

SALT™ BASIC

Sensorless Artificial Lift Technology

A Power Management Controls, Inc. Product

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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.

Patent No. 6,414,455, dated 2002, 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 percent on sucker rod pumps.



POWER SAVINGS

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



SETTING THE STANDARD

Since inception, the patented SALT™ system has set the standard for low cost, reduced failures, increased run-life, optimized production, and decreased 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



The Basic VFD comes with Intra-Stroke Speed Modulation, the benefits of which include smoother transition from upstroke to downstroke (reduction in rod compression) and increased time during downstroke for improved gas separation.

Optimization / control options include pump-off controller (POC) hardware that can be connected and command the VFD, or SALT™ optimization software that can be flashed into the drive. This allows the options of operating the VFD under SALT™ optimization software while using POC hardware for analysis, or without POC hardware.

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



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Patent No. 6,414,455

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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 and 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
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
Harmonic filter
Sine wave filter

Motor Voltage	Rating (110%/1min; 150%/3sec)		PMC Part No.	App. Dimensions (HxWxD) inch	App. Shipping Weight (lbs.)
	HP	Amps			
480Vac	2	3.6	PMCV40003E2S-E6CB	30 x 20 x 16	84
	3	5	PMCV40005E2S-E6CB	30 x 20 x 16	84
	5	7	PMCV40007E2S-E6CB	30 x 20 x 16	84
	7.5	10	PMCV40010E2S-E6CB	30 x 20 x 16	84
	10	13.5	PMCV40013E2S-E6CB	30 x 20 x 16	85
	15	17	PMCV40017E2S-E6CB	30 x 20 x 16	92
	20	24	PMCV40024E2S-E6CB	30 x 20 x 16	93
	25	31	PMCV40031E2S-E6CB	30 x 20 x 16	95
	30	38	PMCV40038E2S-E6CB	42 x 30 x 16	172
	40	45	PMCV40045E2S-E6CB	42 x 30 x 16	179
	50	58.5	PMCV40058E2S-E6CB	42 x 30 x 16	181
	60	70.5	PMCV40070E2S-E6CB	42 x 30 x 16	246
	75	88	PMCV40088E2S-E6CB	42 x 30 x 16	249
	75	105	PMCV40105E2S-E6CB	48 x 30 x 16	290
	125	142	PMCV40142E2S-E6CB	48 x 30 x 16	290
	150	180	PMCV40180E2S-E6CB	48 x 30 x 16	290
	150	211	PMCV40211E2S-E6CB	48 x 30 x 16	290
	200	242	PMCV40242E2S-E6CB	72 x 36 x 44	849
	250	312	PMCV40312E2S-E6CB	72 x 36 x 44	853
	300	370	PMCV40370E2S-E6CB	72 x 36 x 44	860
400	477	PMCV40477E2S-E6CB	72 x 36 x 44	871	
450	515	PMCV40515E2S-E6CB	90 x 36 x 45	1,121	
500	601	PMCV40601E2S-E6CB	90 x 36 x 45	1,127	
600	720	PMCV40720E2S-E6CB	90 x 36 x 45	1,145	

STANDARD

E6: outdoor rated enclosure
CB: main power circuit breaker with door operator

OPTIONS

CU: cULus certification
TV: transient voltage surge arrestor
CW: cold weather; -40°C
FS: floor stand kit
SS: solar shield: +50°C
WL: hinged access wingknob
HT: heat trace
WR: weatherproof receptacle
MT: motor terminals

CT: control terminals
CR: control relays
PO: panel operators
SL: status lights
MB: modbus RTU
EN: ethernet
PC: pumpoff control and modbus RTU
RM: remote control and monitoring
RB: remote signal booster

ACCESSORIES

SPS: stroke position switch
LCC: load cell and cable

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SALT™ Well Automation and Control

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