LIQUID CONTROLS

Simply the Best™

Pulse Output Device (POD)
Electronic Encoder

IDEX CORPORATION

Premier products, premier performance

POD Features

- **Glandless Drive**
  - No dynamic seals to fail or leak.
  - Meets current environmental standards.
- **Pulse Output**
  - The unscaled output easily adapts to remote totalizers, batch controllers, computers, PLC's and other pulse receiving devices.
  - No amplifier or signal conditioner is required.
- **All wetted parts are 316 Stainless Steel or equivalent.**
- **Meets Weights & Measures requirements**
  - Housing cover has a ready made location for lead wire seal.
- **Pressure rating:**
  - Process wetted portion carries 350 PSI (24 BAR, 2,413 kPa) working pressure rating. Burst pressure exceeds 1,750 PSI (121 BAR, 12,066 kPa).
- **Housing:**
  - Weatherproof NEMA 4X

Explosion-proof rating:
UL listed to US and Canadian Safety Standard Class I, Div. 1 & 2, Groups C & D
Flameproof rating: II 2 G EEx d II B T6, LCIE04ATEX6033

- **Connections:**
  - ½ in. NPT conduit port with a removable screw terminal block for all connections.

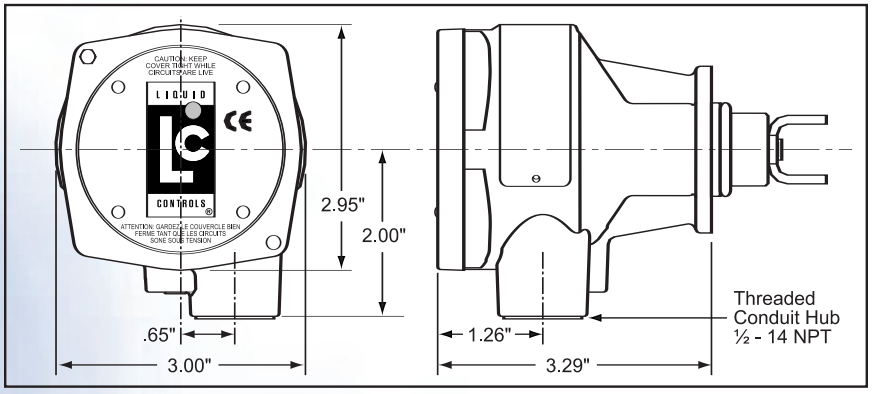
The Liquid Controls Pulse Output Device (POD) converts the rotary motion of the Liquid Controls Positive Displacement Flowmeter into electronic pulses. This allows the meter to interface with a wide variety of electronic monitoring devices and control equipment.

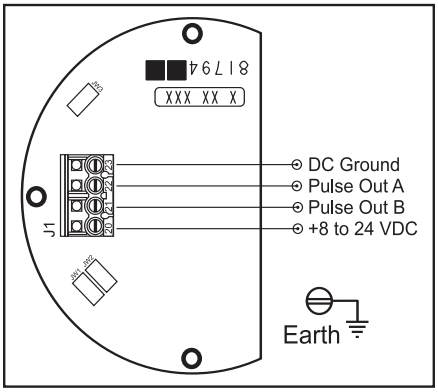
The POD mounts directly to the front cover of any Liquid Controls meter in place of the packing gland. The motion of the meter's blocking rotor is magnetically coupled through a stainless steel wall to the electronics compartment of the POD. This eliminates the dynamic seal of the packing gland and isolates the electronics from the process fluid in the meter.

Technical Specifications

- Voltage: (V+): +8 to +24 VDC (POD5 is +5 VDC) ±5%.
- Current supply: 26 mA typical.
- Output Signal Resolution: 100 pulses per encoder revolution, unscaled. For actual meter resolution, see the table on the page 3.
- Square Wave: Single or dual quadrature channel output.
- Pulse Timing: Nominal 50% on and 50% off.
- Rise/Fall Time of Pulse: <5 µs.
- Operating Temperature Range: -40ºF to +185ºF (-40ºC to +85ºC).
- Humidity Range: 0-100 %, non-condensing.
- Output: Current sinking 100 mA maximum in "ON" state; V+ supply @ 1.0 KΩ in "OFF" state. Optional Open Drain FET (Field Effect Transistor). FET rating (drain to source voltage) +30 VDC maximum.
- Shock: 50 G's for 10 ms.
- Vibration: 1 G at 10-150 Hz.
- Electromagnetic Compatibility (EMI, RFI, etc.): to IEC 801 Standard.
- Pulse Transmission Distance: Up to 5,000 feet (1,524 meters).
- Operates in bidirectional flow applications.

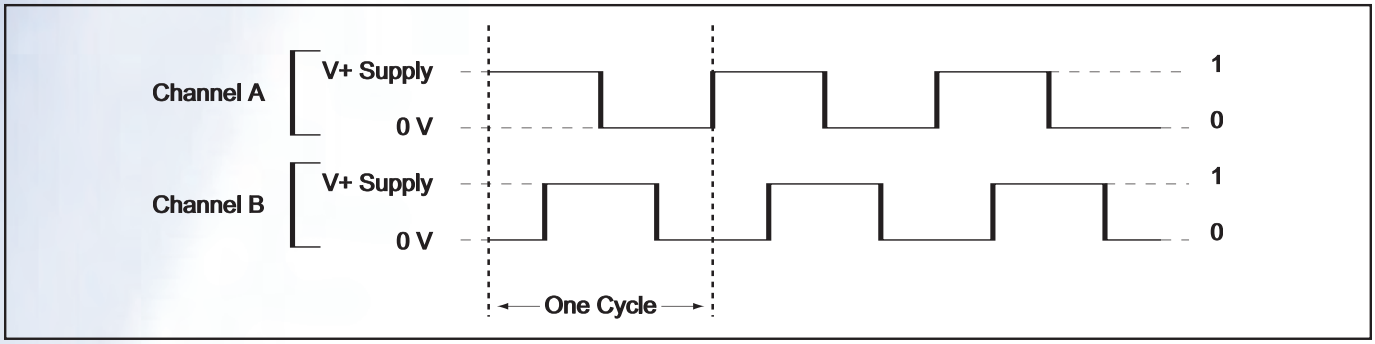
Pulse Output Device (POD)





NOTE: Dimensions shown are not for construction use. Consult factory when certified Engineering Drawings are required.

Signal Output Schematic



The diagram shows the voltage output for a clockwise rotation of the POD with Channel A leading Channel B. For reverse flow (counterclockwise) applications, Channel B leads Channel A.

M & MA Series Meters	Pulses/ Gallon/ Channel	Pulses/ Liter/ Channel	Max Output kHz
MA-4	407.9	107.8	0.27
M-5, MA-5 (3:1)	407.99	107.8	0.41
M-5, MA-5 (1:1)	1,223.7	323.4	1.22
M-7, MA-7	555.5	146.8	0.93
M-10	555.5	146.8	1.48
M-15, MA-15	205.8	54.4	0.69
M-25	205.8	54.4	0.86
M-30	74.2	19.6	0.43
M-40	74.2	19.6	0.53
M-60 (new style)	39.8	10.5	0.40
M-60 (old style)	25.5	6.7	0.26
M-80	39.8	10.5	0.53

MS Series Meters	Pulses/ Gallon/ Channel	Pulses/ Liter/ Channel	Max Output kHz
MS-7	555.5	146.8	0.93
MS-15	205.8	54.4	0.69
MS-25	205.8	54.4	0.86
MS-30	74.2	19.6	0.43
MS-40	74.2	19.6	0.53
MS-75	25.5	6.7	0.30
MS-120	15.8	4.2	0.26

A tradition of excellence that benefits you

Almost fifty years ago, Liquid Controls set a new standard of excellence in engineering and building the finest flow meter products possible, starting with metering aviation fuel for the United States Air Force.

Since that time, the industry base we serve has grown, broadened. Our product line has expanded to include a wide variety of flow meters, accessories and related items distributed worldwide. But our commitment to excellence will never change. The professionals at Liquid Controls are driven to bring you products that perform efficiently and accurately, with minimum maintenance for years to come. Delivering everything you'd expect from the very best—that's our goal.

A good fit

In 2001, Liquid Controls joined the IDEX team of companies. IDEX is a leader in the manufacture of a broad range of pump products, dispensing equipment and other engineered technologies. Maintaining a theme of leadership, IDEX delivers **I**nnovation, **D**iversity and **EX**cellence to thousands of valued customers around the world.

LIQUID CONTROLS

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