

Flow-Alert™ Flow Switches (Reed Switch)

For Liquids / Air and Other Compressed Gases

- No mechanical linkage
- Automatically signals alarm if flow is too high or too low
- 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 **Retaining Ring:** SAE 1070/1090 Carbon Steel
Spring: T302 SS **Retaining Spring:** SAE 1070/1090 Carbon Steel
Fasteners: T303 SS **Indicator:** T400 Series Stainless
Pressure Seals: Viton® **Internal Magnet:** Teflon® Coated Alnico 8
Lens: Polycarbonate **Switch Carrier:** Aluminum
Enclosure Seal: Silicone gasket **Scale Support:** 6063 - T6 Aluminum

PHOSPHATE ESTER (PE) COMMON PARTS:

Spider Plate: T316 SS **Retaining Ring:** SAE 1070/1090 Carbon Steel
Spring: T302 SS **Retaining Spring:** SAE 1070/1090 Carbon Steel
Fasteners: T303 SS **Indicator:** T400 Series Stainless
Pressure Seals: EPR **Internal Magnet:** Teflon® Coated Alnico 8
Lens: Polycarbonate **Switch Carrier:** Aluminum
Enclosure Seal: Silicone gasket **Scale Support:** 6063 - T6 Aluminum

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

Spider Plate: T316 SS **Retaining Ring:** T316 SS
Spring: T302 SS **Retaining Spring:** T316 SS
Fasteners: T303 SS **Indicator:** T400 Series Stainless
Pressure Seals: Viton® **Internal Magnet:** Teflon® Coated Alnico 8
Lens: Polycarbonate **Switch Carrier:** Aluminum
Enclosure Seal: Silicone gasket **Scale Support:** 6063 - T6 Aluminum

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

Spider Plate: T316 SS **Retaining Ring:** T316 SS
Spring: T316 SS **Retaining Spring:** T316 SS
Fasteners: T316 SS **Indicator:** T400 Series Stainless
Pressure Seals: Viton® **Internal Magnet:** Teflon® Coated Alnico 8
Lens: Polycarbonate **Switch Carrier:** Aluminum
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 (-20 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%

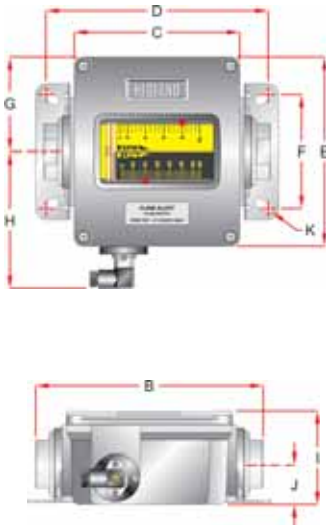
PRESSURE DROP REFERENCE TABLE:

	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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Viton is a registered trademark of DuPont Dow Elastomers

Flow-Alert™ Flow Switches (Reed Switch)

For Liquids / Air and Other Compressed Gases

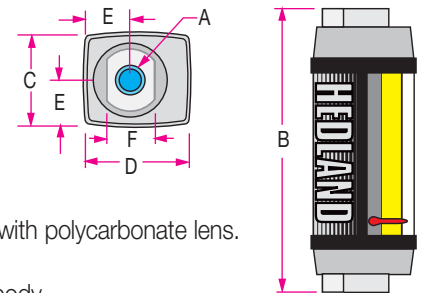


DIMENSIONS:

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)

DIMENSIONS:

A	B	C	D	E	F
NOMINAL PORT SIZE	LENGTH in (mm)	WIDTH in (mm)	DEPTH in (mm)	OFFSET in (mm)	FLATS in (mm)
1/4 (SAE 6)	4.8 (122)	1.68 (43)	1.90 (48)	.84 (21)	.88 (22)



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: 4-pin (Protection Class IP65)

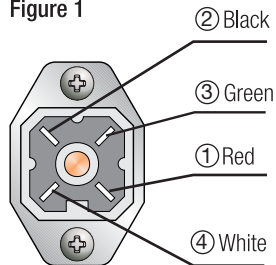
Fastener: T303 SS

Rating: NEMA 12 & 13 (IP65)

ELECTRICAL SPECIFICATIONS:

Adjustable Flow-Alert™ signal: single (1) or double (2) reed switch, pre-wired single-pole, single-throw (SPST-NO) normally open; or single-pole, single-throw (SPST-NC) normally closed. UL recognized and CSA certified with high or low flow limit setting, adjustable over the entire flow measuring range.

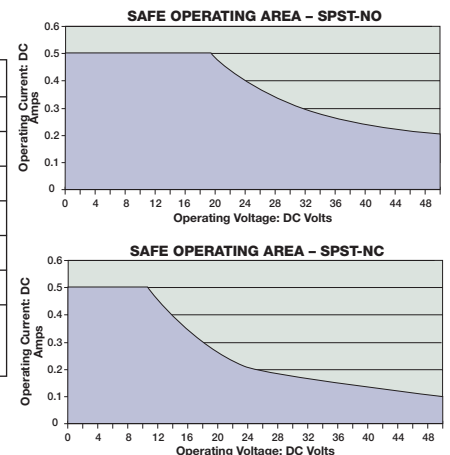
Figure 1



Electrical Circuitry:

The flow switch is supplied with 15 feet of shielded, 4-wire #22 AWG PVC jacketed cable, color coded as follows: ① Red, ② Black for single (1) Reed Switch, and ③ Green, ④ White for double (2) Reed Switch.

Contact Form	SPST-NO	SPST-NC
ELECTRICAL SPECIFICATIONS		
Contact Rating	10 Watts Max	5 Watts Max
Voltage, Switching	50 VDC Max	50 VDC Max
Current (resistive), Switching	0.500 A Max	0.500 A Max
OPERATING SPECIFICATIONS		
Contact Resistance, Initial	0.100 Ω Max	0.100 Ω Max
Operating Temperature	20 to +240 °F (-20 to +116 °C)	-20 to +240 °F (-20 to +116 °C)



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 Petroleum Fluids

ORDERING INFORMATION:

NOMINAL PORT SIZE ^①	FLOW RANGE		MODEL NUMBER (see example below)			MATERIAL			OPTIONS		
	GPM	LPM	SAE	NPTF	BSPP	ALUMINUM 3500 PSI	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	H200 ★ - 002 - †	H201 ★ - 002 - †	H202 ★ - 002 - †	A	B	6000 PSI S	Not Available	SEE OPTIONS BELOW	Not Available
	.05 - 0.5	0.2 - 1.9	H200 ★ - 005 - †	H201 ★ - 005 - †	H202 ★ - 005 - †						
1/4" SAE 6	0.1 - 1.0	0.5 - 3.75	H200 ★ - 010 - †	H201 ★ - 010 - †	H202 ★ - 010 - †	A	B	6000 PSI S	F1/F2		MR
	0.2 - 2.0	1 - 7.5	H200 ★ - 020 - †	H201 ★ - 020 - †	H202 ★ - 020 - †						
1/2" SAE 10	0.1 - 1.0	0.5 - 3.75	H600 ★ - 001 - †	H601 ★ - 001 - †	H602 ★ - 001 - †	A	B	6000 PSI S	F1/F2		MR
	0.2 - 2.0	1 - 7.5	H600 ★ - 002 - †	H601 ★ - 002 - †	H602 ★ - 002 - †						
	0.5 - 5.0	2 - 19	H600 ★ - 005 - †	H601 ★ - 005 - †	H602 ★ - 005 - †						
	1 - 10	5 - 38	H600 ★ - 010 - †	H601 ★ - 010 - †	H602 ★ - 010 - †						
	1 - 15	4 - 56	H600 ★ - 015 - †	H601 ★ - 015 - †	H602 ★ - 015 - †						
3/4" SAE 12	0.2 - 2.0	1 - 7.5	H700 ★ - 002 - †	H701 ★ - 002 - †	H702 ★ - 002 - †	A	B	5000 PSI S	F1/F2		MR
	0.5 - 5.0	2 - 19	H700 ★ - 005 - †	H701 ★ - 005 - †	H702 ★ - 005 - †						
	1 - 10	5 - 38	H700 ★ - 010 - †	H701 ★ - 010 - †	H702 ★ - 010 - †						
	2 - 20	10 - 76	H700 ★ - 020 - †	H701 ★ - 020 - †	H702 ★ - 020 - †						
	3 - 30	10 - 115	H700 ★ - 030 - †	H701 ★ - 030 - †	H702 ★ - 030 - †						
1" SAE 16	0.2 - 2.0	1 - 7.5	H760 ★ - 002 - †	H761 ★ - 002 - †	H762 ★ - 002 - †	A	B	5000 PSI S	F1/F2	MR	
	0.5 - 5.0	2 - 19	H760 ★ - 005 - †	H761 ★ - 005 - †	H762 ★ - 005 - †						
	1 - 10	5 - 38	H760 ★ - 010 - †	H761 ★ - 010 - †	H762 ★ - 010 - †						
	2 - 20	10 - 76	H760 ★ - 020 - †	H761 ★ - 020 - †	H762 ★ - 020 - †						
	3 - 30	10 - 115	H760 ★ - 030 - †	H761 ★ - 030 - †	H762 ★ - 030 - †						
	4 - 40	10 - 150	H760 ★ - 040 - †	H761 ★ - 040 - †	H762 ★ - 040 - †						
1-1/4" SAE 20	5 - 50	20 - 190	H760 ★ - 050 - †	H761 ★ - 050 - †	H762 ★ - 050 - †	A	B	5000 PSI S	F1/F2	MR	
	10 - 75	40 - 280	H800 ★ - 030 - †	H801 ★ - 030 - †	H802 ★ - 030 - †						
	10 - 100	50 - 380	H800 ★ - 050 - †	H801 ★ - 050 - †	H802 ★ - 050 - †						
	10 - 150	50 - 560	H800 ★ - 075 - †	H801 ★ - 075 - †	H802 ★ - 075 - †						
			H800 ★ - 100 - †	H801 ★ - 100 - †	H802 ★ - 100 - †						
1-1/2" SAE 24	3 - 30	10 - 110	H860 ★ - 030 - †	H861 ★ - 030 - †	H862 ★ - 030 - †	A	B	5000 PSI S	F1/F2	MR	
	5 - 50	20 - 190	H860 ★ - 050 - †	H861 ★ - 050 - †	H862 ★ - 050 - †						
	10 - 75	40 - 280	H860 ★ - 075 - †	H861 ★ - 075 - †	H862 ★ - 075 - †						
	10 - 100	50 - 380	H860 ★ - 100 - †	H861 ★ - 100 - †	H862 ★ - 100 - †						
	10 - 150	50 - 560	H860 ★ - 150 - †	H861 ★ - 150 - †	H862 ★ - 150 - †						

^①Fractional sizes apply to NPTF and BSPP.

(example) H 701 **A** - 030 - **F1** or **F2**



Flow-Alert Flow Switches

F1 = Single Switch
F2 = Double Switch

(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)

(example) H 701 **A** - 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).

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 10.
For detailed flow/pressure drop charts, see page 55.