

FS-550 Series – High Pressure, Metal Paddle Switch

Pipe Line Size: 1-1/4" and Up

Primary Construction Material: Stainless Steel or Brass

Setting Type: Fixed

Standard FS-550 switches sense liquid flow in either direction to monitor flow/no-flow conditions. They are supplied in two paddle lengths. The paddle is trimmed during installation to permit switch actuation at the desired flow rate. As flow increases in a pipe, the paddle of the switch pivots to move out of the liquid path, producing less than 3 PSIG of pressure drop regardless of pipe size.

Specifications

| | |
|------------------------------------|--|
| Wetted Materials | |
| Housing | Brass or 316 Stainless Steel |
| Paddle | 302 Stainless Steel |
| Spring | 316 Stainless Steel |
| Other Wetted Parts | Ceramic and Teflon® |
| Operating Pressure, Maximum | 2000 PSIG (138 bar) |
| Pressure Drop | 3 PSIG (0.2 bar) Maximum |
| Operating Temperature | -30°F to + 300°F (-34.4°C to + 148.9°C) |
| Set Point Accuracy | ± 25% |
| Switch* | SPDT, 20 VA |
| Repeatability | ± 5% |
| Electrical Termination | No. 18 AWG, 24" L., Polymeric Lead Wires |

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

Standard Actuation and De-actuation Set Points

The Table below indicates paddle lengths which achieve switch actuation for specific flow rates. Approximate pipe line sizes are marked on paddle.

| | Pipe Size Marked at Paddle Cut-Off Point | Pipe Line Sizes | | | | | |
|--------------------------|--|---|---------|---------|---------|---------|---------|
| | | 1-1/4" | 1-1/2" | 2" | 2-1/2" | 3" | 4" |
| | | Approximate Actuation and (De-Actuation) Flow Rates GPM Water | | | | | |
| Short Paddle Unit | 1-1/4" | 5 (3) | 13 (8) | 22 (15) | 29 (22) | — | — |
| Long Paddle Unit | 1-1/2" | — | 15 (11) | 28 (21) | 38 (30) | — | — |
| | 2" | — | — | 22 (15) | 27 (20) | 48 (38) | — |
| | 2-1/2" | — | — | — | 21 (14) | 40 (26) | 52 (39) |
| | 3" | — | — | — | — | 31 (20) | 45 (32) |
| | 4" | — | — | — | — | — | 39 (25) |

All flow rate tests for the above table were conducted with the switch installed in a standard "T" fitting. For calculation of flow rates in pipe sizes larger than 5", a flow velocity of approximately 0.5 ft. per sec. actuates the switch with a full length (5") paddle. The paddle can be trimmed to achieve different actuation points.

How To Order – Standard Models

Select switch type, paddle length and housing material, then specify adjacent part number.

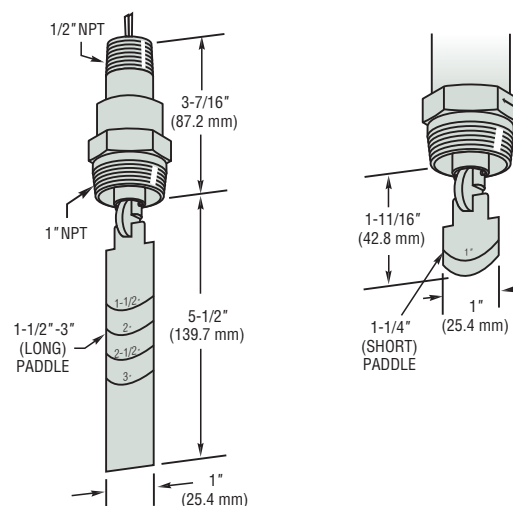
| Switch Type | Paddle Length | Housing Material | Switch Operation | Part Numbers | |
|--------------------|---------------|------------------|------------------|--------------|-------------|
| | | | | Standard | 3-Pin J-Box |
| SPDT Standard Unit | Long | Brass | N.O. or N.C. | 29609 | 56730 |
| | | 316 S.S. | | 29608 | 56729 |
| | Short | Brass | | 30641 | 66914 |
| | | 316 S.S. | | 30640 | 61189 |

Note: The FS-550 Switch is not recommended for use with 1" plastic tees.

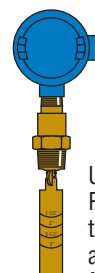


U.L. Recognized
File No. E31926
CSA Listed —
File No. LR30200
and LR22666
FM Approved —
File No. 0A8A3.AE
and 1H3A2.AX

Dimensions



FS-550 switches are U.L. Approved for Class I, Division 2, Groups A, B, C, D hazardous areas.



They are also available as FM-approved when used with GEMS Junction Boxes which are explosion-proof for Class I, Division 1, Groups B, C, D, E, F, G hazardous locations.

Using GEMS SAFE-PAK Relays and barriers, these switches provide automatic flow/no flow interlock and are intrinsically-safe without explosion-proof housing and piping.

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