

FS-200 Series – General Purpose, Straight-Through Flow Path



Flow Rate Settings: Fixed: 0.5 GPM to 100.0 GPM
Adjustable: 1.0 GPM to 15.0 GPM

Port Size: 1" NPT to 2" NPT

Primary Construction Material: Bronze or Stainless Steel

Setting Type: Fixed or Adjustable

The FS-200 Series offers accurate flow detection, with 1% repeatability, over a broad range of flow settings and port sizes. Its durable construction delivers long-life reliability in either water or oil. Generous flow paths keep pressure drop low. These switches are ideal for detection of improper flow rates in high volume lubrication, cooling or process systems.

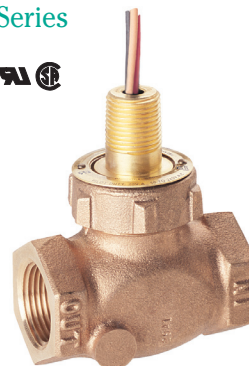
FS-200 Adjustable Series switches offer the same accuracy and are as rugged as those with fixed settings, but provide one additional feature: external adjustability. With these versatile switches your choice of flow settings is diverse within a given range. An ordinary, flat-blade screwdriver is all that's required for the actuation adjustment.

Specifications

| Wetted Materials | |
|-------------------------------|---|
| Housing | |
| FS-200 | Bronze or 316 Stainless Steel |
| FS-200 Adjustable | Bronze |
| Shuttle | Teflon® |
| Bonnet | Bronze or Stainless Steel |
| Spring | 316 Stainless Steel |
| Other Wetted Parts | Viton®, Ceramic |
| Pressure Rating | |
| Operating | 400 PSIG (27.6 bar) @ 100°F (37.8°C) |
| Proof | 800 PSIG (55.2 bar) @ 100°F (37.8°C) |
| Operating Temperature | |
| FS-200 | -20°F to +300°F (-29°C to +148.9°C) |
| FS-200 Adjustable | -20°F to +200°F (-29°C to +93.3°C) |
| Repeatability | 1% Maximum Deviation |
| Set Point Accuracy | ±10% |
| Set Point Differential | 15% Maximum |
| Switch* | SPDT, 20 VA |
| Electrical Termination | No. 18 AWG, 24" L., Polymeric Lead Wires Red NC, Black Common, Orange NO |

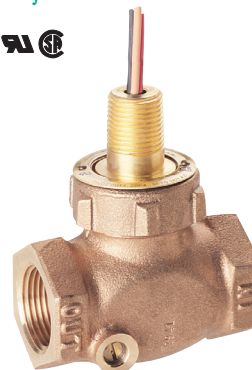
*See "Electrical Data" on Page X-5 for more information.

FS-200 Series



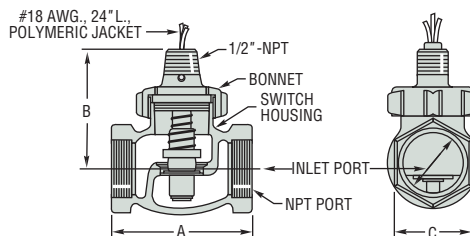
U.L. Recognized
File No. E31926
CSA Listed —
File No. LR30200
and LR22666
FM Approved —
File No. 0A8A3.AE
and 1H3A2.AX

FS-200 Adjustable



U.L. Recognized
File No. E31926
CSA Listed —
File No. LR22666
FM Approved —
File No. 0Q2A8.AE

Dimensions



| Model | Port Size NPT | A inch (mm) | B inch (mm) | C Hex inch (mm) |
|------------------------------|---------------|---------------|---------------|-----------------|
| FS-200 and FS-200 Adjustable | 1" | 3-1/4 (82.6) | 3 (76.2) | 1-25/32 (45.2) |
| | 1-1/4" | 4 (101.6) | 3-3/16 (80.9) | 2-3/16 (55.5) |
| | 1-1/4" ss | 4-1/2 (114.3) | 3-3/16 (80.9) | 2-3/16 (55.5) |
| | 1-1/2" | 4-1/2 (114.3) | 3-1/2 (88.9) | 2-1/2 (63.5) |
| | 2" | 5-3/8 (136.5) | 4 (101.6) | 3-3/32 (78.5) |

Notes:

- Adjustable versions available in 1 inch port sizes only.
- Standard calibration is in water with units in a horizontal position.
- Viscosity changes will affect setpoints. Typically, as viscosity increases setpoints will decrease.
- Consult Gems for special applications.

How To Order – Standard Models

Specify Part Number for the FS-200 Series based on desired housing material, port size and flow setting, or based on flow setting range for FS-200 Adjustable versions.

FS-200 Series

| Port Size NPT | Flow Setting GPM | Part Numbers | |
|---------------|------------------|--------------|-----------------|
| | | Bronze | Stainless Steel |
| 1" | 0.5 | 27051 ⚡ | 27059 ⚡ |
| | 1 | 27052 ⚡ | 27060 |
| | 2 | 27053 ⚡ | 27061 |
| | 3 | 27054 ⚡ | 27062 |
| | 4 | 27055 ⚡ | 27063 |
| | 5 | 27056 ⚡ | 27064 |
| | 6 | 27057 ⚡ | 27065 |
| | 8 | 27058 ⚡ | 27066 |
| 1-1/4" | 1 | 27067 ⚡ | 27076 |
| | 2 | 27068 | 27077 |
| | 4 | 27069 | 27078 |
| | 6 | 27070 | 27079 |
| | 8 | 27071 | 27080 |
| | 10 | 27072 | 27081 |
| | 12 | 27073 | 27082 |
| | 16 | 27074 | 27083 |
| 20 | 27075 | 27084 | |

| Port Size NPT | Flow Setting GPM | Part Numbers | |
|---------------|------------------|--------------|-----------------|
| | | Bronze | Stainless Steel |
| 1-1/2" | 1.5 | 27085 ⚡ | 27093 |
| | 3 | 27086 | 27094 |
| | 5 | 27087 | 27095 |
| | 7.5 | 27088 | 27096 |
| | 10 | 27089 | 27097 |
| | 15 | 27090 | 27098 |
| | 20 | 27091 | 27099 |
| | 30 | 27092 | 27100 |
| 2" | 2 | 27101 ⚡ | 27109 |
| | 4 | 27102 | 27110 |
| | 5 | 27103 | 27111 |
| | 10 | 27104 | 27112 |
| | 15 | 27105 | 27113 |
| | 25 | 27106 | 27114 |
| | 35 | 27107 | 27115 |
| | 50 | 27108 | 27116 |

FS-200 Adjustable

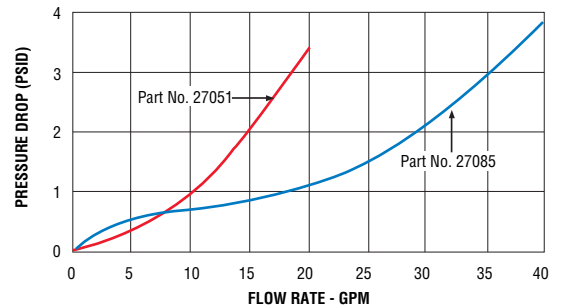
| Port Size NPT | Flow Setting Adjustment Range GPM | Part Numbers |
|---------------|-----------------------------------|--------------|
| 1" | 1.0-6.0 | 26615 ⚡ |
| | 5.0-15.0 | 26616 ⚡ |
| | 2.0-8.0 | 26838 ⚡ |

Notes:

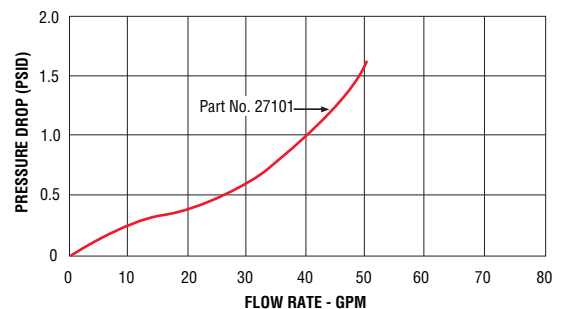
- Flow settings for fixed versions are calibrated using water at +70°F on increasing flow, with units in a horizontal position (lead wires up). Consult factory regarding special flow setting calibration, or liquids other than water. Temperature changes will slightly affect the flow settings listed. Oil flow settings will vary with viscosity.
 - Adjustable units that are set to customer specification are subject to GEMS test stand accuracy.
 - Use of 150 micron filtration is recommended.
 - Minimum 5 PSI line pressure required.
- ⚡ – Stock Items.

Pressure Drop - Typical

1" NPT and 1-1/2" NPT Ports



2" NPT Ports



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

FS-200 Series Flow Switches are U.L. Approved for Class I, Division 2, Groups A, B, C, D hazardous areas.



They are also available with FM-approved, explosion-proof junction box for Class I, Division 1, Group D hazardous locations. Units must be completely assembled at GEMS. U.L. Approved — File No. E183854

For Remote Alarms – See Page E-30

- Adjustable Volume
- Indoor Outdoor
- Solid-State

