

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.

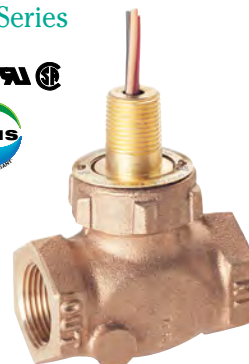
FS-200 Adjustable Series switches offer the same accuracy and are as rugged as those with fixed settings, but provide one additional feature: external adjustability. With these versatile switches your choice of flow settings is diverse within a given range. An ordinary, flat-blade screwdriver is all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

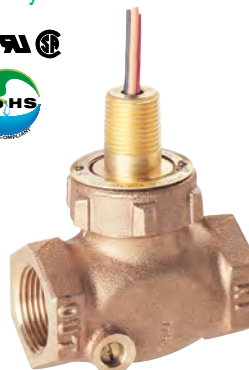
*See "Electrical Data" on Page X-5 for more information.

FS-200 Series



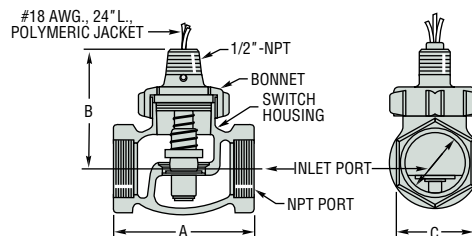
U.L. Recognized
File No. E31926
CSA Listed —
File No. LR30200
and LR22666
FM Approved —
File No. 0A8A3.AE
and 1H3A2.AX

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

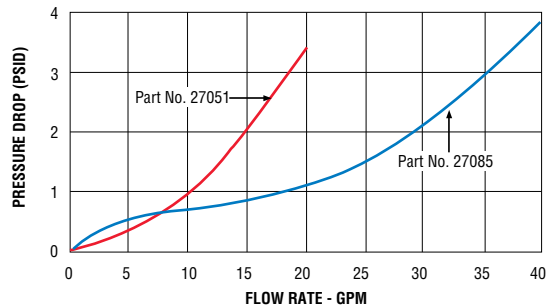
Port Size NPT	Flow Setting Adjustment Range GPM	Part Numbers
1"	1.0-6.0	26615 ⚡
	5.0-15.0	26616 ⚡
	2.0-8.0	26838 ⚡

Notes:

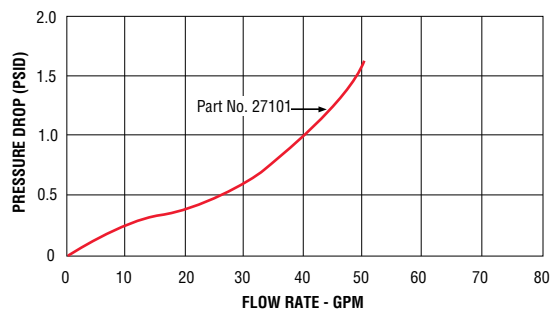
- Flow settings for fixed versions are calibrated using water at +70°F on increasing flow, with units in a horizontal position (lead wires up). Consult factory regarding special flow setting calibration, or liquids other than water. Temperature changes will slightly affect the flow settings listed. Oil 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

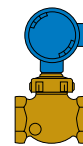


2" NPT Ports



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



**Junction box alternatives
 for
 flow and level switch units**



Small size housings for max 32V, IP65 rating, ¼ and ½" connections internal terminal strip Dims: 60mm dia x 80 mm high		
Aluminium Small 32V IP65	JB-ALS-32V-65-1 (1/4") JB-ALS-32V-65-2 (1/2") Painted aluminium case M16 NPB cable gland supplied	
Stainless Small 32V IP65	JB-SSS-32V-65-2 Full 316SS case M16 SS cable gland supplied	
Medium size housings for max 32V, IP65 rating, 1/2" connection internal terminal strip on SS bracket Dims: 70mm dia x 75 mm high		
Aluminium Medium 32V IP65	JB-ALM-32V-65-2 Painted aluminium case M20 cable entry (no gland)	
Stainless Medium 32V IP65	JB-SSM-32V-65-2 Full 316SS case M20 SS cable gland supplied	
Large size housings for max 250V, IP65 rating, 1/2" connection Painted earth terminals both inside and outside housing. Cover locking screw internal terminal strip on SS bracket Dims: 82mm dia x 94 mm high		
Aluminium Large 240V IP65	JB-ALL-240V-65-2 Painted aluminium case M20 cable entry (no gland)	
Stainless Large 240V IP65	JB-SSL-240V-65-2 Full 316SS case M20 SS cable gland supplied	



FS-200 with JB-ALL-240V-65-2



FS-550 with JB-SSL-240V-65-2



Typical Gems flow switch fitted with large 240V junction box



Typical Gems level sensors with junction box fitted