



Intelligence built in the Unico VSD drive offer sophisticated ESP control of induction or permanent motor (PM) systems.

- Patented pump intake pressure and fluid level sensing without downhole sensors.
- Patented AHD™ technology to minimize input harmonics with autotransformers.
- Transducerless backspin monitor for quicker restarts
- Time-stamped event (300) and fault (300) logging
- Optional high-speed multi-parameter data logging

Control modes and display variables available with or without downhole and surface sensors

- Fluid level monitor and control
- Pump intake pressure monitor and control
- Pump discharge pressure monitor
- Pump differential pressure monitor and limiter

Downhole Sensors supported

| | | | |
|--------|-------|---------|----------------|
| A Well | Ace | Novomet | Generic Modbus |
| Zenith | Scout | BHI | Analog(4-20mA) |
| GRC | SPS | Oxford | |

Sensor Options

| | | |
|---------------------------|------------------------|------------------------|
| Fluid flow sensor | Casing pressure sensor | Tubing pressure sensor |
| Gas flow sensor | Motor temperature | Motor vibration |
| Suction pressure sensor | Fluid temperature | Multiple user defined |
| Discharge pressure sensor | Tubing pressure sensor | |

Speed References

| | | |
|----------------------|------------------------|-----------------------|
| Analog potentiometer | Keypad/display presets | Serial communications |
|----------------------|------------------------|-----------------------|

Optimization Controllers

| | | |
|---------------------|-----------------------|-------------------------|
| Fluid level control | Power demand limiter | Cyclic energy optimizer |
| Pump off control | Power flow optimizer | |
| Gas flow optimizer | Time of use optimizer | |

Starting Algorithms

| | |
|-------------------|--------------------------|
| Auto restarts | Backspin detection |
| Remote start/stop | Stuck pump rocking start |

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ESP Protection

| | | |
|------------------|-------------------------|------------------------------------|
| Motor under load | Motor current limiter | Tubing pressure limiter |
| Motor over load | Motor torque limiter | Pump differential pressure limiter |
| Low speed | Casing pressure limiter | Low torque detector |

ESP Display Features

| | | |
|---------------------------|--------------------|-----------------------|
| Motor and surface voltage | Fluid level | Differential pressure |
| Motor current | Fluid production | Power meter |
| Motor frequency | Gas flow | Input power |
| Drive voltage | Gas production | Motor power |
| Drive current | Pump velocity | Lift power |
| Tubing pressure | Pump torque | System efficiency |
| Casing pressure | Suction pressure | |
| Fluid flow | Discharge pressure | |

Serial Communications

- Multiple serial ports
- Standard Modbus RTU comms
- Ethernet TCP/IP (*optional*)
- Local Wireless WIFI (*optional*)
- Unico Connected™ iOS app.

Embedded Models and Parameters

- Drive
- Transformer
- Cable
- Electric motor
- Tubing
- Casing
- Downhole pump
- Fluid column
- Reservoir
- Drive Specifications
- Transformer specifications
- Cable specifications
- Motor specifications
- Tubing configuration
- Casing configuration
- Pump characteristics
- Fluid properties
- Reservoir properties



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Specifications subject to change without notice.

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