

**BALDOR • RELIANCE**

### VS1ST AC Micro Drive



<b>1/2 thru 1.5 Hp</b>	<b>115 VAC</b>	<b>1 Phase - 50/60 Hz</b>
<b>1/2 thru 3 Hp</b>	<b>230 VAC</b>	<b>1 Phase - 50/60 Hz</b>
<b>1/2 thru 5 Hp</b>	<b>230 VAC</b>	<b>3 Phase - 50/60 Hz</b>
<b>1 thru 10 Hp</b>	<b>460 VAC</b>	<b>3 Phase - 50/60 Hz</b>

**Applications:** Variable torque, constant torque or constant horsepower applications. New installations, replacements and original equipment manufactures (OEM).

**Features:** Volts per Hertz Control with peak overload capacity of 175% and PID capability. **Flexible mounting options with IP20 enclosure as standard and DIN Rail mounting.** Integral keypad, operator interface and local speed control. Basic set of programming parameters. Power ratings up to 10 Hp in both 230V and 460V versions.

<b>Performance Features</b>	Control Modes	V/Hz
	Operator Interface Module	Integral Drive Mounted
	Display Lines	6-Character LED Display
	Programmable Preset Speeds	Four
	Analog Outputs	One (0-10 VDC)
	Auto Restart	Yes – Up to 5 attempts
	Frequency Avoidance	One Band
	Fault History	Last Four Faults
	Digital Inputs: Four	Two Programmable Digital Inputs, Two user selectable analog/digital inputs
	Digital Inputs Type	Pull-Up
<b>Drive Specifications</b>	Analog Inputs: Two	0-10VDC, 0 to 20mA or 4 to 20mA
	Relay Outputs: One	Built-in Form C Relay
	Analog Output/Digital	0-10 VDC: One Analog Usable for Meter (Freq., Current, Voltage, or Digital Output/Digital Output)
	Maximum Load	10 Hp @ 460 VAC
	Overload Capacity	Drive Output 150% for one minute and 175% for 2 seconds
	Input Voltage Ranges	115 VAC (99-126); 230 VAC (198-264); 460 VAC (342-528)
	Rated Input Frequency	50-60Hz (±5%)
	Carrier Frequency	4-32 kHz (8 kHz default)
	Operating Temperature	0° to 50°C
	Snubber (Dynamic Braking)	Built-in Transistor (Frames B & C)
	Dynamic Braking External	Up to 150% Dynamic Braking with appropriately sized resistor
	DC Injection Braking	Included
	Volts/Hz	Linear V/Hz
		Energy Optimizer Function
	Frequency Control Range	0 - 500Hz
	Accel/Decel:	Independently adjustable accel. & decel. ramps
	Time Range:	0 to 600 Seconds
	Keypad Speed Control	Yes
	Sink/Source Inputs	Selectable, 24 VDC Logic
	Electronic Overload Trip	Electronic Motor Overload Inverse 150% for 1 minute or 175% for 2
Communications	Built-in MODBUS-RTU (RS-485) Communications	
PID Control	Built-in	
<b>Protective Features</b>	Under Voltage	Level Depends on Voltage Class (240, 480, or 575)
	Output Short Circuit	Phase-to-Phase on Drive Output
	Over Temperature	Heatsink Monitor
	DC Bus Overvoltage	DC Bus Level Trip
	Drive Overload	Exceed Drive rating of 150% for One Minute or 175% for 2 seconds
	Over Current	Over-current/short-Circuit protection
	Output Phase	Trips on open Output Phase
	Loss of Reference	Trips on Loss of Speed Command Signal
	Comm. Error	Detects a communication error (fault)
	<b>Agency Certifications</b>	UL, cUL, CE, C-tick
<b>Service Conditions</b>	Altitude	1,000 m (3,300 ft.), derate by 1% per 100m up to 2,000 on maximum.
	Ambient Temperature	IP20: -10°C (14°F) to 50°C (122°F)
	Storage Temperature	-40°C (-40°F) to 60°C (140°F)
	Relative Humidity	10% to 95%, non-condensing