Baldor VS1 AC Microdrives

Compact. Cost Efficient. Reliable.

Quality, reliability, and performance—these are characteristics shared by every Baldor product. These traditions continue today in the Baldor VS1 AC Microdrives.

Competitive in price, these compact workhorses feature user-friendly interfaces and design elements that assure consistent motor control throughout a wide range of voltages, horsepowers, and enclosure types.

Three models comprise the Baldor VS1 AC Microdrives Family: the VS1SM single-phase, the VS1MD multi-phase, and the VS1MX—the ultimate drive for harsh environments. Ranging from ½ to 10 horsepower, these performance-proven microdrives are well suited for a wide range of applications.

VS1SM Single-Phase AC drive

Sensorless Vector Control. All In An Easy to Use Package

World-wide acceptance with optional built-in EMC/RFI Filter and configurable PNP/NPN Digital Inputs, the SM is the perfect drive for OEM's who ship around the globe.

Auto Tuning

The auto tuning feature on the VS1SM microdrive improves torque in low-speed, low-torque conditions—automatically tuning and optimizing motor control. It simplifies programming and maximizes efficiency. Setup is quick and easy, and does not require an expert to program.

Communication Interface—ModBus-RTU

The VS1SM microdrive also provides the most popular communication interface—ModBus-RTU for remote control by PLC or other devices.

Programmable PID Process Control

Plus, its PID process control makes speed corrections quickly, with minimal overshooting and oscillation. As a result, you get excellent control of flow, temperature, pressure, and other performance factors.

Easy Programming. Easy Navigation.

The keypad on the VS1SM microdrive incorporates easy-to-use, one-finger up/down, left and right arrows to help you navigate effortlessly. Plus, you'll appreciate the run, stop/reset and manual speed potentiometer.

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VS1MD AC Microdrive

Compact Size.
Superior Torque.

Smart. Easy. Flexible.
With an extended capability up to 10 HP (7.5 kW), the VS1MD microdrive is among the most powerful and cost competitive in its class. Its compact size, user-friendly interface, higher horsepower, and superior motor torque make it ideal for a wide variety of applications.

Sensorless Vector Control
Its built-in sensorless vector control assures superb speed control and tight torque control.

Ground-Fault Protection During Operation
The VS1MD microdrive provides run-time ground-fault protection. This ensures automatic shut-off if a short is present.

Automatic Carrier Frequency Adjustment
This drive automatically controls the carrier frequency of the PWM output to avoid overtemperature problems and still keep the drive as quiet as possible.

Easy To Use Interface
The VS1MD microdrive's convenient interface utilizes four directional keys for simple parameter setup.

Easy Fan Replacement
The VS1MD microdrive has been designed for easy maintenance. If the fan should fail, it can be changed out easily.

Built-In Communication
With its built-in RS485 Bus and ModBus-RTU, the VS1MD can communicate easily with other devices.

Built-In PID Control
This function allows you to control flow rate, oil pressure, temperature, and other parameters easily without the use of another controller.

-10V to +10V Analog Input
Normally found only on higher-end drives, this feature allows speed and direction control from a single analog input.

PNP/NPN Digital Inputs
With configurable digital inputs that support PNP and NPN connections, the VS1MD allows you to interface with a wider variety of controllers and PLCs.

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VS1MX Harsh-duty AC Microdrive

Harsh-Duty Engineered

FEATURES DUST-TIGHT NEMA 12/IP55 ENCLOSURE

Considered the ultimate drive for harsh environments, the Baldor VS1MX microdrive completes our family of reliable AC microdrive products. This easy-to-use, low-power AC variable speed drive has a compact design and is available in switched or non-switched enclosures. It's NEMA 12/IP55 rating makes it ideal for use in harsh-duty applications.

This rugged microdrive is ideal for use in pumping, chemical, waste water, and HVAC applications. It resists low-pressure water, dust, dirt, and chemicals, and incorporates a number of features that help ensure convenient, reliable operation.

WASHDOWN DUTY NEMA 4X ENCLOSURE

Ideal for food and beverage as well as pharmaceutical applications, the VS1MX-NEMA 4X is a cost-effective, washdown duty microdrive for low-HP situations. Ready for high-pressure washdown, the MX-NEMA 4X can mount directly on your processing equipment.

Both, NEMA 12/IP55 and NEMA 4X/IP65 enclosures share these quality attributes:

- Wall mountable
- Conduit cable entry
- Convenient keypad control
- Optional built-in RFI/EMC Filter
- Optional Lockable Power Disconnect
- Local potentiometer for speed control
- Drive FWD/OFF/REV switch
- Built-in Manual Speed Potentiometer

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WHAT THE NEMA AND IP RATINGS MEAN

NEMA 12

Type 12 enclosures are intended for industrial indoor use, primarily to provide a degree of protection against dust, falling dirt, and dripping non-corrosive liquids.

NEMA 4X

NEMA 4X enclosures are protected against rain, splashing and hose-directed water. The drive is corrosion resistant and unaffected by the formation of ice on the enclosure.

The IP55 rating means that the VS1MX has a protection level of five against both solid-body ingress and the ingress of water. A rating of IP65 assures that an enclosure has level 5 protection against the ingress of dust.

Five is the second highest protection level against solid bodies, meaning the unit is protected against dust ingress to the point that it disallows harmful deposits. Protection against water ingress goes up to level eight—a five means this unit will be protected against the effects of low-pressure jets of water from any direction.