

VARIABLE AREA FLOW

METER WITH ALARM

FLSW Series



Optional

- ✓ HIGH or LOW Alarms
- ✓ Compact Design
- ✓ Liquid or Gas Applications
- ✓ High or Low Flow Cutoff Applications
- ✓ Dip Switch Configurable Buzzer, Relay, and LED

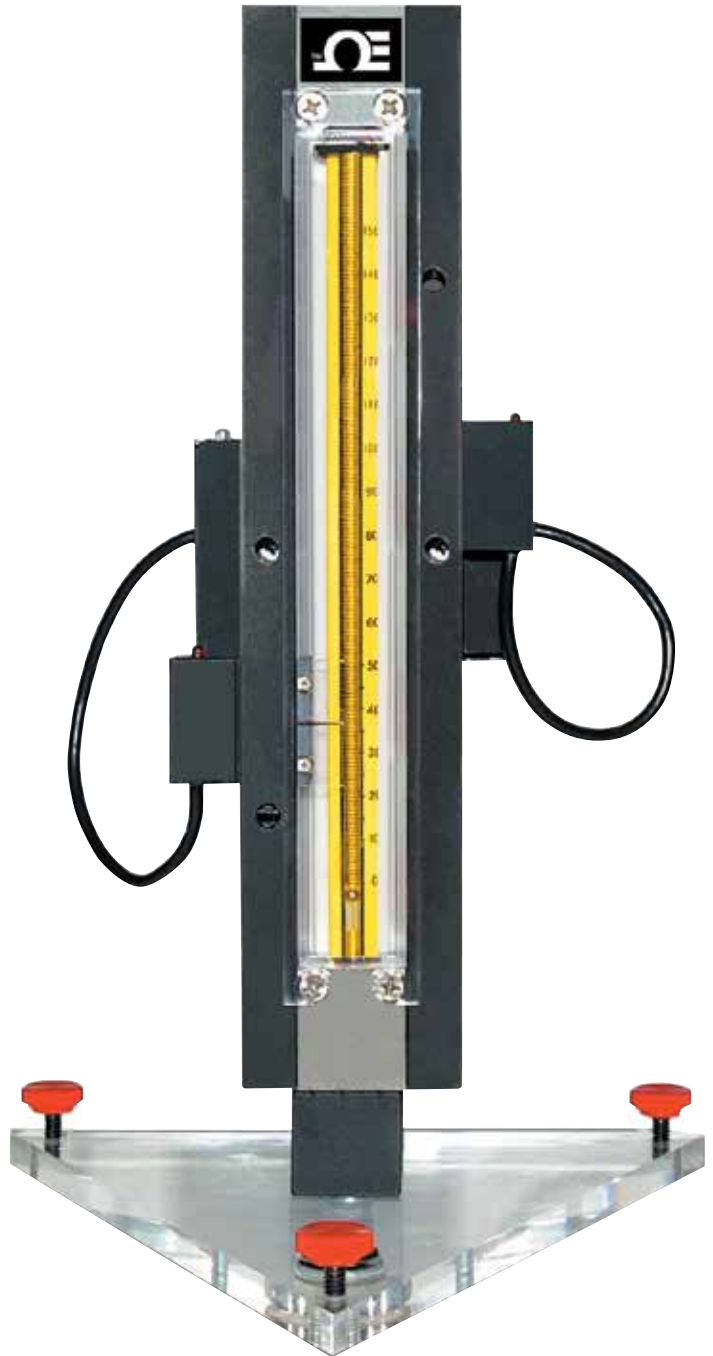
The 150 mm high/low alarm flow meter with optical sensor switch is a noninvasive means for detection of a HI or LOW flow. This sensor is ideal for signaling an alarm, cutoff valve, or other device when the float passes the detector (alarm, valve, etc. not included). The FLSW Series helps protect your processes and equipment from damage caused by extreme flow rates. Its compact design and ease of operation make it a unobtrusive, simple-to-use addition to your flow meter.

This meter is perfect for OEM™ applications. Use whenever maximum or minimum flow levels need to be monitored automatically.

The FLSW Series also can be used in conjunction with a control relay to power alternate equipment or monitoring devices.

Principle of Operation

A small, LED sensor and receiver are mounted on one side of the flow meter. The float inside the flow tube is detected as it passes across the beam of light. Sensor can be used to detect float passage beyond the setpoint of the sensor. It can also be set to monitor float position at a specific level, signalling when float is outside of the range of the sensor light beam. DIP Switches are located next the the 9-pin D connector. In order to activate the alarm sensors the corresponding switch has to be in the "ON" position on the DIP switch. The relay output or the buzzer or the green LED can be separately set for momentary or latch operation. If for example DIP Switch SW1 is set to "ON", when the left sensor is active, the relay and the green LED will be energized in the latch mode. It will remain latched until the RESET button is pressed or external RESET TTL signal is applied.



FLSW3405ST variable area flow meter and FLTR-1 tripod, shown smaller than actual size.

Alarm DIP Switch Configuration

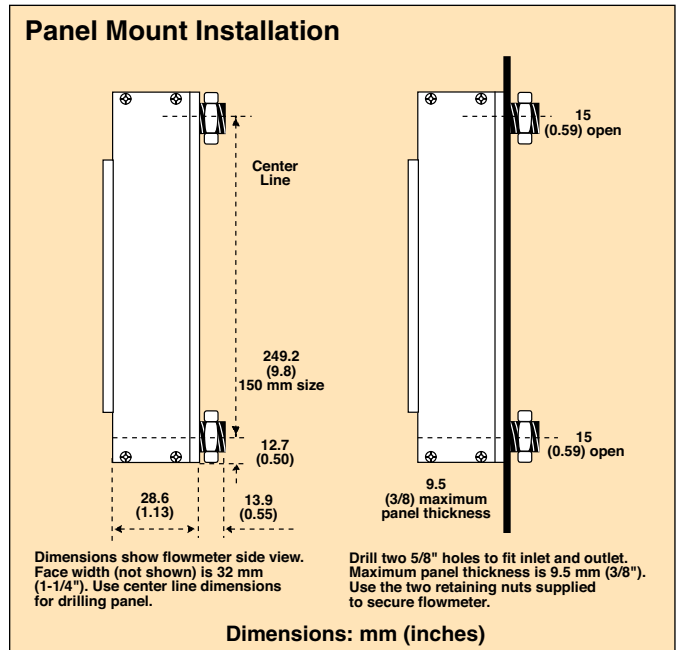
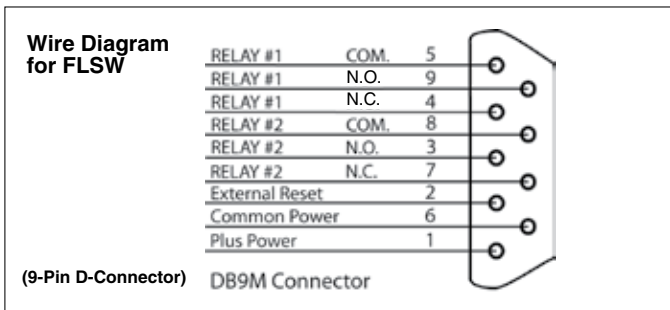
Left Alarm	Right Alarm	Action When Switch is "ON"
SW1	SW5	LED and Relay are ON (Latch)
SW2	SW6	Buzzer is ON (Latch)
SW3	SW7	LED and Relay are ON momentarily (Follow Sensor)
SW4	SW8	Buzzer is ON momentarily (Follow Sensor)

SPECIFICATIONS

Accuracy: ±2% of full scale
Repeatability: 0.5% of full scale
Ambient Temperature: 0 to 70°C (32 to 158°F)
Maximum Pressure: 200 psig
Connections: 1/8 FNPT
End Blocks: Aluminum or 316 Stainless Steel
Elastomers: Buna and FKM (Aluminum), FKM (316SS)
Tube: Borosilicate
Float Materials: "G" for Glass or "ST" for 316 SS or "T" for Tantalum (noted in model number)
Input Power: 12 Vdc, 15 Vdc maximum, 250 mA regulated, peak to peak maximum 100 mV
Power Consumption: Less than 200 mA

Response Time: 500 milliseconds
Source of Light: 65 mm, red LED
Light Immunity: Pulse modulated
Dry Contact Closures: 2 normally open, and normally closed relays 91A, 30 Vdc maximum)
Alarm Options: High, Low or High/Low
Buzzer: User configurable, momentary or latch through DIP switch setting
Reset: Reset button or remote through "D" -connector, to disable relay or buzzer
Interface: 9-pin "D"-connector
Optional: 12 Vdc power supply, tripod base

Dimensions:
Alarm Electronics Enclosure: 51.1 x 76.2 mm (2.01 x 3.00")
Enclosure #2 with Phone Plug: 30.5 x 14.2 mm (1.2 x 0.6")



To Order

Model No. Aluminum	Model No. Stainless Steel	Maximum Flow Air ml/min	Maximum Flow Water ml/min
FLSW3401G	FLSW3501G	49	0.49
FLSW3402G	FLSW3502G	92	0.9
FLSW3403ST	FLSW3503ST	264	4.7
FLSW3404G	FLSW3504G	374	5.5
FLSW3405ST	FLSW3505ST	814	20.4
FLSW3406ST	FLSW3506ST	1682	44.6
FLSW3407G	FLSW3507G	2313	54
FLSW3408G	FLSW3508G	4562	133
FLSW3409ST	FLSW3509ST	7825	217
FLSW3410ST	FLSW3510ST	16737	506
FLSW3411G	FLSW3511G	23742	541
FLSW3412ST	FLSW3512ST	45227	1288
FLSW3413T	FLSW3513T	69940	2000

Accessories

Model No.	Description
FMA178PW	Socket plug-in power supply for 115 Vac
FMA178PW-220VAC	Socket plug-in power supply for 220 Vac, VDE plug type
FLTR-1	Tripod for one variable area flow meter, 177.8 mm (7") L and 9.53 mm (0.375") thick
70A-1	Audible alarm

Comes complete with operator's manual.

For NIST calibration, add suffix "-NIST AIR" to model number or suffix "-NIST WATER" to model number for additional cost.

For oxygen cleaning add suffix "-O2CLEAN" to model number for additional cost.

Ordering Examples: FLSW3405ST, aluminum variable area flow meter, maximum air flow 814 ml/min and maximum water 20.4 ml/min. FLSW3413T, aluminum variable area flow meter, maximum air flow 69940ml/min and maximum water 2000 ml/min.