

KEYDRILL POSITIVE STEP PULSER (PSP)

Overview:

KeyDrill's Positive Step Pulser (PSP) encodes MWD telemetry into a sequence of pressure surges (positive pulse) in the mud column by restricting mud flow through a reciprocating poppet. The tool is fully retrievable and replaceable. The PSP is a drop in replacement servo pulser module that is fully compatible with the QDT-Tensor MWD system. It incorporates cutting-edge technologies to achieve significant improvements in performance.

The PSP is available with Piston or Bladder style oil compensation based on the customer's preference. Combined with servo motor technology, the KeyDrill PSP has excellent power efficiency and offers more accurate control than the legacy Tensor solenoid pulser.

Features:

- High power efficiency and accurate motor control.
- Improved battery life.
- Strong torque and force to make sure tools can work in harsh environments such as high LCM.
- 3-axis flow detection and adjustable flow switch.
- Strong circuit protection and EMI cancellation for superior reliability.
- Compatible with most Mud Pulse MWD Systems.
- Fully interchangeable Piston and Bladder Compensator sections.
- On board memory records pulser status, power consumption and environment conditions for later analysis.
- Easy to maintain and rebuild.
- The electronics section can be configured to accommodate a gamma sensor.

Specifications:

Min Flow Rate: 35 gpm (8 L/sec) in water
Max Flow Rate: 1,100 gpm (67 L/sec) in water
Operating Temperature: -40°C to 175°C
Max Hydrostatic Pressure: . . . 20,000 PSI (137.9 MPa)
Operating Voltage: 20-38V
Nominal Current: 12mA
Shock: 1,000G / 0.5 millisecond
Vibration: 20g RMS 30-500 Hz Random
Mud Sand Content: <1% recommended
Poppet Push/Pull Force: >100 lbs
Output Flow Switch: 0-5VDC
Power Consumption: 400 hours per
29V Lithium Battery
Length (End to End) & Weight:
Standard: 51.5" (1,308mm) / 25 lbs (11.3 kg)
With Gamma: 66.2" (1,681.48mm) / 33 lbs (14.9 kg)
Housing Diameter: 1.875" OD