

Artificial Lift Monitoring ESP Gauges/Sensors



data Series

ESP Sensors / Gauges

The RMSpumptools range of ESP Sensors have been specifically developed with the stresses associated with downhole ESP's in mind. Field proven Metal-to-Metal sealing provides a watertight casing for the electronics, ensuring you always receive reliable and accurate data. Advanced Motor Temperature Monitoring provides a more accurate picture by measuring Motor Winding and Motor Oil Temperature simultaneously. The Sensors are available in Standard and High Temperature models and include High Accuracy as standard across the range.

Technology

- Quick Start - Intake Pressure 15s from Power Up
- Rated for all ESP Motors up to 6.6kV
- Insulation Test to 5000V
- Continuous Rated Intake Temperature Range 0 - 177°C
- Over-Temperature Capability - rated for 1 hour
- 260°C Winding Temperature Probes
- Plug & Play Motor Winding Temperature (RTD or Thermocouple)

Additional Benefits

- 100% Waterproof for Extended Life Electronics
- 3-Axis Vibration Measurement for Greater Accuracy
- Withstand High Temperature spikes on ESP Shutdown
- RMSpumptools renowned Metal-to-Metal Sealing for Enhanced Durability
- High Accuracy for Optimal Monitoring
- Helps reduce Gas Locking
- Prevents Pump-off

Key Performance Features

- Increase the Runlife of your ESP
- Maximize Production from your Well
- Reduce Downtime and Costs
- Improve your Operating Efficiency
- Reduce premature Failure Rates of your ESP

Surface Display Units

The downhole Sensors are fully supported by the RMSpumptools high specification range of Surface Interface Units which transmit and display the necessary information to obtain an accurate understanding of your ESP and Well conditions.



data Series

ESP Sensors / Gauges

	data 1	data 1^{HT}	data 2	data 2^{HT}
Intake Pressure				
Range	0 - 5,800psi	0 - 5,800psi	0 - 5,800psi	0 - 5,800psi
Accuracy	0.1%FS	0.1%FS	0.1%FS	0.1%FS
Resolution	0.1psi	0.1psi	0.1psi	0.1psi
Intake Temperature				
Range	0 - 150°C	0 - 177°C	0 - 150°C	0 - 177°C
Accuracy	0.25°C	0.25°C	0.25°C	0.25°C
Resolution	0.1°C	0.1°C	0.1°C	0.1°C
Discharge Pressure				
Range	N/A	N/A	0 - 5,800psi	0 - 5,800psi
Accuracy	N/A	N/A	0.1%FS	0.1%FS
Resolution	N/A	N/A	0.1psi	0.1psi
Motor Winding Temperature (RTD / Thermocouple)				
Range	0 - 260°C	0 - 260°C	0 - 260°C	0 - 260°C
Accuracy	0.25°C / 1.0°C	0.25°C / 1.0°C	0.25°C / 1.0°C	0.25°C / 1.0°C
Resolution	0.1°C	0.1°C	0.1°C	0.1°C
Motor Oil Temperature				
Range	0 - 185°C	0 - 185°C	0 - 185°C	0 - 185°C
Accuracy	0.25°C	0.25°C	0.25°C	0.25°C
Resolution	0.1°C	0.1°C	0.1°C	0.1°C
Vibration (3 Axis - X, Y and Z)				
Range	0 - 18g	0 - 18g	0 - 18g	0 - 18g
Accuracy	0.5%	0.5%	0.5%	0.5%
Resolution	0.05g	0.05g	0.05g	0.05g
Current Leakage				
Range	0 - 25mA	0 - 25mA	0 - 25mA	0 - 25mA
Accuracy	0.1mA	0.1mA	0.1mA	0.1mA
Resolution	0.01mA	0.01mA	0.01mA	0.01mA

Accessories

Motor Base Crossover:	Available for all motors and in all metallurgies
Discharge Sub:	Available for all flanges, tubing sizes and metallurgies
Discharge Pressure Line:	Standard 160ft length with fittings
Installation Kits:	A full range of surface and downhole kits are available

Variables

Metallurgy:	13Cr as standard and other materials on request
Elastomers:	Viton as standard, Aflas and other elastomers on request
Pressure Range:	5,800psi (standard) - other ranges on request
Insulation Test:	5kVDC

Dimensions & Connections

Diameter:	3.75" (9.525cm) - excluding Top Connection
Length:	25.25" (64.135cm)
Top Connection:	4.5" 6 Hole ESP Flange (industry standard) - others on request
Bottom Connection:	2-3/8" EUE 8 RND box



dataLITE

Surface Interface

The dataLITE Surface Interface is an IP65 rated enclosure allowing it to be mounted externally in any environment. There are both Analogue and Digital Outputs which can be simply set up to protect your ESP system. There is also a VSD Speed Control Output so that the ESP Frequency can be controlled from the dataLITE, ensuring that vital parameters are kept at an optimal level.

dataLITE

- Large Alphanumeric LCD Display
- NO/NC Digital Trip Relay
- 2 x 4-20mA Analogue Outputs
- VSD Speed Control Output
- IP65 Rated Enclosure
- 110V-240VAC or 24VDC Supply
- 8GB Non-volatile Data-logging Memory
- Micro SD Card Data Collect Port
- Real-time Clock
- 200MHz 32-bit Processor
- Modbus RTU RS485
- SCADA Direct-Swap for Available Units
- Eliminates Wellhead-to-Choke Ground Cable
- Power-Up Self-Testing
- Power-Up Self-Proving
- Automatic Self-Test on Fault Suspected
- Detects Ground, Open and Module Faults
- Built-In Simulation Modes for Commissioning
- Digital Error-Detecting Communications
- Compatible with all VFDs
- Compatible with all Switchboards



Testing Equipment
 Battery-powered Test Boxes
 Sensor Simulators

Surface Choke
 Fully Metal Clad (IP30)
 Pre-fitted with UL3239 (40 Kv) Wire
 Direct fit into most ESP
 step-up Transformers
 No need for separate Enclosure



TransCVR

Surface Interface

The TransCVR range includes the latest technology including self testing, proving and fault detection and compact dimensions allow versatile mounting including inside the VFD / Switchboard. The PLUS model has all the features of the base model but with some great additions including a full colour screen which is ideal for navigating readings in real time. There is a built in data logger which can write to a micro SD Card in a structured file arrangement and Firmware updates can also be performed via the micro SD Card.

TransCVR

- Modbus RTU RS485
- SCADA Direct-Swap for Available Units
- Power-Up Self-Testing
- Power-Up Self-Proving
- Automatic Self-Test on Fault Suspected
- Detects Ground, Open and Module Faults
- Built-In Simulation Modes for Commissioning
- Digital Error-Detecting Communications
- Compatible with all VFDs
- Compatible with all Switchboards
- Simple Status LED

TransCVR PLUS

- 160 x 128 Resolution Full-color OLED Display
- 8GB Non-volatile Data-logging Memory
- Micro SD Card Data Collect Port
- Real-time Clock
- 200MHz 32-bit Processor
- Modbus RTU RS485
- SCADA Direct-Swap for Available Units
- Eliminates Wellhead-to-Choke Ground Cable
- Power-Up Self-Testing
- Power-Up Self-Proving
- Automatic Self-Test on Fault Suspected
- Detects Ground, Open and Module Faults
- Built-In Simulation Modes for Commissioning
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- Compatible with all VFDs
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TransCVR



TransCVR PLUS



Testing Equipment

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