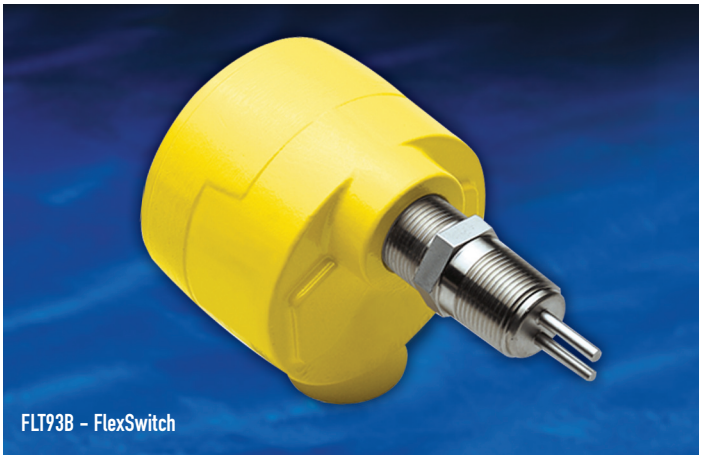
FLT93B FlexSWITCH®

FLUID COMPONENTS INTERNATIONAL LLC

Premium Flow, Level and Temperature Monitor



FLT93B – FlexSwitch

The FLT93B FlexSwitch® represents the first true technological breakthrough in thermal technology in over a decade. A single instrument, easily field-configured, provides unparalleled accuracy, flexibility and stability for most flow, level and temperature sensing and switching needs.

FLT93B 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

FLT93B Specifications *(continued)*

Level/Interface Service

Accuracy: ±0.25 inches [±6.4 mm]
Repeatability: ±0.125 inches [±3.2 mm]

Temperature Service

Accuracy: ±2 °F [±1 °C]
Repeatability: ±1 °F [±0.6 °C]
Response Time: As low as 3 seconds

Element

Construction: All-welded 316L stainless steel for all wetted surfaces
Process Connection: 3/4 inch male NPT
Insertion U-Length: 1.2 inch [30 mm], 2 inch [51 mm] and 4 inch [102 mm]
Operating Temperature: -40 °F to +350 °F [-40 °C to +177 °C]
Operating Pressure: To 3500 psig [240 bar(g)] at 70 °F [21 °C], derated to 2750 psig [190 bar(g)] at 350 °F [177 °C]

Control Circuit

Operating Temperature: -40 °F to +140 °F [-40 °C to +60 °C]
Input Power: Field selectable 115 ±15 Vac, 230 ±30 Vac, 50/60 Hz, or 21 Vdc to 28 Vdc or 18 Vac to 26 Vac; 7 watts maximum consumption. FM/CSA agency approval units are factory preset at 115 Vac. ATEX/IECEx agency approval units are factory preset at 230 Vac.
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.
Electrical Connection: 1 inch female NPT

Other Specifications

Enclosure: Epoxy powder coated aluminum rated for NEMA Type 4X and hazardous locations Groups B, C, D, E, F and G; EEx d IIC (meets IP66).
Agency Approvals: FM, CSA, ATEX, IECEx
Other Certifications: SIL-2 rated, CE Marking
MTBF: 190 years
Shipping Weight (approximate): 8 lb [3.6 kg]

Ordering Information

FLT93B – ☐ ☐ 0 0
1 2 3 4

Ordering Procedure: To order a complete Model FLT93B, please fill in each numbered box above with the appropriate code from the categories below. Consult FCI on the cost of special data and documentation. Final acceptance of the part number is subject to FCI's approval.

Agency Approval (Block 1)	Code
Factory Mutual (FM), CSA	A
ATEX, IEC, IECEx	B

Insertion U-Length (Block 2)	Code
1.2 inch [30 mm]	A
2.0 inch [51 mm]	B
4.0 inch [102 mm]	C

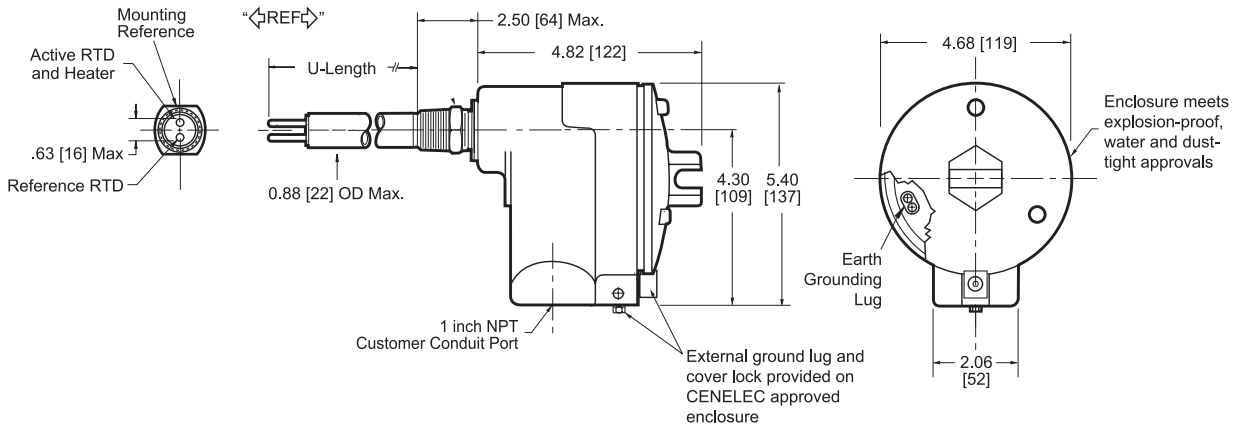
Identification Tag (Block 3)	Code
Adhesive Label**	0
Input Power (Block 4)	**Code**
Field Selectable	0

** Customer tag information requires optional stainless steel tag.

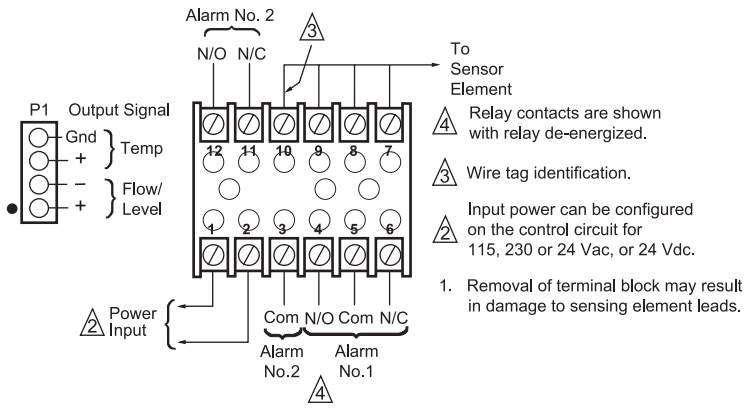
☐ Stainless Steel Tag *(3 lines with 20 characters/line max)*

Line 1: _____
Line 2: _____
Line 3: _____

FLT93B FlexSWITCH, Insertion



FLT93B Wiring Diagram



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FCI is ISO 9001:2000 and AS9100 Certified

Doc. No. 02MK011467D

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