smartGAUGE | DeepSense+

Advanced Downhole ESP Gauge

OILDYNAMICS
Lifting Energy

The **smartGAUGE | DeepSense +** combines simplicity, reliability, and precision in an advanced downhole monitoring system. Featuring the latest sensor technology, onboard diagnostics, and health indicators, it delivers full visibility into ESP performance. Designed for both well testing and preventive monitoring, **DeepSense +** provides accurate pressure and temperature data — helping operators optimize performance and prevent premature ESP failures in even the harshest well conditions.

Key Features

- QuickStart functionality
- Variable-Speed Telemetry[1]
- Inclination measurement
- 2nd Motor Temperature
- Integrated OBD system





Oil Dynamics **smartGAUGE | DeepSense +** measures all essential downhole parameters, including pump intake pressure (Pi), intake temperature (Ti), motor oil or winding temperature (Tm), three-axis vibration (Vx, Vy, Vz), and inclination (In).

Optional upgrades allow monitoring of pump discharge pressure (Pd), discharge temperature (Td), and a second motor oil or winding temperature (Tm_2) for enhanced system diagnostics. Every **DeepSense +** gauge is equipped with an advanced on-board diagnostics (OBD) system, providing comprehensive health indicators such as star-point voltage (Vsp), current leakage (Cl), signal quality (Sq), signal level (Sl), gauge current (Ct), and packet counter (Pk) — ensuring unmatched visibility and reliability in ESP performance monitoring.

[1] Second generation variable speed telemetry.

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Ratings and Features[2]

Primary Parameters	Rating			Accuracy	Resolution	
INTAKE PRESSURE	2,900psi	5,800psi	10,000psi	+/-0.1% FS	0.01psi	0.1psi
INTAKE TEMPERATURE	125°C	150°C	165°C	+/-1°C	0.01°C	
MOTOR TEMPERATURE	300°C			+/-1°C	0.01°C	
VIBRATION X-Y-Z	16g			+/-1% FS	0.001g	
DISCHARGE PRESSURE	5,800psi	10,000psi		+/-0.1% FS	0.01psi	1psi

Advanced Parameters	Rating	Accuracy	Resolution
INCLINATION[3]	180°	+/-0.1% FS	1°
MOTOR TEMPERATURE 2	300°C	+/-1°C	0.01°C

Health Indicators	Rating	Accuracy	Resolution
CURRENT LEAKAGE	25mA	+/-0.2% FS	0.01mA
STAR-POINT VOLTAGE	1000V	+/-2% FS	1V
GAUGE CURRENT	25mA	+/-0.2% FS	0.01mA
SIGNAL QUALITY	+/- 100%		
SIGNAL LEVEL	+/- 100%		
PACKET COUNTER	Data packet incremental counter		

Physical Properties		
MATERIAL	13Cr stainless steel	
DIAMETER	3.75”	95mm
LENGTH	40"	1,000mm
WEIGHT	73lbs	33Kg
TOP CONNECTION	3.75" 6-hole flange or 4.5" 6-hole flange	
BOTTOM CONNECTION	2-3/8" EUE 8 RND-Box	
MAXIMUM HANGING WEIGHT	25,000lbs	11,000Kg
CALIBRATED RANGE	2,900psi; 5,800psi; 10,000psi | 125°C; 150°C; 165°C	
MAXIMUM AC OPERATING VOLTAGE	3,000V phase-to-ground | 5,000V phase-to-phase	
INSULATION TEST RATING	Reverse polarity to 5kV DC (max) for 10 seconds. Recommended 2.5kV	

[2] Specifications are subject to change. Alternative specifications are available upon request.
[3] Available during RIH.

Smart Monitoring. Proven Performance. Advanced.

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