

## R01 FLOW SWITCH DIRECT ACTING

TYPE: FS Series  
MWP: 2000kPa

Where the indication of flow or no flow of liquids is critical for your processing or protection of plant and equipment, use one of Mack's range of Australian made, rugged and reliable flow switches.

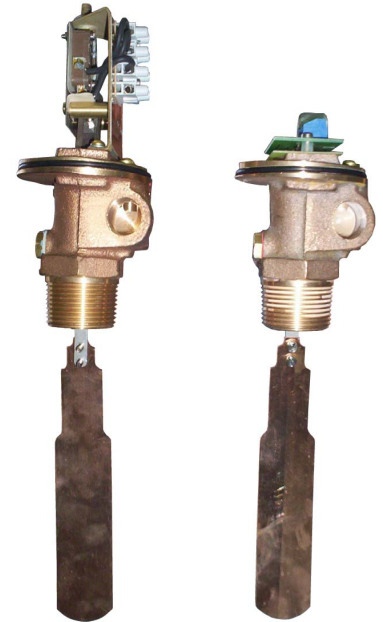
The paddle type, seal-less flow switch consists of a low profile design top assembly with magnetic switching, eliminating any mechanical connection between paddle and switching circuit board.

The low profile makes it ideally suitable for installation in confined areas typically found in fire protection systems.

There are two basic models available, direct switching 2-wire model and time delay 3-wire type, both suitable for voltages 24-240v AC and 24-115v DC.

All are fitted with our multi-function circuit board, easily configurable on site for switching requirements including time delay from 2 seconds to 60 minutes.

All models are suitable for installation in pipe sizes 25mm and upwards.



### Flow Switch Direct Acting

Base No.	#	Body Material	##	Pilot Configuration	###	Size
FS	1	Bronze	DA	Direct Acting		025
FS	1	Bronze	DA	Direct Acting		032

### FEATURES AND BENEFITS:

- Seal-less design – eliminates potential leaks – no seals to wear or maintain.
- Both models fit pipe sizes 25mm and upwards; "one size fits all".
- Compact profile – fits in tight spaces – does not restrict pipeline design.
- Standard bronze and stainless steel construction – corrosion resistant for long trouble-free life.
- SSL listed – accepted by insurance companies for fire service systems.
- Multifunctional circuit board – user adjustable for various operations or voltage.
- Australian designed and manufactured – custom designs or material options available.

**Accredited To Quality Assurance AS/NZS ISO 9001:2015**

**All build options are available from Mack on special order, thus enabling clients to create their own specifications for their own specific needs, but our stock is based around common material specifications favoured by the cryogenic, steam and general process industries.**

## FLOW SWITCH MICRO SWITCH

TYPE: FS Series  
MWP: 2000kPa

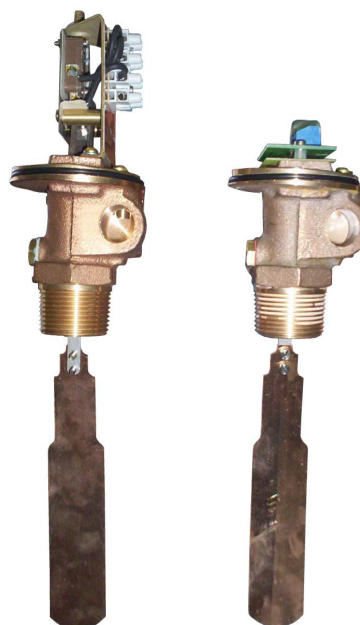
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### Flow Switch Micro Switch

	#			##			###	
Base No.	-	Body Material	-	Pilot Configuration	-	Size		
FS	1	Bronze	MS	Micro Switch		025		
FS	1	Bronze	MS	Micro Switch		032		

### FEATURES AND BENEFITS:

- Seal-less design – eliminates potential leaks – no seals to wear or maintain.
- Both models fit pipe sizes 25mm and upwards; "one size fits all".
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## R03 FLOW SWITCH TIME DELAY

TYPE: FS Series  
MWP: 2000kPa

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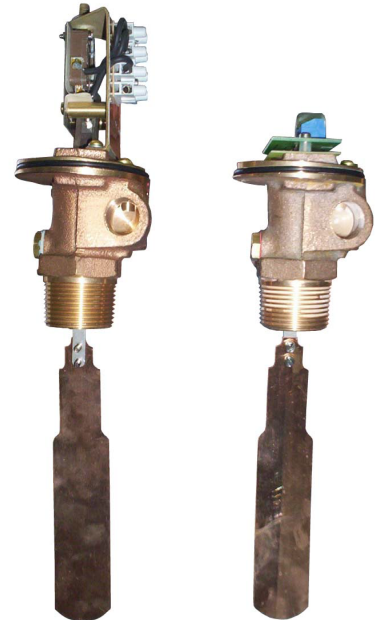
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The low profile makes it ideally suitable for installation in confined areas typically found in fire protection systems.

There are two basic models available, direct switching 2-wire model and time delay 3-wire type, both suitable for voltages 24-240v AC and 24-115v DC.

All are fitted with our multi-function circuit board, easily configurable on site for switching requirements including time delay from 2 seconds to 60 minutes.

All models are suitable for installation in pipe sizes 25mm and upwards.



### Flow Switch Time Delay

Base No.	#	Body Material	##	Pilot Configuration	###	Size
FS	1	Bronze	TD	Time Delay		025
FS	1	Bronze	TD	Time Delay		032

### FEATURES AND BENEFITS:

- Seal-less design – eliminates potential leaks – no seals to wear or maintain.
- Both models fit pipe sizes 25mm and upwards; "one size fits all".
- Compact profile – fits in tight spaces – does not restrict pipeline design.
- Standard bronze and stainless steel construction – corrosion resistant for long trouble-free life.
- SSL listed – accepted by insurance companies for fire service systems.
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## FS32 & FS15 Flow Switch

**Service:** Water and other water-like liquids, non-injurious to valve material.  
**Applications:** Fire service, cooling/lubrication/fuel systems, fluid processing, pump protection, boiler feed etc.  
**Description:** Paddle type, seal-less, magnetic switching flow switch.

Standard models available:

### FS1DA

Direct switching model, used for circuits not requiring integrated time delay feature.  
 Remote High Temperature model, direct switching, suppression network and electrical connections to alarm circuit are made remote from the high temperature installation

### FS1TD

Heavy duty model, used for direct switching currents greater than 0.8 amps.  
 Time delay model, indicates established flow after predetermined time. Mainly used for alarm systems.  
 Reversed time delay model, indicates no flow condition after predetermined time.  
 Pump Protection model, can be wired to motor contactor to automatically shutdown pump if flow is not established within predetermined time.

Mack Valves also manufactures a range of flow switches using micro switches:

### FS1MS

Micro switch model, direct switching 240Vac only for currents higher than FS1DA.  
 Micro switch High Temperature model, mainly used for boiler feed pump alarm on unattended boilers.

		FS1DA (2-wire)	FS1TD (3-wire)
Switching		Solid state circuit board – Reed Switch activated	
Power ratings	Std	0-240vac & 0-115vdc 0.8A	24-240Vac & 24-115Vdc 5.0A
	Option	Low current applications less than 0.1A	
Service temperature	Max	70 deg C	
Service pressure	Max	2100kPa (300psi)	
Cover rating		IP53	
Triggering velocity	Min	0.05m/s	
Time delay range		N/A	2 seconds – 60 mins adjustable
Output contacts		N/O & N/C – User selectable	
Connection size	Std	32mm BSPT Male	
	Option	25mm BSPT Male	

		FS1MS 2-wire	FS1MSRHT 2-wire
Switching		Microswitch	Reed Switch
Power ratings	Std	FS1MS– 240Vac 5A FS1MSHT – 240Vac 5A	240Vac 0.8A
Service Temperature	Max	FS15M – 70 deg C FS1MSHT – 149 deg C	Bronze–200 degC SS-300 degC
Service pressure	Max	2100kPa (300psi)	
Cover rating		IP53	
Triggering velocity	Min	0.05m/s	
Time delay range		N/A	N/A
Output contacts		N/O & N/C – User selectable	N/O only
Connection size	Std	32mm BSPT Male	
	Option	25mm BSPT Male	

Body	Std	Gunmetal – LG2
	Option	Nickel/Aluminium/Bronze – AB2, Stainless Steel AISI 316
Cover	Std	Steel Powder Coated
	Option	Screw-On cast metal – Gunmetal, SS, Nickel/Al/Bronze
Paddle Arm Assy	Std	SS AISI 316
	Option	None
Paddle	Std	Copper
	Option	SS AISI 316, PTFE