

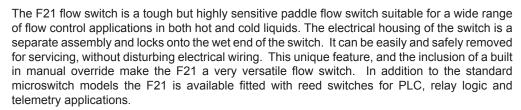
F21 SERIES HEAVY DUTY FLOW SWITCHES

FOR ALL PIPE SIZES 25MM (1") AND LARGER

FEATURES

- 0 to 500V AC 15 Amp S.P.D.T switch
- PLC versions available
- 316 Stainless or Polypropylene models
- 1" BSP & 1" NPT models available
- Manual override built in
- Modular construction
- 200 Bar pressure rating
- Seal-less magnetic drive
- Diesel models available
- Weatherproof IP67 housing
- Easily serviceable







The electrical module of the F21 flow switch is completely separate from the process connection and wet end of the switch. The wet end assembly and the electrical module lock together with a single externally accessible screw. This feature allows the flow switch to be disassembled and unscrewed from pipework without the need to disturb electrical wiring. All F21 flow switches are supplied with an extra long glass fibre reinforced polypropylene paddle. The paddle can be cut and shaped as required to suit pipework 25 mm (1") or larger. A unique feature of the standard F21 flow switch is its built in manual override. This allows the flow switch to be switched on at any time at the press of a button regardless of lack of flow. Using the manual override allows pumps to be manually started at any time by simply pressing the button. It also makes the testing and commissioning of systems very simple. **Please note**: when supplied with a reed switch, no manual override is included in the F21.

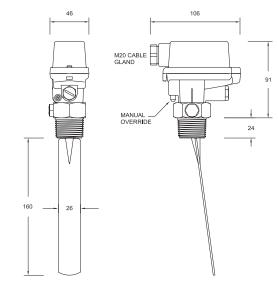
Our well proven magnetic repulsion system is built into each F21 flow switch and couples the paddle's movement to the high compliance switch through a double wall of solid material. The result is a high-pressure flow switch with no seals, diaphragms or bellows or other points of potential failure. The F21 is available in all stainless steel or Polypropylene construction. There are models to suit most applications including use in seawater, bore water, acids, and alkalis and in many chemical solutions and fuels. There is also a dedicated Diesel compatible version available.

OPERATING LIMITATIONS

Model	F21-S (All Poly)	F21-SS (Stainless)	F21-D (Diesel)	
Maximum operating pressure (Static or Dynamic) at ambient temperature	18 Bars (261 PSI)	200 Bars (2900 PSI)	200 Bars (2900 PSI)	
Minimum burst pressure at ambient temperature	45 Bars (652 PSI)			
Maximum operating temperature	60°C See note below	80°C	80°C	
Minimum operating temperature	0°C	0°C	0°C	
Ingress protection rating	IP67	IP67	IP67	

Please note: Maximum operating pressure of the Polypropylene F21-S must be linearly de-rated as operating temperature is increased so that at 60°C the maximum permissible operating pressure for the switch does not exceed one Bar absolute.

DIMENSIONS



F21 SERIES

ELECTRICAL DATA

ELECTRICAL DATA FOR REED SWITCH MODELS

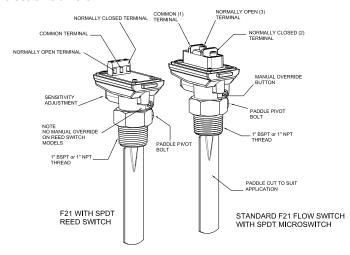
The reed switch models are supplied with a high compliance single pole double throw reed switch suitable for all low wetting current and low voltage applications. Such applications include PLC control, signalling in telemetry systems and relay logic circuits Please note: the reed switch models are not suitable for use with inductive loads such as contactors or high wattage relays.

SWITCH	CONTACT	SWITCHED	SWITCHED VOLTAGE	SWITCHED CURRENT	CARRY	BREAKDOWN	TYPICAL
TYPE		POWER	MAXIMUM	(RESISTIVE)	CURRENT	VOLTAGE	APPLICATIONS
DRY CONTACT REED SWITCH	S.P.D.T BREAK BEFORE MAKE	20W / VA MAXIMUM	140V AC 150V DC	1 AMP MAXIMUM	2 AMP MAXIMUM	200V MINIMUM	PLC, TELEMETRY & GENERAL LOW VOLTAGE CONTROL APPLICATIONS

ELECTRICAL DATA FOR STANDARD MICROSWITCH MODELS

The standard F21 flow switch is suitable for all general control circuit applications up to 500V AC. It is ideal for the control of pump starters, relay logic circuits, and for the direct control of contactors and electronic timers.

RATED VOLTAGE	NON INDUCTIVE LOADS			INDUCTIVE LOADS				
VOLIAGE	RESISTIVE LOAD		LAMP LOAD		INDUCTIVE LOAD		MOTOR LOAD	
	NO	NC	NO	NC	NO	NC	NO	NC
125 VAC	15	A	3A	1.5A	15	5A	5A	2.5A
250 VAC	15A		2.5A	1.25A	15A		3A	1.5A
500 VAC	10A		1.5A	0.75A	6A		1.5A	0.75
8 VDC	15A		3A	1.5A	15A		5A	2.5A
14 VDC	15A		3A	1.5A	10A		5A	2.5A
30 VDC	6A		3A	1.5A	5A		5A	2.5A
125 VDC	0.5A		0.5A	0.25A	0.05A		0.05A	0.05A
250 VDC	0.5	0.5A		0.25A	0.0)3A	0.03A	0.03A



ORDERING



FLOW SENSITIVITY

The flow rates required to actuate the F21 will depend on many variables such as turbulence, liquid viscosity and the exact area of the paddle face exposed to the flow. For an accurate estimate of the switch performance and to determine the effect of paddle trimming, an online flow calculator is available at www.kelco.com.au

APPROVED STANDARDS

The high compliance single pole double throw switch used in the F21 flow switch is approved to the following international standards: UL (File No. E32667), CSA (File No. LR21642) SEV (File No. S20/163) and CE.

HAZARDOUS APPLICATIONS

The F21 flow switch can be used in hazardous areas. The flow switch is classed as a simple device and does not contain components capable of storing or producing an electric charge. As a simple device the F21 can be used in hazardous applications provided it is isolated by an intrinsically safe barrier, a zener barrier.

The Kelco F21 Series flow switches are protected by a 12 month return to base warranty. Full details of our warranty can be downloaded from: http://www.kelco.com.au/menu/information/warranty-statement/

MADE IN AUSTRALIA BY KELCO Engineering Pty Ltd

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