SALT™ BASIC

Patent No. 6,414,455

Sensorless Artificial Lift Technology

Power Management Controls, Inc.

Power Management Controls, Inc., a proven leader in Patented Technology Solutions for the Oil and Gas Industry, pioneered the use of Variable Frequency Drive (VFD) based Artificial Lift System (ALS) control nearly forty years ago.

In 2002, Patent No. 6,414,455, which eliminates the need for Resistors or Regenerative VFD's, decreases Peak Demand charges and reduces Power Consumption, became the foundation for Sensorless Artificial Lift Technology (SALT™). Since then, SALT™ has been installed in over 7,500 locations world-wide, with a proven average annual power savings of 22% on Sucker Rod Pumps.

- 40HP Power Savings = $0.10 x 30kW x 22% x 8,760 = $5,782 per year

SALT™ Basic is the latest offering in a long line of innovation that becomes the new foundation for lower cost, decreased failures, increased run-life, and reduced power consumption on all types of pumps and compressors.

Install SALT™ Basic in place of a standard Pump Panel and have any pump or compressor running in minutes using the simple on-screen instructions. Easy to understand, operator friendly displays guide the user through features not found in other Starter or VFD controls.

- Reduced power consumption and peak demand charges to recoup installation cost quickly
- Soft starting and stopping to reduce mechanical / electrical stress and improve belt life
- Variable speed without costly belt and / or sheave changes
- Reduced rod compression which increases rod / pump life and improves pump efficiency
- Manage external switches and sensors without the need for other costly controllers

SALT™ Basic represents the most comprehensive, yet easiest to use, VFD in the oil and gas industry. Designed specifically for oil and gas, SALT™ Basic includes built-in, user friendly controls for all Sucker Rod Pump, Progressive Cavity Pump, Electric Submersible Pump, and Surface Pump or Compressor applications using electric motors; including Permanent Magnet Motors.

SALT™ Basic meets the equipment standard for low order current harmonics minimizing the need for additional costly filters and ride-through features help keep you running during brown out conditions.

Safety protection features for current, voltage, ground fault, and load are built-in as are motor overload, motor underload, and belt break. Connections for switches (pressure, vibration, level, etc.) and sensors (pressure, flow, load cell, etc.) are built-in for readouts, alarms, and faults with options to add more.

Automatic Fault Reset and Power-up, Run, and Stop Timers help reduce costly trips to the well site. Relevant Speed Units and Limits are easily set and Speed Changes are simply made with the touch of a button. Load Limits ensure loading violations never occur and Load Boost gives that added kick for those hard to start situations.

SALT™ Basic has all the essential features you need including Intra-stroke Speed Modulation, Reduced Rod Compression, Improved Pump Efficiency, PID Closed Loop Sensor Control for precise flow, level, or pressure management, and a simple interface to Pump Off Control (POC) systems of any kind.

Patented Technologies for Oil & Gas

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Specifications

- 380-480Vac; +10%/-15%
- Three / Single phase input
- VFD Patent# 6414455
- Built-in DC link Reactor
- 2 Sensor Inputs 10Vdc/4-20mA
- 2 Signal Outputs 10Vdc/4-20mA
- 6 Switch Inputs 24Vdc
- 3 Contact Output 240Vac; 1 Amp
- Outdoor Enclosure -20°/+40°C
- Wall / Floor Mounting
- Easy access Main Door
- Circuit Breaker & Door Handle
- Door mounted graphic keypad

Functions

- Motor Overload Protection
- Motor Underload Protection
- Stall Detection
- Belt Break Detection
- Switch Faults
- Load Cell / Sensor HI/LO Faults
- Automatic Fault Reset
- Power-up, Run, and Stop Timers
- Speed Units Ratio
- Speed Limits
- Speed Change Buttons
- Load Limits / Load Boost
- Intra-stroke Speed Modulation
- Reduced Power Consumption
- Reduced Rod Compression
- Improved Pump Efficiency
- PID Closed Loop Sensor Control
- Easy POC Interface

Other Configurations

- 220-240Vac, 1/3 phase
- 500-600Vac, 3 phase
- 660-690Vac, 3 phase
- 12/18 Pulse to 2500HP
- Medium voltage to 8000HP

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Motor Volts	Rating (110%/1 min; 150%/3 sec)		Dimensions (H x W x D)	App. Shipping Weight (lbs.)	Part No.
	HP	Amps			
480Vac	2	3.6	24x20x10	75	PMCV40003E2S-E6CB
	3	5	24x20x10	76	PMCV40005E2S-E6CB
	5	7	24x20x10	76	PMCV40007E2S-E6CB
	7.5	10	24x20x10	76	PMCV40010E2S-E6CB
	10	13.5	24x20x10	76	PMCV40013E2S-E6CB
	15	17	24x20x10	84	PMCV40017E2S-E6CB
	20	24	24x20x10	85	PMCV40024E2S-E6CB
	25	31	24x20x10	87	PMCV40031E2S-E6CB
	30	38	30x24x10	112	PMCV40038E2S-E6CB
	40	45	30x24x10	119	PMCV40045E2S-E6CB
	50	58.5	30x24x10	121	PMCV40058E2S-E6CB
	60	70.5	36x30x10	220	PMCV40070E2S-E6CB
	75	88	36x30x10	224	PMCV40088E2S-E6CB
	75	105	48x36x12	310	PMCV40105E2S-E6CB
	125	142	48x36x12	310	PMCV40142E2S-E6CB
	150	180	48x36x12	310	PMCV40180E2S-E6CB
	150	211	48x36x12	310	PMCV40211E2S-E6CB
	200	242	72x36x36	849	PMCV40242E2S-E6CB
	250	312	72x36x36	853	PMCV40312E2S-E6CB
	300	370	72x36x36	860	PMCV40370E2S-E6CB
	400	477	72x36x36	871	PMCV40477E2S-E6CB
	450	515	90x36x36	1,121	PMCV40515E2S-E6CB
	500	601	90x36x36	1,127	PMCV40601E2S-E6CB
	600	720	90x36x36	1,145	PMCV40720E2S-E6CB

Options

CU – cULus Certification
CB - Circuit Breaker
TV – Transient Voltage Surge Arrestor
HF – Harmonic Filter
SF – Sine Wave Filter
CW – Cold Weather; -40°C
SS – Solar Shield; +50°C
HT – Heat Trace
WR – Weatherproof Receptacle
MT – Motor Terminals
CT – Control Terminals
CR – Control Relays
SL – Status Lights

Accessories

SPS – Stroke Position Switch
LCC – Load Cell & Cable
ACM – Advanced Control & Monitoring
RCM – Remote Control & Monitoring
RSB – Remote Signal Booster

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