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Gems Sensors & Controls

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

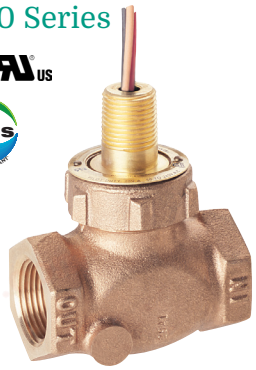
- **Flow Rate Settings:** Fixed: 0.5 GPM to 100.0 GPM
  Adjustable: 1.0 GPM to 15.0 GPM
- **Port Size:** 1" NPT to 2" NPT
- **Primary Construction Material:** Bronze or Stainless Steel
- **Setting Type:** Fixed or Adjustable

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.

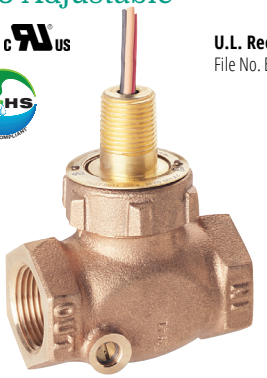
FS-200 Series

U.L. Recognized:
File No. E31926



FS-200 Adjustable

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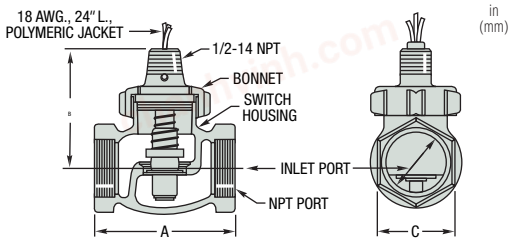


Specifications

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 ""Electrical Data" on page X-5 for more information.

Dimensions



Model	Port Size NPT	A	B	C Hex
FS-200 and FS-200 Adjustable	1"	3-1/4" (82.6 mm)	3" (76.2 mm)	1-25/32" (45.2 mm)
	1¼"	4" (101.6 mm)	3-3/16" (80.9 mm)	2-3/16" (55.5 mm)
	1½"	4-1/2" (114.3 mm)	3-1/2" (88.9 mm)	2-1/2" (63.5 mm)
	2"	5-3/8" (136.5 mm)	4" (101.6 mm)	3-3/32" (78.5 mm)

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

FLOW SWITCHES

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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**
1¼"	1	**27067** ↗	-
	2	**27068**	-
	4	**27069**	-
	6	**27070**	-
	8	**27071**	-
	10	**27072**	-
	12	**27073**	-
	16	**27074**	-
	20	**27075**	-

Port Size NPT	Flow Setting GPM	Part Numbers	
		Bronze	Stainless Steel
1½"	1.5	**27085** ↗	-
	3	**27086**	-
	5	**27087**	-
	7.5	**27088**	-
	10	**27089**	-
	15	**27090**	-
	20	**27091**	-
	30	**27092**	-
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

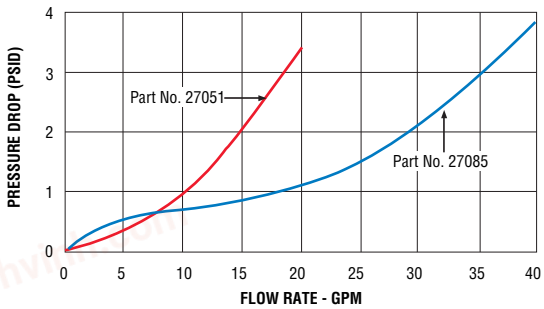
Port Size NPT	Flow Setting Adjustment Range GPM	Part Numbers
1"	1.0-6.0	**26615** ↗
	5.0-15.0	**26616** ↗
	2.0-8.0	**26838** ↗

Notes:
1. 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.
2. Adjustable units that are set to customer specification are subject to GEMS test stand accuracy.
3. Use of 150 micron filtration is recommended.
4. Minimum 5 psi line pressure required.

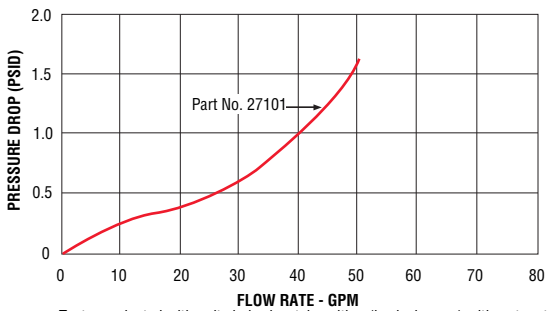
↗ Stock Items

Pressure Drop - Typical

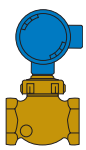
1" NPT and 1½" NPT Ports



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.

U.L. Approved : File No. E183854

For Remote Alarms – See Page E-31

- Adjustable Volume
- Indoor Outdoor
- Solid-State



FLOW SWITCHES