

## Flow switch Model HM

Switzer data sheet FS-HM

### Applications

- Dosing pumps
- Water treatment
- Corrosive applications

### Special features

- All plastic (GF nylon) wetted parts
- For aggressive liquids and chemical solutions
- Line size 25 ... 150 mm NB
- Magnetic actuation - No 'O' ring seal or bellows
- Manual override with lock



Flow switch, model HM

Style HM all plastic flow switch uses GF Nylon paddle and wetted parts as standard, which makes the switch suitable for monitoring flow of almost all aggressive liquids such as chemical solutions, sea water, acids and alkalies.

HM flow switch comes in a compact weatherproof plastic housing and offers superior performance.

HM flow switch employs a paddle whose movement actuates a microswitch through a powerful magnetic coupling. This ensures total isolation of the switching unit from the process, without the need for seals or bellows.

The flow switch is provided with a 15A 250V AC rated microswitch and can be used directly in control circuits of pumps.

A special feature of the HM flow switch is the control override facility, by which the switch can be used to switch ON the pump regardless of the flow being less than the preset limit. In other words the pump can be started or primed with the aid of this override.

The length of the paddle can be easily trimmed by the user to suit the process pipe size.

## Standard version

### Switch enclosure

ABS plastic weatherproof to IP66

### Sensor and wetted parts

GF Nylon plastic.

### Maximum working pressure

15 bar

### Switching range

Refer table

### Switch actuation

By magnetic coupling – totally isolated from process.

### Switching

Instrument quality snap acting microswitch; contact rating 15A, 250V AC

### Repeatability

± 3% FSR

### Deadband

Refer table

### Maximum flow

Not to exceed 5 times the flow rate given in table.

### Process Medium

All liquids, water, sea water, acids, alkalis and chemical solutions compatible with GF Nylon plastic

### Process temperature

(-)30 to (+)80°C

### Override Switching

- "Auto" Position: Contact change-over when flow crosses preset limit
- "Off" Position: Manual change-over of contact

### Mounting online

- Vertical Top only.
- Deviation more than 30° to vertical is not admissible

### Process connection

1" BSPM only

### Electrical connection

Via 3/4" ET Nylon cable gland

Line size NB mm	Switching range – LPM (water)					
	ON Falling flow			ON Rising flow		
	Minimum	Maximum	Differential	Minimum	Maximum	Differential
25	4	4.5	4	8	8.5	4
32	9	10	3	12	13	3
40	7	8	5	12	13	5
50	10	18	5	15	25	7
65	20	26	8	28	34	8
80	34	38	10	44	50	12
100	40	58	20	60	76	18
150	65	75	20	85	95	20

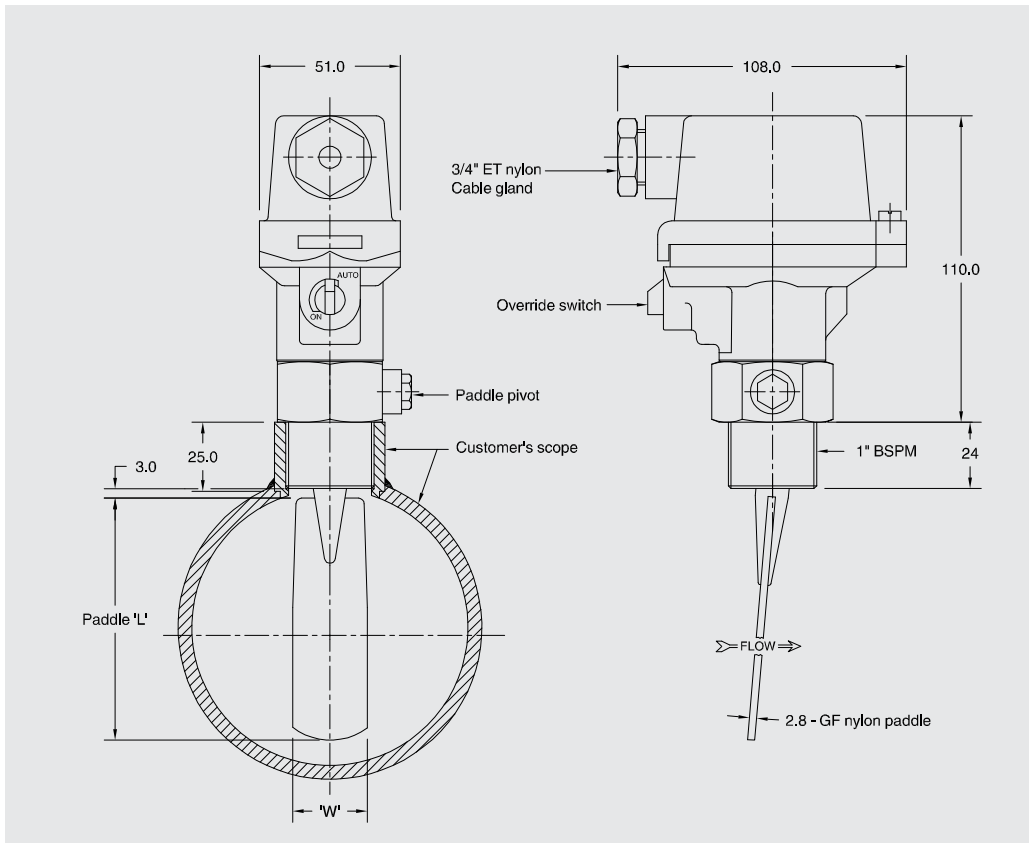
## Ordering matrix

<b>Switch enclosure</b>			
ABS plastic weatherproof to IP:66	HM		
<b>Line size</b>			
25 mm NB		025	
32 mm NB		032	
40 mm NB		040	
50 mm NB		050	
65 mm NB		065	
80 mm NB		080	
100 mm NB		100	
150 mm NB		150	
<b>Paddle and wetted parts</b>			
GF Nylon plastic (standard)			G
PVC (optional)			P

## Notes

1. The setting ranges indicated are applicable when the paddle length extends upto the bottom of the pipe, leaving a gap of 4 mm.
2. For Non-standard ranges the paddle length can be reduced in order to increase the setting range. For a reduction of every 5 mm in paddle length, the range will increase approximately by 16 LPM (water).
3. The paddle length should not be trimmed less than 60% of the pipe ID.
4. The above switching ranges is for non-turbulent flow with 5D straight pipe on either side.
5. Sensitivity increases with increased paddle length / decreased flow and vice-versa for reduced paddle length.

## Dimensions in mm



Pipe size	25 NB	32 NB	40 B	50 NB	65 NB	80 NB	100 NB	150 NB	200 NB
Switching point on a rising flow in L/min.	6	10	13	18	26	39	52	85	132
Paddle 'L'	25	34	40	50	60	77	102	155	160
Paddle 'W'	24.5	27							

### Ordering information

Switch enclosure / Line size / Paddle and wetted parts

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