

# 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 ¼" to 1½" 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 and Internal Magnet:** PPS / Ceramic  
**Pressure Seals:** Viton®    **Enclosure Seal:** Silicone gasket  
**Lens:** Polycarbonate    **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 and Internal Magnet:** PPS / Ceramic  
**Pressure Seals:** EPR    **Enclosure Seal:** Silicone gasket  
**Lens:** Polycarbonate    **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 and Internal Magnet:** PPS / Ceramic  
**Pressure Seals:** Viton®    **Enclosure Seal:** Silicone gasket  
**Lens:** Polycarbonate    **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 and Internal Magnet:** PPS / Ceramic  
**Pressure Seals:** Viton®    **Enclosure Seal:** Silicone gasket  
**Lens:** Polycarbonate    **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. 18	p. 26	p. 34	p. 38	p. 38	p. 40	p. 42
Pressure Drop Chart	p. 61	p. 62	p. 63	p. 64	p. 65	p. 64	p. 65	p. 66

Viton is a registered trademark of DuPont Dow Elastomers

# 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)
¼ (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)
½ (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)
¾ (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)
1¼ (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)
1½ (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 (IP52/54)

### ELECTRICAL CIRCUITRY:

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

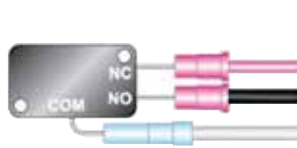
10A @ 250 VAC maximum, 0.5A @ 125 VDC maximum.

All Flow-Alert sizes (¼ to 1½ 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)

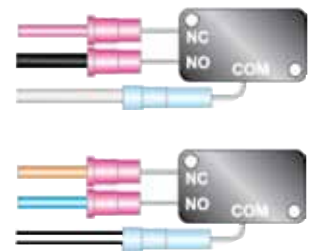
##### Switch #2

Orange: Normally Closed (NC)

Blue: Normally Open (NO)

White/Black: Common (COM)

Green: Ground



**NOTE:** Weights for all sizes can be found on page 79.

# 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 ¼" to 1½" 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, ±7% of full scale for 4.8" (122 mm) length ¼" meters

**REPEATABILITY:** ±1%

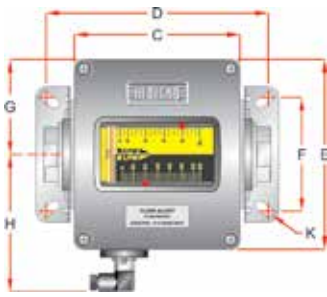
#### PRESSURE DROP REFERENCE TABLE:

	FLUID TYPE							
	Oil	PE	WBF	Water	API Oil	Caustic & Corrosive Liquids	Air/Caustic & Corrosive Gases	Air
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Pressure Drop Chart	p. 61	p. 62	p. 63	p. 64	p. 65	p. 64	p. 65	p. 66

Teflon is a registered trademark of E.I. du Pont de Nemours and Co.  
 Viton is a registered trademark of DuPont Dow Elastomers

# Flow-Alert™ Flow Switches (Reed Switch)

For Liquids / Air and Other Compressed Gases

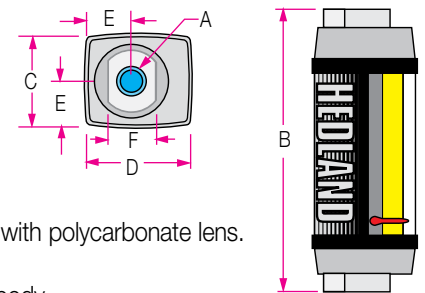


### DIMENSIONS:

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)
¼ (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)
½ (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)
¾ (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)
1¼ (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)
1½ (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)
¼ (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 (IP 52/54)

### 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, with high or low flow limit setting, adjustable over the entire flow measuring range.

Contact Form	SPST-NO	SPST-NC
<b>ELECTRICAL SPECIFICATIONS</b>		
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
<b>OPERATING SPECIFICATIONS</b>		
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)

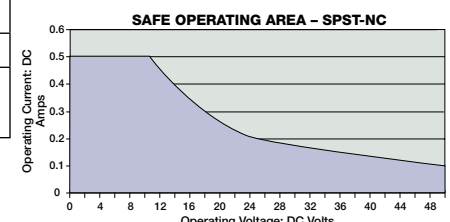
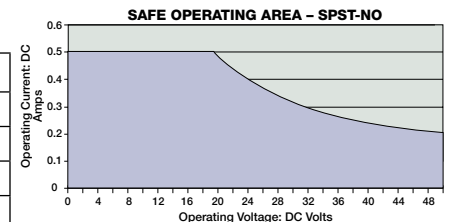
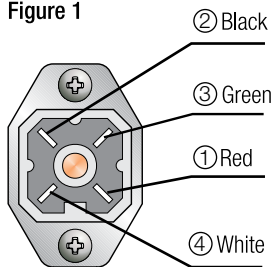


Figure 1



### 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.

**NOTE:** Weights for all sizes can be found on page 79.



# MR Flow Transmitters

## For Liquids / Air and Other Compressed Gases

- Full line of multi-functional remote flow indicators and transmitters
- Operate as part of a totally integrated electronic process control/data acquisition system
- Non-contact sensor electronics
- Electronic signal conditioning circuit
- Digital flow rate and total flow indication
- Proportional analog output
- In-field compensation for- Specific gravity of all fluids Viscosity of petroleum-based fluids Specific gravity, pressure, and temperature of pneumatic systems
- CE compliant- exceeds US and meets European standards for EMI/EMC
- US Patent 7,130,750



### 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

**Internal Magnet:** Teflon® Coated Alnico 8

**Enclosure Seal:** Silicone gasket

#### 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

**Internal Magnet:** Teflon® Coated Alnico 8

**Enclosure Seal:** Silicone gasket

#### 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

**Internal Magnet:** Teflon® Coated Alnico 8

**Enclosure Seal:** Silicone gasket

#### 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

**Internal Magnet:** Teflon® Coated Alnico 8

**Enclosure Seal:** Silicone gasket

**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 maximum with a 3:1 safety factor.

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

**For High Cycle Applications:** See page 7

##### Stainless Steel Operating:

**Liquids** - (1/4" to 1/2") - 6,000 psi/414 bar maximum with a 3:1 safety factor

**Liquids** - (3/4" to 1 1/2") - 5,000 psi/345 bar maximum with a 3:1 safety factor

**Gases** - 1,500 psi/103 bar maximum 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. 18	p. 26	p. 34	p. 38	p. 38	p. 40	p. 42
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# MR Flow Transmitters

## For Liquids / Air and Other Compressed Gases

### ENCLOSURE:

- Material:** Anodized and epoxy powder-coated aluminum with polycarbonate lens
- Seals:** Silicone gaskets between enclosure and lens  
Viton® O-rings between enclosure and flow meter body
- Connection:** 4-pin (Protection Class IP65) standard, see Figure 2  
Other connections available - consult factory for details
- Fasteners:** T303 SS
- Rating:** NEMA 12 & 13 (IP 52/54)

### ELECTRICAL SPECIFICATIONS:

#### Power

- Requirement:** 0-5 VDC Output: 10-30 VDC @ 0.75W maximum  
0-10 VDC Output: 12-30 VDC @ 0.75W maximum  
4-20 mA Output: loop-powered, 30 VDC maximum

#### Power

- Consumption:** 25 mA maximum

#### Analog

- Outputs:** 0-5 VDC and 0-10 VDC into 10,000 Ohms minimum  
4-20 mA into 1000 Ohms maximum, see Figure 1

#### Circuit

- Protection:** Reverse polarity and current limiting

#### Transmission

- Distance:** 4-20 mA limited by cable resistance  
0-5 VDC and 0-10 VDC 1000 feet (300 m) maximum  
**Isolation:** Inherently isolated from the piping system

#### Display:

- Fixed or toggle modes of operation for rate and totalizer display  
8 digit, 0.70" high numeric display for rate and total  
8 digit, 0.35" high alphanumeric display for units and setup

#### Temperature

- Drift:** 50 ppm / °C (max)

- Analog Output:** Resolution - 1:4000

#### Transient

- Over-Voltages:** Category 3, in accordance with IEC 664

#### Pollution

- Degree:** Category 2, in accordance with IEC 664

#### Approvals:

- EMC Directive 89/336/EEC

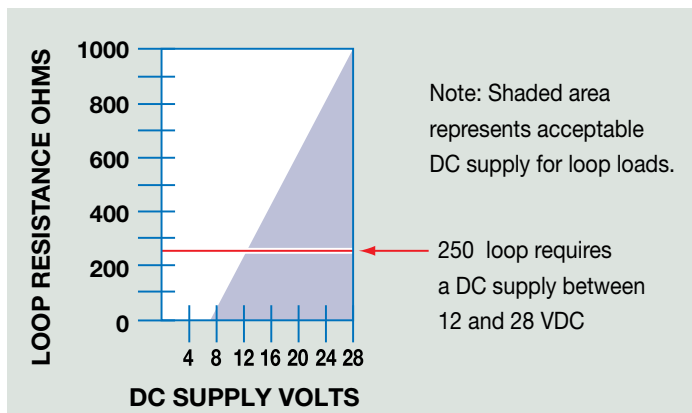
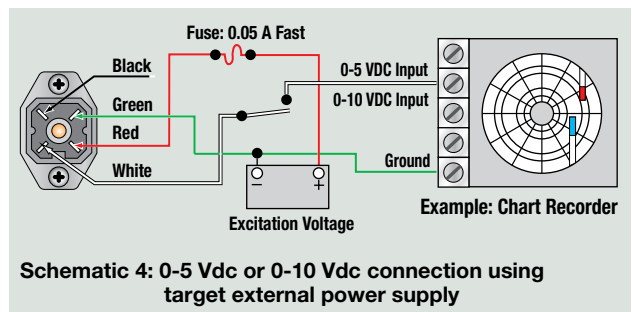
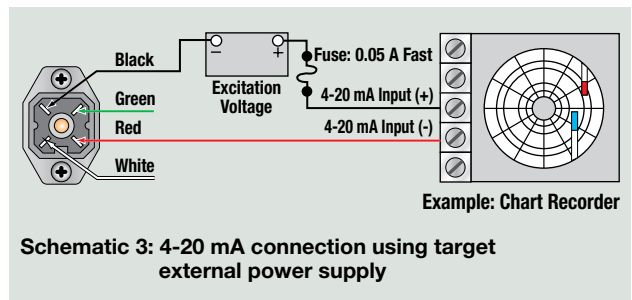
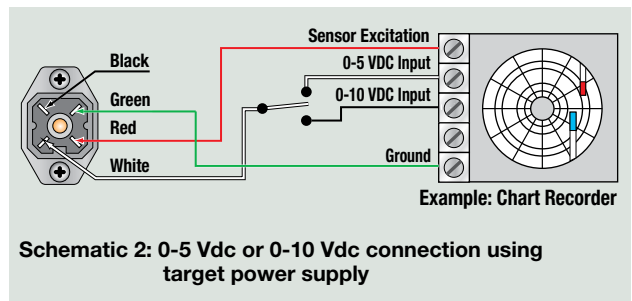
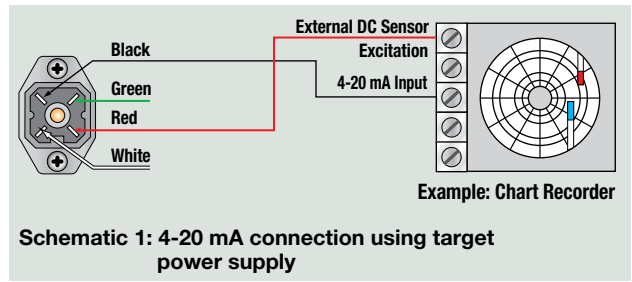


Figure 1. Load Limitations (4-20 mA Output Only)

### SCHEMATICS:

The transmitter can be wired in various configurations to allow interface with many different types of data collection and control instrumentation.

Schematics 1 & 2 represent typical wiring for a target powered by either AC power or DC supply. Schematics 3 & 4 will be utilized when the flow transmitter is operated with loop-powered process indicators or data loggers that do not have external sensor excitation available.



	DC Output Connection	Loop Power Connection
2 Black:	No Connection	(-) 4-20 mA Out
3 Green:	0 VDC	No Connection
1 Red:	(+) DC Power	(+) 4-20 mA In
4 White:	0-5 VDC or 0-10 VDC Output	No Connection

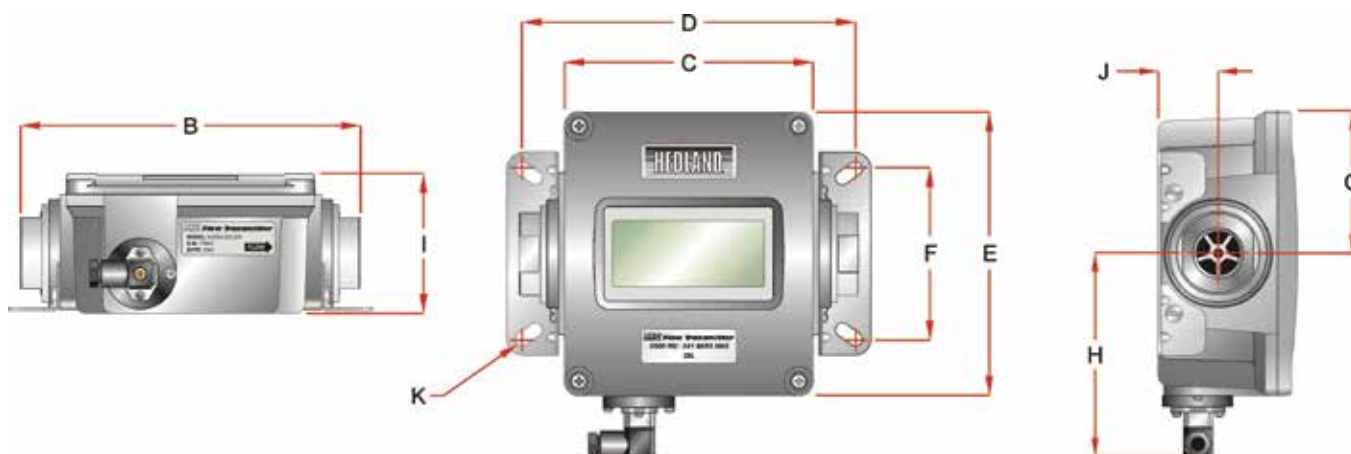
Figure 2. Electrical 4-Pin Connection

# MR Flow Transmitters

## 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)
¼ (SAE 6)	6.60 (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)
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1 (SAE 16)	7.20 (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)
1¼ (SAE 20)	12.20 (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)
1½ (SAE 24)	12.20 (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)



### Optional Remote Display and Signal Processor:

Hedland also offers the F6700/F6750 Series Digital Display with integrated signal processor capabilities to further enhance the utility of the MR Flow Transmitters. In addition to remote flow monitoring, these units can be configured to provide alarm processing and communication options including RS232, RS485, Modbus, Profibus and DeviceNet. For complete product specifications, refer to page 59.



# Flow-Alert™ Flow Switches and Flow Transmitters For Petroleum Fluids

## ORDERING INFORMATION:

NOMINAL PORT SIZE <sup>Ⓛ</sup>	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
¼" SAE 6	.02 - 0.2	0.1 - 0.75	H200 * - 002 - †	H201 * - 002 - †	H202 * - 002 - †	A	B	S	Not Available	SEE OPTIONS BELOW	Not Available
	.05 - 0.5	0.2 - 1.9	H200 * - 005 - †	H201 * - 005 - †	H202 * - 005 - †						
¼" SAE 6	0.1 - 1.0	0.5 - 3.75	H200 * - 010 - †	H201 * - 010 - †	H202 * - 010 - †	A	B	S	F1/F2	SEE OPTIONS BELOW	MR
	0.2 - 2.0	1.0 - 7.5	H200 * - 020 - †	H201 * - 020 - †	H202 * - 020 - †						
½" SAE 10	0.1 - 1.0	0.5 - 3.75	H600 * - 001 - †	H601 * - 001 - †	H602 * - 001 - †	A	B	S	F1/F2	SEE OPTIONS BELOW	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 - †						
¾" SAE 12	0.2 - 2.0	1 - 7.5	H700 * - 002 - †	H701 * - 002 - †	H702 * - 002 - †	A	B	S	F1/F2	SEE OPTIONS BELOW	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	S	F1/F2	SEE OPTIONS BELOW	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	15 - 150	H760 * - 040 - †	H761 * - 040 - †	H762 * - 040 - †						
	5 - 50	20 - 190	H760 * - 050 - †	H761 * - 050 - †	H762 * - 050 - †						
1¼" SAE 20	3 - 30	10 - 110	H800 * - 030 - †	H801 * - 030 - †	H802 * - 030 - †	A	B	S	F1/F2	SEE OPTIONS BELOW	MR
	5 - 50	20 - 190	H800 * - 050 - †	H801 * - 050 - †	H802 * - 050 - †						
	10 - 75	40 - 280	H800 * - 075 - †	H801 * - 075 - †	H802 * - 075 - †						
	10 - 100	50 - 380	H800 * - 100 - †	H801 * - 100 - †	H802 * - 100 - †						
	10 - 100	50 - 380	H800 * - 100 - †	H801 * - 100 - †	H802 * - 100 - †						
	10 - 150	50 - 560	H800 * - 150 - †	H801 * - 150 - †	H802 * - 150 - †						
1½" SAE 24	3 - 30	10 - 110	H860 * - 030 - †	H861 * - 030 - †	H862 * - 030 - †	A	B	S	F1/F2	SEE OPTIONS BELOW	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 - †						

ⓁFractional 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: ¼" 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 16. For detailed flow/pressure drop charts, see page 61.



# Flow-Alert™ Flow Switches and Flow Transmitters For Phosphate Ester Fluids

## ORDERING INFORMATION:

NOMINAL PORT SIZE <sup>①</sup>	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
¼" SAE 6	.02 - 0.2	0.1 - 0.75	H294 * - 002 - †	H295 * - 002 - †	H296 * - 002 - †	A	B	6000 PSI S	Not Available	SEE O P T I O N S  B E L O W	Not Available
	.05 - 0.5	0.2 - 1.9	H294 * - 005 - †	H295 * - 005 - †	H296 * - 005 - †						
¼" SAE 6	0.1 - 1.0	0.5 - 3.75	H294 * - 010 - †	H295 * - 010 - †	H296 * - 010 - †	A	B	6000 PSI S	F1/F2		MR
	0.2 - 2.0	1.0 - 7.5	H294 * - 020 - †	H295 * - 020 - †	H296 * - 020 - †						
½" SAE 10	0.1 - 1.0	0.5 - 3.75	H694 * - 001 - †	H695 * - 001 - †	H696 * - 001 - †	A	B	6000 PSI S	F1/F2		MR
	0.2 - 2.0	1 - 7.5	H694 * - 002 - †	H695 * - 002 - †	H696 * - 002 - †						
	0.5 - 5.0	2 - 19	H694 * - 005 - †	H695 * - 005 - †	H696 * - 005 - †						
	1 - 10	5 - 38	H694 * - 010 - †	H695 * - 010 - †	H696 * - 010 - †						
	1 - 15	4 - 56	H694 * - 015 - †	H695 * - 015 - †	H696 * - 015 - †						
¾" SAE 12	0.2 - 2.0	1 - 7.5	H794 * - 002 - †	H795 * - 002 - †	H796 * - 002 - †	A	B	5000 PSI S	F1/F2	MR	
	0.5 - 5.0	2 - 19	H794 * - 005 - †	H795 * - 005 - †	H796 * - 005 - †						
	1 - 10	5 - 38	H794 * - 010 - †	H795 * - 010 - †	H796 * - 010 - †						
	2 - 20	10 - 76	H794 * - 020 - †	H795 * - 020 - †	H796 * - 020 - †						
	3 - 30	10 - 115	H794 * - 030 - †	H795 * - 030 - †	H796 * - 030 - †						
1" SAE 16	0.2 - 2.0	1 - 7.5	H764 * - 002 - †	H765 * - 002 - †	H766 * - 002 - †	A	B	5000 PSI S	F1/F2	MR	
	0.5 - 5.0	2 - 19	H764 * - 005 - †	H765 * - 005 - †	H766 * - 005 - †						
	1 - 10	5 - 38	H764 * - 010 - †	H765 * - 010 - †	H766 * - 010 - †						
	2 - 20	10 - 76	H764 * - 020 - †	H765 * - 020 - †	H766 * - 020 - †						
	3 - 30	10 - 115	H764 * - 030 - †	H765 * - 030 - †	H766 * - 030 - †						
	4 - 40	15 - 150	H764 * - 040 - †	H765 * - 040 - †	H766 * - 040 - †						
	5 - 50	20 - 190	H764 * - 050 - †	H765 * - 050 - †	H766 * - 050 - †						
1¼" SAE 20	3 - 30	10 - 110	H894 * - 030 - †	H895 * - 030 - †	H896 * - 030 - †	A	B	5000 PSI S	F1/F2	MR	
	5 - 50	20 - 190	H894 * - 050 - †	H895 * - 050 - †	H896 * - 050 - †						
	10 - 75	40 - 280	H894 * - 075 - †	H895 * - 075 - †	H896 * - 075 - †						
	10 - 100	50 - 380	H894 * - 100 - †	H895 * - 100 - †	H896 * - 100 - †						
	10 - 150	50 - 560	H894 * - 150 - †	H895 * - 150 - †	H896 * - 150 - †						
1½" SAE 24	3 - 30	10 - 110	H864 * - 030 - †	H865 * - 030 - †	H866 * - 030 - †	A	B	5000 PSI S	F1/F2	MR	
	5 - 50	20 - 190	H864 * - 050 - †	H865 * - 050 - †	H866 * - 050 - †						
	10 - 75	40 - 280	H864 * - 075 - †	H865 * - 075 - †	H866 * - 075 - †						
	10 - 100	50 - 380	H864 * - 100 - †	H865 * - 100 - †	H866 * - 100 - †						
	10 - 150	50 - 560	H864 * - 150 - †	H865 * - 150 - †	H866 * - 150 - †						

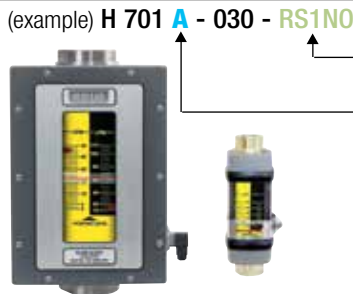
① Fractional sizes apply to NPTF and BSPP.

(example) H 795 **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 795 **A** - 030 - **MR**



### Multiple Output Flow Sensor

3 Standard field selectable outputs

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

**NOTE:** ¼" 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 24. For detailed flow/pressure drop charts, see page 62.

# Flow-Alert™ Flow Switches and Flow Transmitters For Water-based Fluids (Water/Oil Emulsions)

## ORDERING INFORMATION:

NOMINAL PORT SIZE <sup>Ⓞ</sup>	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
¼" SAE 6	.02 - 0.2	0.1 - 0.75	H212 * - 002 - †	H213 * - 002 - †	H214 * - 002 - †	A	B	6000 PSI S	Not Available	SEE OPTIONS BELOW	Not Available
	.05 - 0.5	0.2 - 1.9	H212 * - 005 - †	H213 * - 005 - †	H214 * - 005 - †						
¼" SAE 6	0.1 - 1.0	0.5 - 3.75	H212 * - 010 - †	H213 * - 010 - †	H214 * - 010 - †	A	B	6000 PSI S	F1/F2		MR
	0.2 - 2.0	1.0 - 7.5	H212 * - 020 - †	H213 * - 020 - †	H214 * - 020 - †						
½" SAE 10	0.1 - 1.0	0.5 - 3.75	H612 * - 001 - †	H613 * - 001 - †	H614 * - 001 - †	A	B	6000 PSI S	F1/F2		MR
	0.2 - 2.0	1 - 7.5	H612 * - 002 - †	H613 * - 002 - †	H614 * - 002 - †						
	0.5 - 5.0	2 - 19	H612 * - 005 - †	H613 * - 005 - †	H614 * - 005 - †						
	1 - 10	5 - 38	H612 * - 010 - †	H613 * - 010 - †	H614 * - 010 - †						
	1 - 15	4 - 56	H612 * - 015 - †	H613 * - 015 - †	H614 * - 015 - †						
¾" SAE 12	0.2 - 2.0	1 - 7.5	H712 * - 002 - †	H713 * - 002 - †	H714 * - 002 - †	A	B	5000 PSI S	F1/F2	MR	
	0.5 - 5.0	2 - 19	H712 * - 005 - †	H713 * - 005 - †	H714 * - 005 - †						
	1 - 10	5 - 38	H712 * - 010 - †	H713 * - 010 - †	H714 * - 010 - †						
	2 - 20	10 - 76	H712 * - 020 - †	H713 * - 020 - †	H714 * - 020 - †						
	3 - 30	10 - 115	H712 * - 030 - †	H713 * - 030 - †	H714 * - 030 - †						
1" SAE 16	0.2 - 2.0	1 - 7.5	H782 * - 002 - †	H783 * - 002 - †	H784 * - 002 - †	A	B	5000 PSI S	F1/F2	MR	
	0.5 - 5.0	2 - 19	H782 * - 005 - †	H783 * - 005 - †	H784 * - 005 - †						
	1 - 10	5 - 38	H782 * - 010 - †	H783 * - 010 - †	H784 * - 010 - †						
	2 - 20	10 - 76	H782 * - 020 - †	H783 * - 020 - †	H784 * - 020 - †						
	3 - 30	10 - 115	H782 * - 030 - †	H783 * - 030 - †	H784 * - 030 - †						
	4 - 40	15 - 150	H782 * - 040 - †	H783 * - 040 - †	H784 * - 040 - †						
	5 - 50	20 - 190	H782 * - 050 - †	H783 * - 050 - †	H784 * - 050 - †						
	5 - 50	20 - 190	H782 * - 050 - †	H783 * - 050 - †	H784 * - 050 - †						
1¼" SAE 20	3 - 30	10 - 110	H812 * - 030 - †	H813 * - 030 - †	H814 * - 030 - †	A	B	5000 PSI S	F1/F2	MR	
	5 - 50	20 - 190	H812 * - 050 - †	H813 * - 050 - †	H814 * - 050 - †						
	10 - 75	40 - 280	H812 * - 075 - †	H813 * - 075 - †	H814 * - 075 - †						
	10 - 100	50 - 380	H812 * - 100 - †	H813 * - 100 - †	H814 * - 100 - †						
	10 - 150	50 - 560	H812 * - 150 - †	H813 * - 150 - †	H814 * - 150 - †						
1½" SAE 24	3 - 30	10 - 110	H882 * - 030 - †	H883 * - 030 - †	H884 * - 030 - †	A	B	5000 PSI S	F1/F2	MR	
	5 - 50	20 - 190	H882 * - 050 - †	H883 * - 050 - †	H884 * - 050 - †						
	10 - 75	40 - 280	H882 * - 075 - †	H883 * - 075 - †	H884 * - 075 - †						
	10 - 100	50 - 380	H882 * - 100 - †	H883 * - 100 - †	H884 * - 100 - †						
	10 - 150	50 - 560	H882 * - 150 - †	H883 * - 150 - †	H884 * - 150 - †						

Ⓞ Fractional sizes apply to NPTF and BSPP.

(example) H 713 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 713 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: ¼" 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 32. For detailed flow/pressure drop charts, see page 63.

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

## ORDERING INFORMATION:

NOMINAL PORT SIZE <sup>ⓐ</sup>	FLOW RANGE		MODEL NUMBER (see example below)			MATERIAL		OPTIONS		
	GPM	LPM	SAE	NPTF	BSPP	BRASS 3500 PSI	STAINLESS	Flow-Alert 1 SWITCH / 2 SWITCH	Flow-Alert REED SWITCH	MULTIPLE OUTPUT SENSOR
¼" 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 - †					
¼" SAE 6	0.1 - 1.0	0.5 - 3.75	H204 * - 010 - †	H205 * - 010 - †	H206 * - 010 - †	B	S	6000 PSI	F1/F2	MR
	0.2 - 2.0	1.0 - 7.5	H204 * - 020 - †	H205 * - 020 - †	H206 * - 020 - †					
½" SAE 10	0.1 - 1.0	0.5 - 3.75	H604 * - 001 - †	H605 * - 001 - †	H606 * - 001 - †	B	S	6000 PSI	F1/F2	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 - †					
¾" SAE 12	0.2 - 2.0	1 - 7.5	H704 * - 002 - †	H705 * - 002 - †	H706 * - 002 - †	B	S	5000 PSI	F1/F2	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	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 - †					
1¼" SAE 20	0.2 - 2.0	1 - 7.5	H804 * - 002 - †	H805 * - 002 - †	H806 * - 002 - †	B	S	5000 PSI	F1/F2	MR
	0.5 - 5.0	2 - 19	H804 * - 005 - †	H805 * - 005 - †	H806 * - 005 - †					
	1 - 10	5 - 38	H804 * - 010 - †	H805 * - 010 - †	H806 * - 010 - †					
	2 - 20	10 - 76	H804 * - 020 - †	H805 * - 020 - †	H806 * - 020 - †					
	3 - 30	10 - 115	H804 * - 030 - †	H805 * - 030 - †	H806 * - 030 - †					
1½" SAE 24	0.2 - 2.0	1 - 7.5	H854 * - 002 - †	H855 * - 002 - †	H856 * - 002 - †	B	S	5000 PSI	F1/F2	MR
	0.5 - 5.0	2 - 19	H854 * - 005 - †	H855 * - 005 - †	H856 * - 005 - †					
	1 - 10	5 - 38	H854 * - 010 - †	H855 * - 010 - †	H856 * - 010 - †					
	2 - 20	10 - 76	H854 * - 020 - †	H855 * - 020 - †	H856 * - 020 - †					
	3 - 30	10 - 115	H854 * - 030 - †	H855 * - 030 - †	H856 * - 030 - †					

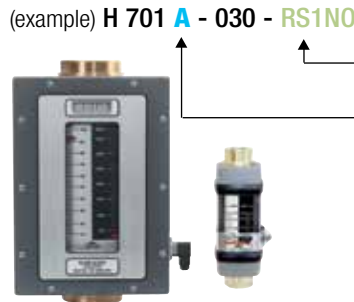
ⓐ Fractional sizes apply to NPTF and BSPP.

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



### Flow-Alert Flow Switches

F1 = Single Switch  
F2 = Double Switch



(example) H 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 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).

NOTE: ¼" 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 36. For detailed flow/pressure drop charts, see page 64.

# Flow-Alert™ Flow Switches and Flow Transmitters For API Oil / Caustic and Corrosive Liquids

## ORDERING INFORMATION:

NOMINAL PORT SIZE	FLOW RANGE		MODEL NUMBER (see example below)				OPTIONS		
	GPM	LPM	API - OIL .876 (S.G.)		LIQUIDS 1.0 (S.G.)		Flow-Alert 1 SWITCH / 2 SWITCH	Flow-Alert REED SWITCH	MULTIPLE OUTPUT SENSOR
			NPTF	BSPF	NPSF	BSPF			
1/4"	0.1 - 1.0	0.5 - 3.75	6000 PSI H231X - 010 - †	6000 PSI H232X - 010 - †	6000 PSI H234X - 010 - †	6000 PSI H235X - 010 - †	Not Available	SEE OPTIONS BELOW	Not Available
1/4"	0.2 - 2.0	1 - 7.5	6000 PSI H231X - 020 - †	6000 PSI H232X - 020 - †	6000 PSI H234X - 020 - †	6000 PSI H235X - 020 - †	F1/F2		MR
1/2"	0.2 - 2.0	1 - 7.5	6000 PSI H631X - 002 - †	6000 PSI H632X - 002 - †	6000 PSI H634X - 002 - †	6000 PSI H635X - 002 - †	F1/F2		MR
	0.5 - 5.0	2 - 19	H631X - 005 - †	H632X - 005 - †	H634X - 005 - †	H635X - 005 - †			
	1 - 10	5 - 38	H631X - 010 - †	H632X - 010 - †	H634X - 010 - †	H635X - 010 - †			
	1 - 15	4 - 56	H631X - 015 - †	H632X - 015 - †	H634X - 015 - †	H635X - 015 - †			
3/4"	0.2 - 2.0	1 - 7.5	5000 PSI H731X - 002 - †	5000 PSI H732X - 002 - †	5000 PSI H734X - 002 - †	5000 PSI H735X - 002 - †	F1/F2		MR
	0.5 - 5.0	2 - 19	H731X - 005 - †	H732X - 005 - †	H734X - 005 - †	H735X - 005 - †			
	1 - 10	5 - 38	H731X - 010 - †	H732X - 010 - †	H734X - 010 - †	H735X - 010 - †			
	2 - 20	10 - 76	H731X - 020 - †	H732X - 020 - †	H734X - 020 - †	H735X - 020 - †			
	3 - 30	10 - 115	H731X - 030 - †	H732X - 030 - †	H734X - 030 - †	H735X - 030 - †			
1"	0.2 - 2.0	1 - 7.5	5000 PSI H741X - 002 - †	5000 PSI H742X - 002 - †	5000 PSI H744X - 002 - †	5000 PSI H745X - 002 - †	F1/F2	MR	
	0.5 - 5.0	2 - 19	H741X - 005 - †	H742X - 005 - †	H744X - 005 - †	H745X - 005 - †			
	1 - 10	5 - 38	H741X - 010 - †	H742X - 010 - †	H744X - 010 - †	H745X - 010 - †			
	2 - 20	10 - 76	H741X - 020 - †	H742X - 020 - †	H744X - 020 - †	H745X - 020 - †			
	3 - 30	10 - 115	H741X - 030 - †	H742X - 030 - †	H744X - 030 - †	H745X - 030 - †			
	4 - 40	15 - 150	H741X - 040 - †	H742X - 040 - †	H744X - 040 - †	H745X - 040 - †			
1 1/4"	3 - 30	10 - 110	5000 PSI H831X - 030 - †	5000 PSI H832X - 030 - †	5000 PSI H834X - 030 - †	5000 PSI H835X - 030 - †	F1/F2	MR	
	5 - 50	20 - 190	H831X - 050 - †	H832X - 050 - †	H834X - 050 - †	H835X - 050 - †			
	10 - 75	40 - 280	H831X - 075 - †	H832X - 075 - †	H834X - 075 - †	H835X - 075 - †			
	10 - 100	50 - 380	H831X - 100 - †	H832X - 100 - †	H834X - 100 - †	H835X - 100 - †			
1 1/2"	3 - 30	10 - 110	5000 PSI H841X - 030 - †	5000 PSI H842X - 030 - †	5000 PSI H844X - 030 - †	5000 PSI H845X - 030 - †	F1/F2	MR	
	5 - 50	20 - 190	H841X - 050 - †	H842X - 050 - †	H844X - 050 - †	H845X - 050 - †			
	10 - 75	40 - 280	H841X - 075 - †	H842X - 075 - †	H844X - 075 - †	H845X - 075 - †			
	10 - 100	50 - 380	H841X - 100 - †	H842X - 100 - †	H844X - 100 - †	H845X - 100 - †			

(example) H 734 X - 030 - F1 or F2



### Flow-Alert Flow Switches

F1 = Single Switch  
F2 = Double Switch

(example) H 734 X - 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 734 X - 030 - MR



### Multiple Output Flow Sensor

3 Standard field selectable outputs  
0-5 VDC  
0-10 VDC  
4-20 mA

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

**NOTE:** 1/4" liquid meters for 0.1-1.0 GPM range available in strap-on design for RS1NO and RS1NC only.

**NOTE:** For 50% and 100% flow/pressure drop information, see page 38. For detailed pressure drop charts, see page 65 for API Oil and page 64 for Water and Other Liquids.

# Flow-Alert™ Flow Switches and Flow Transmitters For Air / Caustic and Corrosive Gases

## ORDERING INFORMATION:

NOMINAL PORT SIZE	FLOW RANGE		MODEL NUMBER (see example below)		OPTIONS		
	SCFM	L/SEC	GASES 1.0 (S.G.)		Flow-Alert 1 SWITCH / 2 SWITCH	Flow-Alert REED SWITCH	MULTIPLE OUTPUT SENSOR
			NPTF	BSPP			
¼"	20-20	1-9	H237X - 020 - †	H238X - 020 - †	Not Available	SEE OPTIONS BELOW	Not Available
	30-30	1.5-14	H237X - 030 - †	H238X - 030 - †			
¼"	3-25	2-12	H237X - 025 - †	H238X - 025 - †	F1/F2	SEE OPTIONS BELOW	MR
	5-50	3-22	H237X - 050 - †	H238X - 050 - †			
½"	3-25	2-12	H637X - 025 - †	H638X - 025 - †	F1/F2	SEE OPTIONS BELOW	MR
	5-50	3-22	H637X - 050 - †	H638X - 050 - †			
	10-100	5-47	H637X - 100 - †	H638X - 100 - †			
	15-150	7-70	H637X - 150 - †	H638X - 150 - †			
¾"	3-25	1.5-11.5	H737X - 025 - †	H738X - 025 - †	F1/F2	SEE OPTIONS BELOW	MR
	5-50	2-23	H737X - 050 - †	H738X - 050 - †			
	10-100	5-47.5	H737X - 100 - †	H738X - 100 - †			
	15-150	7-70	H737X - 150 - †	H738X - 150 - †			
	25-250	10-118	H737X - 250 - †	H738X - 250 - †			
1"	3-25	1.5-11.5	H747X - 025 - †	H748X - 025 - †	F1/F2	SEE OPTIONS BELOW	MR
	5-50	2-23	H747X - 050 - †	H748X - 050 - †			
	10-100	5-47.5	H747X - 100 - †	H748X - 100 - †			
	15-150	7-70	H747X - 150 - †	H748X - 150 - †			
	25-250	10-118	H747X - 250 - †	H748X - 250 - †			
1¼"	20-200	10-95	H837X - 200 - †	H838X - 200 - †	F1/F2	SEE OPTIONS BELOW	MR
	40-400	20-180	H837X - 400 - †	H838X - 400 - †			
	60-600	30-280	H837X - 600 - †	H838X - 600 - †			
	80-800	50-350	H837X - 800 - †	H838X - 800 - †			
1½"	20-200	10-95	H847X - 200 - †	H848X - 200 - †	F1/F2	SEE OPTIONS BELOW	MR
	40-400	20-180	H847X - 400 - †	H848X - 400 - †			
	60-600	30-280	H847X - 600 - †	H848X - 600 - †			
	80-800	50-350	H847X - 800 - †	H848X - 800 - †			

(example) H 737 X - 250 - F1 or F2



### Flow-Alert Flow Switches

F1 = Single Switch  
F2 = Double Switch

(example) H 737 X - 250 - 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 737 X - 250 - MR



### Multiple Output Flow Sensor

3 Standard field selectable outputs

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

**NOTE:** ¼" air meters for 2.0-20 and 3.0-30 SCFM ranges available in strap-on design for RS1NO and RS1NC only.



**CAUTION:** High flow gas shock may decouple indicator.

**NOTE:** For 50% and 100% flow/pressure drop information, see page 40. For detailed flow/pressure drop charts, see page 65.