

Flow-Alert™ Flow Switches (Micro Switch)

For Liquids / Air and Other Compressed Gases

- Automatically signals alarm if flow is too high or too low
- Automatically opens or closes electrical circuits
- Triggers warning lights, buzzers and other devices
- Shuts down pumps and/or other equipment to protect your operation against permanent damage
- Available from 1/4" to 1-1/2" sizes in aluminum, brass and stainless
- Installs in any position
- Easier-to-read linear scale
- No flow straighteners or special piping requirements
- Relatively insensitive to shock and vibration
- Special scales available



SPECIFICATIONS:

MATERIALS:

2024 - T351 Anodized aluminum body, piston and cone

C360 Brass body, piston and cone

T303 Stainless body, 2024 - T351 Anodized aluminum piston and cone
(Oil, PE, WBF, & Air Meters)

T303 Stainless body, C360 Brass piston and cone (Water meters)

T316 Stainless body, piston and cone

PETROLEUM (Oil) COMMON PARTS:

Spider Plate: T316 SS

Spring: T302 SS

Fasteners: T303 SS

Pressure Seals: Viton®

Lens: Polycarbonate

Retaining Ring: SAE 1070/1090 Carbon Steel

Retaining Spring: SAE 1070/1090 Carbon Steel

Indicator and Internal Magnet: PPS / Ceramic

Enclosure Seal: Silicone gasket

Scale Support: 6063 - T6 Aluminum

PHOSPHATE ESTER (PE) COMMON PARTS:

Spider Plate: T316 SS

Spring: T302 SS

Fasteners: T303 SS

Pressure Seals: EPR

Lens: Polycarbonate

Retaining Ring: SAE 1070/1090 Carbon Steel

Retaining Spring: SAE 1070/1090 Carbon Steel

Indicator and Internal Magnet: PPS / Ceramic

Enclosure Seal: Silicone gasket

Scale Support: 6063 - T6 Aluminum

WATER-BASED (WBF), WATER, AIR COMMON PARTS:

Spider Plate: T316 SS

Spring: T302 SS

Fasteners: T303 SS

Pressure Seals: Viton®

Lens: Polycarbonate

Retaining Ring: T316 SS

Retaining Spring: T316 SS

Indicator and Internal Magnet: PPS / Ceramic

Enclosure Seal: Silicone gasket

Scale Support: 6063 - T6 Aluminum

API OIL / AIR / CAUSTIC and CORROSIVE LIQUIDS and GASES:

Spider Plate: T316 SS

Spring: T316 SS

Fasteners: T316 SS

Pressure Seals: Viton®

Lens: Polycarbonate

Retaining Ring: T316 SS

Retaining Spring: T316 SS

Indicator and Internal Magnet: PPS / Ceramic

Enclosure Seal: Silicone gasket

Scale Support: 6063 - T6 Aluminum

THREADS: SAE J1926/1, NPTF ANSI B2.2, BSPP ISO1179

TEMPERATURE RANGE: -20 to +240 °F (-29 to +116 °C)

PRESSURE RATING:

Aluminum / Brass Operating:

Liquids - 3,500 psi/241 bar max. with a 3:1 safety factor.

Gases - 1,000 psi/69 bar max. with a 10:1 safety factor.

For High Cycle Applications: See page 7

Stainless Steel Operating:

Liquids - 6,000 psi/414 bar max. with a 3:1 safety factor.

Gases - 1,500 psi/103 bar max. with a 10:1 safety factor.

For High Cycle Applications: See page 7

ACCURACY: ±2% of full scale

REPEATABILITY: ±1%

PRESSURE DROP REFERENCE TABLE:

	FLUID TYPE							
	Oil	PE	WBF	Water	API Oil	Caustic & Corrosive Liquids	Air/Caustic & Corrosive Gases	Air
50% / 100% Pressure Drop	p. 10	p. 16	p. 22	p. 28	p. 32	p. 32	p. 34	p. 36
Pressure Drop Chart	p. 55	p. 56	p. 57	p. 58	p. 59	p. 58	p. 59	p. 60

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Flow-Alert™ Flow Switches (Micro Switch)

For Liquids / Air and Other Compressed Gases



DIMENSIONS:

A	B	C	D	E	F	G	H	I	J	K
NOMINAL PORT SIZE	LENGTH in (mm)	LENGTH in (mm)	LENGTH in (mm)	WIDTH in (mm)	WIDTH in (mm)	WIDTH in (mm)	WIDTH in (mm)	DEPTH in (mm)	OFFSET in (mm)	HOLE DIA. in (mm)
1/4 (SAE 6)	6.6 (168)	5.27 (134)	6.41 (163)	6.00 (152)	3.23 (82)	3.00 (76)	4.20 (107)	2.94 (75)	1.51 (38)	.31 (8)
1/2 (SAE 10)	6.6 (168)	5.27 (134)	6.41 (163)	6.00 (152)	3.23 (82)	3.00 (76)	4.20 (107)	2.94 (75)	1.51 (38)	.31 (8)
3/4 (SAE 12)	7.2 (183)	5.27 (134)	7.04 (179)	6.00 (152)	3.60 (91)	3.00 (76)	4.20 (107)	2.94 (75)	1.27 (32)	.31 (8)
1 (SAE 16)	7.2 (183)	5.27 (134)	7.04 (179)	6.00 (152)	3.60 (91)	3.00 (76)	4.20 (107)	2.94 (75)	1.27 (32)	.31 (8)
1-1/4 (SAE 20)	12.2 (310)	10.68 (271)	11.65 (296)	7.63 (194)	4.84 (123)	3.82 (97)	5.02 (128)	4.50 (114)	2.20 (56)	.31 (8)
1-1/2 (SAE 24)	12.2 (310)	10.68 (271)	11.65 (296)	7.63 (194)	4.84 (123)	3.82 (97)	5.02 (128)	4.50 (114)	2.20 (56)	.31 (8)

ENCLOSURE:

Material: Anodized and epoxy powder-coated aluminum with polycarbonate lens.

Seals: Silicone gasket between enclosure and lens.

Viton® O-rings between enclosure and flow meter body.

Connection: Pig-tail conductor (standard) with water-tight strain relief.

Other connections, including quick-disconnect, are available – consult factory for details.

Fastener: T303 SS

Rating: NEMA 12 & 13 (IP65)

ELECTRICAL CIRCUITRY:

Adjustable Flow-Alert™ signal: single (1) or double (2) switch, pre-wired single-pole, double-throw (SPDT) UL recognized and CSA certified with high or low flow limit setting, adjustable over the entire flow measuring range. Other switches are available – consult factory for details.

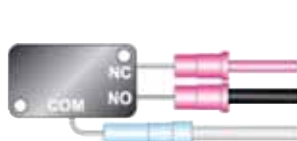
10A @ 250 VAC maximum, 0.5A @ 125 VDC maximum.

All Flow-Alert sizes (1/4 to 1-1/2 inch series) are offered in single (1) switch or double (2) switch models.

The single switch model is supplied with a 34" length of 4-wire #18 AWG jacketed cable.

The double switch model is supplied with an 18" length of 7-wire #16 AWG jacketed cable.

Optional 8 ft. cables are available – consult factory for details.



One (1) Switch 4-wire cable

Red: Normally Closed (NC)
Black: Normally Open (NO)
White: Common (COM)
Green: Ground

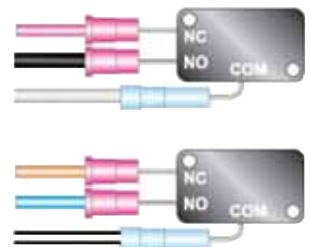
Two (2) Switch 7-wire cable

Switch #1

Red: Normally Closed (NC)
Black: Normally Open (NO)
White: Common (COM)

Switch #2

Orange: Normally Closed (NC)
Blue: Normally Open (NO)
White/Black: Common (COM)
Green: Ground



NOTE: Weights for all sizes can be found on page 73.



FLOW-ALERT OIL

Ordering Info **46**



FLOW-ALERT PE

Ordering Info **47**



FLOW-ALERT WBF

Ordering Info **48**



FLOW-ALERT WATER

Ordering Info **49**



FLOW-ALERT API Oil and
Caustic and Corrosive Liquids

Ordering Info **50**



FLOW-ALERT AIR and
Caustic and Corrosive Gases

Ordering Info **51**



FLOW-ALERT AIR

Ordering Info **52**

Flow-Alert™ Flow Switches and Flow Transmitters For Water Fluids

ORDERING INFORMATION:

NOMINAL PORT SIZE ^①	FLOW RANGE		MODEL NUMBER <i>(see example below)</i>			MATERIAL		OPTIONS		
	GPM	LPM	SAE	NPTF	BSPP	BRASS 3500 PSI	STAINLESS	Flow-Alert 1 SWITCH / 2 SWITCH	Flow-Alert REED SWITCH	MULTIPLE OUTPUT SENSOR
1/4" SAE 6	.02 - 0.2	0.1 - 0.75	H204 * - 002 - †	H205 * - 002 - †	H206 * - 002 - †	B	S 6000 PSI	Not Available		Not Available
	.05 - 0.5	0.2 - 1.9	H204 * - 005 - †	H205 * - 005 - †	H206 * - 005 - †					
1/4" SAE 6	0.1 - 1.0	0.5 - 3.75	H204 * - 010 - †	H205 * - 010 - †	H206 * - 010 - †	B	S 6000 PSI	F1/F2	SEE	MR
	0.2 - 2.0	1 - 7.5	H204 * - 020 - †	H205 * - 020 - †	H206 * - 020 - †					
1/2" SAE 10	0.1 - 1.0	0.5 - 3.75	H604 * - 001 - †	H605 * - 001 - †	H606 * - 001 - †	B	S 6000 PSI	F1/F2	SEE	MR
	0.2 - 2.0	1 - 7.5	H604 * - 002 - †	H605 * - 002 - †	H606 * - 002 - †					
	0.5 - 5.0	2 - 19	H604 * - 005 - †	H605 * - 005 - †	H606 * - 005 - †					
	1 - 10	5 - 38	H604 * - 010 - †	H605 * - 010 - †	H606 * - 010 - †					
	1 - 15	4 - 56	H604 * - 015 - †	H605 * - 015 - †	H606 * - 015 - †					
3/4" SAE 12	0.2 - 2.0	1 - 7.5	H704 * - 002 - †	H705 * - 002 - †	H706 * - 002 - †	B	S 5000 PSI	F1/F2	SEE	MR
	0.5 - 5.0	2 - 19	H704 * - 005 - †	H705 * - 005 - †	H706 * - 005 - †					
	1 - 10	5 - 38	H704 * - 010 - †	H705 * - 010 - †	H706 * - 010 - †					
	2 - 20	10 - 76	H704 * - 020 - †	H705 * - 020 - †	H706 * - 020 - †					
	3 - 30	10 - 115	H704 * - 030 - †	H705 * - 030 - †	H706 * - 030 - †					
1" SAE 16	0.2 - 2.0	1 - 7.5	H754 * - 002 - †	H755 * - 002 - †	H756 * - 002 - †	B	S 5000 PSI	F1/F2	SEE	MR
	0.5 - 5.0	2 - 19	H754 * - 005 - †	H755 * - 005 - †	H756 * - 005 - †					
	1 - 10	5 - 38	H754 * - 010 - †	H755 * - 010 - †	H756 * - 010 - †					
	2 - 20	10 - 76	H754 * - 020 - †	H755 * - 020 - †	H756 * - 020 - †					
	3 - 30	10 - 115	H754 * - 030 - †	H755 * - 030 - †	H756 * - 030 - †					
	4 - 40	15 - 150	H754 * - 040 - †	H755 * - 040 - †	H756 * - 040 - †					
	5 - 50	20 - 190	H754 * - 050 - †	H755 * - 050 - †	H756 * - 050 - †					
1-1/4" SAE 20	3 - 30	10 - 110	H804 * - 030 - †	H805 * - 030 - †	H806 * - 030 - †	B	S 5000 PSI	F1/F2	SEE	MR
	5 - 50	20 - 190	H804 * - 050 - †	H805 * - 050 - †	H806 * - 050 - †					
	10 - 75	40 - 280	H804 * - 075 - †	H805 * - 075 - †	H806 * - 075 - †					
	10 - 100	50 - 380	H804 * - 100 - †	H805 * - 100 - †	H806 * - 100 - †					
	10 - 150	50 - 560	H804 * - 150 - †	H805 * - 150 - †	H806 * - 150 - †					
1-1/2" SAE 24	3 - 30	10 - 110	H854 * - 030 - †	H855 * - 030 - †	H856 * - 030 - †	B	S 5000 PSI	F1/F2	SEE	MR
	5 - 50	20 - 190	H854 * - 050 - †	H855 * - 050 - †	H856 * - 050 - †					
	10 - 75	40 - 280	H854 * - 075 - †	H855 * - 075 - †	H856 * - 075 - †					
	10 - 100	50 - 380	H854 * - 100 - †	H855 * - 100 - †	H856 * - 100 - †					
	10 - 150	50 - 560	H854 * - 150 - †	H855 * - 150 - †	H856 * - 150 - †					

① Fractional sizes apply to NPTF and BSPP.

(example) H 705 **B** - 030 - **F1** or **F2**



Flow-Alert Flow Switches

F1 = Single Switch
F2 = Double Switch

(example) H 705 **B** - 030 - **MR**



Multiple Output Flow Sensor

3 Standard field selectable outputs

0-5 VDC } Flow Transmitter is factory-calibrated to provide 4 mA (0 VDC) at zero flow
0-10 VDC } and 20 mA (5/10 VDC) at full flow. Optional 5-point calibration certificate available
4-20 mA } (see Price and Availability Digest for details).



(example) H 701 **A** - 030 - **RS1NO**

Flow-Alert Reed Switches

Options:

RS1NO (reed switch one (1) normally open)
RS2NO (reed switch two (2) normally open)
RS1NC (reed switch one (1) normally closed)
RS2NC (reed switch two (2) normally closed)

NOTE: 1/4" liquid meters for .02-0.2 and .05-0.5 GPM ranges available in strap-on design for RS1NO and RS1NC only.

NOTE: For 50% and 100% flow/pressure drop information, see page 28. For detailed flow/pressure drop charts, see page 58.