

FLOW SWITCHES

FS-200E 2.0 - 30 (l/min) with pre-adjusted set points
FS-200E-A 3.0 - 57 (l/min) adjustable set points

SHUTTLE TYPE

The FS-200E flow switch offers accurate flow detection with 1% repeatability and European G1" port size. The durable construction delivers long life repeatability in either water or oil. The design of large flow paths keep pressure drop low, thus are ideal for detection of flow in high volume lubrication, cooling or process applications.

The FS-200E Adjustable versions offer the same accuracy with the additional feature of external adjustment.



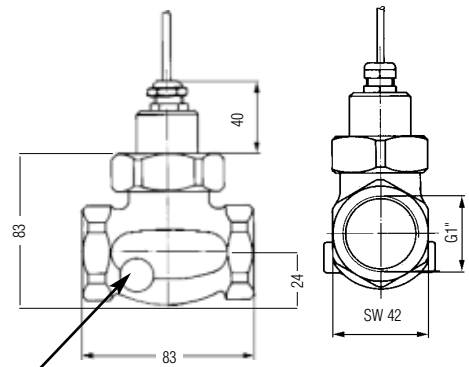
Adjustment vane on FS-200E-A

Specifications

(all data related to water at +20°C)

Max. flow	85 l/min
Max. operating pressure	27 bar
Proof pressure	45 bar
Temperature range	- 20 °C to +80 °C (cable, plug connector) - 20 °C to +150 °C (terminal box)
Set points	see order number
Switching function (related to increasing flow)	SPDT
Factory calibration position	horizontal, electrical connection up
Mounting orientation	any position
Repeatability	± 1%
Adjustment accuracy	±10%
Hysteresis	max. 15%
Mounting	G1"
Electrical connections	- cable: PVC, 3 x 0.34 mm ² (length: approx. 1 m) - plug connector per DIN 43650 - terminal box
Enclosure	- IP65
Electrical data contact rating	20 VA, 0.5 A, 250 V~
Weight	approx. 1.2 kg

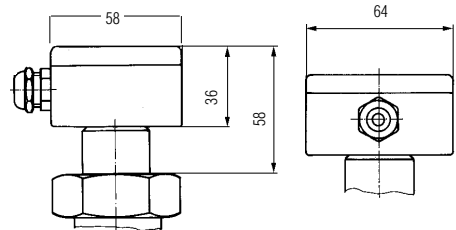
Dimensions (in mm)



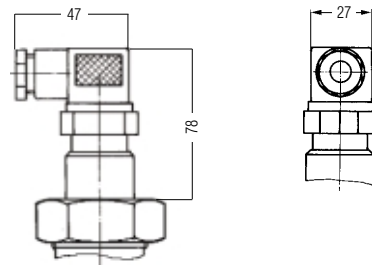
Adjustment vane on FS-200E-A

- Housing: Bronze
- Disc: Stainless Steel
- Spring: Stainless Steel
- O-Ring: Viton®
- Magnet: PTFE/Ceramic

Terminal Box



Plug Connector



How to Order

Order numbers for FS-200E

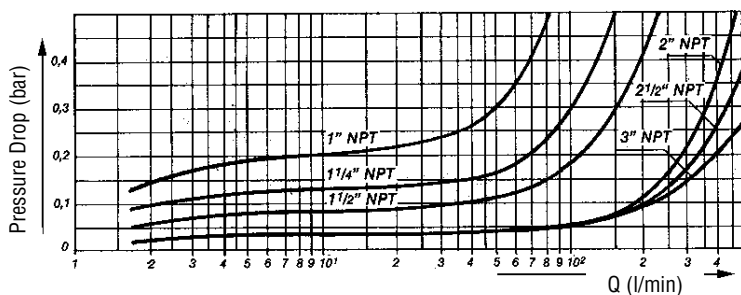
Set points (l/min)	Cable	Terminal box	Plug connector
2.0	020-2393	020-2401	020-3481
4.0	020-2394	020-2402	020-3482
7.5	020-2395	020-2403	020-3483
11.5	020-2396	020-2404	020-3484
15.0	020-2397	020-2405	020-3485
19.0	020-2398	020-2406	020-3486
22.5	020-2399	020-2407	020-3487
30.0	020-2400	020-2408	020-3488

Order numbers for FS-200E-A

Set points (l/min)	Cable	Terminal box	Plug connector
3.0 ... 22.5	020-2413	020-2416	020-3489
7.5 ... 30.0	020-2415	020-2418	020-3491
19.0 ... 57.0	020-2414	020-2417	020-3490

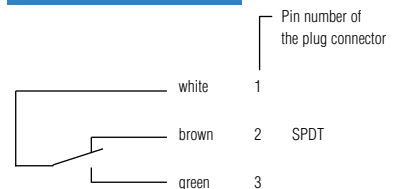
Pressure Drop Diagram

(at min. set point adjustment)



Standard Products in **bold**

Wiring Diagram



FLOW SWITCHES

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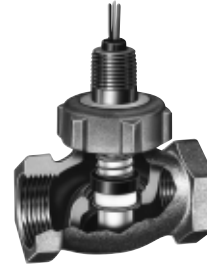
FS-200 2.0 - 190 (l/min) with pre-adjusted set points

SHUTTLE TYPE

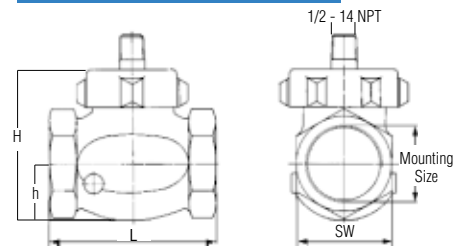
The FS-200 range of flow switches offer accurate flow detection, with 1% repeatability, with a wide range of flow and port sizes. The durable construction delivers long life repeatability in either water or oil. The design of large flow paths keep pressure drop low, thus are ideal for detection of flow in high volume lubrication, cooling or process applications.

Specifications (all data related to water at +20°C)

Max. flow	see order numbers
Max. operating pressure	27 bar at +20 °C
Proof pressure	45 bar
Temperature range	- 20 °C...+150 °C
Set points	see order numbers
Switching function (related to increasing flow)	SPDT
Factory calibration position	horizontal, electrical connection up
Mounting orientation	any position
Repeatability	±1%
Adjustment accuracy	±10%
Hysteresis	max. 15%
Mounting	1" NPT...2" NPT (see "dimensions" and "order number")
Electrical connections	- lead wire: Polymeric, 18 AWG (length: approx. 0.6m)
Enclosure	- IP 44 (with lead wire) - IP 54 (with conduit box IP65 [with K6])
Electrical data contact rating	20 VA; 0.5 A; 250 V~
Weight	see "dimensions"



Dimensions (in mm)



Housing: Bronze or Stainless Steel
 Disc: Stainless Steel
 Spring: Stainless Steel
 O-Ring: Viton®
 Magnet: PTFE/Ceramic

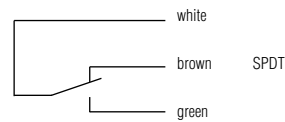
Mounting D	1" NPT	1 1/4" NPT	1 1/2" NPT	2" NPT
L	83	115	115	150
h	26	30	35	44
SW	42	53	62	72
H	71	83	98	118
Approx. weight	1.2 kg	1.8 kg	2.5 kg	4.0 kg

How to Order

Set point (l/min)	Mounting	Max. flow (l/min)	Order number Housing Bronze	Order number Housing Stainless Steel
2.0 4.0	1" NPT	80	27051	27059
7.5 11.5			27052	27060
15.0 19.0			27053	27061
22.5 30.0			27054	27062
			27055	27063
			27056	27064
4.0 7.5	1 1/4" NPT	140	27057	27065
15.0 22.5			27058	27066
30.0 37.5			27067	27076
45.0 60.0 75.0			27068	27077
			27069	27078
			27070	27079
6.0 11.5	1 1/2" NPT	200	27071	27080
19.0 28.5			27072	27081
37.5 57.0			27073	27082
75.0 115.0			27074	27083
			27075	27084
			27085	27093
7.0 15.0	2" NPT	350	27086	27094
19.0 37.5			27087	27095
57.0 95.0			27088	27096
132.5 190.0			27089	27097
			27090	27098
			27091	27099
	27101	27109		
	27102	27110		
	27103	27111		
	27104	27112		
	27105	27113		
	27106	27114		
	27107	27115		
	27108	27116		

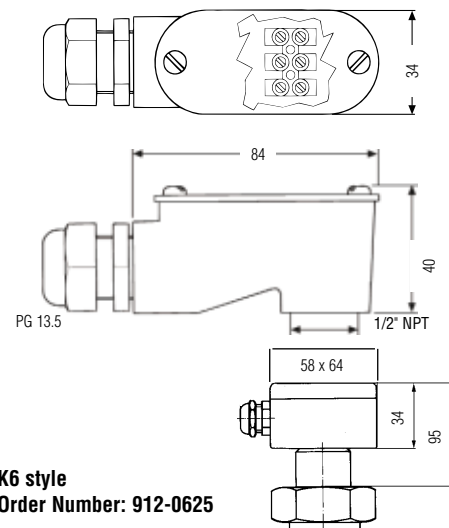
Pressure Drop Diagram see previous page

Wiring Diagram



Terminal boxes

Conduit style Order Number: 912-0615



K6 style Order Number: 912-0625

*Order numbers are valid for units with the electrical connection "lead wire". If you need a unit with the electrical connection "terminal box", please select the respective "lead wire" order number and add: "...with mounted terminal box 912-0615 or 912-0625. See drawing (previous page)

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