

# DEPTH/LEVEL TRANSMITTER—SLIM-LINE VERSALINE VL4500 SERIES

The PMC VersaLine VL4500 Series submersible transmitters feature an all Titanium welded housing providing immunity to virtually all environments. They are designed for depth and level measurements of ground, surface, waste, and sea water. Suitable for small size bore holes, wells, dams, irrigation, sewage lift stations, rivers and oceanography.

The VersaLine series of submersible pressure/level transmitters are designed for long term installations with reliabilities for more than 20 years. The transmitters are feature rich in design to achieve this and the major details are highlighted on the reverse side of this datasheet.

With a choice of millivolt or 4-20 mA configurations, small physical size and a wide range of pressures, the VL4500 Series will satisfy most applications.

The VersaLine VL3000 and MTM3000 offer similar performance while contained within 1" and 3/8" diameter housings respectively. The VL2000 provides an open face construction avoiding clogging or sludge build up in wastewater and similar applications.

## TECHNICAL SPECIFICATIONS

<b>Full Scale Ranges (Zero Based)</b>	0-30, 50" WC 0-1, 5, 10, 15, 30, 50, 100, 150, 300 psig 0-50, 100, 150, 200, 300 psia
<b>Accuracy</b>	±0.1% FS (BSL) or ±0.25% FS (BSL) <i>Combined non-linearity, hysteresis &amp; repeatability</i>
<b>Overpressure</b>	Full scale ranges up to 20 psi - >10X Full scale ranges above 20psi up to 150 psi - >4X Full scale ranges above 150 psi - >2X
<b>Operating Temperature Range</b>	-5° to +175°F (-20° to +80°C) - non freezing
<b>Compensated Temperature Range</b>	30° to 85°F (-2° to +30°C)
<b>Temperature Effects (Compensated)</b>	High accuracy (±0.1%) ±0.3% TEB for ranges 5 psi and above ±1.0% TEB for ranges below 5 psi Standard accuracy (±0.25%) ±1.5% TEB for ranges 5 psi and above ±2.0% TEB for ranges below 5 psi
<b>Electrical (either)</b>	4-wire bridge: supply voltage: 1-15VDC Output: from 5mv/V to 10mv/V, ratiometric with supply. <i>Contact factory for exact output of each range.</i> Input Impedance: >10k ohm, Bridge: 3k ohm typical 2-wire, 4-20mA, 10-35 VDC power
<b>Intrinsically Safe Approvals</b>	For FM/FMC Class I, II, and III Div. 1 Groups A-G <i>Please refer to VL2000, VL3000 and VL4000</i>
<b>Cable – up to 5000ft in single length</b>	Polyurethane molded, vented with Kevlar, 4 conductors
<b>Housing</b>	Titanium with 5-year corrosion warranty <i>For 316L Stainless Steel Contact the factory.</i>
<b>Weight (excluding cable)</b>	VL45x1 - 4.5 oz. VL45x3 – 6.5oz

PMC Engineering adopts a continuous development program which sometimes necessitates specification changes without notice

## Process Measure Control

### Features

- mV or 4-20mA output
- 0.1% accuracy
- 0-30" WC to 0-300psi
- 0.725" dia. Titanium  
*five year warranty*
- Molded cable
- CE

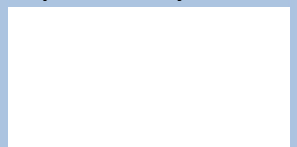
### Applications

- 1" dia. Bore Holes
- Water Level
- Waste Water
- Oceanography
- Ground Water

### Contact

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Represented by:



Your depth and level specialists for Ground, Surface, Sea and Waste Water

## PMC Configurator

VL x x x x

<b>Model Construction</b>	0.725" Depth Cone	4
<b>Housing Material</b>	Titanium - 5 year warranty	5
<b>Electrical Connection</b>	Polyurethane molded cable	1
	FEP cable	2
Cable length must be specified at the time of ordering.		
<b>Electrical Configuration</b>	4 wire bridge ratiometric	1
	2 wire 4-20 mA	3

**Example Ordering format: VL 4513 - 300'WC - 0.1% - 350' cable**

## VERSALINE FEATURES

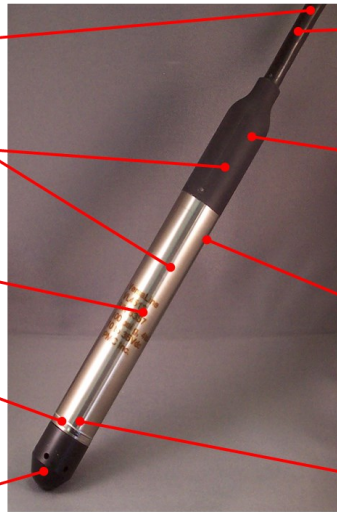
**Breather** connected directly to sensor reference to ensure ideal performance

**Fully-Potted** to provide secondary level of protection against water ingress

**Solid State Electronics** providing 4-20 mA, 2-wire

**Laser-Welded Titanium Housing** with 5-year Corrosion Warranty

**Anti-Shock Nose Cone** to avoid damage from water hammer



**Custom Vented Cable** with Kevlar® strain retention

**Injection-Molded Cable Seal** eliminates water ingress

**0.725 inch diameter** for installation into small diameter bore holes

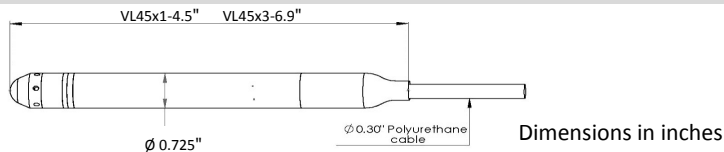
**Piezoresistive Technology** provides High Accuracy and good Long Term Stability

## FOR ZERO MAINTENANCE



In order to reduce on site maintenance PMC has developed the MP 11 Moisture Protection Reference Volume. For vented gauge transmitters this provides a total isolation to the atmosphere by using a custom bladder while maintaining the high performance of the transmitter. This changes volume with Barometric pressure. Totally maintenance free. Please specify MP 11.

## MECHANICAL DETAILS



## ELECTRICAL DETAILS

Configuration	+Ve Supply	0V Supply	+Ve Output	-Ve Output	Ground (case)
4-20mA	Red	Black			Green
Millivolt	Red	Black	Yellow	Green	Drain wire

## Process Measure Control

### Sensors for

- Pressure
- Level
- Vacuum
- Humidity
- Temperature
- Force
- Position

### Accessories

PMC offers a range of Accessories and variants for depth and level transmitters. Reference sheet VLA502

- Termination Enclosure
- Cable Hanger
- Moisture Protection
- Calibration Adaptor
- Sink Weights
- Level Meters

### PMC is

- Engineering Driven
- Confidential
- Experienced
- Responsive
- Dynamic
- Friendly

**Your depth and level specialists for Ground, Surface, Sea and Waste Water**