Поршневые переключатели потока FS

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81

Казахстан +(727)345-47-04

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47

Беларусь +(375)257-127-884

Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Саранск (8342)22-96-24 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35 Сыктывкар (8212)25-95-17 Тамбов (4752)50-40-97 Тверь (4822)63-31-35

Узбекистан +998(71)205-18-59

Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93

Киргизия +996(312)96-26-47

эл.почта: gsx@nt-rt.ru || сайт: https://gems.nt-rt.ru/

FS-150 Series – Straight Flow Path with Low Pressure Drop

Flow Rate Settings: Liquids: 0.5 GPM to 5 GPM

Port Size: 1/2" NPT

Primary Construction Material: Polypropylene

Setting Type: Fixed

These slim, inline switches reduce pressure drop to a minimum. They incorporate a unique, dual-diameter, internal bore and piston configuration to minimize flow constriction. Liquids are able to smoothly pass around the piston and flow through the switch with little pressure loss to the down stream line.

Specifications

| Wetted Materials Housing | Polypropylene, Hydrolytically Stable, Glass Reinforced | | |
|-----------------------------|---|--|--|
| Piston | Ryton® -R4, 316 Stainless Steel | | |
| O-Ring | Viton® | | |
| Spring | 316 Stainless Steel | | |
| Operating Pressure, Maximum | 200 PSIG (13.8 bar) @+70°F to +150°F (+21.1°C to 65.5°C) 150 PSIG (10.3 bar) @+150°F to +212°F (+65.5°C to +100°C) | | |
| Operating Temperature | 0°F to 212°F (-17.8°C to +100°C) | | |
| Set Point Accuracy | ±15% | | |
| Set Point Differential | 20% Maximum | | |
| Switch* | SPST, 20 VA | | |
| Inlet/Outlet Ports | 1/2" NPT Male | | |
| Electrical Termination | 1/4" Male Quick Connect Terminals (2) | | |

^{*}See "Electrical Data" on Page X-5 for more information.

How To Order - Standard Models

Specify Part Number based on flow setting and switch operation.

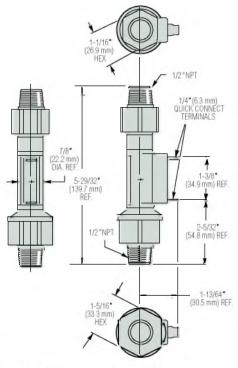
| Flow Settings | Part Numbers | | | |
|---------------|-------------------------|---------------------------|--|--|
| GPM | Normally Open @ No Flow | Normally Closed @ No Flow | | |
| 0.5 | 129660∱ | 129666 | | |
| 1.0 | 129661∱ | 129667 | | |
| 2.0 | 129662≠ | 129668 | | |
| 3.0 | 129663 | 129669 | | |
| 4.0 | 129664 | 129670 | | |
| 5.0 | 129665 | 129671 | | |

- 1. Flow settings are calibrated using water @ +70°F on increasing flow, with units in a horizontal position (terminals up).
- 2. Care should be taken by specifiers to ensure fluid compatibility with the above listed wetted materials.
- 3. Use of 150 micron filtration is recommended.

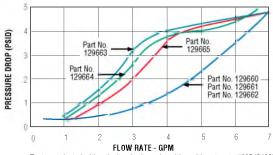




Dimensions



Note: Cable output available. Please consult factory.



Tests conducted with units in a horizontal position with water at +70°F (21°C). Data will vary slightly for vertically mounted units.



FS-10798 Series – Externally Adjustable for Water, Oils and Gases

Flow Rate Settings: Liquids: Infinite Adjustment between 0.5 GPM and

20.0 GPM

Air/Gases: See Gas Flow Adjustment Ranges below

Port Size: 1/2" NPT

Primary Construction Material: Brass or Stainless Steel

Setting Type: Adjustable

These externally adjustable switches are ideal for protecting machine tools from coolant flow failure, for protecting bearings from loss of lubricant or to assure proper air flow. They offer an infinite number of flow settings at pressures up to 1000 PSIG, with low pressure drop and precise repeatability.

The adjusting vane is easily field adjustable using an ordinary flat-bladed screwdriver. The adjustment is set-screw-locked for tamper-free operation after field calibration.

Specifications

| Wetted Materials | | | | |
|----------------------------|---|--|--|--|
| Housing | Brass or 316 Stainless Steel | | | |
| Piston | | | | |
| In Brass Housing | Polysulfone for water; Brass for oil or air | | | |
| In Stainless Steel Housing | 316 Stainless Steel Only | | | |
| Spring | 316 Stainless Steel | | | |
| 0-Ring | Viton® | | | |
| Other Wetted Parts | Ероху | | | |
| Pressure Rating | | | | |
| Operating | 1000 PSIG (69 bar) | | | |
| Proof | 2500 PSIG (172 bar) | | | |
| Burst | 5000 PSIG (345 bar) | | | |
| Operating Temperature | | | | |
| With Brass or S.S. Piston | -20°F to +300°F (-29°C to +148.9°C) | | | |
| With Polysulfone Piston | -20°F to +225°F (-29°C to +107.2°C) | | | |
| Repeatability | 1% Maximum Deviation | | | |
| Set Point Accuracy | ±10% Maximum | | | |
| Set Point Differential | 15% Maximum | | | |
| Switch* | SPDT, 20 VA | | | |
| Inlet/Outlet Ports | 1/2″ NPT | | | |
| Electrical Termination | No. 18 AWG, 24" L., Polymeric Lead Wires | | | |

^{*}See "Electrical Data" on Page X-5 for more Information.

Air/Gas Flow Adjustment Ranges

Water or oil flow units should not be utilized for air/gas applications. The FS-10798 Gas Flow configuration utilizes a special dash-pot piston for reliability. The flow adjustment ranges are typical for air service. For other gases, the flow range will vary with the density of the gas. Please consult factory for more information.

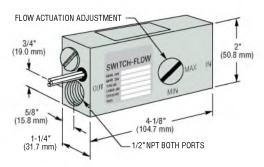
| For 5 PSIG Line* | 1 to 75 SCFM Approx. |
|-------------------|-----------------------|
| For 100 PSIG Line | 3 to 160 SCFM Approx. |

^{*} Minimum 5 PSI line pressure required.

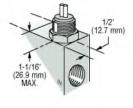


Dimensions

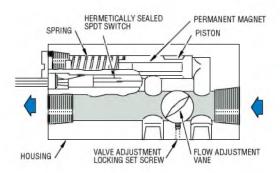
With Wire Leads and Strain Relief

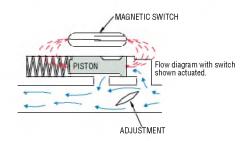


With 1/2" NPT Conduit Connector



How It Works





An externally rotatable vane is positioned in the main flow path within the unit. The magnet carrier piston is located in a bypass flow chamber. Pressure differential, caused by flow around the adjusting vane, displaces the spring-biased piston which actuates a hermetically sealed SPDT reed switch within the unit.

How To Order - Standard Models

Specify Part Number based on desired media, piston material and electrical termination.

| | Materials | | Part Numbers | | |
|---------|---------------------|-------------------------|--------------|----------------------|--|
| Media | | | With Lead | With 1/2" Conduit | |
| | Housing | Piston | Wires | Connector | |
| | Brass Liquids | Brass (for Oils) | 61205 | 49073 🗲 | |
| Liquids | | Polysulfone (for Water) | 25357 🗲 | 25363 🗲 | |
| | 3 | 316 Stainless Steel | 25358 | 25364 🗲 | |
| Canas | Brass | | 25359 🗲 | 25365 🗲 | |
| Gases | 316 Stainless Steel | | 25360 | 25366 | |

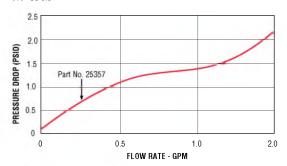
Notes:

- Temperature changes will slightly affect the standard water or gas flow settings listed.
 Oil flow settings will vary with temperature and viscosity.
- 2. Use of 50 micron filtration is recommended.

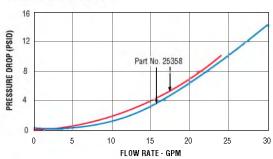


Pressure Drop - Typical

0.5 GPM



10 GPM and 20 GPM



Tests conducted with units in horizontal position with water at +70°F (21°C). Data will vary slightly for vertically mounted units.

FS-10798 switches are U.L. Approved for Class I, Division 2, Groups A, B, C, D hazardous locations. U.L. Approved — File No. E183854

Standard Wiring Color Code

| Wire Color | Terminal |
|------------|----------|
| Orange | N.O. |
| Black | Common |
| Red | N.C. |



FS-380 Series - Compact Flow Switch for High Inline Pressures

Flow Rate Settings: 0.15 GPM to 2.00 GPM

Port Size: Multiple

Primary Construction Material: Brass or Stainless Steel

Setting Type: Fixed

These rugged inline flow switches require 100 micron filtration and are less susceptible to clogging than other high-pressure inline flow switches. The onepiece magnetic PPS composite piston makes the FS-380 ideal for high-pressure applications such as industrial cleaning equipment. The FS-380 is also an excellent choice for semicon cooling applications where simple design and reliable operation are required.

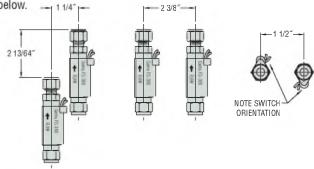
Specifications

| Wetted Materials Housing | Brass or 316 Stainless Steel |
|-----------------------------|---|
| Piston | PPS Composite, Epoxy |
| Spring | 316 Stainless Steel |
| O-Ring | Fluorocarbon |
| Operating Pressure, Maximum | 1500 PSI (107 bar); 500 PSI (34 bar) for 1/2" Barb Models |
| Operating Temperature | -20°F to +275°F (-28.8°C to +135°C) |
| Set Point Accuracy | ±20% Maximum |
| Set Point Differential | 20% Maximum |
| Switch* | SPST, 20VA, N.O. at no Flow |
| Electrical Termination | No. 22 AWG, 24" to 26" Polymeric leads |

^{*}See "Electrical Data" on Page X-5 for more Information.

Spacing

To prevent sensor to sensor magnetic field interference, follow the spacing guidelines below.



How To Order - Standard Models

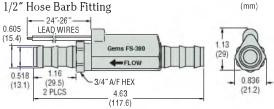
Specify Part Number based on flow settings.

| Flow Brass | | Stainless Steel | | | | |
|------------------------------|------------------|--|----------|--------|-----------|--------|
| Settings GPM ¹ | 1/2" NPT Male | 3/8" NPT 3/8" NPT 1/4" 3/8" Male Male Compression Compress | | _, _ | 1/2″ Barb | |
| 0.15 | _ | 181130 🗲 | 193482 🗲 | 259118 | 212136 | 239693 |
| 0.25 | 192562 🗲 | 168432 🗲 | 179992 🗲 | 259119 | 177592 🗲 | 239692 |
| 0.50 | 192563 | 168433 🗲 | 179993 🗲 | 259121 | 177593 | 239691 |
| 1.00 | 192564 🗲 | 168434 🗲 | 179994 🗲 | 259122 | 177594 🗲 | 239690 |
| 1.50 | 192566 | 168435 | 179995 🗲 | _ | 177595 🗲 | 239689 |
| 2.00 | 192567 | 178353 🗲 | 179996 | _ | 225525 | 239688 |

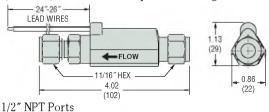
⁻ Stock Items.

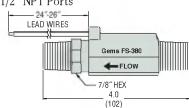


1/2" Hose Barb Fitting

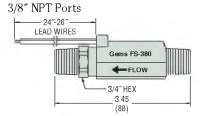


1/4" and 3/8" Tube End Compression Fitting

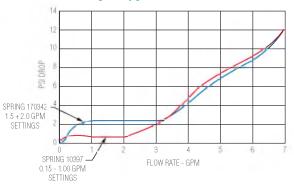












Flow settings are calibrated using water @ 70°F on increasing flow with units in horizontal position. Consult factory for other fluid compatibility.



FS-380 Series - Compact Flow Switch for High Inline Pressures

Flow Rate Settings: 0.15 GPM to 2.00 GPM

Port Size: Multiple

Primary Construction Material: Brass or Stainless Steel

Setting Type: Fixed

These rugged inline flow switches require 100 micron filtration and are less susceptible to clogging than other high-pressure inline flow switches. The onepiece magnetic PPS composite piston makes the FS-380 ideal for high-pressure applications such as industrial cleaning equipment. The FS-380 is also an excellent choice for semicon cooling applications where simple design and reliable operation are required.

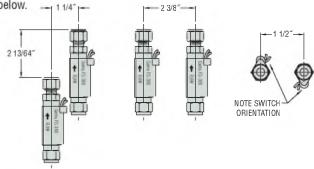
Specifications

| Wetted Materials Housing | Brass or 316 Stainless Steel |
|-----------------------------|---|
| Piston | PPS Composite, Epoxy |
| Spring | 316 Stainless Steel |
| O-Ring | Fluorocarbon |
| Operating Pressure, Maximum | 1500 PSI (107 bar); 500 PSI (34 bar) for 1/2" Barb Models |
| Operating Temperature | -20°F to +275°F (-28.8°C to +135°C) |
| Set Point Accuracy | ±20% Maximum |
| Set Point Differential | 20% Maximum |
| Switch* | SPST, 20VA, N.O. at no Flow |
| Electrical Termination | No. 22 AWG, 24" to 26" Polymeric leads |

^{*}See "Electrical Data" on Page X-5 for more Information.

Spacing

To prevent sensor to sensor magnetic field interference, follow the spacing guidelines below.



How To Order - Standard Models

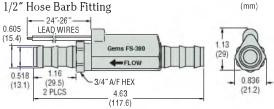
Specify Part Number based on flow settings.

| Flow Brass | | Stainless Steel | | | | |
|------------------------------|------------------|--|----------|--------|-----------|--------|
| Settings GPM ¹ | 1/2" NPT Male | 3/8" NPT 3/8" NPT 1/4" 3/8" Male Male Compression Compress | | _, _ | 1/2″ Barb | |
| 0.15 | _ | 181130 🗲 | 193482 🗲 | 259118 | 212136 | 239693 |
| 0.25 | 192562 🗲 | 168432 🗲 | 179992 🗲 | 259119 | 177592 🗲 | 239692 |
| 0.50 | 192563 | 168433 🗲 | 179993 🗲 | 259121 | 177593 | 239691 |
| 1.00 | 192564 🗲 | 168434 🗲 | 179994 🗲 | 259122 | 177594 🗲 | 239690 |
| 1.50 | 192566 | 168435 | 179995 🗲 | _ | 177595 🗲 | 239689 |
| 2.00 | 192567 | 178353 🗲 | 179996 | _ | 225525 | 239688 |

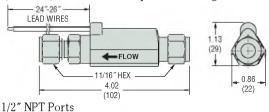
⁻ Stock Items.

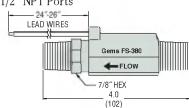


1/2" Hose Barb Fitting

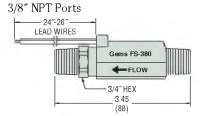


1/4" and 3/8" Tube End Compression Fitting

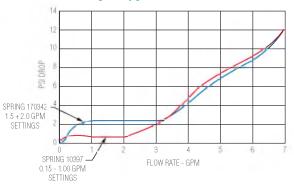












Flow settings are calibrated using water @ 70°F on increasing flow with units in horizontal position. Consult factory for other fluid compatibility.



FS-4 Series – Low Cost, Molded Plastic Construction

Flow Rate Settings: 0.1 GPM to 1.5 GPM

Port Size: 9/16"-18 UNF

Primary Construction Material: Ryton®

Setting Type: Fixed

The FS-4 Series makes flow protection economical for a broad range of industrial applications such as welders, lubrication systems, medical sterilizers and laundry

chemicals dispensing.

Specifications

| Wetted Materials Housing and Piston | Ryton® R4 |
|--|--|
| Spring | 316 Stainless Steel |
| O-Ring | Viton® |
| Other Wetted Parts | Ероху |
| Operating Pressure, Maximum | 250 PSIG (17.2 bar) @ 70°F (21°C) |
| Operating Temperature | 0°F to 225°F (-17°C to +107°C) |
| Set Point Accuracy | ±15% Maximum |
| Set Point Differential | 20% Maximum |
| Switch* | SPST or SPDT, 20 VA (SPDT: 240 VAC Max.) |
| Inlet/Outlet Ports | 9/16″-18 UNF-2B Thread |
| Recommended Filtration | 50 Microns or Better |
| Electrical Termination SPST | 18 AWG, Zipcord, 24" Long |
| SPDT | 18 AWG, PVC 24"Long Leads |
| | |

^{*} See "Electrical Data" on Page X-5 for more Information.

How To Order - Standard Models

| Housing | Flow | Part Numbers | | | |
|------------|---------|---------------|---------------|-------------|--|
| and Piston | Setting | SPST | With | | |
| Material | GPM | N.O., No Flow | N.C., No Flow | SPDT Switch | |
| | 0.1 | 122340 🗲 | 122346 | 122352 🗲 | |
| | 0.25 | 122341 🗲 | 122347 | 122353 🗲 | |
| Dyton® | 0.5 | 122342 | 122348 | 122354 | |
| Ryton® | 0.75 | 122343 | 122349 | 122355 | |
| | 1.0 | 122344 | 122350 | 122356 | |
| | 1.5 | 122345 | 122351 | 122357 🗲 | |

Note:

Flow settings are calibrated using water @ +70°F on increasing flow, with units in a vertical position (lead wires up).

Port Adapters for FS-4

Converts 9/16" threaded ports to NPT or barbed connection. Made of Ryton®-R4 or polypropylene with O-Rings in place.

CAUTION: Do not exceed 15 in./lbs. maximum torque when installing adapter fittings.

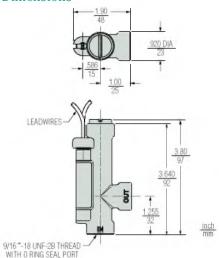
| Material | Adapter Size | Part Numbers |
|---------------|--------------|--------------|
| Ryton® | 1/8" NPT* | 123028 🗲 |
| | 1/4" NPT* | 123029 🗲 |
| Polypropylene | 1/4" NPT* | 158602 🗲 |
| | 1/2″ Barb** | 158603 🗲 |

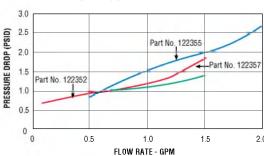
- *Wrench flats provide for proper assembly.
- **Accepts 1/2"I.D. flexible hose



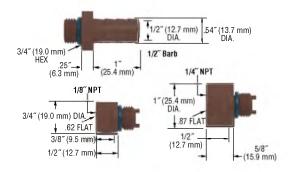


Dimensions





Tests conducted with units in vertical position (lead wires up) with water at +70 F (21 C)





FS-480 Series – Stainless Steel Flow Switch for Large Flow, Low Pressure Drop

Flow Rate Settings: 0.50 GPM to 3.00 GPM

Port Size: 1/2"NPT, 3/4"NPT, 1/2"Tube Compression Fitting

Primary Construction Material: 316 Stainless Steel

Setting Type: Fixed

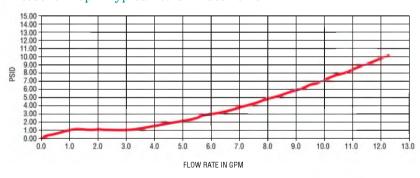
The FS-480 large-body inline flow switch delivers ample flow rates with minimal pressure drop. 25% larger than its FS-380 sibling, the FS-480 is ideal for processes that push more fluid through their systems and demand low pressure drops. Designed to accommodate the Semiconductor Industry's move to larger 300 mm wafer and cross-over equipment, this switch is also perfect for critical medical equipment applications. A glass-reinforced PPS piston and forged 316 stainless steel body make this sensor rugged enough for high pressure lubrication and cooling systems as well. This simple, yet meticulously perfected design provides the reliability required in critical applications while allowing for much lower pressure drop rates than other available switches.

Specifications

| Wetted Materials Housing/End Fitting | 316 Stainless Steel |
|---|--|
| Piston | PPS, Epoxy |
| | , , , |
| Spring | 316 Stainless Steel |
| O-Ring | Fluorocarbon |
| Operating Pressure, Maximum | 1000 PSI (69 bar) |
| Operating Temperature | -20°F to +250°F (-28.8°C to +121°C) |
| Set Point Accuracy | ±20% Maximum |
| Set Point Differential | 20% Maximum |
| Recommended Filtration | 100 Micron or better |
| Switch* | SPST, 20VA, 120/240 VAC, N.O. at no Flow |
| Electrical Termination | No. 22 AWG, 24" PVC Cable |

^{*}See "Electrical Data" on Page X-5 for more information.

Pressure Drop - Typical 1.0 GPM Set Point



How To Order - Standard Models

Specify Part Number based on flow settings.

| | Flow Settings* GPM | 1/2" NPT Port | 3/4" NPT Port | 1/2" Tube Compression Fitting |
|---|-----------------------|---------------|---------------|----------------------------------|
| Ī | 0.50 | 206915 | 204715 | 204710 |
| | 1.00 | 206916 | 204716 | 204711 |
| | 1.50 | 206917 | 204717 | 204712 |
| | 2.00 | 206918 | 204718 | 204713 |
| | 3.00 | 206919 | 204719 | 204714 |

^{*}Calibrated with unit in horizontal position.



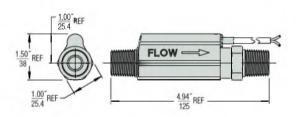
Straight design and large bore body minimizes pressure drop.

WHITE WW

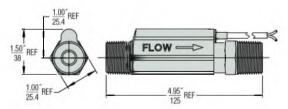
Dimensions

PISTON ASSY.

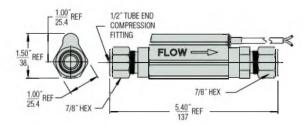
1/2" NPT Ports



3/4" NPT Ports



1/2" Tube End Compression Fitting





FS-925 Series – General Purpose

▶ Flow Rate Settings: Liquids: 0.1 GPM to 1.5 GPM

Air/Gases: See Flow Settings at right

FS-926 Series – Low Flow

Port Size: 1/4-18 NPT

Primary Construction Material: Brass or Stainless Steel

Setting Type: Fixed

Flow Rate Settings: Liquids: 50-300 cc/min.

Air/Gases: See Flow Settings at right

These two series of precision-calibrated switches provides reliable and consistent performance; repeatability is within 1%. FS-925 and FS-926 units are factory preset for actuation at specified flow rates.

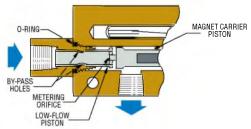
These switches provide accurate detection of excessive or insufficient flow rates in such applications as: protecting against loss of fluid flow in hydraulic systems, assuring proper coolant flow in semiconductor processing equipment, monitoring high pressure lubrication systems, and ensuring proper air flow in water/waste systems.

Specifications

| Netted Materials | | |
|---|--|--|
| Brass or 316 Stainless Steel | | |
| | | |
| Polysulfone for water; Brass for oil or air | | |
| 316 Stainless Steel | | |
| Same as Housing | | |
| 316 Stainless Steel | | |
| Viton® | | |
| Ероху | | |
| | | |
| 1000 psig (69 bar) | | |
| 2500 psig (172 bar) | | |
| 5000 psig (345 bar) | | |
| | | |
| -20°F to +300°F (-29°C to +148.9°C) | | |
| -20°F to +225°F (-29°C to +107.2°C) | | |
| 1% Maximum Deviation | | |
| ±10% | | |
| 15% Maximum | | |
| SPDT, 20 VA | | |
| 1/4-18 NPT | | |
| Electrical Termination No. 18 AWG, 24"L., Polymeric Lead Wires | | |
| | | |

^{*} See "Electrical Data" on Page X-5 for more information.

Double Piston Detects Minute Flow - FS-926



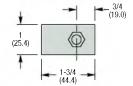
An additional, lap-fitted piston is used in Gems FS-926 Series to accurately detect low-flow rates. Calibration is determined by one or more metering holes in the end of the low-flow piston, which regulate bypass flow, and therefore the actuation setting.

When metered bypass flow is exceeded, the resultant pressure differential displaces the lowflow piston, moving the magnet carrier piston to actuate the reed switch. Two large bypass holes in the piston skirt are exposed after actuation to maintain low pressure drop.

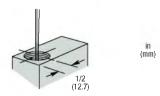


Both the FS-925 and FS-926 use a spring-loaded piston to detect positive flow with great precision. They act upon direct fluid flow and will not show "false-positive" flow indication as can happen with sensors using indirect sensing methods such as pressure measurement. The FS-926 incorporates an additional lap-fitted piston for very low flows; see below.

Dimensions 1/4 (6.3) in (mm) 4-1/8 (104.7) 4-1/8 (104.7) 1/2 (12.7) 1/2 (12.7) FS-925 27/32 (21.4) 1/4-18 NPT BOTH PORTS 1-9/32 (32.6)



Electrical Connection, 1/2-14 NPT Conduit



Flow Settings, Air (Typical)

Dependent on operating line pressure. Examples of set point ranges at a given line pressure are shown below.

| | Actuation Point FS-925 FS-926 | | | |
|-------------------|-------------------------------|---------|--------|---------|
| Line Pressure* | | | FS-926 | |
| | Min. | Max. | Min. | Max. |
| 5 psig | 0.5 SCFM | 10 SCFM | 2 SCFH | 15 SCFH |
| 100 psig | 1.5 SCFM | 25 SCFM | 7 SCFH | 50 SCFH |

^{*} Minimum 5 psig line pressure required.

Gas Calibration

Water flow units should not be used for air/gas applications: Gas flow units have a special dash-pot piston for reliable operation. Gas calibration is dependent upon line pressure, switch orientation, and the specific type of gas. The calibrated flow set point is subject to change with fluctuations in line pressure.

How To Order – Standard Models – Water Calibration

Specify Part Number based on desired housing material and flow setting.

Liquids other than water: Special calibration is available from GEMS for media other than water. Please consult factory with your requirements, including housing material (brass or stainless steel), flow media, operating pressure, flow set point and liquid viscosity (SSU). A lot charge will be applied for special calibrations.

Gas flow: Consult factory for available calibrations. Specify: Housing material (brass or stainless steel), gas type, mounting orientation, operating pressure and actuation setting (SCFM or SCFH) and normal flow rate. A lot charge will be applied for special calibrations.

FS-925 Series – General Purpose

| Flow Settings | Part Numbers | | |
|---------------|--------------------|----------|--|
| GPM, ±10% | Brass | 316 S.S. | |
| 0.10 | 26914 🗲 | 26926 🗲 | |
| 0.25 | 26915 🗲 | 26927 🗲 | |
| 0.50 | 26916 🗲 | 26928 | |
| 0.75 | 26917 / | 26929 | |
| 1.00 | 26918 🗲 | 26930 | |
| 1.50 | 26919 | 26931 | |

FS-926 Series - Low Flow

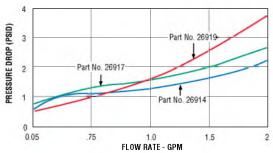
| Flow Setting | | Part Numbers | |
|--------------|------------|----------------|-------------------|
| cc/Min. ±10% | Equiv. GPM | Brass Material | 316 S.S. Material |
| 50 | 0.013 | 26938 | 26951 🗲 |
| 100 | 0.025 | 26939 | 26952 |
| 150 | 0.045 | 26941 🗲 | 26953 |
| 200 | 0.055 | 26942 | 26954 |
| 250 | 0.065 | 26943 | 26955 |
| 300 | 0.075 | 26944 | 26956 |

Notes:

- 1. Flow settings are calibrated using water @ $+70^{\circ}$ F on increasing flow, with units in a vertical position (lead wires up). Consult factory regarding special flow setting calibration.
- Temperature changes will slightly affect the standard water or gas flow settings listed. Oil flow settings will vary with viscosity.
- 3. Use of 50 micron filtration is recommended.
- ∮ Stock Items

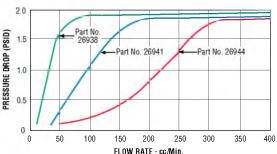
Pressure Drop - Typical

FS-925 Series



Tests conducted with units in vertical position (lead wires up) with water at $+70^{\circ}F$ (21°C).

FS-926 Series



Tests conducted with units in vertical position (lead wires up) with water at $+70^{\circ}F$ (21°C).

FS-925 and FS-926 switches are U.L. Approved for Class I, Division 2, Groups A, B, C, D hazardous locations.

U.L. Approved: File No. E183854

Standard Wiring Color Code

| Wire Color | Terminal |
|------------|----------|
| Orange | N.O. |
| Black | Common |
| Red | N.C. |
| | |

FS-927 Series – Small Design for Tight Instrumentation Packages

Flow Rate Settings: 0.10 GPM to 1.50 GPM

Port Size: 1/4" NPT

Primary Construction Material: Brass, Stainless Steel

Setting Type: Fixed

Measuring only 1"x 2-3/4", these compact switches are ideal for use where space is at a premium. Designed for use with water and oil, these switches are suitable for high volume OEM applications. They are ideal for coolant or lubricant flow monitoring in portable equipment and many other applications with space constraints.

Specifications

| Brass, Stainless Steel |
|------------------------------------|
| 316 Stainless Steel |
| Stainless Steel |
| 1000 PSIG (69 bar) |
| -20°F to +200°F (-29°C to +93.3°C) |
| ±15% |
| 20% Maximum |
| SPST, 20 VA |
| 1/4″NPT |
| No. 18 AWG, 24" L., PVC Lead Wires |
| |

^{*}See "Electrical Data" on Page X-5 for more information.

How To Order - Standard Models

Specify Part Number based on flow setting and switch operation.

Liquids other than water: Special calibration is available from Gems for media other than water. Please consult factory with your requirements, including flow media, operating pressure, flow set point and liquid viscosity (SSU).

| | Part Numbers | | |
|----------------------|-------------------------|---------------------------|-----------------|
| Flow Settings GPM | Brass | | Stainless Steel |
| 4. | Normally Open @ No Flow | Normally Closed @ No Flow | Normally Open |
| 0.10 | 70820 🗲 | 70826 | 26969 |
| 0.25 | 70821 🗲 | 70827 | 26970 |
| 0.50 | 70822 🗲 | 70828 | 26971 |
| 0.75 | 70823 | 70829 | 26972 |
| 1.00 | 70824 🗲 | 70830 | 26973 |
| 1.50 | 70825 | 70831 | 26974 |

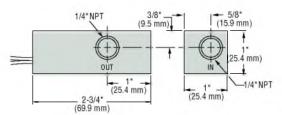
Notes:

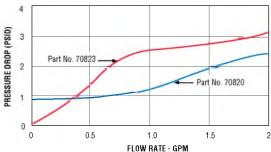
- 1. Flow settings are calibrated using water @ +70°F on increasing flow, with units in a vertical position (lead wires up)
- 2. Care should be taken by specifiers to ensure fluid compatibility with the above listed wetted materials.
- 3. Use of 50 micron filtration is recommended.





Dimensions





Tests conducted with units in vertical position (lead wires up) with water at +70°F (21°C).



FS-930 Series – Oil Flow Switch, Compensates For Viscosity Change In Fluids

Flow Rate Settings: 0.1 GPM to 1.0 GPM

Port Size: 1/4" NPT

Primary Construction Material: Brass

Setting Type: Fixed

A unique, patented piston design assures accuracy within 20% over a full range of viscosities—from 40 to 2000 SSU. Ideal for use in applications where liquids of different viscosities are blended; or for use in lubrication systems where oil flow monitoring is critical at start-ups. Switch compensates for viscosity changes automatically. Each unit is factory preset, using 300 SSU oil, for actuation at specified flow rates.

Specifications

| Wetted Materials Housing | Brass |
|---------------------------------------|--|
| Piston | Brass |
| Spring | 316 Stainless Steel |
| 0-Ring | Viton [®] |
| Other Wetted Parts | Ероху |
| Pressure Rating Operating, Maximum | 1000 PSIG (69 bar) |
| Proof | 2500 PSIG (172 bar) |
| Burst | 5000 PSIG (345 bar) |
| Operating Temperature | -20°F to + 300°F (-29°C to +148.9°C) |
| Repeatability | 1% Maximum Deviation** |
| Set Point Accuracy | ±10% |
| Set Point Differential | 15% Maximum |
| Switch* | SPDT, 20 VA |
| Inlet/Outlet Ports | 1/4″ NPT |
| Electrical Termination | No. 18 AWG, 24" L., Polymeric Lead Wires |
| Explosion-Proof Approvals | U.L. Approved for Class I, Division 2, Groups A, B, C, D. Also available with FM approved, explosion proof junction box for Class I, Division 1, Group D hazardous locations. U.L. Approved — File No. E183854, RoHS |

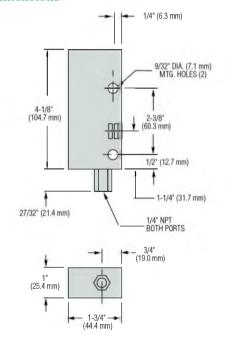
^{*} See "Electrical Data" on Page X-5 for more information





Dimensions

UL Approved Explosion-Proof



Electrical Connection, 1/2" NPT Conduit



^{**} Reference at 300 SSU set point.

How To Order - Standard Models

Specify Part Number based on flow setting.

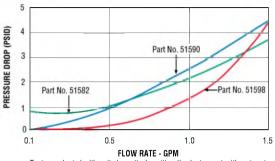
| Flow Setting GPM, ±10% | Part Numbers |
|---------------------------|-----------------|
| 0.10 | 51582 ∱ |
| 0.25 | 51586 ≁ |
| 0.50 | 51590 |
| 0.75 | 51594 |
| 1.00 | 51598 |

Notes:

- Flow settings are calibrated in a vertical position (lead wires up) with 300 SSU oil. Set points will be maintained within 20% of settings in a liquid viscosity range of 40 to 2,000 SSU.
- 2. Use of 50 micron filtration is recommended.

✓ – Stock items.

Pressure Drop - Typical



Tests conducted with units in vertical position (lead wires up) with water at +70°F (21°C).

FS-930 switches are U.L. Approved for Class I, Division 2, Groups A, B, C, D hazardous locations.

They are also available with FM-approved, explosion-proof junction box for Class I, Division 1, Group D hazardous locations. Units must be assembled completely at GEMS.

U.L. Approved — File No. E183854

Standard Wiring Color Code

| Wire Color | Terminal |
|------------|----------|
| Orange | N.O. |
| Black | Common |
| Red | N.C. |

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81

Казахстан +(727)345-47-04

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47

Беларусь +(375)257-127-884

Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Саранск (8342)22-96-24 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35 Сыктывкар (8212)25-95-17 Тамбов (4752)50-40-97 Тверь (4822)63-31-35

Узбекистан +998(71)205-18-59

Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93

Киргизия +996(312)96-26-47