



Series  
F6 & F7

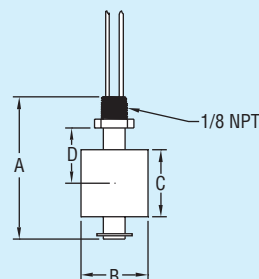
# Level Switches - Vertical

Low Cost, Reliable and Compact, Hermetically Sealed Contacts



F7-SB

F7-ST713



Series F6 & F7 compact level switches combine low cost and reliability with fast, simple installation. Hermetically sealed reed switches are actuated by magnets permanently bonded inside the float and can be easily adapted to open or close a circuit on rising or falling levels. Vertical mount models are shipped with normally open switch contacts which close as the float rises toward the mounting threads. Reverse switch action by removing the float, rotating it end-for-end and replacing it on the stem. Vertical models mount internally, oriented within 30° of vertical, or select optional fittings for external mounting. Switch ratings are suitable for many solid state control systems and monitors or alarms. Simple relay interfaces can be used for higher current applications.

## Dimensions in Inches (mm)

| Model    | (A) Stem Length | (B) Float Diameter | (C) Float Height | (D) Actuation from Hex <sup>①</sup> |
|----------|-----------------|--------------------|------------------|-------------------------------------|
| F7-SB    | 2.75 (70)       | 1.38 (35)          | 1.13 (29)        | 1.2 (31)                            |
| F7-SS2   | 2.06 (52)       | 1.0 (25)           | 1.0 (25)         | 0.73 (19)                           |
| F6-SS    | 2.17 (55)       | 1.11 (28)          | 1.11 (28)        | —                                   |
| F7-MPP   | 1.63 (41)       | 0.63 (16)          | 0.63 (16)        | 0.47 (12)                           |
| F7-PP    | 2.18 (55)       | 1.18 (30)          | 1.0 (25)         | 0.69 (18)                           |
| F7-BT    | 2.18 (55)       | 1.18 (30)          | 1.0 (25)         | 0.69 (18)                           |
| F7-K     | 2.13 (54)       | 1.0 (25)           | 1.0 (25)         | 0.65 (17)                           |
| F7-C11   | 2.06 (52)       | 1.0 (25)           | 1.0 (25)         | 0.56 (14)                           |
| F7-C21   | 2.06 (24)       | 1.0 (25)           | 1.0 (25)         | 0.56 (14)                           |
| F7-BB    | 3.19 (81)       | 1.88 (48)          | 1.81 (46)        | 1.19 (30)                           |
| F7-PS    | 3.38 (86)       | 1.88 (48)          | 1.88 (48)        | 1.25 (32)                           |
| F7-PVC   | 3.44 (87)       | 1.5 (38)           | 1.81 (46)        | 0.75 (19)                           |
| F7-T1    | 3.47 (88)       | 2.13 (54)          | 1.94 (49)        | 0.92 (22)                           |
| F7-ST713 | 3.38 (86)       | 2.06 (52)          | 2.06 (52)        | 1.09 (28)                           |
| F7-ST714 | 3.38 (86)       | 2.06 (52)          | 2.06 (52)        | 1.09 (28)                           |

| Model       | Applications                              | Material Float/Stem                    | Temp. Limits     | Press. Limits        | Min. S.G. | Electrical Rating         | Wire Leads           | Mtg NPT (M) | Weight oz (g) |
|-------------|-------------------------------------------|----------------------------------------|------------------|----------------------|-----------|---------------------------|----------------------|-------------|---------------|
| F7-SB       | General purpose                           | Buna-N & Epoxy/<br>316 SS              | 220°F<br>(105°C) | 150 psig<br>10 bar   | 0.60      | 25 VA: 1A @<br>220 VAC    | 22 AWG 18" (45 cm)   | 1/8"        | 2 (58)        |
| F7-SS2      | High temp/pressure,<br>corrosives         | 316 SS (CYC)/<br>316 SS                | 300°F<br>(149°C) | 450 psig<br>31 bar   | 0.75      | 25 VA: 1A @<br>200 VAC    | 22 AWG 18" (45 cm)   | 1/8"        | 1.2 (34)      |
| F6-SS       | Corrosives                                | 316 SS/<br>316 SS                      | 257°F<br>(125°C) | 218 psig<br>15 bar   | 0.65      | 20 VA: 0.08A @<br>240 VAC | 20 AWG 11.8" (30 cm) | 1/8"        | 1.59 (45)     |
| F7-MPP**    | Broad chemical<br>compatibility           | Polypropylene/<br>Polypropylene        | 180°F<br>(82°C)  | 100 psig<br>6.89 bar | 0.90      | 10 VA: 0.1A @<br>100 VAC  | 22 AWG 24" (61 cm)   | 1/8"        | 0.8 (23)      |
| F7-MPP-NO** | Broad chemical<br>compatibility           | Polypropylene/<br>Polypropylene        | 176°F<br>(80°C)  | 100 psig<br>6.89 bar | 0.90      | 50 VA: 0.2A @<br>240 VAC  | 22 AWG 24" (61 cm)   | 1/8"        | 0.8 (23)      |
| F7-PP       | Broad chemical<br>compatibility           | Polypropylene &<br>Epoxy/Polypropylene | 220°F<br>(105°C) | 100 psig<br>6.89 bar | 0.60      | 30 VA: 0.14A @<br>220 VAC | 22 AWG 24" (61 cm)   | 1/8"        | 0.8 (23)      |
| F7-BT       | Oils & Fuels                              | Buna-N & Epoxy/<br>PBT*                | 220°F<br>(105°C) | 150 psig<br>10 bar   | 0.45      | 30 VA: 0.14A @<br>220 VAC | 22 AWG 24" (61 cm)   | 1/8"        | 0.7 (20)      |
| F7-K        | Food/beverage,<br>corrosives              | PVDF/<br>PVDF                          | 180°F<br>(82°C)  | 100 psig<br>6.89 bar | 1.00      | 50 VA: 0.25A @<br>150 VAC | 22 AWG 24" (61 cm)   | 1/8"        | 1.5 (43)      |
| F7-C11      | General purpose                           | Buna-N/<br>Brass                       | 180°F<br>(82°C)  | 150 psig<br>10 bar   | 0.45      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/8"        | 1.5 (43)      |
| F7-C21      | Oils & water,<br>general purpose          | Buna-N/<br>316 SS                      | 180°F<br>(82°C)  | 150 psig<br>10 bar   | 0.45      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/8"        | 1.5 (43)      |
| F7-BB       | High viscosity liquids                    | Buna-N/<br>Brass                       | 180°F<br>(82°C)  | 150 psig<br>10 bar   | 0.55      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/4"        | 5 (140)       |
| F7-PS       | Water-based liquids,<br>complies with FDA | Polysulfone/<br>Polysulfone†           | 225°F<br>(107°C) | 50 psig<br>3 bar     | 0.55      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/4"        | 4 (110)       |
| F7-PVC      | Chemical & plating                        | CPVC/<br>CPVC                          | 180°F<br>(82°C)  | 15 psig<br>1 bar     | 0.85      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/4"        | 5 (140)       |
| F7-T1       | Viscous, sticky or<br>corrosive liquids   | PTFE/<br>TFE                           | 300°F<br>(149°C) | 30 psig<br>2 bar     | 0.80      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/4"        | 6 (170)       |
| F7-ST713    | Oils, water &<br>chemicals                | 316 SS/<br>316 SS                      | 300°F<br>(149°C) | 750 psig<br>52 bar   | 0.80      | 20 VA: 0.08A @<br>240 VAC | 22 AWG 24" (61 cm)   | 1/4"        | 6 (170)       |

①Distance between hex and liquid (S.G. = 1.0) level at actuation point will vary with specific gravity changes.

\*PBT - Polybutylene Terephthalate.

†Includes 316 SS clip.

‡Spherical floats.

\*\* F7-MPP is normally closed/F7-MPP-NO is normally open

UL Listed

## OPTIONAL FITTINGS — For external mounting of vertical models

A-347, 1/8" x 1-1/4" NPT carbon steel adapter

A-347-SS, 1/8" x 1-1/4" NPT 316 SS adapter

A-348, 1/8" x 1-1/2" NPT carbon steel adapter