

# Flow-Alert™ Flow Switches (Reed Switch)

For Liquids / Air and Other Compressed Gases

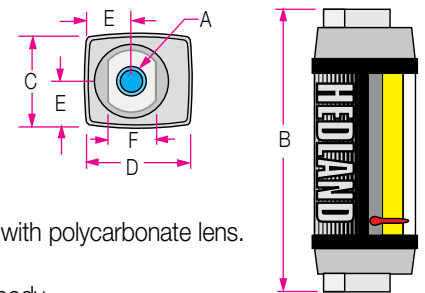


### DIMENSIONS:

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)

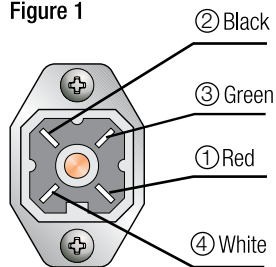
**Fastener:** T303 SS

**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.

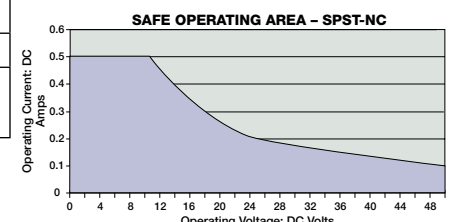
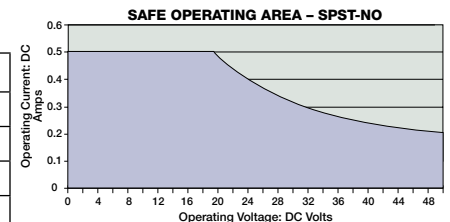
Figure 1



### 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
<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)



**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
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  
Teflon is a registered trademark of E.I. DuPont de Nemours & Co.

# 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  
Inherently isolated from the piping system
- Isolation:**
- 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

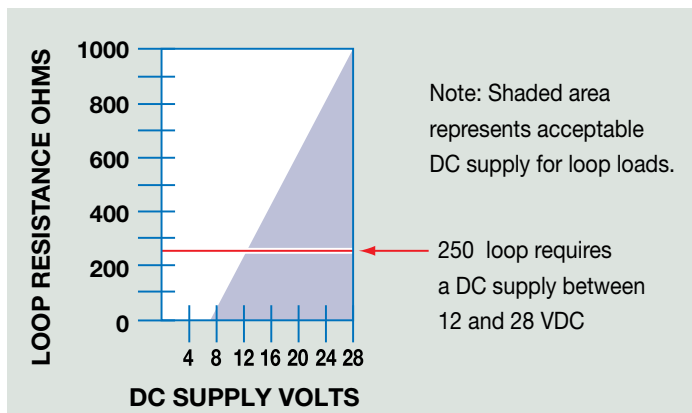
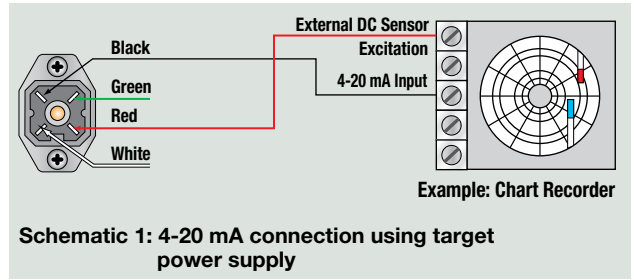


Figure 1. Load Limitations (4-20 mA Output Only)

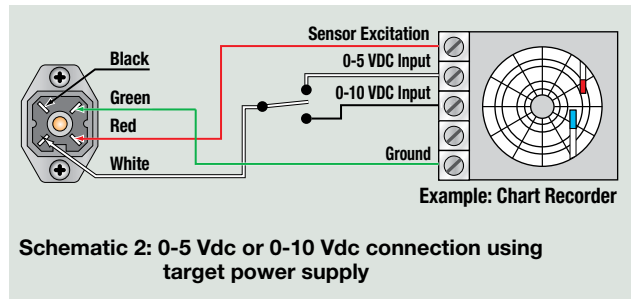
### SCHEMATICS:

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

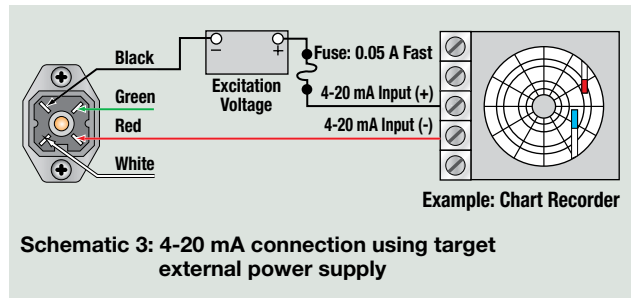
Schematics 1 & 2 represent typical wiring for a target powered by either AC power or DC supply. Schematics 3 & 4 will be utilized when the flow transmitter is operated with loop-powered process indicators or data loggers that do not have external sensor excitation available.



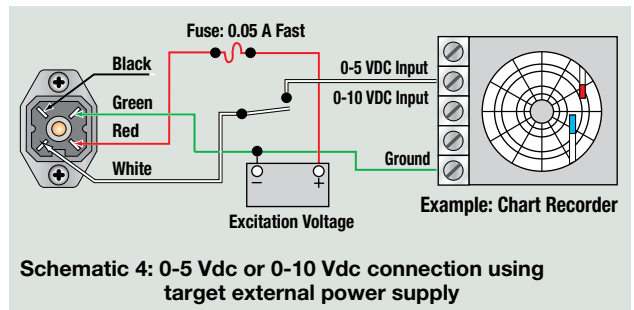
Schematic 1: 4-20 mA connection using target power supply



Schematic 2: 0-5 Vdc or 0-10 Vdc connection using target power supply



Schematic 3: 4-20 mA connection using target external power supply



Schematic 4: 0-5 Vdc or 0-10 Vdc connection using target external power supply

	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
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½ (SAE 10)	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		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		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		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		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		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		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		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 - †						

SEE OPTIONS BELOW

Ⓢ 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		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 - †						

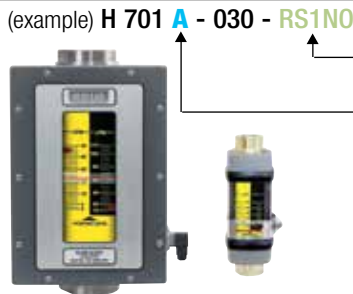
① Fractional sizes apply to NPTF and BSPP.

(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>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	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 - †						

① 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	3 - 30	10 - 110	H804 * - 030 - †	H805 * - 030 - †	H806 * - 030 - †	B	S	5000 PSI	F1/F2	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 - †					
1½" SAE 24	3 - 30	10 - 110	H854 * - 030 - †	H855 * - 030 - †	H856 * - 030 - †	B	S	5000 PSI	F1/F2	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 - †					

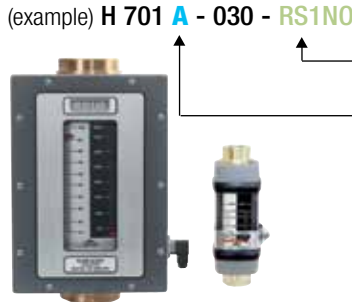
ⓐ Fractional sizes apply to NPTF and BSPP.

(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 O P T I O N S	Not Available
	30-30	1.5-14	H237X - 030 - †	H238X - 030 - †			
¼"	3-25	2-12	H237X - 025 - †	H238X - 025 - †	F1/F2	B E L O W	MR
	5-50	3-22	H237X - 050 - †	H238X - 050 - †			
½"	3-25	2-12	H637X - 025 - †	H638X - 025 - †	F1/F2	B E L O W	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	B E L O W	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	B E L O W	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	B E L O W	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	B E L O W	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)

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

(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).



**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.

# Flow-Alert™ Flow Switches and Flow Transmitters

## For Air / Compressed Gases

### ORDERING INFORMATION:

NOMINAL PORT SIZE <sup>①</sup>	FLOW RANGE		MODEL NUMBER (see example below)			MATERIAL			OPTIONS		
	SCFM	L/SEC	SAE	NPTF	BSPP	ALUMINUM 1000 PSI	BRASS 1000 PSI	STAINLESS 1500 PSI	Flow-Alert 1 SWITCH / 2 SWITCH	Flow-Alert REED SWITCH	MULTIPLE OUTPUT SENSOR
<b>¼"</b> <b>SAE 6</b>	0.5 - 5	0.2 - 2.2	H270 * - 005 - †	H271 * - 005 - †	H272 * - 005 - †	<b>A</b>	<b>B</b>	<b>S</b>	Not Available	<b>SEE OPTIONS BELOW</b>	Not Available
	1 - 10	0.5 - 4.75	H270 * - 010 - †	H271 * - 010 - †	H272 * - 010 - †						
	2 - 20	1 - 9	H270 * - 020 - †	H271 * - 020 - †	H272 * - 020 - †						
	3 - 30	1.5 - 14	H270 * - 030 - †	H271 * - 030 - †	H272 * - 030 - †						
<b>¼"</b> <b>SAE 6</b>	3 - 25	2 - 12	H270 * - 025 - †	H271 * - 025 - †	H272 * - 025 - †	<b>A</b>	<b>B</b>	<b>S</b>	<b>F1/F2</b>		<b>MR</b>
	5 - 50	3 - 22	H270 * - 050 - †	H271 * - 050 - †	H272 * - 050 - †						
<b>½"</b> <b>SAE 10</b>	3 - 25	2 - 12	H670 * - 025 - †	H671 * - 025 - †	H672 * - 025 - †	<b>A</b>	<b>B</b>	<b>S</b>	<b>F1/F2</b>		<b>MR</b>
	5 - 50	3 - 22	H670 * - 050 - †	H671 * - 050 - †	H672 * - 050 - †						
	10 - 100	5 - 47	H670 * - 100 - †	H671 * - 100 - †	H672 * - 100 - †						
	15 - 150	7 - 70	H670 * - 150 - †	H671 * - 150 - †	H672 * - 150 - †						
<b>¾"</b> <b>SAE 12</b>	3 - 25	1.5 - 11.5	H770 * - 025 - †	H771 * - 025 - †	H772 * - 025 - †	<b>A</b>	<b>B</b>	<b>S</b>	<b>F1/F2</b>	<b>MR</b>	
	5 - 50	2 - 23	H770 * - 050 - †	H771 * - 050 - †	H772 * - 050 - †						
	10 - 100	5 - 47.5	H770 * - 100 - †	H771 * - 100 - †	H772 * - 100 - †						
	15 - 150	7 - 70	H770 * - 150 - †	H771 * - 150 - †	H772 * - 150 - †						
	25 - 250	10 - 118	H770 * - 250 - †	H771 * - 250 - †	H772 * - 250 - †						
<b>1"</b> <b>SAE 16</b>	3 - 25	1.5 - 11.5	H790 * - 025 - †	H791 * - 025 - †	H792 * - 025 - †	<b>A</b>	<b>B</b>	<b>S</b>	<b>F1/F2</b>	<b>MR</b>	
	5 - 50	2 - 23	H790 * - 050 - †	H791 * - 050 - †	H792 * - 050 - †						
	10 - 100	5 - 47.5	H790 * - 100 - †	H791 * - 100 - †	H792 * - 100 - †						
	15 - 150	7 - 70	H790 * - 150 - †	H791 * - 150 - †	H792 * - 150 - †						
	25 - 250	10 - 118	H790 * - 250 - †	H791 * - 250 - †	H792 * - 250 - †						
<b>1¼"</b> <b>SAE 20</b>	20 - 200	10 - 95	H870 * - 200 - †	H871 * - 200 - †	H872 * - 200 - †	<b>A</b>	<b>B</b>	<b>S</b>	<b>F1/F2</b>	<b>MR</b>	
	40 - 400	20 - 180	H870 * - 400 - †	H871 * - 400 - †	H872 * - 400 - †						
	60 - 600	30 - 280	H870 * - 600 - †	H871 * - 600 - †	H872 * - 600 - †						
	80 - 800	50 - 350	H870 * - 800 - †	H871 * - 800 - †	H872 * - 800 - †						
	100 - 1000	50 - 475	H870 * - 999 - †	H871 * - 999 - †	H872 * - 999 - †						
<b>1½"</b> <b>SAE 24</b>	20 - 200	10 - 95	H890 * - 200 - †	H891 * - 200 - †	H892 * - 200 - †	<b>A</b>	<b>B</b>	<b>S</b>	<b>F1/F2</b>	<b>MR</b>	
	40 - 400	20 - 180	H890 * - 400 - †	H891 * - 400 - †	H892 * - 400 - †						
	60 - 600	30 - 280	H890 * - 600 - †	H891 * - 600 - †	H892 * - 600 - †						
	80 - 800	50 - 350	H890 * - 800 - †	H891 * - 800 - †	H892 * - 800 - †						
	100 - 1000	50 - 475	H890 * - 999 - †	H891 * - 999 - †	H892 * - 999 - †						

① Fractional sizes apply to NPTF and BSPP.

(example) H 771 **A** - 250 - **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 771 **A** - 250 - **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" air meters for .05-5, 1-10, 2-20 and 3-30 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 66.

# Digital Display

## For Hedland® MR Flow Transmitters

### Applications

- Remote flow meter monitoring
- Totalizing
- Alarm processing
- Process control

### Features

- 5-digit rate display
- 5-digit totalizer with 4-digit overcarry
- Dual inputs, 4-20 mA or 0-10 VDC
- Built-in transmitter power supply
- Three plug-in card slots
- Optional setpoint alarm cards
- AC and DC powered versions
- NEMA 4X/IP65 rated



### Introduction

The F6700/F6750 series digital display with integrated signal processor accepts a 4-20 mA or 0-10 VDC signal from Hedland's MR Flow Transmitters as well as any other 4-20 mA or 0-10 VDC source.

These 5-digit displays can be scaled to most engineering units and are easily programmed using the front panel buttons or available programming software. To meet your specific requirements, each display accepts up to three optional plug-in cards. One card for each of the following function types can be installed in each display:

**Analog Outputs** – A linear DC output signal card will be set up to provide either 4-20 mA, 0-20 mA or 0-10 VDC signals and can be scaled independent of the input range.

**Communications** – Optional plug-in cards to facilitate digital communications include: RS232, RS485, Modbus, Profibus and DeviceNet.

**Setpoint Alarms** – Select from dual FORM-C relays (5 Amp), quad FORM-A relays (3 Amp) or either sinking or sourcing quad open collector logic outputs.

The analog output and communication cards will be installed by the factory at time of order, or they may be installed by the customer at a later date. The setpoint alarm cards are available for customer installation and setup only.

### SPECIFICATIONS:

<b>Display:</b>	5-digit, 0.56" sunlight-readable red LED
<b>Power:</b>	
AC	85 to 250 VAC, 50/60 Hz, 15 VA
DC	11 to 36 VDC, 11 W
<b>A/D Converter:</b>	16-bit resolution
<b>A/D Conversion Rate:</b>	20 readings/sec
<b>Display Update Rate:</b>	1 to 20 updates/sec
<b>Sensor Inputs:</b>	4-20 mA or 0-10 VDC
<b>Transmitter Power:</b>	24 VDC, ±5%, regulated 50 mA maximum
<b>Totalizer Time Base:</b>	Second, minute, hour or day
<b>Total:</b>	9 digits, display alternates between high order and low order readouts
<b>Linearization Data</b>	
<b>Point Pairs:</b>	Selectable from 2 to 16
<b>Operating Temperature:</b>	32 °F to 122 °F (0 °C to 50 °C) (32 °F to 113 °F with all three plug-in cards installed)