

Flow switch Model HM

WIKA data sheet FL 70.02

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



Fig.: Flow switch, model HM

Description

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.

Specifications

Basic information	
Case type	Weatherproof
Case material	ABS plastic
Paddle and wetted parts	GF nylon plastic standard PVC optional

Output signal	
Switching ranges	→ See table "Switching range"
Maximum working pressure	15 bar
Switch actuation	By magnetic coupling – totally isolated from process.
Switching	Instrument quality snap acting microswitch; contact rating 15A, 250V AC
Repeatability	±3% of FSR
Differential	→ See table "Switching range"
Maximum flow	Not to exceed 5 times the flow rate given in table.
Override switching	<ul style="list-style-type: none"> ■ "Auto" Position: Contact change-over when flow crosses preset limit ■ "Off" Position: Manual change-over of contact

Electrical connection	
Conduit type	1/2" NPT(F) per ASME B1.20.1 nylon cable gland

Process connection	
Type	One
Size	1" BSP(M) ISO 288/1
Medium	All liquids, water, sea water, acids, alkalis and chemical solutions compatible with GF nylon plastic

Mounting	
Type	Vertical top only Deviation more than 30° to vertical is not admissible

Operating condition	
Ambient temperature range	-30°C ... +80°C [86 ... 176°F]
Ingress protection	IP66 per IS/IEC 60529

Switching range

Line size NB mm	Switching range – LPM (water)					
	ON Falling flow			ON Rising flow		
	Minimum	Maximum	Differential	Minimum	Maximum	Differential
25	8	9	4	12	13	4
32	22	24	4	26	28	4
40	25	27	5	30	32	5
50	30	35	7	37	42	7
65	36	40	8	44	48	8
80	70	74	12	82	86	12
100	80	90	18	98	108	18
150	100	110	20	120	130	20

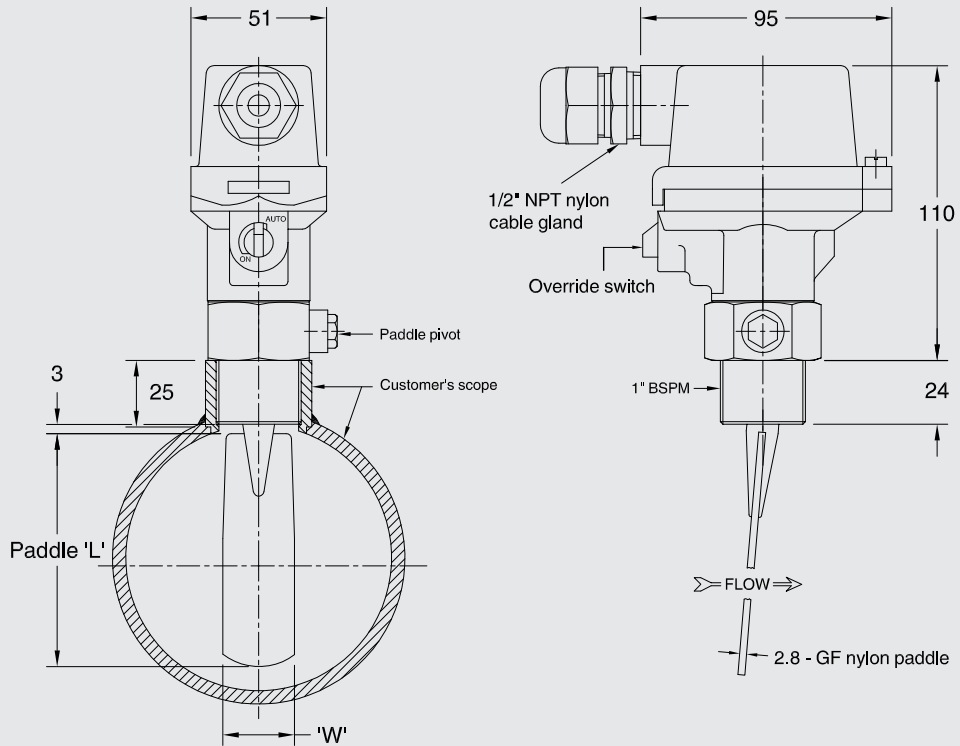
Ordering matrix

Switch enclosure			
ABS plastic weatherproof to IP:66	HM		
Line size			
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	
Paddle and wetted parts			
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
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

© 2022 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
 The specifications given in this document represent the state of engineering at the time of publishing.
 We reserve the right to make modifications to the specifications and materials.

