

M & N Series Flow Rate Alarms



TECHNICAL SPECIFICATIONS

Measuring Accuracy
±2.0% of full scale

Repeatability
±1% of full scale

Flow Measuring Range
0.5-550 LPM
2.0-1300 SCFM, 1-600 SLPS

Maximum Operating Pressure
Liquids
Aluminum and brass monitors:
240 Bar, Stainless steel: 414 Bar

Air/Gas
Aluminum and brass: 40 Bar
Stainless steel: 69 Bar

Maximum Operating Temperature
Media: 85 °C
Ambient: 85 °C

Standard Calibration Fluids
Oil meters: DTE 25® @ 43°C, 0.873 sg
Water meters: tap water @ 21°C, 1.0 sg
Air meters: air @ 21°C, 1.0 sg and 6.8 Bar

Alarm Switch Dead-band
4% of full scale

Alarm Switch Contacts
SPDT (dry contact) 10 amps, 125 or 250 VAC. 1/2 amp, 125 VDC (regulated)

Filtration Requirements
74 micron filter or 200 mesh screen minimum

Viscosity
Standard viscosities up to 110 cSt.

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)

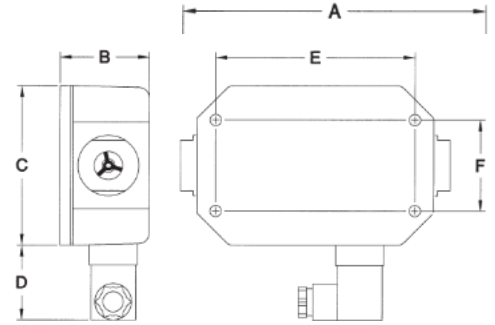
| | | | |
|-------------------|------------------------------|-----------|------------------|
| Enclosure & Cover | Painted Aluminum Aluminum | Painted | Painted Aluminum |
| Seals | Buna-N® | Buna-N® | Buna-N® |
| Window | Pyrex® | Pyrex® | Pyrex® |
| Din Connector | Polyamide | Polyamide | |

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 | PTFEcoated Alnico Alnico | PTFEcoated Alnico | PTFEcoated |
| All other internal parts | Stainless Steel | Stainless Steel | Stainless Steel |

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" (135 mm) | 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) |



PART NUMBER GUIDE

- - -

METER STYLE

Flow Alarm = **M** (1 switch)

Flow Alarm = **N** (2 switches)

*For uniswitch are to switch in the upper 2/3 of scale, add -A247 to end of M style part number

PORT SIZE

1/4" - 1/2" = **3**

3/4" - 1" = **4**

1-1/4" - 2" = **5**

MATERIAL

Aluminum = **A**

Brass = **B**

Stainless Steel = **S**

MAX. PRESSURE

40 Bar (air & gas, aluminum & brass) = **4**

69 Bar (air & gas, stainless steel) = **5**

241 Bar (liquids, aluminum & brass) = **6**

414 Bar (liquids, stainless steel) = **7**

FLUID MEDIA

Air & Gases = **A**

Oil @ 0.873 SG = **H**

Water @ 1.0 SG = **W**

PORTING/THREAD TYPE

(all female)

| Size | 3 only | 4 only | 5 only |
|----------------------|-----------------------------------|--------|--------|
| 1/4" NPTF | <input type="text"/> S | | |
| 3/8" NPTF | <input type="text"/> A | | |
| 1/2" NPTF | <input type="text"/> B | | |
| 3/4" NPTF | <input type="text"/> C | | |
| 1" NPTF | <input type="text"/> D | | |
| #6 SAE, O-ring seal | <input type="text"/> E | | |
| #8 SAE, O-ring seal | <input type="text"/> F | | |
| #10 SAE, O-ring seal | <input type="text"/> G | | |
| #12 SAE, O-ring seal | <input type="text"/> H | | |
| #16 SAE, O-ring seal | <input type="text"/> J | | |
| 1-1/4" NPTF | <input type="text"/> K | | |
| 1-1/2" NPTF | <input type="text"/> L | | |
| 2" NPTF | <input type="text"/> M | | |
| #20 SAE, O-ring seal | <input type="text"/> N | | |
| #24 SAE, O-ring seal | <input type="text"/> P | | |
| #32 SAE, O-ring seal | <input type="text"/> Q | | |
| 1/4 BSPP | <input type="text"/> & | | |
| 3/8" BSPP | <input type="text"/> R | | |
| 1/2" BSPP | <input type="text"/> T | | |
| 3/4" BSPP | <input type="text"/> U | | |
| 1" BSPP | <input type="text"/> V | | |
| 1-1/4" BSPP | <input type="text"/> W | | |
| 1-1/2" BSPP | <input type="text"/> Y | | |
| 2" BSPP | <input type="text"/> X | | |

SPECIAL SCALE/CUSTOM PRODUCT

OPTIONAL FLOW DIRECTIONS

Standard Flow, Uni-Directional =

Reverse Flow =

FLOW RANGES

| Water/ Oil | Air | Size |
|-------------|---------------|--|
| 0.5-4 LPM | 2.0-12 SCFM | 3 only = <input type="text"/> 0 <input type="text"/> 1 |
| 1-8 LPM | 4-23 SCFM | 3 & 4 = <input type="text"/> 0 <input type="text"/> 2 |
| 2-19 LPM | 5-50 SCFM | 3 & 4 = <input type="text"/> 0 <input type="text"/> 5 |
| 5-37.5 LPM | 10-100 SCFM | 3 & 4 = <input type="text"/> 1 <input type="text"/> 0 |
| 5-55 LPM | 25-150 SCFM | 3 & 4 = <input type="text"/> 1 <input type="text"/> 5 |
| 10-75 LPM | 20-215 SCFM | 4 only = <input type="text"/> 2 <input type="text"/> 0 |
| 10-95 LPM | 20-250 SCFM | 4 & 5 = <input type="text"/> 2 <input type="text"/> 5 |
| 15-115 LPM | 30-330 SCFM | 4 only = <input type="text"/> 3 <input type="text"/> 0 |
| 20-150 LPM | 30-400 SCFM | 4 only = <input type="text"/> 4 <input type="text"/> 0 |
| 20-190 LPM | 40-500 SCFM | 4 only = <input type="text"/> 5 <input type="text"/> 0 |
| 30-280 LPM | 30-750 SCFM | 5 only = <input type="text"/> 7 <input type="text"/> 5 |
| 50-375 LPM | 150-900 SCFM | 5 only = <input type="text"/> 8 <input type="text"/> 8 |
| 100-550 LPM | 150-1300 SCFM | 5 only = <input type="text"/> 9 <input type="text"/> 9 |

Note: SAE porting not available in Brass.