

# VEL-trol II

## ULTRA-LOW RANGE DIFFERENTIAL PRESSURE/ FLOW TRANSMITTER / CONTROLLER

<b>OPTIONS</b>				
<input type="checkbox"/> Alarms <b>or</b> <input type="checkbox"/> AUTO-purge Mgmt <input type="checkbox"/> Auxiliary Output <input type="checkbox"/> Terminal Cover/Conduit Connection	<b>Display</b> <input type="checkbox"/> 2x20 LCD (std) <input type="checkbox"/> 5x20 LCD	<b>Certification</b> <input type="checkbox"/> Standard <input type="checkbox"/> NIST Traceable	<b>Special Function</b> <input type="checkbox"/> % Deviation <input type="checkbox"/> Differential Flow <input type="checkbox"/> Summed Flow <input type="checkbox"/> Averaged Flow <input type="checkbox"/> Low Select <input type="checkbox"/> High Select	<b>Network</b> <input type="checkbox"/> None (std) <input type="checkbox"/> Modbus TCP/IP over Ethernet <input type="checkbox"/> LonWorks
<b>Power</b> <input type="checkbox"/> 24VAC <input type="checkbox"/> 20-40VDC <input type="checkbox"/> 120VAC (via ext transformer)	<b>Controller</b> <input type="checkbox"/> Ext. Setpoint <input type="checkbox"/> P,I,1/2 Control			

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**PERFORMANCE SPECIFICATIONS**

**Accuracy.** ±0.1% of Natural Span, Including non-linearity, hysteresis, deadband, and non-repeatability.

**Stability.** ±0.5% of Natural Span for six months.

**Temperature Effect.**  
 Zero. None; corrected by AUTO-zero.  
 Span. 0.015% of Full Span/°F.

**Mounting Position Effect.** None; corrected by AUTO-zero.

**Transducer Response Time.** 0.5 second to reach 98% of a step change.

**Power Consumption.**

	Standard		w/AUTO-purge	
	In Rush	Hold	In Rush	Hold
24VAC	14.4VA	14VA	85VA	73VA
24VDC	9.6W	9.0W	37W	37W
120VAC	19.2VA	18.67VA	106VA	92VA

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**FUNCTIONAL SPECIFICATIONS**

**Digital Outputs.**  
 Dual Form C dry contacts and dual Form A dry contacts rated for 3 amps at 24VAC/VDC are used for optional Hi/LC alarm or AUTO-purge activation and acknowledgment.

**Digital Inputs.**  
 Dry contact for soft start command, AUTO-purge external start command, and switch to external setpoint command.

**Analog Outputs.**  
 The single transmitter and controller outputs are individually configurable via jumper for 0-5VDC, 0-10VDC, or 4-20 mAADC. Two additional outputs are optionally available.

**Analog Inputs.**  
 Dual inputs are field configurable via jumper for 0-5VDC, 0-10VDC, or 4-20mAADC. For use with optional special function and controller external setpoint.

**AUTO-purge Management.**  
 AUTO-purge cycle is initiated via an external dry contact input, or via an internal timer with field selectable frequencies of 1 to 24 hours, in 1 hour increments. Three internal relays provide remote purge activation & acknowledgment.

**Controller.**  
 Controller output type is P,I,1/D, user selectable forward or reverse acting. Controller setpoint is user selectable as internal or via external analog input.

**Low Pass Filtration.**  
 Response time to reach 98% of a step change is adjustable from 2.0 to 250.0 seconds.

**Power Supply.**  
 Standard 24VAC (20-28VAC) or 24VDC (20-40VDC), with automatic selection. Optional 120VAC (100-132VAC), via external transformer.

**Automatic Zeroing.**  
 Accuracy. Within 0.1% of calibrated span.  
 Frequency. Every 1 to 24 hours on 1 hour intervals.

**Overpressure and Static Pressure Limit.** 25 psig.

**Circuit Protection.**  
 Power input is isolated, fused, and reverse polarity protected.

**Span and Zero Adjustment.**  
 Digital, via internally located push-buttons.

**Displays.**  
 Standard 2 line x 20 character backlit graphical LCD provides one line of data display. Optional 5 line x 20 character backlit graphical LCD provides up to 5 lines of data display.

LED's indicate CPU activated, AUTO-zero in progress, AUTO-zero over-ranged, AUTO-purge in progress, and auxiliary alarm "on" status.

**Humidity Limits.** 0-95% RH, non-condensing.

**Temperature Limits.**  
 -20°F to 180°F Storage.  
 +40°F to 140°F Operating.

