

# FLT93<sup>®</sup> B FlexSwitch<sup>™</sup>

## Premium Flow, Level and Temperature Monitor



FLT93 B – FlexSwitch

Model FLT93B is a preconfigured version of FCI's Model FLT93S in its most popular configuration for simplified ordering and off-the-shelf quick shipment. For additional application and installation requirements, consult FCI's complete FLT93 Series brochure and ordering guides.

### FLT93 B Specifications

#### Flow Service – Setpoint Ranges

##### Water-based Liquids

0.01 FPS to 0.5 FPS [0,003 MPS to 0,15 MPS] -0.75 watt heater  
0.01 FPS to 3.0 FPS [0,003 MPS to 0,9 MPS] -3.0 watt heater

##### Hydrocarbon-based Liquids

0.01 FPS to 1.0 FPS [0,003 MPS to 0,3 MPS] -0.75 watt heater  
0.01 FPS to 5.0 FPS [0,003 MPS to 1,5 MPS] -3.0 watt heater

##### Air/Gas

0.25 SFPS to 120 SFPS [0,08 NMPS to 37 NMPS] -0.75 watt heater  
at standard conditions of 70 °F [21.1 °C] and 14.7 psia [1,013 bar(a)]

##### Accuracy (whichever reading is larger)

Liquids: ±0.5 % reading or ±0.04 FPS [±0,012 MPS]  
Gases: ±0.5 % reading or ±2 SFPS [±0,06 NMPS]

##### Repeatability: ±0.5 % reading

#### Level/Interface Service

**Accuracy:** ±0.25" [± 6,4 mm] | **Repeatability:** ±0.125" [± 3,2 mm]

#### Temperature Service

**Accuracy:** ± 2 °F [± 1 °C] | **Repeatability:** ± 1 °F [± 0,6 °C]

**Response Time:** As low as 3 seconds

### Ordering Information FLT93 B -

1      2      3      4

**Ordering Procedure:** To order a complete Model FLT93 B, please fill in each numbered box above with the appropriate code from the categories below.<sup>2</sup>

[Block 1] Agency Approval <sup>1</sup>	Code
FM, FMc	<b>A</b>
ATEX, IECEx	<b>B</b>

[Block 2] Insertion U-Length	Code
1.2 inch [30 mm]	<b>A</b>
2.0 inch [51 mm]	<b>B</b>
4.0 inch [102 mm]	<b>C</b>

[Block 3] Identification Tag	Code
Stainless steel metal tag <sup>2</sup>	<b>0</b>
[Block 4] Input Power	Code
Field selectable <sup>1</sup>	<b>0</b>

### FLT93 B Specifications (continued)

#### Element

**Construction:** All-welded 316L stainless steel for all wetted surfaces

**Process Connection:** 3/4" male NPT

**Insertion U-Length:** 1.2" [30 mm], 2" [51 mm] or 4" [102 mm]

**Operating Temperature:** -40 °F to 350 °F [-40 °C to 177 °C]

**Operating Pressure:** 2350 psig [162 bar (g)]

#### Control Circuit

##### Operating Temperature:

-40 °F to 140 °F [-40 °C to 60 °C]

**Input Power:** Universal AC/DC supply; input terminals and jumpers on circuit board select specific power

AC	108-132 V <sup>1</sup>	13 W, 100 mA maximum
AC	207-253 V <sup>1</sup>	14 W, 50 mA maximum
AC	18-28 V	7 W, 230 mA maximum
DC	21-30 V	7 W, 230 mA maximum

**Alarm Application:** Two alarms, independently field selected for flow, liquid level/interface, or temperature operation

**Relay Rating:** Field configurable dual SPDT or single DPDT 6 amp resistive at 115 Vac, 220 Vac or 24 Vdc

**Output Signal:** Analog DC voltage related to flow or level/interface signal and proportional to temperature

#### Other Specifications

**Enclosure:** Polyester powder coated aluminum rated for NEMA Type 4X/IP67; 1 inch female NPT conduit port

#### Agency Approvals

##### FM, FMc

Explosion-Proof for Class I, Division 1, Groups B, C and D;  
Dust-Ignition-Proof for Class II, Division 1, Groups E, F and G; Class III, Division 1;  
Nonincendive for Class I, II and III, Division 2, Groups A, B, C, D, E, F and G,  
T4 Ta=+60°C, T3A Ta=+60°C; hazardous (classified) locations;  
Type 4X.

**ATEX** II 2 G Ex db IIC T4...T2 Gb  
II 2 D Ex tb IIIC T135 °C...T300 °C Db

**IECEx** Ex db IIC T4...T2 Gb  
Ex tb IIIC T135 °C...T300 °C Db

**Other Compliances:** SIL-2 rated, CRN, probe complies with NEC & CEC Code requirements of ANSI/ISA 12.27.01-2011 as a single seal device, CE marking, RoHS compliant, EAC/TR CU, Inmetro, EMSA EQM-Ex

**MTBF:** 190 years

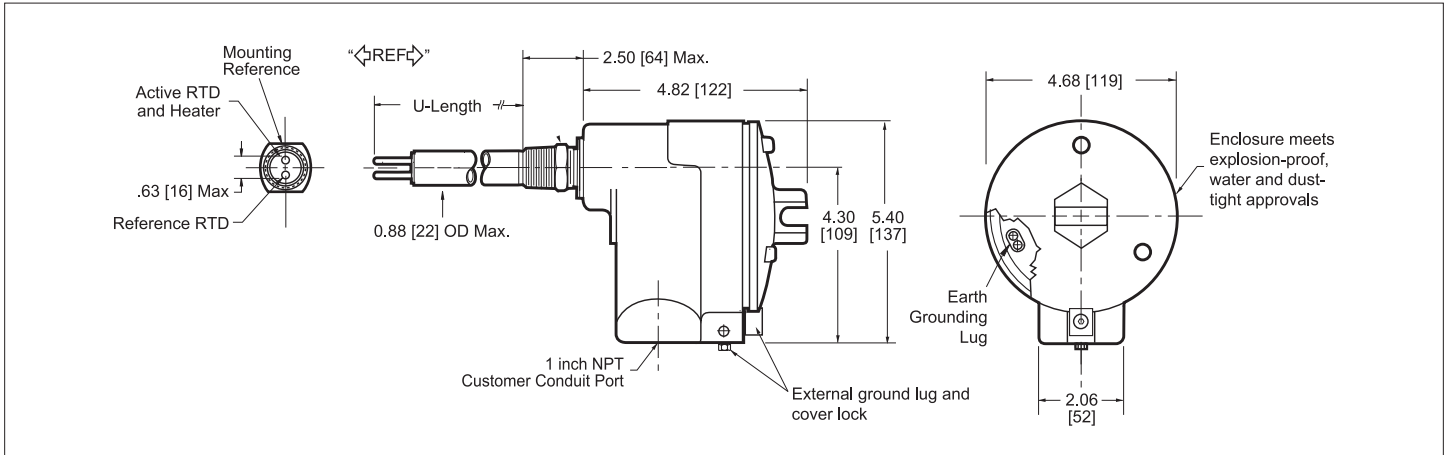
**Ship Weight** (approximate): 8 lb [3,6 kg]

**Warranty:** 3 years

<sup>1</sup> FM/FMc unit preset by factory as 108-132 Vac; ATEX/IEC unit preset by factory as 207-253 Vac

<sup>2</sup> For any other requirements – such as custom user tag information, specific certifications or test documentation, alternative agency approvals, longer insertion U-lengths or a different process connection – please refer to and order Model FLT93S.

**FLT93 B, Insertion**



**FLT93 B Wiring Diagram**

