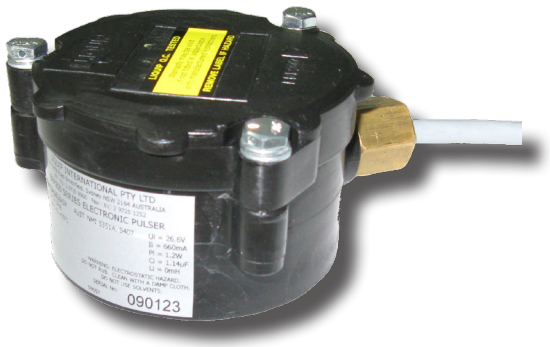
ERP200 Series Electronic Remote Pulser

Liquip offers an electronic remote pusler to be used in conjunction with Liquip's electronic registers that are not located on the meter or where a register has no in-built pulse generator.

The ERP200 uses opto sensors to convert the rotational movement of the meter shaft into an electronic signal to the register.



With various weights and measures approval (see below) and ATEX, IECEx and UKEX approvals for use in hazardous areas the ERP200 is the ideal solution for all your metering and registering needs.

Key Features

- Weights & Measures Approved: NMO UK, NMI Aus, W&M NZ, MID Europe, Measurement Canada & NTEP USA.
- ATEX, IECEx and UKEX approved for use in Zone 0 hazardous locations.
- 3 opto sensors allowing for 150 pulses per revolution, allowing the detection of flow direction, faulty opto sensors and/or loss of power.
- Fully solid state electronic circuit.
- Full weather sealed to IP66.
- Lightweight assembly.

Ordering Information

ERP200 Electronic meter remote pulser.

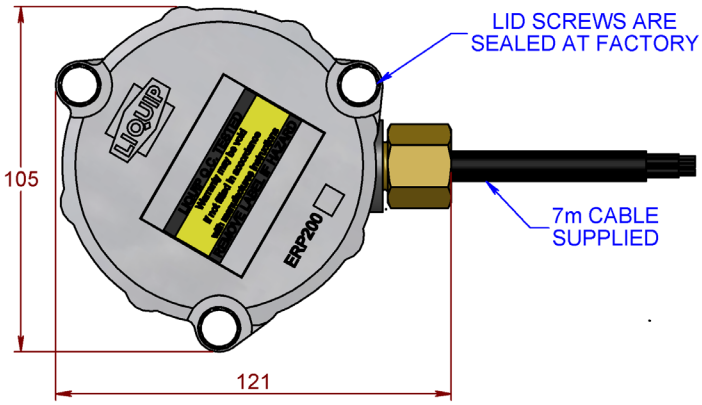
Specifications

Specifications	• Fully solid state electronic circuit. • Intrinsically safe, approved for Zone 0 • Fully weather sealed to IP66 • Weights & Measures approved	
Electrical	**Certification Parameters**	**Safe Zone Parameters**
Input	Ui = 26.6V, Ii = 660mA, Pi = 1.2W, Ci = 1.14µF, Li = 0mH	Vin : +9VDC to +30VDC Iin : 100mA max
Operating Temperature	-20ºC to +60ºC	-40ºC to +80ºC
Rotation	Bi-directional	
Input Shaft Speed	1000 rpm maximum	
Output Pulse: **(P1, P2, P3)**	Push-Pull Outputs. 0V to +5VDC with in-line resistor 100R per channel. Square wave. For clockwise rotation, channel 2(P2) lags channel 1(P1) by 60 electrical degrees and channel 3(P3) lags channel 1(P1) by 120 electrical degrees. The disk has 25 evenly spaced slots, each slot corresponding to one electrical cycle (360 electrical Deg.) or 14.4 mechanical angular Deg. The duty cycle of the pulse is 50% therefore there are 6 stages for each electrical cycle (S0 - S5). Ref. Figure 2.	
K Factor	K= $\frac{\text{N pulses}}{\text{litre}}$ pulses/rev/single channel = 25 pulses/rev/combined 3 channel =150	

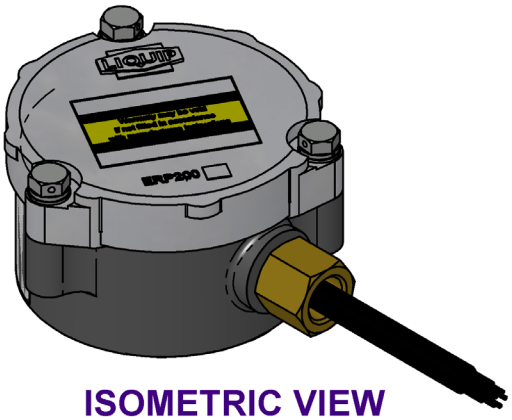
Specifications

Associated Equipment	• DFV100: Register for use in zone 1 hazardous locations. • DFV100H: Register with heated display (for non-hazardous locations). • DFV103: Level Gauging CPU for use in zone 1 hazardous locations. • DFV101: Combined register & level gauging CPU for use in zone 1 hazardous locations. • DFV100-18: DFV Top mount bracket to suit various meters. **KITS TOP MOUNT** • EPM200-3Z Meter kit for electronic remote pulser to top mount to Neptune meter • EPM200-4Z Meter kit for electronic remote pulser to top mount to Sampi & Lc meters WITH calibrator • EPM200-7Z Meter kit for electronic remote pulser to top mount to Lc meters NO calibrator (to suit Lc meter with old style drive) • EPM200-9Z Meter kit for electronic remote pulser to top mount to Lc meters NO calibrator (to suit Lc meter with hexagon drive) • EPM200-5Z Meter kit for electronic remote pulser to top mount to SBM meters • EPM200-6Z Meter kit for electronic remote pulser to top mount to Smith meters **KITS DIRECT MOUNT** • EPM100-3Z Meter kit for electronic remote pulser to direct mount to Lc meters • EPM100-4Z Meter kit for electronic remote pulser to direct mount to SBM meters • EPM100-7Z Meter kit for electronic remote pulser to direct mount to Sampi meters • EPM100-8Z Meter kit for electronic remote pulser to direct mount to Avery-Hardoll meters
Conditions of Safe Use	1. Input Parameters: Ui = 26.6V, Ii = 660mA, Pi = 1.2W, Ci = 1.14µF, Li = 0mH. 2. Warning: In Zone 0 only: Electrostatic Hazard. Do not rub. Clean with a damp cloth. Do not use solvents. 3. Port entry: Use suitable conduit or cable gland, min IP66. 4. Any length of connecting cable may be supplied subject to satisfying the L and C parameters of the equipment.
Weights & Measures Approval	NMO UK, NMI Aus, W&M NZ, MID Europe, Measurement Canada & NTEP USA.
Weight	500g per assembly (without cable).
Mounting	3 off 1/4” UNF screws on a 63.5mm PCD (Similar to Veeder Root for standardisation)
Materials	Housing & drive acetal

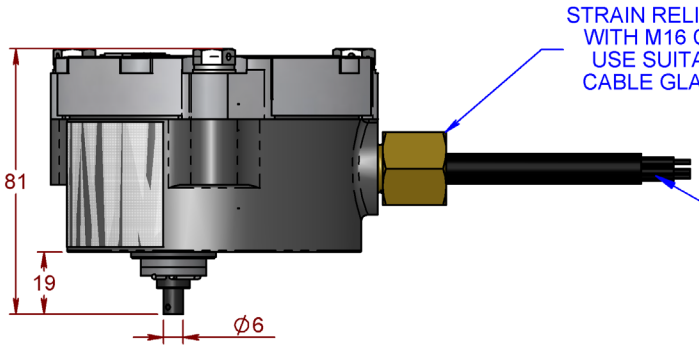
ELECTRONIC REMOTE PULSER ERP200



TOP VIEW

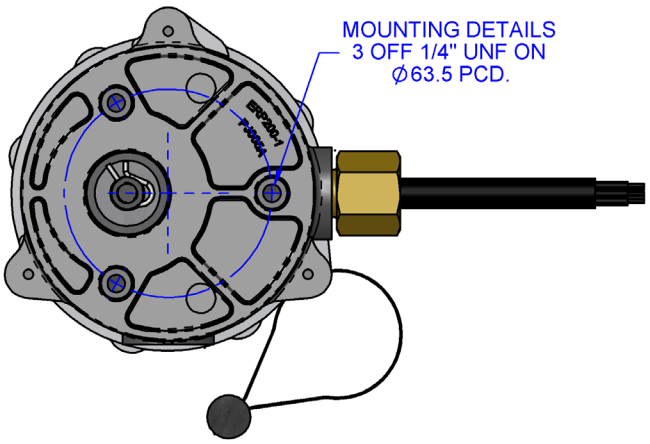


ISOMETRIC VIEW



WIRES COLOUR CODE
+V = BROWN
P1 = BLACK
P2 = BLUE
P3 = GREY
GND = GREEN

SIDE VIEW



BOTTOM VIEW

X400208.F

METERS - VALVES - VENTS - MANHOLES - HOSEREELS - OVERFILL PROTECTION - LOADING ARMS - ELECTRONIC DIPSTICKS

LIQUIP
PART OF OPW a DOVER company

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X400208
Sheet 1 of 1
Issue: F

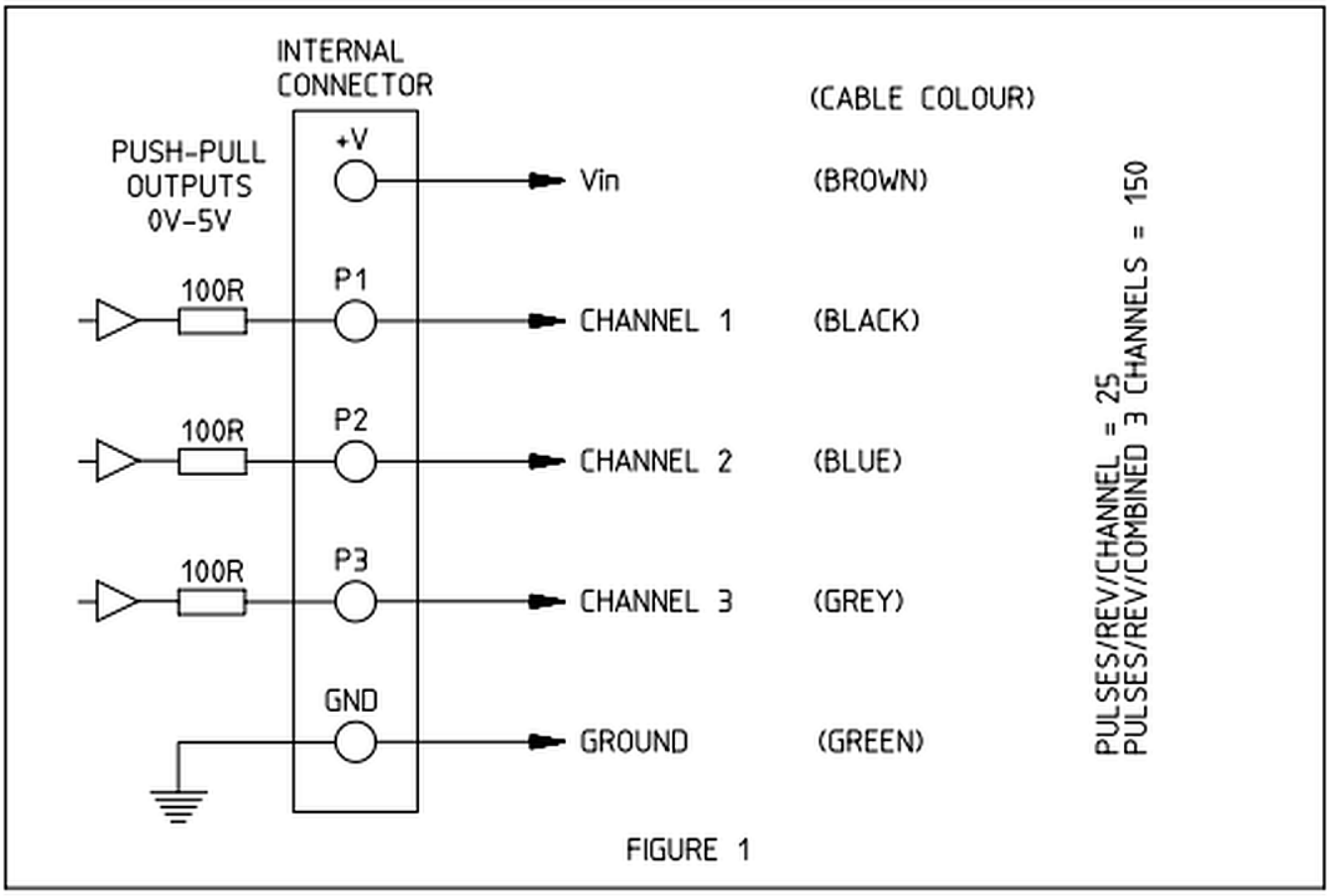
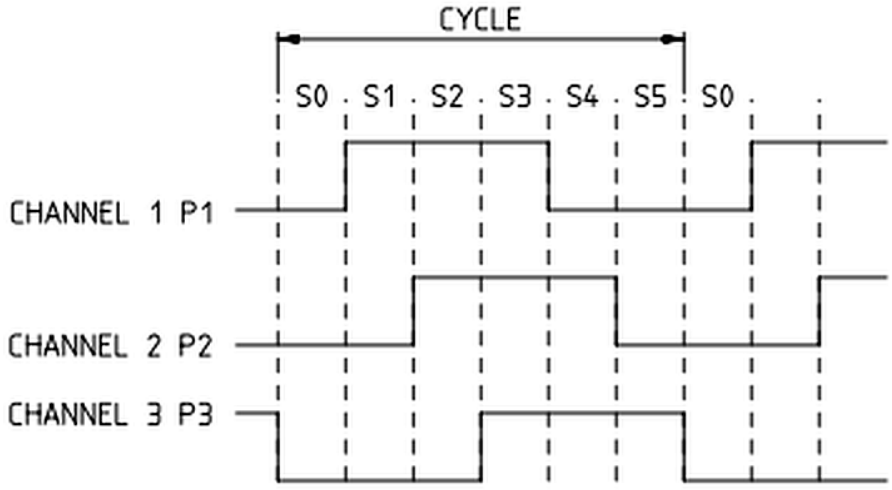


FIGURE 1



1 CYCLE = 360 ELEC DEG = 14.4 ANGULAR DEG

POSSIBLE STATE	P3	P2	PI	ALLOWED STATE
0	0	0	0	S0
1	0	0	1	S1
2	0	1	0	-
3	0	1	1	S2
4	1	0	0	S5
5	1	0	1	-
6	1	1	0	S4
7	1	1	1	S3

FIGURE 2

X400308
Issue: B