

Series EVS Liquid Level Controllers

Zero-Leak Pilot: Plus easy-to-service design



Series EVS pneumatic controllers are easy-access, back-mounted units that provide liquid level or interface control for gas separator and scrubber applications. EVS controllers feature patented Envirosave snap (on/off) pilots, which prevent fugitive emissions and reduce bleeding of valuable gases. The Envirosave pilot was rated at zero leakage in a U.S. EPA Natural Gas STAR Program report.*

Series EVS controllers operate using Norriseal's force-balance technology, which delivers proven reliability and long service life. Service-enhanced design makes units simpler to install and easy to access for routine maintenance. EVS controllers accommodate both low- and high-pressure applications, making them ideal for a wide range of uses in natural gas production, compression and gas processing

Features

Service-Enhanced Design

- Controller body is back-mounted on the case for versatility and ease of installation
- Flush-mounted internals allow easy access
- Removable door
- Field-reversible output for direct or reverse action
- Field-configurable horizontal or vertical displacer

Advanced Operation

- Environmentally friendly Envirosave snap (on/off) pilot stops fugitive emissions and conserves valuable gases
- Field-proven, force-balance technology
- High sensitivity for either Top Level or Interface control
- 0 to 60 psig supply and output gauges are standard
- Rated for extreme low-temperature operation (-50°F or -46°C ambient operating temperature) when using the SST Displacer option

Extreme Reliability

- Weather-resistant sealed enclosure
- Polyurethane dry-powder coating complies with ASTM B117-90 (salt spray) and B2247-87 (humidity resistance)
- High-performance HSN seals standard
- Complies with NACE MR01.75-2002
- 40-micron SST supply filter resists contamination of the pilot Displacer option

*Natural Gas STAR Program report: Technical Support Documents; Options for Reducing Methane Emissions from Pneumatic Devices in the Natural Gas Industry; Appendix A: Gas Bleed Rate for Various Pneumatic Devices; August 18th, 2003; www.epa.gov/gasstar/pneumat.htm

*This product is covered by U.S. Patents 4,700,738 and 6,497,246.

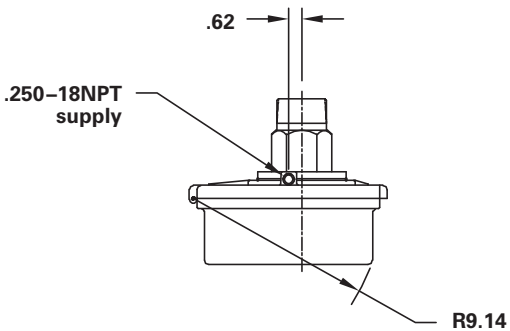
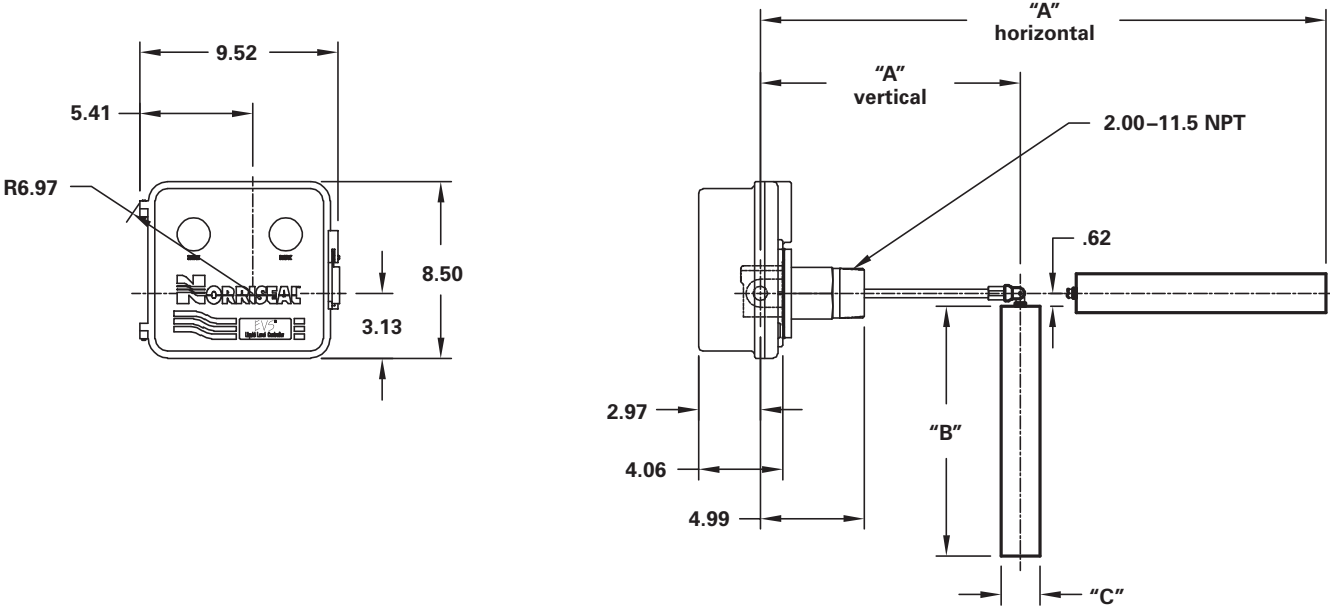
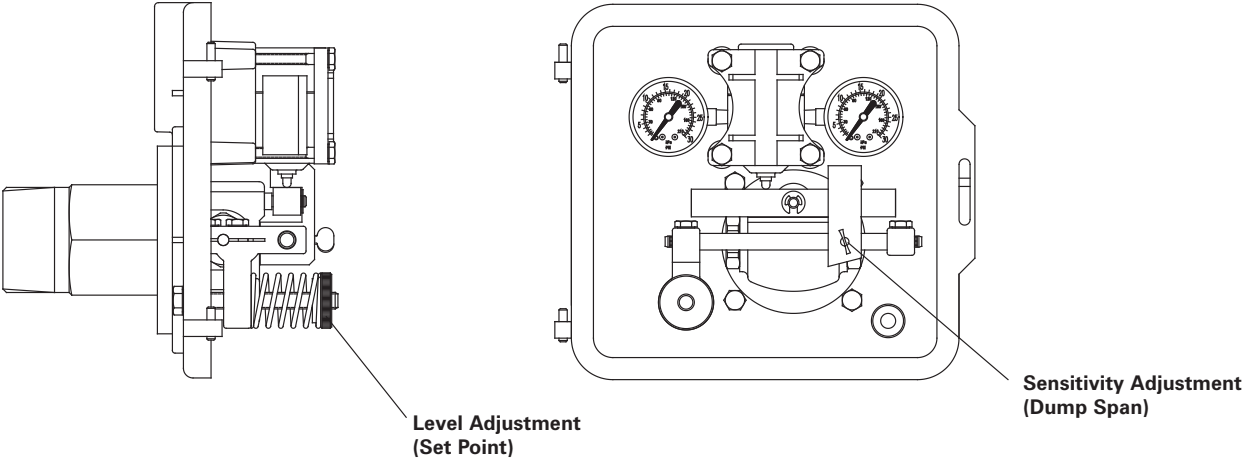
Specifications

PNEUMATIC PILOTS	
Output	
Envirosave, snap	0–20 psig, 0–30 psig
Optional: Throttle, proportional	3–15 psig, 6–30 psig
Supply Pressure Required	
3–15 psig, 0–20 psig	20–30 psig (min.)
6–30 psig, 0–30 psig	35–40 psig (min.)
Ambient Temperature	–20° to +180°F (–29° to 82°C)
Pilot Flow Capacity	
Throttle C _v	0.394
Envirosave™ C _v	0.282
Proportional Band Adjustment (Recommended adjustment for a full output pressure change over a percent of sensing element)	
Throttle	20-150%
Envirosave™	7-55%
Body	
Throttle	Aluminum w/ Aluminum Seat
Envirosave™	Aluminum w/ Elastomeric Seat
Gasket/diaphragm	Nitrile
Internal Valving	Nylon
Filter Element	40 Micron SST
Screws & Nuts	SST

GENERAL	
Repeatability	1.0% of output span
Dead Band	5.0% of input span
Linearity	1.75% of output span
Mechanical Disturbance Effects on Setpoint	1.0%
Specific Gravity	
Interface	SG Differential*
Top level	0.35 to 2.00
Process Temperature Limits of Body	–50° to +400°F (– 46° to +204°C)
Process Pressure Rating	1500 ANSI Class
LLC Body Material	ASTM A352 LCC –50° to +400°F (–46° to +204°C)
Displacers	PVC –20° to +140°F (–29° to +60°C) Acrylic –20° to +200°F (–29° to +93°C) 316 SST –70° to +400°F (–57° to +204°C)
Case and Cover	ASTM A380 die cast aluminum. Polyurethane dry-powder coating complies with ASTM B117-90 (salt spray) and B2247-87 (humidity resistance).
Pressure Gauges	Dual scale 0–60 psig/ 0–4 bar, Bronze, 316SS
Operational Service Condition	NACE MR01.75-2002 compliant
Supply, Output and Case Vent/ Relay Exhaust Connections	1/4" NPT, vent assembly installed. (Discard for piped exhaust.)
Total Weight	16 lbs.

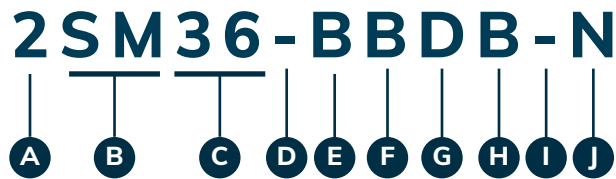
*Will require special arm length, displacer and spring. Consult factory for more details.

Dimensions



Note: Dimensions A, B and C are dependent on arm length and displacer size selection.

Model code



A

SIZE END CONNECTION	
Code	Description
2	2.00

B

BODY TYPE END CONNECTION	
Code	Description
SM	NPT (Screwed Male)

C

RATING BODY END CONNECTION		
Code	Rating*	ANSI
36	3705	1500

*Body pressure rating subject to selection of displacer (reference displacer chart below).

D

MATERIAL: BODY/SHAFT/BLOCK			
Code	Body	Shaft	Bearing Block
-	LCC Carbon Steel	316	316

E

PNEUMATIC PILOT MODE		
Code	Description	Seat Material*
B	Envirosave, Snap	Metal/Elastomer
T	Throttle, Proportional	Metal

*Same as seal material

F

MOUNTING CASE	
Code	Type Mounting
B	Back Mount

G

PILOT ACTION	
Code	Pilot Action
D	Direct Acting
R	Reverse Acting

H

WETTED/SEAL MATERIAL		
Code	O-Ring	Temp °F (°C)**
B	HSN	-25 to 300 (-32 to 149)
S	AFLAS	-25 to 400 (-32 to 204)

**Seal temperature rating subject to selection of displacer.

I

PRESSURE GAUGES	
Code	Description
-	Pressure Gauges – Bronze 0–60 psi (0–4 bar)
K	Pressure Gauges – 316SS 0–60 psi (0–4 bar)

J

SERVICE CONDITION	
Code	Description
N	NACE MR0175-2002

DISPLACER CHART DISPLACER TEMPERATURE/PRESSURE RATING		
Material	Temp °F (°C)**	Max Pressure
PVC	-20 to 140 (-29 to 60)	3705
Acrylic	-20 to 200 (-29 to 93)	3705
SST-2	-70 to 400 (-57 to 204)	2000
SST-3	-70 to 400 (-57 to 204)	3000

**Displacer temperature rating subject to selection of seal

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