supplied with 40mm Unions and 25NB PVC pipe sockets

Flow rate versus differential head loss for the P25 flow switch.



OPERATING PARAMETERS

Switching Point on a Slowly Rising Flow +/- 15%.	A Range Adjustable from 0.8 Litres per Minute to 5.3 L/min. B Range Adjustable from 2.2L/min. to 10L/min.
Switching Point on a Slowly Falling Flow +/-15%.	Approximately 20% less than the rising flow switching rate in both the A and B ranges..
Minimum Gravity Head Required to Actuate the P25 Switch	A or B Range at Maximum Sensitivity, 1.4 Metres,
Maximum Recommended Continuous Flow Rate	100 Litres per Minute (Head loss across the switch<50kPa at 100 L/min.)
Maximum Recommended Operating Pressure (Static or Dynamic) at Ambient Temperature	1800 kPa (260 P.S.I.)
Minimum Burst Pressure at Ambient Temperature	6000 kPa (865 P.S.I.)
Maximum Liquid Temperature (Standard P25 Switch)	80 Degrees C at a pressure 1 bar absolute, see note below
Minimum Liquid Temperature (Standard P25 Switch)	-30°C
Liquid Ph range	1 to14
Ingress Protection Rating (Weatherproof Rating)	IP67

Note: Switching point flow rate date given in the table above refers to water at 15°C as the process fluid. In the interest of safety, maximum operating pressure given in the operating parameters table must be de-rated linearly in direct proportion to temperature increase, to a maximum pressure of 1 bar absolute at 80 degrees Centigrade. In other words only use this switch at elevated temperatures in non pressurised systems that are totally open to atmosphere in all circumstances and under all conditions.

ELECTRICAL DATA

The P25 flow switch houses a high capacity single pole double throw microswitch suitable for most general control applications and for the direct control of pump motors up to 1.5kW 2HP.

Rated Voltage	NON INDUCTIVE LOADS				INDUCTIVE LOADS			
	Resistive Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	20A		7.5A		20A		12.5A	
250 VAC	20A		7.5A		20A		8.3A	
500 VAC	15 A		4A		10A		2A	
8 VDC	20A		3 A	1.5 A	20A		12.5A	
14 VDC	20A		3 A	1.5 A	15 A		12.5A	
30 VDC	6 A		3 A	1.5 A	5 A		5 A	
125 VDC	0.5 A		0.5 A		0.05 A		0.05 A	
250 VDC	0.25 A		0.25 A		0.03 A		0.03 A	

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