

# Differential Pressure Purge Control



## 788 SERIES

- Generates a constant flow of compressed air to purge a downpipe
- Integral differential pressure transmitter provides 4 mAdc to 20 mAdc output proportional to liquid level
- All-pneumatic design does not include integral transmitter
- Provides 1:1 pressure signal to a compatible indicator or external transducer through 1/4 in. airline tubing
- Holds a fixed pressure differential across a precision orifice to ensure constant flow rate of 1 cfh (cubic foot per hour), making it possible to maintain a linear 1:1 response of the sensing system
- Backpressure sensed is equivalent to the hydrostatic head pressure due to actual liquid depth

### APPLICATIONS

- Tank level indication
- Marine
  - Tank level, draft monitoring and vessel management
  - Ballast water
  - Fuel oil
  - Fresh water
  - Lube oil
  - Brine
  - Preload
  - Holding

### SPECIFICATIONS

<b>Output signal</b>	4 mAdc to 20 mAdc (milliamperes)	
<b>Accuracy</b>	0-5 psid trans./control	± 0.34% full scale
	0-10 psid trans./control	± 0.27% full scale
	0-15 psid trans./control	± 0.24% full scale
	0-30 psid trans./control	± 0.22% full scale
	0-50 psid trans./control	± 0.21% full scale
<b>Repeatability</b>	± 0.20% of calibrated span	
<b>Temperature Range</b>	0 °F to 120 °F / -16 °C to 54 °C	
<b>Maximum pressure</b>	300% over-range	
<b>Burst pressure</b>	200 psig	
<b>Power requirement*</b>	14 Vdc to 40 Vdc	
<b>Compressed air requirement</b>	35 psig to 150 psig supply pressure at control inlet. (Minimum supply pressure should be at least 20 psig greater than anticipated maximum liquid head pressure.)	
<b>Maximum depth measurement</b>	1,937 inH <sub>2</sub> O (49.0 m)	
<b>DP Purge control</b>	Unit incorporates differential air flow regulator with flow control orifice Fixed differential set to nominal 10 psid Output is 1:1 pneumatic pressure (hydrostatic force equivalent) Includes an integral differential pressure (D/P) transmitter converting pneumatic pressure into 4 mAdc to 20 mAdc electronic output. Ranges available: 0 psid to 5 psid, 0 psid to 10 psid to 30 psid, 0 psid to 50 psid	
<b>Flow rate (air purge)</b>	Nominal 1 cfh (cubic feet per hour) at specified differential Maximum air consumption under 5 cfh.	
<b>Materials</b>	Machined brass body with acrylic semi-gloss enamel finish; integral filter element is aluminum with acrylic semi-gloss enamel finish	

\* Unregulated



ORDERING INFORMATION				
<b>SERIES</b>	788			
<b>FITTINGS</b>	198 None, 1/4" NPT	398 Polyflo; (1) 3/8" tube, (1) 1/4" tube	498 Swagelok; (1) 3/8" tube, (1) 1/4" tube (compatible with copper or poly tubing)	
<b>DP NOMINAL RANGES</b>	148 0 psi to 2 psi	168 0 psi to 10 psi	188 0 psi to 30 psid	198 0 psi to 50 psi

**EXAMPLE**

**Series** ..... 788 Series 788 - 398 - 178  
**Fitting** ..... Polyflo; (1) 3/8" tube, (1) 1/4" tube  
**DP Nominal range** ..... 0 psi to 15 psi

