

Farm Duty Motors

**BALDOR • RELIANCE**

### VS1PF Pump and Fan AC Drive

**7.5 thru 40 Hp**  
**7.5 thru 700 Hp**

**230 VAC**  
**460 VAC**

**3 Phase - 50/60 Hz**  
**3 Phase - 50/60 Hz**

Definite Purpose Motors



**Applications:** Pump and Fan AC Drive Applications (both Variable and Constant Torque) from 5 to 700 Hp.

**Features:** Nema 1 as standard up to 15Hp. IP00 with NEMA 1 Kits available from 20 Hp to 125 Hp. IP00 as standard over 125 Hp. Integral keypad and plain English 2-line display including UP/DOWN keys to adjust speed reference. Dual PID control loops. External DBU Dynamic Braking kits connect to remote braking resistor for enhanced performance needs. Sleep/Wake Function -- Ability to disable/re-enable drives automatically as demand dictates. Energy Savings Function Power Dip Ride-thru. Flying Start Function.

Unit Handling

Brake Motors

200 & 575 Volt Motors

IEC Frame Motors

50 Hertz Motors

Inverter/Vector Motors & Controls

DC Motors and Controls

Soft Start & Dynamic Brakes

<b>Input Ratings</b>	Voltage	230	460
	Voltage Range	170-253	323-528
	Phase	3 Phase (single phase with derate)	
	Frequency	50/60 Hz +5%	
<b>Output Ratings</b>	Horsepower	7.5-40 Hp @ 230VAC, 3PH; 7.5-700 Hp @ 460VAC, 3 PH;	
	Overload Capacity	Heavy Duty (Constant Torque) = 150% for 60 seconds, 200% for 3 seconds Normal Duty (Variable Torque) = 110% for 60 seconds and 150% overload for 3 seconds.	
	Frequency	0-400 Hz	
	Voltage	0 to maximum input voltage (RMS)	
<b>Protective Features</b>	Trip	Missing control power, over current, over voltage, under voltage, over temperature (motor or control), output shorted or grounded, motor overload	
	External Output	LED trip condition indicators, 5 assignable logic outputs, 2 assignable analog outputs	
	Short Circuit	Phase to phase, phase to ground	
<b>Environmental Conditions</b>	Temperature	-10 to 40°C. Derate 2% per °C to maximum ambient temperature of 50°C.	
	Cooling	Forced air	
	Enclosure	NEMA 1 and IP00	
	Altitude	Sea level to 3300 Feet (1000 Meters) Derate 2% per 1000 Feet (303 Meters) above 3300 Feet	
	Humidity	10 to 95% RH Non-Condensing	
	Storage Temperature	-40 to +70°C	
<b>Keypad Display</b>	Display	16 character x 2-line, plain-English alpha-numeric display	
	Keys	9 key membrane with tactile response	
	Functions	Output status monitoring, Digital speed control, Parameter setting and display, Diagnostic and Fault log display, Motor run and jog, Local/Remote toggle	
	LED Indicators	Forward run command, Reverse run command, Stop command	
	Remote Mount	5 meter distance	
	Trip	Separate message and trace log for each trip, last 5 trips retained in memory	
<b>Control Specifications</b>	Control Method	Microprocessor controlled PWM output, selectable encoderless vector or V/Hz inverter	
	Sleep / Wake Function	Ability to disable/re-enable drive automatically as demand dictates	
	Programmable Preset Speeds	Sixteen	
	Accel/Decel	0-6000 seconds, linear, S-Curve, U-Curve	
	Energy Savings Function	Automatic Mode	
	Frequency Control Range	0-400 Hz	
	Frequency Avoidance	3 Bands	
	Selectable Operating Modes	Keypad, 2-Wire, 3-Wire, 16 Preset Speeds, Fan Pump, Process Control.	
<b>Analog Inputs</b>	Two total	One: 0-10VDC or -10 to 10VDC	One: 4-20mADC
	<b>Analog Outputs</b>	Two	Two: 0-12 VDC
<b>Digital Inputs</b>	Pull - up or Pull - down	8 Completely Configurable Inputs	
<b>Digital Outputs</b>	Five Total	Four Form A Relays	
		One Form C Relay	