

# Magnetic Paddle Flow Switch

## Model No – FSPT-25SR2

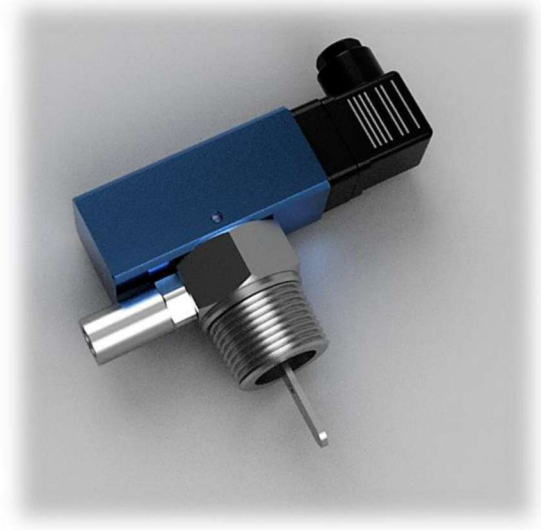
### Product Description:

FSPT-25SR2 is a magnetically coupled Flow Switch with Set point Adjustment feature. This model has following advantages.

- Hermetically Sealed Reed switch
- Relatively Low-pressure loss
- Flow Set Point Adjustment.
- Compact design
- Threaded connection
- Plug DIN 43650-A / ISO 4400

### Technical Parameters:

Operating Principle	Magnetically Coupled
Line Size Covered	1" to 8"
Process connection	1" BSPT Male/ 1" NPT Male ( optional)
Accuracy	± 5 % of full scale value
Pressure Rating	25 Bar
Temperature Rating	-20 to +110 °C
Media	Water, Oil, Ethyl Alcohol
Switching voltage	max. 230 V AC
Switching current	max. 1 A
Switching capacity	max. 50 VA
Ingress protection	IP 65
Electrical connection	plug DIN 43650-A / ISO 4400,
Materials medium-contact	SS316 Contact Parts, Viton® 'O' Ring, Aluminium Enclosure.
Installation Instructions	Horizontal, Vertically Upward Flow, Vertically Downward Flow Is Not Recommended. Installation direction will affect the switching Set point.

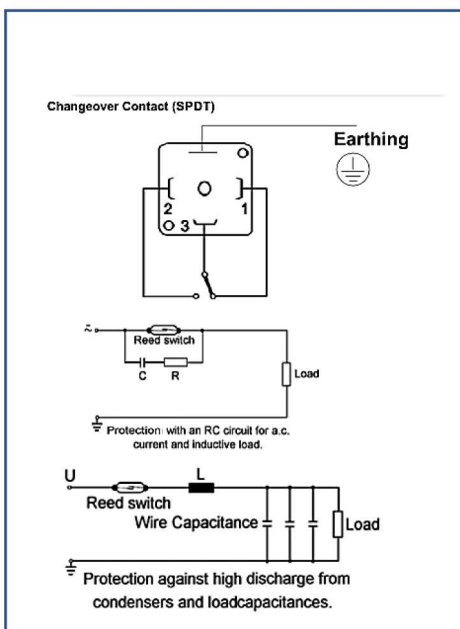


### Flow Range Table:

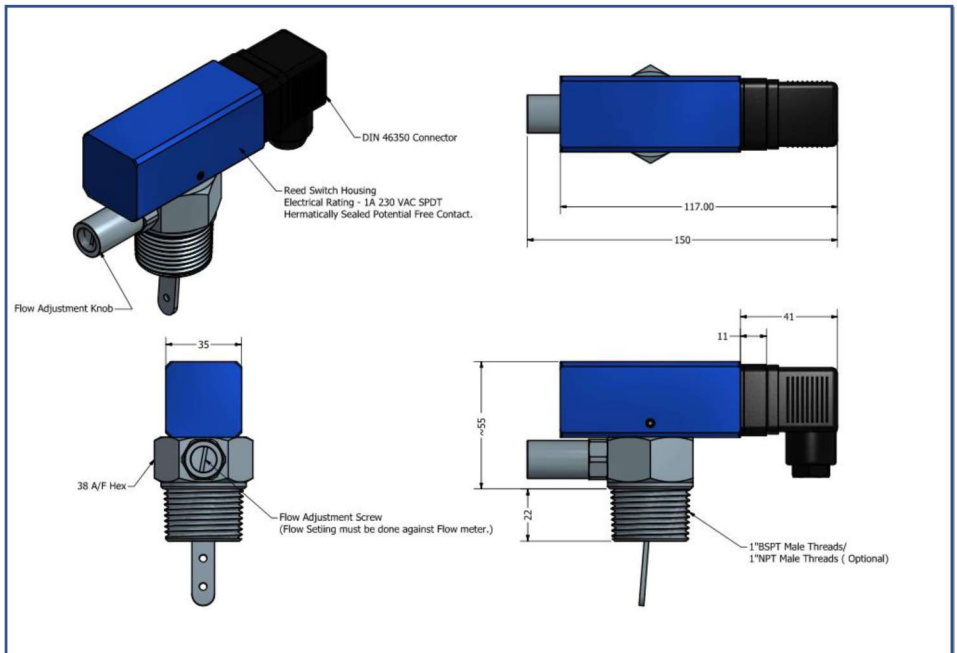
Line Size	Instrument Connection	Min Flow Setting in LPM		Max. Flow Setting in LPM		Max Allowable Flow Q Max. LPM	Approx. Pressure Drop ΔP Kg/cm <sup>2</sup>	Max Working Pressure in Kg/cm <sup>2</sup>
		ON	OFF	ON	OFF			
1" (25 NB)	1" BSPT/NPT Male	9	5	38	36	60	0.15 at Q. Max.	25
1.25" (30 NB)	1" BSPT/NPT Male	10	6	38	33	100	0.15 at Q. Max.	25
1.5" (40 NB)	1" BSPT/NPT Male	17	10	63	61	150	0.15 at Q. Max.	25
2" (50 NB)	1" BSPT/NPT Male	19	12	88	86	250	0.15 at Q. Max.	25
2.5" (65 NB)	1" BSPT/NPT Male	20	13	137	121	400	0.15 at Q. Max.	25
3" (80 NB)	1" BSPT/NPT Male	28	25	141	125	600	0.15 at Q. Max.	25

\* Adjustable range indicated are for Horizontal installations.

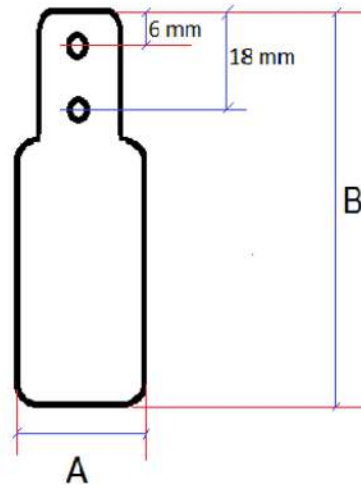
### WIRING DIAGRAM



### DIMENSIONS

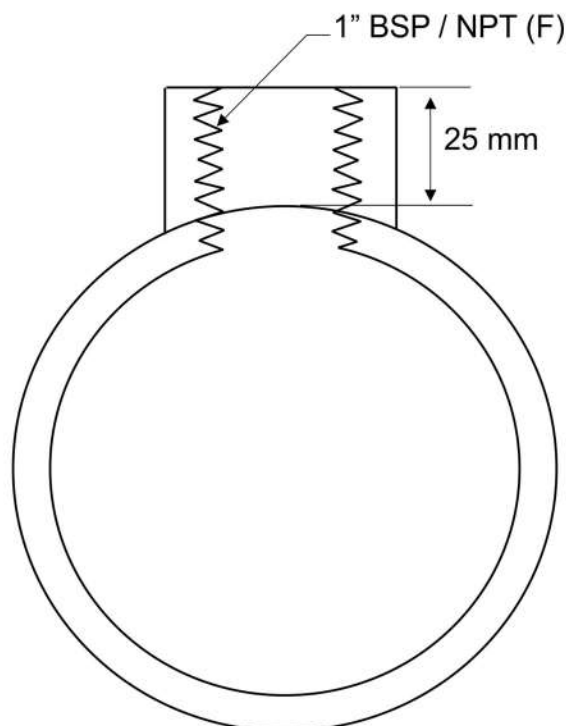


Standard Paddle dimensions:



SR NO.	LINE SIZE AS PER SCHEDULE 40	WIDTH (mm)		LENGTH (mm)	
		A	B	A	B
1	1"	26	30	26	30
2	1 ¼"	26	32	26	32
3	1 ½"	26	36	26	36
4	2"	26	50	26	50
5	2 ½"	26	65	26	65
6	3"	26	80	26	80

HOW TO WELD ADAPTER:.



### Installation

#### INSTALLATION INSTRUCTIONS

The FSPT-25SR2 is screwed directly into piping using the 1" NPT, BSP Stainless Steel fitting on its base. There are some important things to observe:

1. The paddle length must be appropriate for the diameter of the pipe to which the Flow switch is connected. Ensure also that the Flow switch is not screwed too deeply into its fitting, as this may cause the paddle to contact the bottom of the pipe. The paddle must be completely free to move.
2. To ensure the stability, the shorter paddle should always be left on.
3. The Flow Switch must be installed so that the arrow on its housing is aligned with the direction of flow in the pipe. Connect to the internal Reed Switch by removing the housing, leading cable through the housing inlet, and connect according to the Wiring diagram given in this manual. Though the FSPT-25SR2 may be installed in any orientation, we recommend that you do not install with the housing more than 90 degrees out of a vertical "up" position. This suggestion is strictly to avoid accumulation of sediment in the Chamber and subsequent seizure of the paddle-lever mechanism. 3.1 Upstream and downstream straight pipe run requirements to switch at the values specified
4. Straight runs of pipe are needed before and after the FSPT-25SR2 installation point. These should be at least 10 times pipe dia at the inlet and 5 times pipe dia at the outlet. For example, for 2" pipe flow switch straight length before the flow switch will be 20" and after the flow switch will be 10".

#### OPERATION

After installation, the switch point may be adjusted. Note that the switch point is slightly dependent on the orientation of the Flow switch. This is because the weight of the paddle acts differently in different positions. If you have reoriented your Flow Switch, it may be necessary to reset the switch point.

The Setpoint adjustment screw label is given in the flow switch **SETTING SCREW.** By turning the setting screw clockwise will increase the Set Flow and by turning the screw anti-clockwise will decrease the set Flow.

ACTIVATING THE SETPOINT ON RISING FLOW	ACTIVATING THE SETPOINT ON FALLING FLOW
Establish desired Setpoint flow rate in the system.	Establish desired setpoint flow rate in the system.
Turn Setpoint screw fully clockwise.	Turn the setpoint screw fully counter clockwise.
Slowly turn Setpoint screw counter clockwise until Reed Switch activates	Slowly turn setpoint screw clockwise until the Reed Switch activates.

#### MAINTENANCE

Due to its construction, a paddle type flow Switch, such as the FSPT-25SR2, is virtually maintenance-free. There are only two areas that could (potentially) be a source of concern if the medium contains minerals which could precipitate out onto the instrument.

1. If enough material deposits on the paddle, its area may be increased. This will lead to erroneous flow rate switching of the flow switch
2. In extremely severe cases, it may be possible that sufficient materials will deposit inside the Chamber. This will lead to higher flow rate readings.

#### ARRIVAL OF DAMAGED EQUIPMENT

Your instrument was inspected prior to shipment and found to be defect-free. If damage is visible on the unit, we advise that you carefully inspect the packing in which it was delivered. If damage is visible, notify your local carrier at once, since the carrier is liable for a replacement under these circumstances. If your claim is refused, please contact MULTI-TECH DEVICES® or Your Local Supplier for further support.

#### SERVICE POLICY

Owners of MULTI-TECH DEVICES® products may request the return of a Flow Switch; or, any part of a Flow Switch for complete rebuilding or replacement. They will be rebuilt or replaced promptly. MULTI-TECH DEVICES® will repair or replace the Flow Switch, at no cost to the purchaser, (or owner) other than transportation cost if:

- a) Returned within the warranty period; and,
- b) The factory inspection finds the cause of the malfunction to be defective material or workmanship.

If the trouble is the result of conditions beyond our control; or, is NOT covered by the warranty, there will be charges for labour and the parts required to rebuild or replace the equipment. In some cases, it may be expedient to ship replacement parts; or, in extreme cases a complete new Flow Switch, to replace the original equipment before it is returned. If this is desired, notify the factory of both the model and serial numbers of the control to be replaced. In such cases, credit for the materials returned, will be determined based on the applicability of our warranty. No claims for misapplication, labour, direct or consequential damage will be allowed.

While returning the damaged material for repair or recalibration purpose. Please supply the following information:

1. Purchaser Name
2. Description of Material
3. Serial Number
4. Reason for Return
5. Process details

Authorised Dealer

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