Functions & Features

Intelligence built in the Unico VSD drive offer sophisticated ESP control of induction or permanent motor (PM) systems.
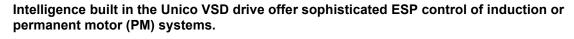
- **Patented pump intake pressure and fluid level sensing without downhole sensors.**
- **Patented AHD™ technology to minimize input harmonics with autotransformers.**
- **Transducerless backspin monitor for quicker restarts**
- **Time-stamped event (300) and fault (300) logging**
- **Optional high-speed 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

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

- Local and remote serial ports
- Standard Modbus RTU

- Windows, iPhone, or iPad
- Optional 900 MHz and 2.4 GHz wireless radio
- Optional Local Wireless WIFI

- Optional ControlNet, Profibus, ProfiNet, Ethernet, etc

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