

INSTRUCT S30 VSD Optimization System

Intelligent variable speed control for sucker rod pump applications

Applications

- + INSTRUCT S30 VSD sucker rod pump (SRP) control
- + Up to 400HP

Benefits

- + Combines the benefits of the INSTRUCT SRP optimization system with the proven performance of the 10 Series variable speed drives
- + Incorporates the reliability and proven excellence of Rockwell inverters
- + High performance configurable HMI with quick-start guide
- + Rapid Avalon* integration
- + Helps maximize oil and gas production
- + Improves equipment uptime and run life
- + Reduces failure frequency and minimizes workovers

Features

- + Stand-alone NEMA Type 3R or 4 rated enclosure options
- + Easy to use display and keypad
- + Supports radio, cellular, and satellite communication
- + Inflow performance relationship (IPR)

The INSTRUCT S30 Series Variable Speed Drive (VSD) packages provide a comprehensive optimization package. The S30 provides accurate surface and downhole dynamometer card-based control.

Instruct S30 VSD's are cost-effective and easy to use for sucker rod pump applications.

The four fixed speed modes and three variable speed options provide flexibility for the operator to choose the operating mode best suited for the well conditions.

Accurate load cells and position transducers are available in a range of sizes and options (wireless).

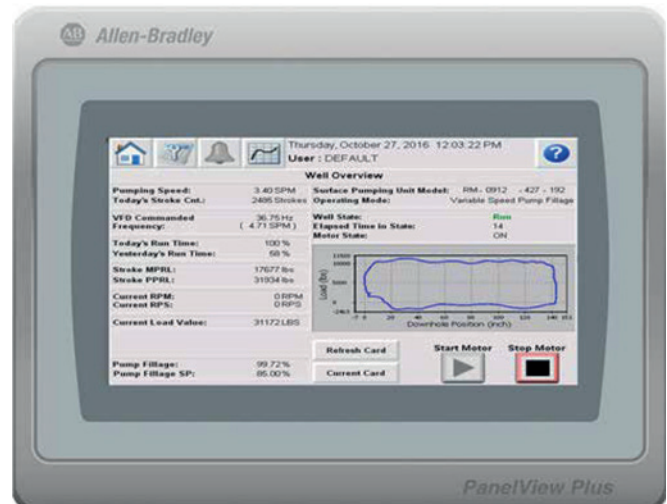
The S30 comes standard with built-in I/O, and offers options for communications and additional I/O.

Systems are available for all major voltage levels and both 50 Hz and 60 Hz. Enclosed in a NEMA Type 3R or NEMA 4 enclosure, the VSD system can be configured in accordance with local compliance standards worldwide.



Improved reliability

INSTRUCT 30 Series VSDs help your optimization team improve uptime and reliability while modifying pump speed to match the dynamic inflow of your wells – whether fluctuations are due to rapid decline rates or improved production from a waterflood response.



Instruct 30 Series specifications

Motor Control

- + All types of control algorithms, including:
 - Sensorless vector torque control
 - Volts per hertz
 - Permanent magnet motor control (interior)

Digital Inputs

- + Supports up to 21 inputs
 - Qty. 21 - 24V DC or
 - Qty. 19 - 115V AC

Analog Inputs and Outputs

- + 7 total inputs
- + 7 total outputs (bipolar voltage or current)

PTC Inputs

- + 3 total

Relay Outputs

- + 7 total

Transistor Outputs

- + 7 total

Internal Brake Transistor

- + Standard (frames 1-5)
- + Optional (frames 6-7)

DC Link Choke

- + Standard on all sizes 5HP and larger

Safety

- + Safe Torque Off SIL3, PLe, Cat 3 with option card
- + Safe Speed Monitor SIL3, PLe, Cat 4 with option card

Application

- + Open-loop speed regulation
- + Closed-loop speed regulation
- + Precise torque and speed regulation
- + Indexer positioning
- + Single-phase input w/derate

Ratings

- + 480V: 5-400 HP: 8-477 A
- + 600V: 5-300 HP: 9-289 A
- + 690V: 5-200 HP: 12-263 A

Overload Capability

- + 110% - 60 s
- + 150% - 3 s

Output Frequency Range

- + 0-325 Hz @ 2 kHz PWM
- + 0-590 Hz @ 4 kHz PWM

Communications Options

- + Single or dual-port Ethernet/IP options
- + ControlNet (coax or fiber)
- + DeviceNet
- + Remote I/O
- + RS485 DFI
- + PROFIBUS DP
- + BACnet/IP
- + Modbus/TCP
- + HVAC (Modbus RTU, FLN PI, Metasys N2)
- + ProfiNet 10
- + LonWorks
- + CANopen