

# PULSE® VARIABLE SPEED DRIVES

## ESP & HPS Control

Deployment of surface technology to monitor, control, and automate artificial lift systems is one of the most far-reaching and financially beneficial investments made during the production life of a well. Application of variable speed drives becomes more critical as downhole conditions become more challenging.

Payoff in the form of increased fluid recovery, extended run life, deferred or eliminated replacement expenses, and reductions in the daily cost of production can be enhanced through the utilization of integral automation capabilities and remote monitoring software.

Valiant Artificial Lift Solutions now offers Pulse® Variable Speed Drives for ESP and HPS applications. Available in ratings from 48 to 1,121 kVA, these drives include application-specific software, expandable communications capabilities, and an easy-to-use graphical interface which enable users to control:

- Motor speed, current, and load settings
- Controlled starts and auto restarts
- Restart delays and restart retries



## Pulse® Variable Speed Drives—Standard Features and Ratings

ESP DRIVES	HPS DRIVES	INPUT VOLTAGE	KVA	AMPS
Model A1000 VSD	Model A1000 Vector VSD <sup>1</sup>	480V	48	58
Sinewave Output Filter			59	72
			73	88
6/12/18 Pulse Input			85	103
380V to 480V Input Voltage			115	139
60Hz or 50Hz Input Frequency			137	165
1800 Amp Max Input Current @ 480V			172	208
NEMA 4 Enclosure Rating			207	250
Color Touchscreen HMI Controller			245	296
110VAC-24VDC Power Supply			300	362
			343	414
			427	515
			560	675
			772	930
		996	1200	
		1121	1350	

<sup>1</sup>HPS A1000 Vector VSD models available in NEMA 1 indoor-rated enclosure

Pulse® Variable Speed Drives are programmed with application-specific software for ESP or HPS production. Pulse VSDs allow precise motor control and full integration of monitoring and automation technologies to optimize production and enhance system runlife.



## Motor Controller Specifications

<b>Model</b>	HMI Motor Controller
<b>Display</b>	High-clarity 7" Color Touchscreen Display; 4 line x 20 Digit, 24-Key-board with Zoom Capability
<b>LED Pilot Lights</b>	Auto Start, Alarm, On/Off
<b>Control Devices</b>	Auto, Hand, Start/Stop
<b>Digital Input/Output</b>	16 Inputs, 4 Outputs
<b>Analog Input</b>	4 Inputs, Software Configurable for 0–10V or 4–20mA
<b>Analog Output</b>	2 Outputs, 4–20mA
<b>Communications Ports</b>	2 RS485, 2 USB, 1 LAN
<b>Modbus</b>	Modbus® RTU and Modbus® ASCII Master/Slave
<b>Memory</b>	256MB On-board, Expansion To 8GB
<b>Data/Alarm Trending</b>	Time Stamped Data and Alarm Log; 16-Channel Time Stamped Trending with Programmable Sample Rate Download Data/Alarm Logs and Trending via USB or LAN Connection
<b>Ground Fault Monitoring</b>	Motor controller can receive input from various manufacturers Ground Fault Monitoring for Drive Output is Standard

Enhance system performance with Valiant's streamlined VSD interface.

- › 7" Color Touchscreen
- › Intuitive Controls
- › Quicker programming allows for more efficient operation

## Enclosure & Environmental Specifications

<b>Enclosure Rating</b>	ESP Drives: NEMA 4; HPS Drives: NEMA 4 (Std.), NEMA 1 (Opt.)
<b>Max Elevation</b>	1,000 m [3,000 ft.]
<b>Max Operating Temp</b>	NEMA 4: 50°C [122°F]; NEMA 1: 40°C [104°F]
<b>Max Humidity</b>	95%, Non-condensing
<b>SWF Enclosure</b>	ESP Drive: Rear Hood
<b>Enclosure Base</b>	NEMA 4: 4" or 6" Free Standing C-Channel
<b>Cooling</b>	NEMA 4: External Heat Sink with 2 Fans; NEMA 1: External Heat Sink with Shroud, Optional Wall Exhaust
<b>Heating</b>	NEMA 4: Air-to-Air Heat Exchanger with 2 Fans
<b>Power Connection</b>	NEMA 4: Junction Box, Bottom Aluminum Gland Plate (in/out); NEMA 1: Aluminum gland plate (in/out)



Energy Providing Energy



valiant-als.com | 405-605-4567

