# FLT93®B FlexSwitch™



# Premium Flow, Level and Temperature Monitor



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

# **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:  $\pm 0.5$  % reading or  $\pm 0.04$  FPS [ $\pm 0.012$  MPS] Gases:  $\pm 0.5$  % reading or  $\pm 2$  SFPS [ $\pm 0.06$  NMPS]

Repeatability: ±0.5% reading

### Level/Interface Service

Accuracy:  $\pm 0.25$  " [ $\pm$  6,4 mm] Repeatability:  $\pm$  0.125" [ $\pm$  3,2 mm]

# **Temperature Service**

Accuracy: ± 2 °F [±1 °C]
Repeatability: ±1 °F [±0,6 °C]
Response Time: As low as 3 seconds

# 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] and 4 " [102 mm] Operating Temperature: -40  $^{\circ}$ F to 350  $^{\circ}$ F [-40  $^{\circ}$ C to 177  $^{\circ}$ 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.

	FM/CSA	ATEX/IECEx	
AC	100-130 V <sup>1</sup>	108-132 V	13 W, 100 mA max.
AC	200-260 V	216-240 V <sup>1</sup>	14 W, 50 mA max.
DC	18-26 V	18-28 V	7 W, 230 mA max.
DC	21-28 V	21-30 V	7 W, 230 mA max.

**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" 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 XP, Class I, Division 1, Groups B, C, D

DIP, Class II/III, Division 1, Groups E, F, G

T4, Ta=60 °C; T3A, Ta=60 °C

ATEX II 2 G Ex d IIC T6...T2

IECEX Ex d IIC T6 or T5

Tamb (Housing) = -40 °C to 40 °C, T6 Tamb (Housing) = -40 °C to 60 °C, T5

Tp (Sensing Element) = -40 °C to 177 °C, T4/T2

Other Certifications: SIL-2 rated, CE marking, RoHS compliant (ATEX, IEC version)

MTBF: 190 years

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

Warranty: 3 years

- 1 FM/CSA unit preset by factory as 100-130 Vac; ATEX/IEC unit preset by factory as 216-240 Vac
- Optional stainless steel tag available; required for customer tag information. Order "Identification Tag" as a separate line item; may specify up to three (3) lines of 20 characters per line.

# Ordering Information FLT93 B - 0 0 0

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.

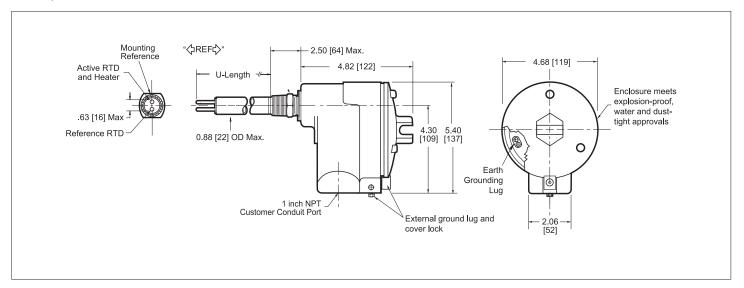
[Block 1] Agency Approval <sup>1</sup>	Code
FM, CSA	Α
ATEX, IECEx	В

[Block 2] Insertion U-Length	Code
1.2 inch [30 mm]	Α
2.0 inch [51 mm]	В
4.0 inch [102 mm]	C

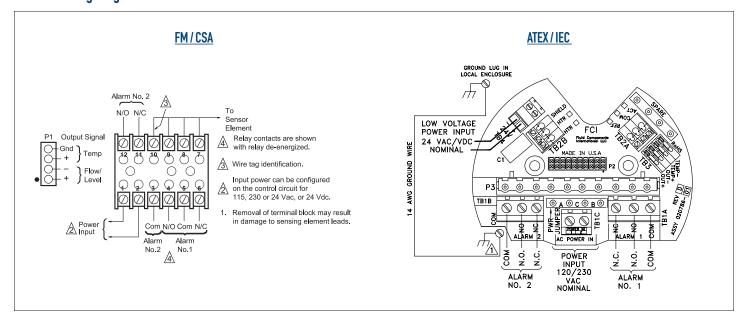
[Block 3] Identification Tag	Code
Adhesive Label <sup>2</sup>	0
[Block 4] Input Power	Code
Field Selectable	0

Line 1:	
Line 2:	
Line 3	

# FLT93 B. Insertion



# **FLT93 B Wiring Diagram**





# Representantes / Distribuidores Exclusivos

Buenos Aires, Argentina Tel.: (54-11) 5352-2500 E-mail: info@dastecsrl.com.ar Web: www.dastecsrl.com.ar

### Visit FCI online at www.FluidComponents.com | FCI is ISO 9001 and AS9100 Certified

#### **FCI World Headquarters**

1755 La Costa Meadows Drive | San Marcos, California 92078 USA **Phone**: 760-744-6950 **Toll Free (US)**: 800-854-1993 **Fax**: 760-736-6250

#### **FCI Europe**

Persephonestraat 3-01 | 5047 TT Tilburg, The Netherlands | **Phone:** 31-13-5159989 **Fax:** 31-13-5799036

# FCI Measurement and Control Technology (Beijing) Co., LTD | www.fluidcomponents.cn

Room 107, Xianfeng Building II, No.7 Kaituo Road, Shangdi IT Industry Base, Haidian District | Beijing 100085, P. R. China

Phone: 86-10-82782381 Fax: 86-10-58851152

