

*Pioneer Petrotech Services Inc.*



# ESPLink

## Electric Submersible Pump Monitoring & Control System

[www.pioneerps.com](http://www.pioneerps.com)

# ESPLink

Improve ESP run life and production performance with PPS's customizable monitoring systems

The PPS electric submersible pump monitoring system can measure pressure, temperature, pump motor operating parameters, and vibration on the x, y and z axes. One of the key advantages of the PPS system is the high level of accuracy and resolution provided for all measurements.

### *Determine operating parameters in completions with ESP pumps*

A gauge is placed underneath the ESP motor in line with the completion string and can measure all or some of the following parameters depending on the gauge chosen; intake pressure and temperature, discharge pressure, current leakage, motor winding/oil temperature and vibration (x, y, z). The discharge pressure is routed through a pressure tube.

### *Diagnose and plan ESP maintenance to prevent system failure and reduce pump down time.*

Vibration analysis, properly done, allows the operator to evaluate the condition of pumps and avoid failures. By using three axes of vibration as a leading indicator of ESP health, operators can recognize issues and plan preventative

maintenance before the pump is damaged beyond repair. This allows for accurate forecasting regarding preventative pump maintenance and helps increase ESP longevity.

### *Increase pump lifting efficiency while controlling the pump operating time*

Having the ability to control the pump is essential to maintaining optimum pump lifting efficiency. Using ESPLink operators can monitor intake and discharge pressure, as well as set parameters for the minimum and normal dynamic fluid level, and the critical and normal motor temperature. When these values are entered into the monitoring system, commands will be sent to the VFD to either stop or restart the pump when these specific levels are reached.

### *Update the reservoir grid with the data acquired.*

Accurate measurement of static and dynamic well parameters (intake pressure and temperature) on a multi-well reservoir can also enable reservoir engineers to update the reservoir model and perform transient analysis.

## Select your system

	Intake Pressure	Discharge Pressure	Intake Temperature	Motor Temperature	Vibration X-Axis	Vibration Y-Axis	Vibration Z-Axis	Current Leakage	Touchscreen Display	AISI420 Housing
ESPLink-4-ST	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ESPLink-7-ST	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ESPLink-8-ST	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## Surface Touch System (ST)

Memory capacity	32 GB SD Card (2 GB Factory Default)
Operating System	Industry HMI
Display	4.7" Colour Touchscreen
Power	110V to 240V AC
Operating Temperature	- 40 °C to 75 °C



Touch System (ST)

ESP Downhole Gauges are available in three specifications:

### ESPLink-4 Downhole Gauge

	Rating	Accuracy	Resolution
Pressure (Intake)	6,000 psi	0.05 % FS	0.02 psi
Current Leak	25 mA	0.05 % FS	1 uA
Temperature (Intake)	150 °C (302 °F)	0.67 % FS	0.01 °C
Temperature (Motor)	210 °C (410 °F)	0.67 % FS	0.01 °C

### ESPLink-7 Downhole Gauge

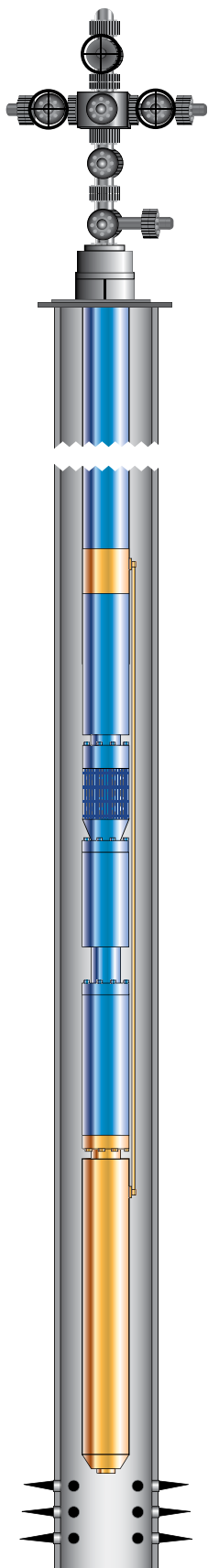
	Rating	Accuracy	Resolution
Pressure (Intake)	6,000 psi	0.05 % FS	0.02 psi
Vibration (x)	12 g	0.5 % FS	2 mg
Vibration (y)	12 g	0.5 % FS	2 mg
Vibration (z)	12 g	0.5 % FS	2 mg
Current Leak	25 mA	0.05 % FS	1 uA
Temperature (Intake)	150 °C (302 °F)	0.67 % FS	0.01 °C
Temperature (Motor)	210 °C (410 °F)	0.67 % FS	0.01 °C

### ESPLink-8 Downhole Gauge

	Rating	Accuracy	Resolution
Pressure (Intake)	6,000 psi	0.05 % FS	0.02 psi
Pressure (Discharge)	6,000 psi	0.05 % FS	0.02 psi
Vibration (x)	12 g	0.5 % FS	2 mg
Vibration (y)	12 g	0.5 % FS	2 mg
Vibration (z)	12 g	0.5 % FS	2 mg
Current Leak	25 mA	0.05 % FS	1 uA
Temperature (Intake)	150 °C (302 °F)	0.67 % FS	0.01 °C
Temperature (Motor)	210 °C (410 °F)	0.67 % FS	0.01 °C



ESPLink Gauge



# Smart Gauges and Simple Software



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