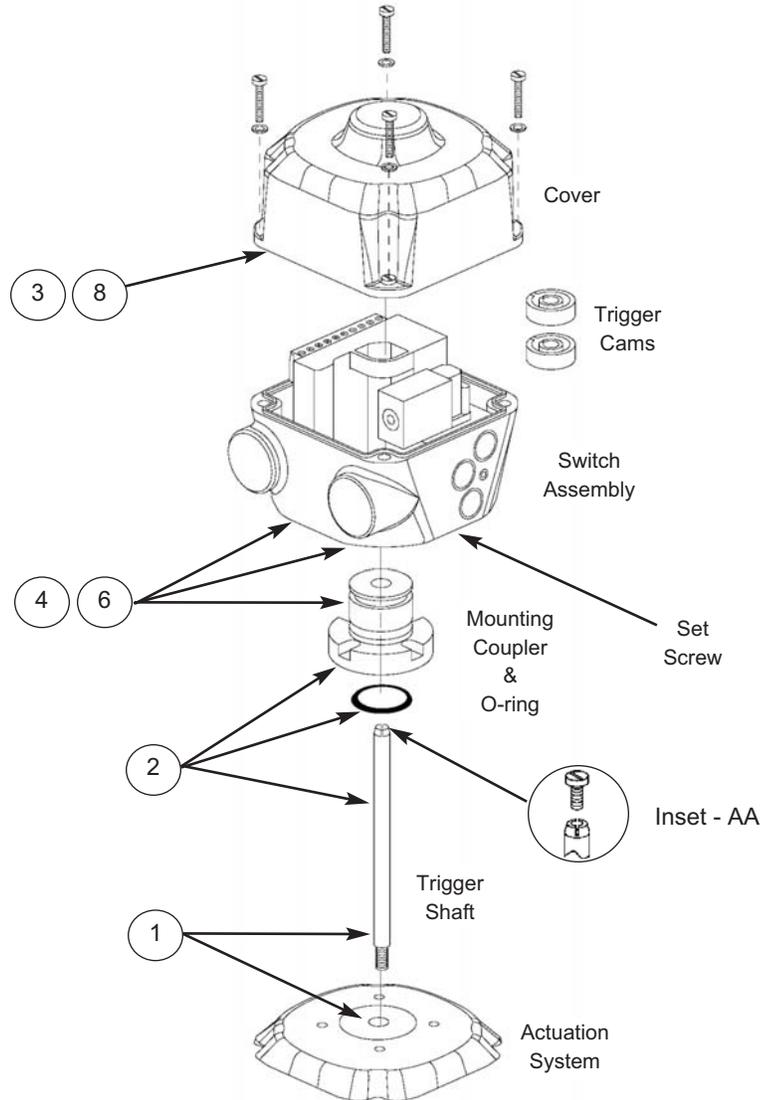




Installation & Adjusting Instructions

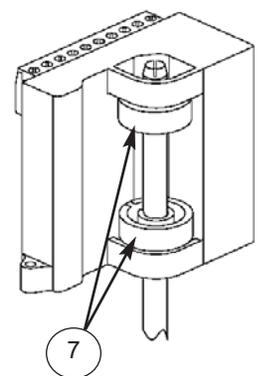
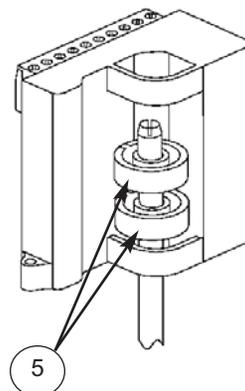
Prism™ Mounting

1. Thread the Trigger Shaft onto the actuation system stem.
2. Place provided o-ring in groove on the bottom of the Mounting Coupler and slide over the Trigger Shaft. Secure Mounting Coupler to the actuation system. Fastening of Mounting Coupler to the actuation system will be either flange mounted or threaded. (Dependent on manufacturer of valve assembly)
3. Remove the Prism's Cover.
4. Slide the Prism Switch Assembly over the Trigger Shaft via the Mounting Coupler socket located on the bottom of the Switch Assembly. Do not seat the Switch Assembly onto the Mounting Coupler. The Trigger Shaft should now be approximately midway between upper and lower Cam Stops on the Dual Module. (See Detail A)
5. While supporting the Switch Assembly with one hand, place the two Trigger Cams onto the Trigger Shaft between the cam stops. (See Detail A)
6. Fully seat the Switch Assembly onto the Mounting Coupler. Secure the Switch Assembly to the Mounting Coupler by tightening the set screw located on the bottom of the Switch Assembly, opposite of the conduit entries. **Some mounting systems for 2" and larger valves may have the Trigger Shaft threaded, in these cases thread the provided 6/32 screw into the top of the Trigger Shaft. (See Inset - AA)**
7. To set the Cam Triggers, slide the upper trigger until it touches the upper cam stop (or 6/32 screw) and push down the lower trigger until it touches the lower cam stop. Cycle the actuator and the triggers will automatically be set to the proper position. (See Detail B)
8. Perform applicable field wiring and replace Prism Cover. (Applicable wiring diagrams and connector pin-out guides located on Page 4 of this document)



Detail A

Detail B



StoneL
 26271 US Hwy 59
 Fergus Falls, MN 56537
 USA
 Telephone: 218.739.5774
 Toll Free: 800.843.7866
 Fax: 218.739.5776
 E-mail: sales@stonel.com
 Website: www.stonel.com

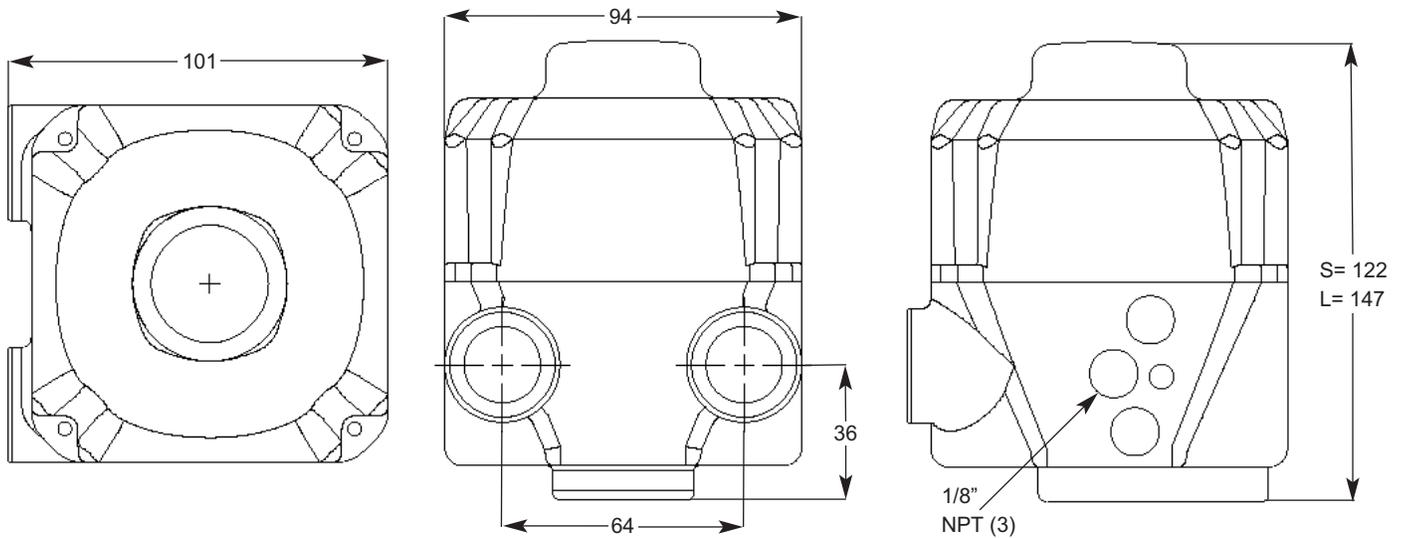
PRISM Model Selector

	Function	Pneumatic Valve	Conduit/Connectors	Visual Indicator	Valve Size
PM	33 (2) SST N.O. Sensors 34 (2) SST N.C. Sensors 44 (2) NAMUR Sensors 92 DeviceNet VCT** 93 Foundation Fieldbus VCT* (Bus Power Outputs; I.S.) 94 Foundation Fieldbus VCT** (Externally Powered Outputs) 95 Modbus VCT** 96 AS-Interface VCT** 97 AS-Interface VCT (Ext Add)** * For use with pneumatic valve option 11 or 1A only ** For use with pneumatic valve option 11, 1B or 1D only	11 No Pneumatic Valve 1A 3-way/Piezo* 1B 3-way/24 VDC/1.8 W 1C 3-way/120 VAC/5.4 W 1D 3-way/24 VDC/0.5 W 1E 3-way/12 VDC (I.S.)** * For use with Function 93 only ** For use with Function 44 only	S02 (2) 1/2" NPT S05 (2) M20 S09 (2) Cable Glands S11 (1) 5-Pin Mini-Connector S13 (1) 4-Pin Micro-Connector S14 (2) 4-Pin Micro-Connector S15 (1) 5-Pin Micro-Connector S16 (1) 5-Pin Micro-Connector & (1) 4-Pin Micro Connector	R Red Closed/ Green Open G Green Closed/ Red Open	S Stroke less than 2" L Stroke from 2" to 4"
Model Number Example: PM961BS02RS					

General Specifications and Ratings

Materials of Construction Housing & Cover: Polycarbonate Fasteners: Stainless Steel Triggering Cams: Stainless Steel Banded Polycarbonate Mounting System: Stainless Steel O-Rings: Buna-N Valve Manifold: Polysulfone with Stainless Steel Reinforced NPT Ports	Operating Life: One Million Cycles Temperature Range: -40° C to 80° C (-40° F to 180° F) Enclosure Protection NEMA: 4, 4X, 6; IP67 Hazardous Location Ratings Nonincendive: Class I&II, Div 2, All Gas Groups Warranty Dual Modules/VCTs: Five Years Mechanical Components: Two Years
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Dimensions (mm)



General Pneumatic Specifications

Configuration: 3-Way, 2-Position, Spring Return
Porting: 1/8 NPT (all pressurized ports)
Rebreather Port: 4-40 size
Operating Pressure: 40 psi to 120 psi (2.6 to 8.0 bar)
Flow Rating: 0.1 Cv (1.4 Kv)
Rebreather: Standard on all models; Diverts air from exhausting cylinder into actuator spring side, Excess air exhausted to the atmosphere

Valve Cycle Time:
 1/2" Stroke To Open = < 1 sec. To Close = < 1 sec.
 1 1/8" Stroke To Open = 3.4 sec. To Close = 3.1 sec.
Operating Life: One Million Cycles

Solenoid Coil Specifications

120 VAC (with burn-out proof coil)
Power: 5.4 Watts
Inrush Current: 0.09 Amps @ 120 VAC
Holding Current: 0.06 Amps @120 VAC

24 VDC

Power: 1.8 Watts (1B); 0.5 Watts (1D)
Current Draw: 0.075 Amps (1B); 0.02 Amps (1D)
Temperature Range: -18° C to 50° C (0° F to 120° F)
Filtration Requirements: 40 Microns

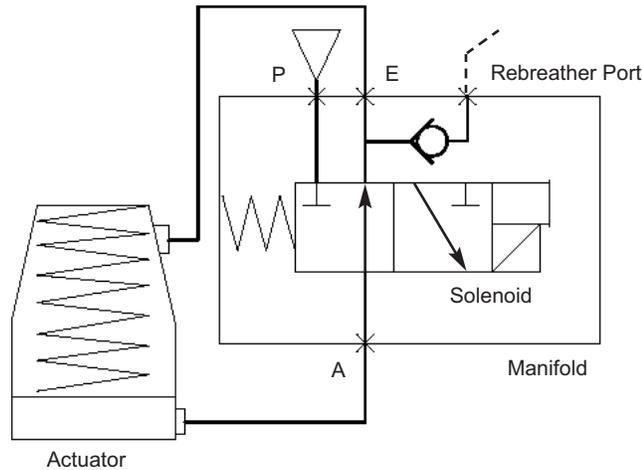
12 VDC (Intrinsically Safe)

Power: 0.5 Watts
Current Draw: 0.04 Amps
Temperature Range: -18° C to 50° C (0° F to 120° F)
Filtration Requirements: 40 Microns

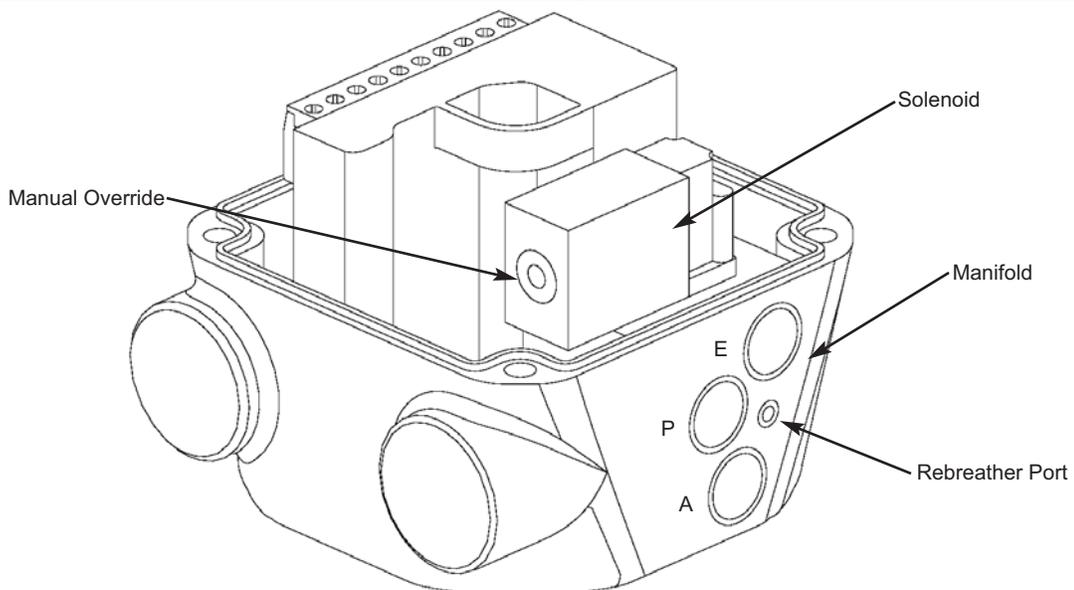
Piezo

Operating Voltage: 5.5 VDC to 9.0 VDC
Current Draw: 2.0 mA @ 6.5 VDC
Temperature Range: -10° C to 60° C (14° F to 140° F)
Filtration Requirements: 30 Microns
Hazardous Ratings: EEx ia IIC T6

Pneumatic Valve Schematic



Pneumatic Valve Component Locator



33 Dual Module Specifications

Sensors: (2) NO 2-wire Solid State Sensors
 Voltage Range: 8 to 125 VDC, 24 to 125 VAC
 Maximum Current:
 Inrush 1.0 Amps@125V AC/DC
 Continuous 0.1 Amps@125V AC/DC

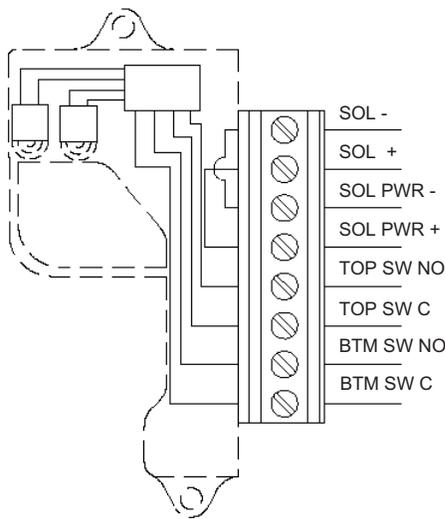
Minimum On Current: 2.0 mA
 Leakage Current:
 DC Circuits 0.15 mA
 AC Circuits 0.25 mA
 Max Voltage Drop 6.5 Volts @ 10 mA
 7.5 Volts @ 100mA

To Bench Test a Dual Module SST Sensor: Use StoneL Light Read Tester. Or use a 24 Vdc or 120 Vac power supply with series load resistor (2K - 6K Ω).

WARNING:

FAILURE TO USE A SERIES LOAD RESISTOR WHEN BENCH TESTING SENSORS WITH A POWER SUPPLY WILL RESULT IN PERMANENT DAMAGE TO THE UNIT

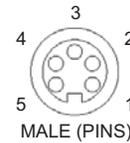
Wiring Diagram/Connector Pin-Out



Connector Option (S11)

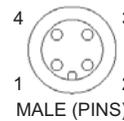
PIN	PM3311S11XX	PM331BS11XX	PM331CS11XX	PM331DS11XX
1	BTM C	TOP/BTM C	TOP/BTM C	TOP/BTM C
2	BTM NO	BTM NO	BTM NO	BTM NO
3	NOT USED	TOP NO	TOP NO	TOP NO
4	TOP NO	SOL PWR +	SOL PWR +	SOL PWR +
5	TOP C	SOL PWR -	SOL PWR -	SOL PWR -

MINI-CONNECTOR



Connector Option (S13)

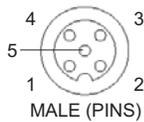
MICRO-CONNECTOR



PIN	PM3311S13XX
1	TOP NO
2	BTM NO
3	BTM C
4	TOP C

Connector Option (S16)

MICRO-CONNECTOR



MICRO-CONNECTOR



PIN	PM3311S16XX
1	TOP NO
2	BTM NO
3	SOL PWR -
4	SOL PWR +
5	TOP/BTM C
XX	XXXXXXXXXX
1	NOT USED
2	NOT USED
3	SOL -
4	SOL +

Connector Option (S15)

PIN	PM3311S15XX	PM331BS15XX	PM331CS15XX	PM331DS15XX
1	BTM C	TOP/BTM C	TOP/BTM C	TOP/BTM C
2	BTM NO	BTM NO	BTM NO	BTM NO
3	NOT USED	TOP NO	TOP NO	TOP NO
4	TOP NO	SOL PWR +	SOL PWR +	SOL PWR +
5	TOP C	SOL PWR -	SOL PWR -	SOL PWR -

MICRO-CONNECTOR

