SENSIA
Rockwell Automation + SLB
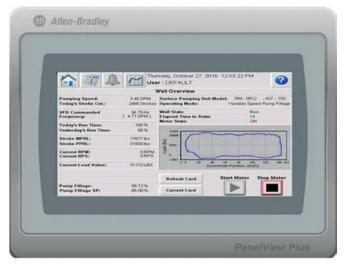
INSTRUCT SRP Controller

Intelligent control for sucker rod pump applications

Features

+ Surface or downhole dynamometer card based control

+ Remote maintenance of your INSTRUCT SRP Intelligent Controller* via the controller web server and online firmware updates

+ High performance configurable HMI with quick-start guide

+ Rapid Avalon* integration via asset auto-discovery

+ Easily connects to well management systems and third-party SCADA software

+ API 11E pumping unit database

+ User programmable with any IEC 61131 standard programming language

+ Hall effect or inclinometer position measurement

+ Oil, gas, and water production calculations

+ Fluid level and pump intake pressure (PIP) estimation

+ Inflow performance relationship (IPR)

The INSTRUCT SRP Intelligent Controller is an advanced design on-site control solution that provides the accurate and flexible dynamometer-based pump-off control necessary for sucker rod pump optimization.

The INSTRUCT SRP Intelligent Control system helps achieve continuous operations and optimize production while maximizing your return on investment. This reliable rod pump controller from Sensia is easy to install, easy to configure and easy to use.

INSTRUCT SRP Intelligent Controller's touchscreen HMI

Featuring a high-performance HMI, the INSTRUCT SRP Intelligent Controller allows convenient on-site configuration of completion parameters such as well bore, mechanical unit and motor data, and provides extensive process visualization, alarming functions, and diagnostics. The controller extends this data to your existing SCADA system or to the cloud via its embedded IoT gateway.

Based on conditions at the surface of the well, the INSTRUCT SRP provides continuous true load and position monitoring for beam pumps and belt driven linear pumping units and pump-off control with across-the-line fixed speed or variable speed power packages.

The dynamic surface and downhole dynamometer card display allows the operator to visualize what is occurring with the process. 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.

The INSTRUCT SRP includes a range of standard features that allow extensive end user connectivity and customization:

+ AGA 3, 7, 8, and 9 Gas Flow Measurement

+ Modbus RTU and TCP master capability for 3rd party device monitoring

+ Direct connection to Sensia S10 or S30 VSD's with no additional integration

INTELLIGENT ACTION

INSTRUCT SRP Intelligent Controller Specifications

General Specifications

Cabinet	+ 18" H × 20" W × 11.5 "D
Local operator interface	+ High performance 7" full-color touchscreen graphics terminal + 100-240 VAC, 50/60 Hz
Power	+ 100-240 VAC, 50/60 Hz
Operating environment	+ NEMA3R + Humidity range 5% to 95%, noncondensing + Base temperature range is -20 °C to +46 °C (-4 °F to +114 °F) + Heating/cooling options extend temperature range from -40 °C to +60 °C (-40 °F to +140 °F)

System Hardware

I/O interface	+ Two analog inputs (load cell, inclinometer-as required) + Two digital inputs (Hall effect position sensors) + Four digital inputs (motor status, two auxiliary fault inputs, hand/off status monitoring) + One analog output (drive frequency control) + Four digital outputs (motor On/Off command, motor On pulse, motor Off pulse, start alert user supplied annunciator) + Spare inputs/outputs – 6 analog inputs, 1 analog output, 2 digital inputs, and 4 digital outputs + I/O expansion via Ethernet/IP with Allen Bradley FLEX IO module
Communication ports	+ Two Ethernet ports + Two RS232 ports + One RS485 port
Communication protocols	+ Modbus TCP, Modbus serial, Ethernet/IP, MQTT + WMP wireless, supports up to 10 Sensia iSens transmitters
Accessories	+ Beam-mounted inclinometer or Hall effect sensors + Load cell (30k lb and 50k lb ranges) – wireless option is available + Load cell load level washer kit + Coiled cable for load cell