WM-PC Series

Plastic Water Meter

The WM-PC Series plastic water meter is an impeller style meter available in sizes from 1/2” to 1-1/2” with a dry type register for residential applications and designed to meet AWWA C708.

Water flows through the meter’s strainer (inlet and internal) and into the measuring chamber where it drives the impeller. A driving magnet transmits the movement of the impeller to a driven magnet located within the sealed register. The magnet is connected to a gear train which translates the impeller rotations into volume totalizers displayed on the meter’s register dial face.

The WM-PC Series water meter is top loaded and consists of three basic components: main case, measuring chamber, and head ring. The main cases of all sizes are constructed with a sturdy polymer.

All meters include pipe adapters (2 gaskets, 2 couplings, and 2 nuts) with nuts and couplings made from the same polymer as the main case, except the 1-1/2” which substitutes brass for the coupling material.

FEATURES
• All parts in contact with water are constructed of corrosion-resistant materials.
• Body is constructed of reinforced plastic.
• Impeller is the only moving part in contact with water, giving the meter long life and consistently reliable operation.
• Extra filter at the inlet of the meter body permits cleaning without having to open the meter.
• Dial plate design in US Gallons.
• Optional pulse output consisting of plastic housing with contact reed switch and cable.

MATERIALS OF CONSTRUCTION
Body:
FRP (fiber reinforced polymer)
Internals:
Engineered thermoplastic
Magnet:
Alnico

PRESSURE RANGE
Up to 150 PSI.

TEMPERATURE RANGE
Up to 105°F.

SPECIFICATIONS
Maximum Reading:
050, 075 & 100: 9,999,999.99
150: 9,999,999.9
Accuracy:
Normal flow: ±1.5%
Low flow: ±3%

OPTIONAL PULSE OUTPUT SPECIFICATIONS
Sensor:
Reed switch
Pulse Rates:
050, 075 & 100: 1 pulse/1 gal.
150: 1 pulse/10 gal.
Maximum Current:
20 mA
Maximum Voltage:
24 VAC/VD C
Cable Length:
4.5’ standard,
2000’ maximum run
WM-PC Series

Plastic water meter
(1/2” to 1-1/2” end connections)

DIMENSIONS, WEIGHTS & SPECIFICATIONS

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H (MNPT)</th>
<th>Flow Rate (GPM)</th>
<th>Normal Flow (GPM)</th>
<th>Wt. (lbs.)</th>
<th>Model No.</th>
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<tbody>
<tr>
<td>5/8&quot; x 1/2&quot;</td>
<td>10.20</td>
<td>6.50</td>
<td>3.70</td>
<td>4.24</td>
<td>7.52</td>
<td>0.75</td>
<td>3.70</td>
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<td>20</td>
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<td>1-1/2&quot;</td>
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<td>4.81</td>
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<td>2.00</td>
<td>4.80</td>
<td>1.50</td>
<td>100</td>
<td>50</td>
<td>1.50</td>
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<table>
<thead>
<tr>
<th>Flow (GPM)</th>
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<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
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<tr>
<td>Pressure / Flow</td>
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ACCURACY CURVE

HEAD LOSS CURVES

Contact us for the most recent product and technical information. Visit our website for more details: assuredautomation.com
Features

- 8 Digits Standard
- Meets NEMA 4X and IP65 Ratings
- Long Life (10 Year) Lithium Battery
- 10 kHz Count Speed
- Screw Terminal Block
- Slow Speed Input for Contact Closures
- High Speed Input for Sinking Inputs from a Max. of 18VDC Without Module
- Quadrature and High Voltage (10 to 240 V AC; 2 to 110V DC) Inputs Optional
- UL Listed

Description:

The KAL-D06 counters are small, lithium battery powered, totalizing counters that are panel mounted. The counters are designed as replacements for standard electro-mechanical counters. They use the latest custom CMOS technology and incorporate an 8 digit, 0.354” (9mm) high, LCD display.

It operates from a long life lithium battery (life 10 years) and can be operated from contact closure or high speed electronic devices. No separate alkaline batteries are required. The front reset button can be disabled if desired.

Specifications:

Battery: Non-replaceable Lithium battery, expected life of 10 years at 20°C

Display: 8 digit black LCD, Digit size 0.354” (9mm) high, leading zero blanking.

Backlight: backlight requires external 5V supply (±0.5V @ 20mA). 12V, 24V and 30V can be used with the use of an external resistor, see backlight wiring diagram for details and resistor values.

Reset: Panel or remote (can be disabled if desired)

Count Range: 0-99999999, rollover to 0

Temperature Range:
- Operating: 14 to 140°F (-10 to 60°C)
- Storage: -4 to 140°F (-20 to 60°C)

Battery Life: 10 years at 20°C (calculated)

Relative Humidity: 80% max. up to 31°C, decreasing to 50% max. at 40°C

Connection: Finger-proof screw terminal for wires up to 0.06” (1.5mm²)

Sealing: NEMA 4X/IP65; Remove film from self adhesive gasket before use! Overvoltage Category II, Pollution Fegree 2 (IEC 64)

Certifications: UL Listed

KAL-D06 Wiring:

1 - High Speed Count Input
2 - Low Speed Count Input
3 - External Reset Input
4 - Direction Input
5 - External Power for Backlight
6 - 0V, Common

High Speed Count Input:

- Sink input NPN
- R = Internal resistor 3.3MΩ
- Max 18V, threshold 1V
- Negative edge trigger
- Max. 10kHz, min. 50µS

Low Speed Count Input:

- Sink input NPN or contact closure
- R = Internal resistor 3.3MΩ
- Max 18V, threshold 1V
- Negative edge trigger
- Max. 30Hz, min. 15mS

External Reset Input:

- Sink input NPN or contact closure
- R = Internal resistor 3.3MΩ
- Max 18V, threshold 1V
- Negative edge trigger
- Min. 15mS

Direction Input:

- Sink input NPN or contact closure
- R = Internal resistor 3.3MΩ
- UP: Not connected or >2V (logic 1), max 18V
- DOWN: Connected to common or <1V (logic 0)
- Direction signal must change >5µS before Count signal.
**KAL-DQUAD06 Wiring**

1. Count Input A
2. Count Input B
3. External Reset Input
4. Not used
5. External Power for Backlight and Input Circuit
6. 0V, Common

**Quadrature Input:**

- Count Inputs A & B
  - Sink input NPN or push-pull signals, NOT source only
  - R = Internal resistor 3.3MΩ
  - Max. +V
  - Max. 2.5kHz
  - Mark to space ratio 1:1

**KAL-D06AC/DC Wiring**

1. High Voltage Count Input
2. High Voltage External Reset Input
3. Common for pins 1 & 2
4. Direction Input
5. External Power for Backlight
6. 0V, Common for pins 4 & 5

**High Voltage Input:**

- Count Input 10-240 VAC 5-110 VDC
- reset Input 10-240 VAC 5-110 VDC

- High Voltage Count Input
  - Opto-isolated
  - R = Internal resistor 50kΩ
  - 10 - 240V AC ±10%
  - 5 - 110V DC ±10%
  - Max. 10 pulses per second
  - Min 50mS

- High Voltage Reset Input
  - Opto-isolated
  - R = Internal resistor 50kΩ
  - 10 - 240V AC ±10%
  - 5 - 110V DC ±10%
  - Min 15mS

**Backlight Wiring**

5V: R = 0Ω
12V: R = 360Ω
24V: R = 1KΩ
30V: R = 1.2KΩ

External supply for backlight is 5 VDC @ 20mA
R = external resistor; see table next to diagram above.

**Jumpers**

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<tr>
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<th>Front Panel Reset Disabled</th>
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**How To Order:**

- KAL-D06 ............. 8 digit counter with 10 yr battery
- KAL-DQUAD06 .......... 8 digit counter with 10 yr battery with Quadrature Input
- KAL-D06AC/DC ........... 8 digit counter with 10 yr battery with High Voltage Input

**Accessories**

- N7 - Explosion proof housing (see accessories section)
- E200 - Outdoor Enclosure (see accessories section)

**Dimensions**

Panel Cutout: 0.92" x 1.77" (22.5 x 45 mm)