

# FLOW RATE ALARMS

Flow Rate Alarm ensures sufficient flows of coolants and lubricants in mobile hydraulic equipment and industrial process control. Field adjustable alarm setting available in single or dual switch.



## TECHNICAL SPECIFICATIONS

### Measuring Accuracy

±2.0% of full scale for oil and water  
±2.5% of full scale in center third of measuring range; ±4% in upper & lower thirds for air and gas

### Repeatability

±1% of full scale

### Flow Measuring Range

0.1-150 GPM (0.5-550 LPM)  
2.0-1300, SCFM (1-600 SLPS)

### Maximum Operating Pressure

#### Liquids

Aluminum and brass monitors:  
3500 PSIG (240 bar)

Stainless steel: 6000 PSIG (410 bar)

#### Air/Gas

Aluminum & brass: 600 PSIG (40 bar)

Stainless steel: 1000 PSIG (69 bar)

### Maximum Operating Temperature

Media: 185 °F (85°C)

Ambient: 185 °F (85°C)

### Standard Calibration Fluids

Oil meters: DTE 25® @ 110°F (43°C), 0.873 sg

Water meters: tap water @ 70°F (21°C), 1.0 sg

Air meters: air @ 70°F (21°C), 1.0 sg and 100 PSIG (6.8 Bar)

### Alarm Switch Dead-band

4% of full scale

### Alarm Switch Contacts

SPDT (dry contact). 10 amps and 1/4 hp, 125 or 250 VAC. 1/2 amp, 125 VDC (regulated); 1/4 amp, 250 VDC (regulated); 3 amps, 125 VAC "L" (lamp load)

### Filtration Requirements

74 micron filter or 200 mesh screen minimum

### Viscosity

Standard viscosities up to 110 cSt. For viscosities between 110 to 430 cSt contact factory.

DTE 25 is a registered trademark of Exxon Mobil.

## BENEFITS

### Field Adjustable Alarm Setting

Only an allen wrench is required to change the flow alarm setting.

### Weather-Tight Construction

Rugged cast aluminum NEMA type 4X enclosure allows installation outdoors and in environments where liquid tight seals are required.

### Simple On/Off Logic

Positive alarm points using dry-contact, SPDT switches, reduce the complexity found in standard rotameter OFF/ON/OFF circuits.

### Pre-Wired with Cable Disconnect

The standard Hirschmann interconnection provides easy installation and maintenance of the Flow Alarm and the system it is a part of.

### Economical Protection

This monitor rapidly pays for itself as it "sounds the alarm" on incorrect pneumatic, lubrication or cooling volumes, protecting expensive equipment and reducing downtime.

## ENCLOSURE MATERIALS OF CONSTRUCTION (NON-WETTED COMPONENTS)

Enclosure & Cover	Painted Aluminum	Painted Aluminum	Painted Aluminum
Seals	Buna-N®	Buna-N	Buna-N
Window	Pyrex®	Pyrex	Pyrex
Din Connector	Polyamide	Polyamide	Polyamide

Buna-N is a registered trademark of Chemische Werke Huls. Pyrex® is a registered trademark of Corning Incorporated.

## FLOW METER MATERIALS OF CONSTRUCTION (WETTED COMPONENTS)

Casing & End Ports	Anodized Aluminum	Brass	Stainless Steel 303
Seals	Buna-N (STD), EPR, FKM or Kalrez®	Buna-N (STD), EPR, FKM or Kalrez	FKM with PTFE backup (STD), Buna-N, EPR or Kalrez
Transfer Magnet	PTFE coated Alnico	PTFE coated Alnico	PTFE coated Alnico
All other internal parts	Stainless Steel	Stainless Steel	Stainless Steel

Kalrez is a registered trademark of DuPont Incorporated.

# FLOW RATE ALARMS

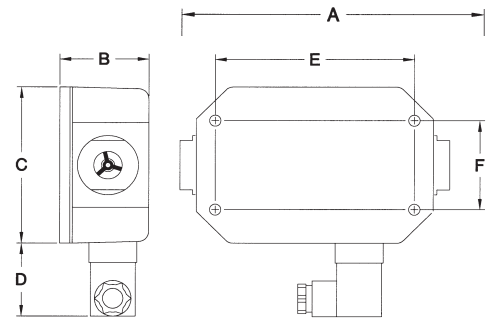
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## PART NUMBER GUIDE

<p><b>METER STYLE</b></p> <p>Flow Alarm = <input type="checkbox"/> M* (1 switch)</p> <p>Flow Alarm = <input type="checkbox"/> N (2 switches)</p> <p><small>*For units which are to switch in the upper 2/3 of scale, add -A247 to end of M style part number</small></p> <p><b>PORT SIZE RANGE</b></p> <p>1/4" - 1/2" = <input type="checkbox"/> 3</p> <p>3/4" - 1" = <input type="checkbox"/> 4</p> <p>1-1/4" - 2" = <input type="checkbox"/> 5</p> <p><b>MATERIAL</b></p> <p>Aluminum = <input type="checkbox"/> A</p> <p>Brass = <input type="checkbox"/> B</p> <p>Stainless Steel = <input type="checkbox"/> S</p> <p><b>MAX. PRESSURE RATING</b></p> <p>600 psig (air &amp; gas, aluminum &amp; brass) = <input type="checkbox"/> 4</p> <p>1000 psig (air &amp; gas, stainless steel) = <input type="checkbox"/> 5</p> <p>3500 psig (liquids, aluminum &amp; brass) = <input type="checkbox"/> 6</p> <p>6000 psig (liquids, stainless steel) = <input type="checkbox"/> 7</p> <p><b>FLUID MEDIA</b></p> <p>Air &amp; Gases = <input type="checkbox"/> A</p> <p>Oil @ 0.873 specific gravity = <input type="checkbox"/> H</p> <p>Water @ 1.0 specific gravity = <input type="checkbox"/> W</p> <p><small>Note: For special scales consult the factory.</small></p>	<p><b>PORTING/THREAD TYPE</b></p> <p>(all female)</p> <table border="0"> <tr><td>1/4" NPTF, dry seal</td><td>3 only</td><td>=</td><td><input type="checkbox"/> S</td></tr> <tr><td>3/8" NPTF, dry seal</td><td>3 only</td><td>=</td><td><input type="checkbox"/> A</td></tr> <tr><td>1/2" NPTF, dry seal</td><td>3 only</td><td>=</td><td><input type="checkbox"/> B</td></tr> <tr><td>3/4" NPTF, dry seal</td><td>4 only</td><td>=</td><td><input type="checkbox"/> C</td></tr> <tr><td>1" NPTF, dry seal</td><td>4 only</td><td>=</td><td><input type="checkbox"/> D</td></tr> <tr><td>#6 SAE, O-ring seal</td><td>3 only</td><td>=</td><td><input type="checkbox"/> E</td></tr> <tr><td>#8 SAE, O-ring seal</td><td>3 only</td><td>=</td><td><input type="checkbox"/> F</td></tr> <tr><td>#10 SAE, O-ring seal</td><td>3 only</td><td>=</td><td><input type="checkbox"/> G</td></tr> <tr><td>#12 SAE, O-ring seal</td><td>4 only</td><td>=</td><td><input type="checkbox"/> H</td></tr> <tr><td>#16 SAE, O-ring seal</td><td>4 only</td><td>=</td><td><input type="checkbox"/> J</td></tr> <tr><td>1-1/4" NPTF, dry seal</td><td>5 only</td><td>=</td><td><input type="checkbox"/> K</td></tr> <tr><td>1-1/2" NPTF, dry seal</td><td>5 only</td><td>=</td><td><input type="checkbox"/> L</td></tr> <tr><td>2" NPTF, dry seal</td><td>5 only</td><td>=</td><td><input type="checkbox"/> M</td></tr> <tr><td>#20 SAE, O-ring seal</td><td>5 only</td><td>=</td><td><input type="checkbox"/> N</td></tr> <tr><td>#24 SAE, O-ring seal</td><td>5 only</td><td>=</td><td><input type="checkbox"/> P</td></tr> <tr><td>#32 SAE, O-ring seal</td><td>5 only</td><td>=</td><td><input type="checkbox"/> Q</td></tr> <tr><td>1/4" BSPP</td><td>3 only</td><td>=</td><td><input type="checkbox"/> 8</td></tr> <tr><td>3/8" BSPP</td><td>3 only</td><td>=</td><td><input type="checkbox"/> R</td></tr> <tr><td>1/2" BSPP</td><td>3 only</td><td>=</td><td><input type="checkbox"/> T</td></tr> <tr><td>3/4" BSPP</td><td>4 only</td><td>=</td><td><input type="checkbox"/> U</td></tr> <tr><td>1" BSPP</td><td>4 only</td><td>=</td><td><input type="checkbox"/> V</td></tr> <tr><td>1-1/4" BSPP</td><td>5 only</td><td>=</td><td><input type="checkbox"/> W</td></tr> <tr><td>1-1/2" BSPP</td><td>5 only</td><td>=</td><td><input type="checkbox"/> Y</td></tr> <tr><td>2" BSPP</td><td>5 only</td><td>=</td><td><input type="checkbox"/> X</td></tr> </table> <p><small>Note: SAE porting not available in Brass.</small></p>	1/4" NPTF, dry seal	3 only	=	<input type="checkbox"/> S	3/8" NPTF, dry seal	3 only	=	<input type="checkbox"/> A	1/2" NPTF, dry seal	3 only	=	<input type="checkbox"/> B	3/4" NPTF, dry seal	4 only	=	<input type="checkbox"/> C	1" NPTF, dry seal	4 only	=	<input type="checkbox"/> D	#6 SAE, O-ring seal	3 only	=	<input type="checkbox"/> E	#8 SAE, O-ring seal	3 only	=	<input type="checkbox"/> F	#10 SAE, O-ring seal	3 only	=	<input type="checkbox"/> G	#12 SAE, O-ring seal	4 only	=	<input type="checkbox"/> H	#16 SAE, O-ring seal	4 only	=	<input type="checkbox"/> J	1-1/4" NPTF, dry seal	5 only	=	<input type="checkbox"/> K	1-1/2" NPTF, dry seal	5 only	=	<input type="checkbox"/> L	2" NPTF, dry seal	5 only	=	<input type="checkbox"/> M	#20 SAE, O-ring seal	5 only	=	<input type="checkbox"/> N	#24 SAE, O-ring seal	5 only	=	<input type="checkbox"/> P	#32 SAE, O-ring seal	5 only	=	<input type="checkbox"/> Q	1/4" BSPP	3 only	=	<input type="checkbox"/> 8	3/8" BSPP	3 only	=	<input type="checkbox"/> R	1/2" BSPP	3 only	=	<input type="checkbox"/> T	3/4" BSPP	4 only	=	<input type="checkbox"/> U	1" BSPP	4 only	=	<input type="checkbox"/> V	1-1/4" BSPP	5 only	=	<input type="checkbox"/> W	1-1/2" BSPP	5 only	=	<input type="checkbox"/> Y	2" BSPP	5 only	=	<input type="checkbox"/> X	<p><b>SPECIAL SCALE/CUSTOM PRODUCT</b></p> <p><b>OPTIONAL FLOW DIRECTIONS</b></p> <p>Standard Flow, Uni-Directional = <input type="checkbox"/> <input type="checkbox"/></p> <p>Reverse Flow = <input type="checkbox"/> R <input type="checkbox"/> F</p> <p><b>FLOW RANGES</b></p> <table border="0"> <thead> <tr> <th>Liquid</th> <th>Air</th> <th>Size</th> <th>=</th> <th><input type="checkbox"/></th> <th><input type="checkbox"/></th> </tr> </thead> <tbody> <tr><td>0.1-1.0 GPM</td><td>2.0-12 SCFM</td><td>3 only</td><td>=</td><td><input type="checkbox"/> 0</td><td><input type="checkbox"/> 1</td></tr> <tr><td>0.2-2.0 GPM</td><td>4-23 SCFM</td><td>3 &amp; 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## MECHANICAL - SIZE CODE

DIM	Series 3	Series 4	Series 5	Series 5 (2" port only)
A	6-9/16" (167mm)	7-5/32" (182mm)	10-1/8" (258mm)	12-5/8" (322mm)
B	2-3/16" (56mm)	2-15/16" (75mm)	3-13/16" (97mm)	3-13/16" (97mm)
C	4" (101mm)	4-1/2" (114mm)	5-5/16" (135mm)	5-5/16" (135mm)
D	1-7/8" (47mm)	1-7/8" (47mm)	1-7/8" (47mm)	1-7/8" (47mm)
E	4-7/8" (128mm)	5" (127mm)	6-3/4" (172mm)	6-3/4" (172mm)
F	2-1/4" (57mm)	2-7/8" (73mm)	3-3/4" (95mm)	3-3/4" (95mm)



Products may be subject to change without notice - Contact factory for the most up-to-date product information.