



## KAL-D06 Digital Pulse Counters with LCD Displays



KAL-D06

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 (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 and an external reset can be used. The display can be backlit using an external 5 VDC power source.



in mounting frame (included) and backlit (external power required)



Dual display in weatherproof box



Multiple (up to 10) displays in a lockable weatherproof cabinet

### FEATURES

- 8 Digits Standard
- Meets NEMA 4X and IP65 Ratings
- Long Life (10 Year) Lithium Battery
- 10 kHz Count Speed
- Backlighting using external power
- 6-Screw Wiring Terminal Block
- Slow Speed Input for Contact Closures
- High Speed Input for Sinking Inputs from a Max. of 18VDC Without Module
- UL Listed

### TYPICAL APPLICATIONS

- Adding a RESET function to a mechanical totalizer meter
- Adding a remote display to a meter that is in a difficult location to access
- Simplifying the reading of a meter
- Residential cold water metering
- Multi-unit building submetering

### MODELS

- Digital Display Alone
- In Weatherproof Enclosure
- With Lockable Reset
- Dual Display
- Up to 10 Displays

[see page 2 for details](#)

### SPECIFICATIONS

**Battery:** Non-replaceable Lithium battery, expected life of 10 years at 68°F (20°C)

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

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

**Reset:** Single button on display (can be disabled if desired) and/or remote

**Count Range:** 0 - 99,999,999 rolls over to 0

**Temperature Range:**

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

**Relative Humidity:**

80% max. up to 31°C  
decreasing to 50% max. at 40°C

**Electrical Connection:** Finger-proof 6-screw terminal for wires up to 0.06" (1.5mm)



## KAL-D06



## Digital Pulse Counter with LCD Display

### MODELS AVAILABLE

#### KAL-D06



This is the base unit. It is simply a single display for one meter. It comes with mounting hardware for panel mounting. The reset button can be disabled if you want through the simple removal of a jumper (a small piece of plastic that has a conductor to complete a circuit). It operates on a non-replaceable lithium battery that lasts 10 years under normal operating conditions. The unit can also be backlit by providing an external 5 VDC power supply. Other voltages may be used with the addition of an appropriate resistor.

#### KAL-D06-NEMA



This is the same as above but it comes with a NEMA 4X weatherproof enclosure to mount it in. The pulse output wire exits through a PG7 cable gland at the bottom. This gland cinches tight around the cable for a waterproof fit.

#### KAL-D06-LOCK



This is the same as to the left but it has a keyed switch that is used to enable or disable the reset button. A great solution for apartments or households with curious children.

#### KAL-D06-DUAL



This model is the same as above with two displays. It can be used for two separate meters, or with one meter, where one display is not resttable and the other is. This provides a lifetime total and a current term total that can be reset at the end of the term. It makes reading the term total easy while also keeping track of the lifetime use.

#### KAL-D06-MULTI



This lockable weatherproof cabinet can hold up to 10 KAL-D06 displays. Like the KAL-D06-DUAL, it can be used for 10 separate meters or 5 meters where each has a pair of displays where one side is resttable and the other is not. This provides a lifetime total and resettable total for each meter.



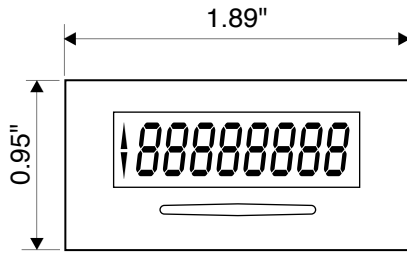
## KAL-D06



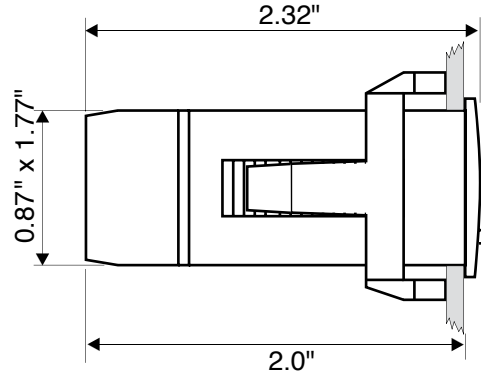
## Digital Pulse Counter with LCD Display

### DIMENSIONS

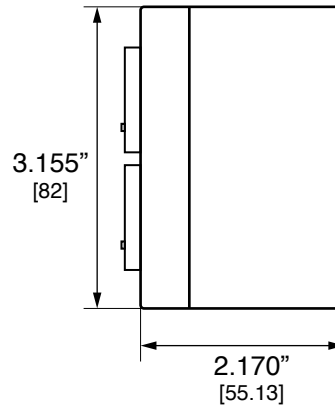
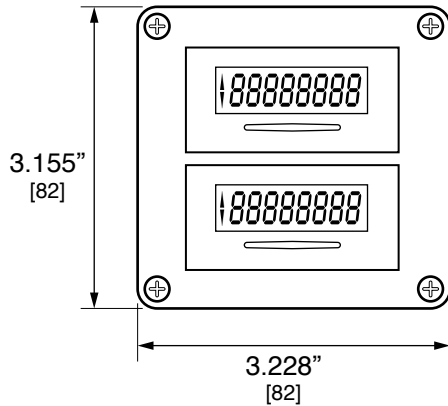
#### KAL-D06



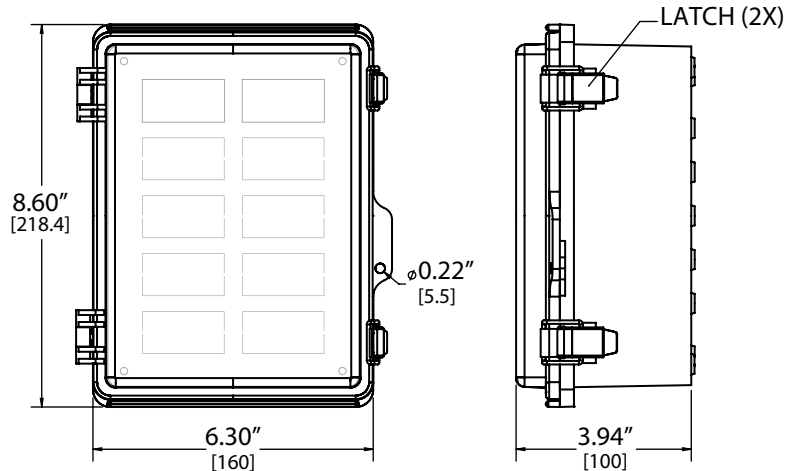
Panel Cutout: 0.92" x 1.77"



#### KAL-D06-NEMA, KAL-D06-LOCK, KAL-D06-DUAL



#### KAL-D06-MULTI





## KAL-D06



## Digital Pulse Counter with LCD Display

### PULSE OUTPUT WIRES

In order to use a KAL-D06 display, a pulse output wire and switch are required from the meter. There are a few different types of switches that are made specifically for different types of meters. All wires are 2-wire cables with bare leads for simple insertion into the KAL-D06 screw terminal strip. The wires attach to terminals #2 and #6 and polarity does not matter.

#### WM-C-SRS

for WM, WM-C/H, WM-PC, WM-NLC/H series multi-jet meters



#### D10-C-SRS

for D10 series positive displacement (nutating disc) meters

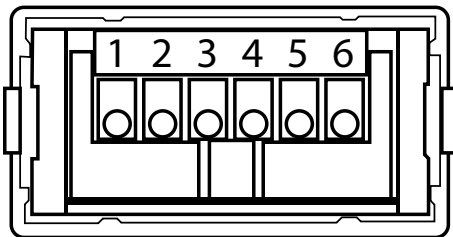


#### WM-PD-REED

for WM-PD series positive displacement (oscillating piston) meters



### WIRING INSTRUCTIONS (for common use with water meters)



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

#### Simple Low Speed Counter: (most common use)

Connect the wires from the pulse output reed switch to terminals #2 & 6. Polarity does not matter.

#### External Reset:

Connect the wires from the external reset button to terminals #3 & 6. Polarity does not matter.

#### Switch Direction:

Connect the wires from the flow direction switch to terminals #4 & 6. Polarity does not matter. Direction will NOT change until the next pulse is received.

#### Disable Front Panel Reset:

Remove the bottom jumper that is connecting the bottom 2 pins. (jumpers are located on the side of the unit - see below)

#### Turn On Backlight:

Connect the wires from the external power to terminals #5 & 6. 0 VDC to #6, and +VDC to #5. (see voltages and resistors below)

5 VDC: no resistor

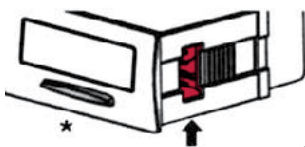
12 VDC: R = 360Ω

24 VDC: R = 1KΩ

30 VDC: R = 1.2KΩ

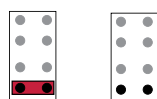
For voltages other than 5, place a resistor specified here on the +VDC wire leading to terminal screw #5.

### Jumpers



#### Front Panel Reset

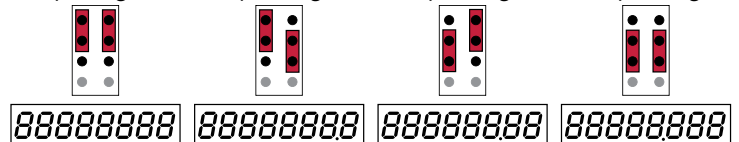
Enabled Disabled



Simply remove the jumper from the bottom pins to disable

#### Decimal Point Placement / Pulse Rate

1 pulse/gal. 10 pulses/gal. 100 pulses/gal. 1000 pulses/gal.



Note: The decimal point will not change until the unit is RESET