

VS Series Variable Speed IntelliPass Drives

Product Bulletin

New Information
Effective July 2004



VS Series IntelliPass Drive

Product Description

Introducing Johnson Controls VS Series Variable Speed IntelliPass Drives powered by Cutler-Hammer® enclosed control and circuit breaker technology from Eaton's electrical business.

The IntelliPass bypass is a two- or three-contactor design utilizing 24V DC contactors and power supplies. The features, function and form allow the drive and bypass to become an integrated design, the world's smallest drive and bypass package. The IntelliPass bypass comes standard with a Cutler-Hammer circuit breaker integrated into the drive and bypass design.

Features and Benefits

- Compatibility with current and future Johnson Controls network architecture

- Supported by standard Johnson Controls ordering, estimating, and project management tools: Advanced Order Management System (AOMS), Advanced Installation Management (AIM) Tools — Excalibur, Catalog, PRESTO, STORE
- Closed-loop control programmed with engineering units for specific Heating, Ventilating and Air-Conditioning (HVAC) applications: duct static, building static, pressure control, and temperature control
- Quick and easy non-HVAC specific, standard application to get the drive up and running
- One-finger keypad operation allows easy navigation between monitoring values and adjusting parameters
- Automatic fault display captures 16 drive operating parameters at time of fault
- Circuit breaker or fused disconnect provides flexible drive isolation configurations to meet customers' needs
- Fully rated, mechanically and electrically interlocked contacts
- Solid-state motor overload relay provides motor protection while in bypass
- HAND/OFF/AUTO and DRIVE/BYPASS selector on keypad simplifies control
- Two power sources for control ensure redundancy and provide additional ride-through capability
- Reliable drive with over 500,000 hours MTBF
- Weighs 70% less than other bypass designs which simplifies and speeds up the installation process, lowering contractors' costs
- Serial communication interface can control both the drive and all bypass features so that the remote operator can fully control the motor whether it is operated by the drive or bypass
- Plenum rated
- Designed and tested to UL 508C specifications

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- Self-healing power supplies
- Standard 3% line reactors for enhanced transient and harmonic distortion protection
- EMI/RFI Filters standard on all drives
- Top and bottom conduit entry for installation ease
- Standard drive current rating of 100 kAIC, bypass rating of 65 kAIC
- Upgradeable software extends product life
- Pass-through I/O capability
- Lockable disconnect in OFF position
- 3rd Contactor drive isolation option
- I/O and communication cards provide plug and play functionality
- Copy/Paste keypad function allows transfer of parameter settings from one drive to the next
- Keypad can display up to three monitored parameters simultaneously
- TYPE 1 enclosure
- Standard TYPE 12 keypad on all drives
- Simplified operating menu allows for typical programming changes
- Accommodates a wide selection of expander boards and adapter boards
- Control logic can be powered from an external auxiliary control panel
- Standard option board configuration includes an A9 I/O board, A2 relay output board and a B5 output board which are installed in slots A, B and C respectively

Technical Data and Specifications

Table 1. VS Series IntelliPass Drives Specifications

Description	Specification
Power Connections	
Input Voltage (V_{in})	+10% / -15%
Input Frequency (f_{in})	50/60 Hz (variation up to 45 – 66 Hz)
Connection to Power	Once per minute or less (typical operation)
High Withstand Rating	65 k
Motor Connections	
Output Voltage	0 to V_{in}
Continuous Output Current	Ambient temperature max. +104°F(+40°C), overload $1.1 \times I_L$ (1 min./10 min.)
Starting Current	110%
Output Frequency	0 to 320 Hz
Frequency Resolution	.01 Hz
Control Characteristics	
Control Method	Frequency Control (V/f) Open Loop Sensorless Vector Control
Switching Frequency	Adjustable Parameter 1 – 40 hp: 1 to 16 kHz; default 10 kHz 50 – 75 hp: 1 to 10 kHz; default 3.6 kHz
Frequency Reference	Analog Input: Resolution .1% (10-bit), accuracy $\pm 1\%$ Panel Reference: Resolution .01 Hz
Field Weakening Point	30 to 320 Hz
Acceleration Time	0 to 3000 sec.
Deceleration Time	0 to 3000 sec.
Braking Torque	DC brake: $30\% \times T_n$ (without brake option)
Ambient Conditions	
Ambient Operating Temperature	14°F (-10°C), no frost to 104°F (+40°C)
Storage Temperature	-40°F (-40°C) to 158°F (70°C)
Relative Humidity	0 to 95% RH, noncondensing, non-corrosive, no dripping water
Air Quality	Chemical vapors: IEC 721-3-3, unit in operation, class 3C2; Mechanical particles: IEC 721-3-3, unit in operation, class 3S2
Altitude	100% load capacity (no derating) up to 3280 ft. (1000m); 1% derating for each 328 ft. (100m) above 3280 ft. (1000m); max. 9842 ft. (3000m)
Enclosure Class	TYPE 1/IP21
Standards	
EMC (at default settings)	Immunity: Fulfills all EMC immunity requirements; Emissions: EN 61800-3, LEVEL H
Safety	UL 508C
Product	IEC 61800-2

Description	Specification
Control Connections	
Analog Input Voltage	0 to 10V, R = 200Ω differential (-10 to 10V joystick control) Resolution .1%; accuracy $\pm 1\%$
Analog Input Current	0(4) to 20 mA; R_i - 250Ω differential
Digital Inputs (6)	Positive or negative logic; 18 to 24V DC
Auxiliary Voltage	+24V $\pm 15\%$, max. 250 mA
Output Reference Voltage	+10V +3%, max. load 10 mA
Analog Output	0(4) to 20 mA; R_L max. 500Ω; Resolution 10 bit; Accuracy $\pm 2\%$
Digital Outputs	Open collector output, 50 mA/48V
Relay Outputs	2 programmable Form C relay outputs Switching capacity: 24V DC / 8A, 250V AC / 8A, 125V DC / .4A
Protections	
Overcurrent Protection	Trip limit $4.0 \times I_H$ instantaneously
Overvoltage Protection	Yes
Undervoltage Protection	Yes
Earth Fault Protection	In case of earth fault in motor or motor cable, only the frequency converter is protected
Input Phase Supervision	Trips if any of the input phases are missing
Motor Phase Supervision	Trips if any of the output phases are missing
Overtemperature Protection	Yes
Motor Overload Protection	Yes
Motor Stall Protection	Yes
Motor Underload Protection	Yes
Short Circuit Protection	Yes (Of the +24V and +10V Reference Voltages)
General	
Line Voltage	208/230/480V
Drive Efficiency	>95%
Power Factor (Displacement)	.96
Ratings	UL Listed, File No. E134360
Warranty	Two Years Standard Terms; Three Years with Certified Start-Up

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Catalog Number Selection

Table 2. VS Series IntelliPass Drives Selection Chart

	Code Number	V	S				1	1	A	-	N					
Base Product	VS = Variable Speed Drive Series															
Horsepower	001 = 1.0 hp to 075 = 75 hp ①															
Voltage	1 = 208V 2 = 230V 4 = 480V															
Enclosure Rating	1 = TYPE 1															
Enclosure Style	1 = IntelliPass															
Revision #	A = Revision 1															
Separator (-)																
Communications	0 = None N = N2 (Standard) L = LONWORKS® Network															
Option 1	See Options List ②③															
Option 2	See Options List ②③															

① 1 to 75 hp @ 480V; 1 to 30 hp @ 208/230V.

② Options List: 00 = None
P3 = Drive Isolation Fusing
P6 = Third Contactor
K9 = Two Factory-Installed Auxiliary Contacts

③ Options P3 and P6 cannot be ordered together in the same drive.

Product Selection

VS Series 208/230V IntelliPass Drives

Table 3. VS Series 208/230V IntelliPass Drives

Part Number	Description
Frame 4	
VS001111A-00000 VS001111A-0K900 VS001111A-0K9P3 VS001111A-0K9P6 VS001111A-0P300 VS001111A-0P600	VSD Bypass 1 hp 208V TYPE 1 VSD Bypass 1 hp 208V TYPE 1, Aux Cont VSD Bypass 1 hp 208V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 1 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 1 hp 208V TYPE 1, w/Iso Fuses VSD Bypass 1 hp 208V TYPE 1, 3 Cont
VS001111A-L0000 VS001111A-LK900 VS001111A-LK9P3 VS001111A-LK9P6 VS001111A-LP300 VS001111A-LP600	VSD Bypass 1 hp 208V TYPE 1, LON VSD Bypass 1 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 1 hp 208V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 1 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 1 hp 208V TYPE 1, LON, w/Iso Fuses VSD Bypass 1 hp 208V TYPE 1, LON, 3 Cont
VS001111A-N0000 VS001111A-NK900 VS001111A-NK9P3 VS001111A-NK9P6 VS001111A-NP300 VS001111A-NP600	VSD Bypass 1 hp 208V TYPE 1, N2 VSD Bypass 1 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 1 hp 208V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 1 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 1 hp 208V TYPE 1, N2, w/Iso Fuses VSD Bypass 1 hp 208V TYPE 1, N2, 3 Cont
VS001211A-00000 VS001211A-0K900 VS001211A-0K9P3 VS001211A-0K9P6 VS001211A-0P300 VS001211A-0P600	VSD Bypass 1 hp 230V TYPE 1 VSD Bypass 1 hp 230V TYPE 1, Aux Cont VSD Bypass 1 hp 230V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 1 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 1 hp 230V TYPE 1, w/Iso Fuses VSD Bypass 1 hp 230V TYPE 1, 3 Cont
VS001211A-L0000 VS001211A-LK900 VS001211A-LK9P3 VS001211A-LK9P6 VS001211A-LP300 VS001211A-LP600	VSD Bypass 1 hp 230V TYPE 1, LON VSD Bypass 1 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 1 hp 230V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 1 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 1 hp 230V TYPE 1, LON, w/Iso Fuses VSD Bypass 1 hp 230V TYPE 1, LON, 3 Cont
VS001211A-N0000 VS001211A-NK900 VS001211A-NK9P3 VS001211A-NK9P6 VS001211A-NP300 VS001211A-NP600	VSD Bypass 1 hp 230V TYPE 1, N2 VSD Bypass 1 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 1 hp 230V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 1 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 1 hp 230V TYPE 1, N2, w/Iso Fuses VSD Bypass 1 hp 230V TYPE 1, N2, 3 Cont

Table 3. VS Series 208/230V IntelliPass Drives (Continued)

Part Number	Description
VS002111A-00000 VS002111A-0K900 VS002111A-0K9P3 VS002111A-0K9P6 VS002111A-0P300 VS002111A-0P600	VSD Bypass 2 hp 208V TYPE 1 VSD Bypass 2 hp 208V TYPE 1, Aux Cont VSD Bypass 2 hp 208V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 2 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 2 hp 208V TYPE 1, w/Iso Fuses VSD Bypass 2 hp 208V TYPE 1, 3 Cont
VS002111A-L0000 VS002111A-LK900 VS002111A-LK9P3 VS002111A-LK9P6 VS002111A-LP300 VS002111A-LP600	VSD Bypass 2 hp 208V TYPE 1, LON VSD Bypass 2 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 2 hp 208V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 2 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 2 hp 208V TYPE 1, LON, w/Iso Fuses VSD Bypass 2 hp 208V TYPE 1, LON, 3 Cont
VS002111A-N0000 VS002111A-NK900 VS002111A-NK9P3 VS002111A-NK9P6 VS002111A-NP300 VS002111A-NP600	VSD Bypass 2 hp 208V TYPE 1, N2 VSD Bypass 2 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 2 hp 208V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 2 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 2 hp 208V TYPE 1, N2, w/Iso Fuses VSD Bypass 2 hp 208V TYPE 1, N2, 3 Cont
VS002211A-00000 VS002211A-0K900 VS002211A-0K9P3 VS002211A-0K9P6 VS002211A-0P300 VS002211A-0P600	VSD Bypass 2 hp 230V TYPE 1 VSD Bypass 2 hp 230V TYPE 1, Aux Cont VSD Bypass 2 hp 230V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 2 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 2 hp 230V TYPE 1, w/Iso Fuses VSD Bypass 2 hp 230V TYPE 1, 3 Cont
VS002211A-L0000 VS002211A-LK900 VS002211A-LK9P3 VS002211A-LK9P6 VS002211A-LP300 VS002211A-LP600	VSD Bypass 2 hp 230V TYPE 1, LON VSD Bypass 2 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 2 hp 230V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 2 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 2 hp 230V TYPE 1, LON, w/Iso Fuses VSD Bypass 2 hp 230V TYPE 1, LON, 3 Cont
VS002211A-N0000 VS002211A-NK900 VS002211A-NK9P3 VS002211A-NK9P6 VS002211A-NP300 VS002211A-NP600	VSD Bypass 2 hp 230V TYPE 1, N2 VSD Bypass 2 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 2 hp 230V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 2 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 2 hp 230V TYPE 1, N2, w/Iso Fuses VSD Bypass 2 hp 230V TYPE 1, N2, 3 Cont
VS003111A-00000 VS003111A-0K900 VS003111A-0K9P3 VS003111A-0K9P6 VS003111A-0P300 VS003111A-0P600	VSD Bypass 3 hp 208V TYPE 1 VSD Bypass 3 hp 208V TYPE 1, Aux Cont VSD Bypass 3 hp 208V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 3 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 3 hp 208V TYPE 1, w/Iso Fuses VSD Bypass 3 hp 208V TYPE 1, 3 Cont
VS003111A-L0000 VS003111A-LK900 VS003111A-LK9P3 VS003111A-LK9P6 VS003111A-LP300 VS003111A-LP600	VSD Bypass 3 hp 208V TYPE 1, LON VSD Bypass 3 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 3 hp 208V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 3 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 3 hp 208V TYPE 1, LON, w/Iso Fuses VSD Bypass 3 hp 208V TYPE 1, LON, 3 Cont
VS003111A-N0000 VS003111A-NK900 VS003111A-NK9P3 VS003111A-NK9P6 VS003111A-NP300 VS003111A-NP600	VSD Bypass 3 hp 208V TYPE 1, N2 VSD Bypass 3 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 3 hp 208V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 3 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 3 hp 208V TYPE 1, N2, w/Iso Fuses VSD Bypass 3 hp 208V TYPE 1, N2, 3 Cont
VS003211A-00000 VS003211A-0K900 VS003211A-0K9P3 VS003211A-0K9P6 VS003211A-0P300 VS003211A-0P600	VSD Bypass 3 hp 230V TYPE 1 VSD Bypass 3 hp 230V TYPE 1, Aux Cont VSD Bypass 3 hp 230V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 3 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 3 hp 230V TYPE 1, w/Iso Fuses VSD Bypass 3 hp 230V TYPE 1, 3 Cont
VS003211A-L0000 VS003211A-LK900 VS003211A-LK9P3 VS003211A-LK9P6 VS003211A-LP300 VS003211A-LP600	VSD Bypass 3 hp 230V TYPE 1, LON VSD Bypass 3 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 3 hp 230V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 3 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 3 hp 230V TYPE 1, LON, w/Iso Fuses VSD Bypass 3 hp 230V TYPE 1, LON, 3 Cont
VS003211A-N0000 VS003211A-NK900 VS003211A-NK9P3 VS003211A-NK9P6 VS003211A-NP300 VS003211A-NP600	VSD Bypass 3 hp 230V TYPE 1, N2 VSD Bypass 3 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 3 hp 230V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 3 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 3 hp 230V TYPE 1, N2, w/Iso Fuses VSD Bypass 3 hp 230V TYPE 1, N2, 3 Cont

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Table 3. VS Series 208/230V IntelliPass Drives (Continued)

Part Number	Description
Frame 5	
VS005111A-00000 VS005111A-0K900 VS005111A-0K9P3 VS005111A-0K9P6 VS005111A-0P300 VS005111A-0P600	VSD Bypass 5 hp 208V TYPE 1 VSD Bypass 5 hp 208V TYPE 1, Aux Cont VSD Bypass 5 hp 208V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 5 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 5 hp 208V TYPE 1, w/Iso Fuses VSD Bypass 5 hp 208V TYPE 1, 3 Cont
VS005111A-L0000 VS005111A-LK900 VS005111A-LK9P3 VS005111A-LK9P6 VS005111A-LP300 VS005111A-LP600	VSD Bypass 5 hp 208V TYPE 1, LON VSD Bypass 5 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 5 hp 208V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 5 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 5 hp 208V TYPE 1, LON, w/Iso Fuses VSD Bypass 5 hp 208V TYPE 1, LON, 3 Cont
VS005111A-N0000 VS005111A-NK900 VS005111A-NK9P3 VS005111A-NK9P6 VS005111A-NP300 VS005111A-NP600	VSD Bypass 5 hp 208V TYPE 1, N2 VSD Bypass 5 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 5 hp 208V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 5 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 5 hp 208V TYPE 1, N2, w/Iso Fuses VSD Bypass 5 hp 208V TYPE 1, N2, 3 Cont
VS005211A-00000 VS005211A-0K900 VS005211A-0K9P3 VS005211A-0K9P6 VS005211A-0P300 VS005211A-0P600	VSD Bypass 5 hp 230V TYPE 1 VSD Bypass 5 hp 230V TYPE 1, Aux Cont VSD Bypass 5 hp 230V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 5 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 5 hp 230V TYPE 1, w/Iso Fuses VSD Bypass 5 hp 230V TYPE 1, 3 Cont
VS005211A-L0000 VS005211A-LK900 VS005211A-LK9P3 VS005211A-LK9P6 VS005211A-LP300 VS005211A-LP600	VSD Bypass 5 hp 230V TYPE 1, LON VSD Bypass 5 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 5 hp 230V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 5 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 5 hp 230V TYPE 1, LON, w/Iso Fuses VSD Bypass 5 hp 230V TYPE 1, LON, 3 Cont
VS005211A-N0000 VS005211A-NK900 VS005211A-NK9P3 VS005211A-NK9P6 VS005211A-NP300 VS005211A-NP600	VSD Bypass 5 hp 230V TYPE 1, N2 VSD Bypass 5 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 5 hp 230V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 5 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 5 hp 230V TYPE 1, N2, w/Iso Fuses VSD Bypass 5 hp 230V TYPE 1, N2, 3 Cont
VS007111A-00000 VS007111A-0K900 VS007111A-0K9P3 VS007111A-0K9P6 VS007111A-0P300 VS007111A-0P600	VSD Bypass 7-1/2 hp 208V TYPE 1 VSD Bypass 7-1/2 hp 208V TYPE 1, Aux Cont VSD Bypass 7-1/2 hp 208V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 7-1/2 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 208V TYPE 1, w/Iso Fuses VSD Bypass 7-1/2 hp 208V TYPE 1, 3 Cont
VS007111A-L0000 VS007111A-LK900 VS007111A-LK9P3 VS007111A-LK9P6 VS007111A-LP300 VS007111A-LP600	VSD Bypass 7-1/2 hp 208V TYPE 1, LON VSD Bypass 7-1/2 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 7-1/2 hp 208V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 7-1/2 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 208V TYPE 1, LON, w/Iso Fuses VSD Bypass 7-1/2 hp 208V TYPE 1, LON, 3 Cont
VS007111A-N0000 VS007111A-NK900 VS007111A-NK9P3 VS007111A-NK9P6 VS007111A-NP300 VS007111A-NP600	VSD Bypass 7-1/2 hp 208V TYPE 1, N2 VSD Bypass 7-1/2 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 7-1/2 hp 208V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 7-1/2 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 208V TYPE 1, N2, w/Iso Fuses VSD Bypass 7-1/2 hp 208V TYPE 1, N2, 3 Cont
VS007211A-00000 VS007211A-0K900 VS007211A-0K9P3 VS007211A-0K9P6 VS007211A-0P300 VS007211A-0P600	VSD Bypass 7-1/2 hp 230V TYPE 1 VSD Bypass 7-1/2 hp 230V TYPE 1, Aux Cont VSD Bypass 7-1/2 hp 230V TYPE 1, Aux Cont, w/Iso Fuses VSD Bypass 7-1/2 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 230V TYPE 1, w/Iso Fuses VSD Bypass 7-1/2 hp 230V TYPE 1, 3 Cont
VS007211A-L0000 VS007211A-LK900 VS007211A-LK9P3 VS007211A-LK9P6 VS007211A-LP300 VS007211A-LP600	VSD Bypass 7-1/2 hp 230V TYPE 1, LON VSD Bypass 7-1/2 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 7-1/2 hp 230V TYPE 1, LON, Aux Cont, w/Iso Fuses VSD Bypass 7-1/2 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 230V TYPE 1, LON, w/Iso Fuses VSD Bypass 7-1/2 hp 230V TYPE 1, LON, 3 Cont
VS007211A-N0000 VS007211A-NK900 VS007211A-NK9P3 VS007211A-NK9P6 VS007211A-NP300 VS007211A-NP600	VSD Bypass 7-1/2 hp 230V TYPE 1, N2 VSD Bypass 7-1/2 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 7-1/2 hp 230V TYPE 1, N2, Aux Cont, w/Iso Fuses VSD Bypass 7-1/2 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 230V TYPE 1, N2, w/Iso Fuses VSD Bypass 7-1/2 hp 230V TYPE 1, N2, 3 Cont

Table 3. VS Series 208/230V IntelliPass Drives (Continued)

Part Number	Description
VS010211A-00000 VS010211A-0K900 VS010211A-0K9P3 VS010211A-0K9P6 VS010211A-0P300 VS010211A-0P600	VSD Bypass 10 hp 230V TYPE 1 VSD Bypass 10 hp 230V TYPE 1, Aux Cont VSD Bypass 10 hp 230V TYPE 1, Aux Cont, w/ISO Fuses VSD Bypass 10 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 10 hp 230V TYPE 1, w/ISO Fuses VSD Bypass 10 hp 230V TYPE 1, 3 Cont
VS010211A-L0000 VS010211A-LK900 VS010211A-LK9P3 VS010211A-LK9P6 VS010211A-LP300 VS010211A-LP600	VSD Bypass 10 hp 230V TYPE 1, LON VSD Bypass 10 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 10 hp 230V TYPE 1, LON, Aux Cont, w/ISO Fuses VSD Bypass 10 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 10 hp 230V TYPE 1, LON, w/ISO Fuses VSD Bypass 10 hp 230V TYPE 1, LON, 3 Cont
VS010211A-N0000 VS010211A-NK900 VS010211A-NK9P3 VS010211A-NK9P6 VS010211A-NP300 VS010211A-NP600	VSD Bypass 10 hp 230V TYPE 1, N2 VSD Bypass 10 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 10 hp 230V TYPE 1, N2, Aux Cont, w/ISO Fuses VSD Bypass 10 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 10 hp 230V TYPE 1, N2, w/ISO Fuses VSD Bypass 10 hp 230V TYPE 1, N2, 3 Cont
Frame 6	
VS010111A-00000 VS010111A-0K900 VS010111A-0K9P3 VS010111A-0K9P6 VS010111A-0P300 VS010111A-0P600	VSD Bypass 10 hp 208V TYPE 1 VSD Bypass 10 hp 208V TYPE 1, Aux Cont VSD Bypass 10 hp 208V TYPE 1, Aux Cont, w/ISO Fuses VSD Bypass 10 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 10 hp 208V TYPE 1, w/ISO Fuses VSD Bypass 10 hp 208V TYPE 1, 3 Cont
VS010111A-L0000 VS010111A-LK900 VS010111A-LK9P3 VS010111A-LK9P6 VS010111A-LP300 VS010111A-LP600	VSD Bypass 10 hp 208V TYPE 1, LON VSD Bypass 10 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 10 hp 208V TYPE 1, LON, Aux Cont, w/ISO Fuses VSD Bypass 10 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 10 hp 208V TYPE 1, LON, w/ISO Fuses VSD Bypass 10 hp 208V TYPE 1, LON, 3 Cont
VS010111A-N0000 VS010111A-NK900 VS010111A-NK9P3 VS010111A-NK9P6 VS010111A-NP300 VS010111A-NP600	VSD Bypass 10 hp 208V TYPE 1, N2 VSD Bypass 10 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 10 hp 208V TYPE 1, N2, Aux Cont, w/ISO Fuses VSD Bypass 10 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 10 hp 208V TYPE 1, N2, w/ISO Fuses VSD Bypass 10 hp 208V TYPE 1, N2, 3 Cont
VS015111A-00000 VS015111A-0K900 VS015111A-0K9P6 VS015111A-0P600	VSD Bypass 15 hp 208V TYPE 1 VSD Bypass 15 hp 208V TYPE 1, Aux Cont VSD Bypass 15 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 15 hp 208V TYPE 1, 3 Cont
VS015111A-L0000 VS015111A-LK900 VS015111A-LK9P6 VS015111A-LP600	VSD Bypass 15 hp 208V TYPE 1, LON VSD Bypass 15 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 15 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 15 hp 208V TYPE 1, LON, 3 Cont
VS015111A-N0000 VS015111A-NK900 VS015111A-NK9P6 VS015111A-NP600	VSD Bypass 15 hp 208V TYPE 1, N2 VSD Bypass 15 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 15 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 15 hp 208V TYPE 1, N2, 3 Cont
VS015211A-00000 VS015211A-0K900 VS015211A-0K9P6 VS015211A-0P600	VSD Bypass 15 hp 230V TYPE 1 VSD Bypass 15 hp 230V TYPE 1, Aux Cont VSD Bypass 15 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 15 hp 230V TYPE 1, 3 Cont
VS015211A-L0000 VS015211A-LK900 VS015211A-LK9P6 VS015211A-LP600	VSD Bypass 15 hp 230V TYPE 1, LON VSD Bypass 15 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 15 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 15 hp 230V TYPE 1, LON, 3 Cont
VS015211A-N0000 VS015211A-NK900 VS015211A-NK9P6 VS015211A-NP600	VSD Bypass 15 hp 230V TYPE 1, N2 VSD Bypass 15 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 15 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 15 hp 230V TYPE 1, N2, 3 Cont
VS020111A-00000 VS020111A-0K900 VS020111A-0K9P6 VS020111A-0P600	VSD Bypass 20 hp 208V TYPE 1 VSD Bypass 20 hp 208V TYPE 1, Aux Cont VSD Bypass 20 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 20 hp 208V TYPE 1, 3 Cont
VS020111A-L0000 VS020111A-LK900 VS020111A-LK9P6 VS020111A-LP600	VSD Bypass 20 hp 208V TYPE 1, LON VSD Bypass 20 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 20 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 20 hp 208V TYPE 1, LON, 3 Cont

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Table 3. VS Series 208/230V IntelliPass Drives (Continued)

Part Number	Description
VS020111A-N0000 VS020111A-NK900 VS020111A-NK9P6 VS020111A-NP600	VSD Bypass 20 hp 208V TYPE 1, N2 VSD Bypass 20 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 20 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 20 hp 208V TYPE 1, N2, 3 Cont
VS020211A-00000 VS020211A-0K900 VS020211A-0K9P6 VS020211A-0P600	VSD Bypass 20 hp 230V TYPE 1 VSD Bypass 20 hp 230V TYPE 1, Aux Cont VSD Bypass 20 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 20 hp 230V TYPE 1, 3 Cont
VS020211A-L0000 VS020211A-LK900 VS020211A-LK9P6 VS020211A-LP600	VSD Bypass 20 hp 230V TYPE 1, LON VSD Bypass 20 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 20 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 20 hp 230V TYPE 1, LON, 3 Cont
VS020211A-N0000 VS020211A-NK900 VS020211A-NK9P6 VS020211A-NP600	VSD Bypass 20 hp 230V TYPE 1, N2 VSD Bypass 20 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 20 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 20 hp 230V TYPE 1, N2, 3 Cont
Frame 7	
VS025111A-00000 VS025111A-0K900 VS025111A-0K9P6 VS025111A-0P600	VSD Bypass 25 hp 208V TYPE 1 VSD Bypass 25 hp 208V TYPE 1, Aux Cont VSD Bypass 25 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 25 hp 208V TYPE 1, 3 Cont
VS025111A-L0000 VS025111A-LK900 VS025111A-LK9P6 VS025111A-LP600	VSD Bypass 25 hp 208V TYPE 1, LON VSD Bypass 25 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 25 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 25 hp 208V TYPE 1, LON, 3 Cont
VS025111A-N0000 VS025111A-NK900 VS025111A-NK9P6 VS025111A-NP600	VSD Bypass 25 hp 208V TYPE 1, N2 VSD Bypass 25 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 25 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 25 hp 208V TYPE 1, N2, 3 Cont
VS025211A-00000 VS025211A-0K900 VS025211A-0K9P6 VS025211A-0P600	VSD Bypass 25 hp 230V TYPE 1 VSD Bypass 25 hp 230V TYPE 1, Aux Cont VSD Bypass 25 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 25 hp 230V TYPE 1, 3 Cont
VS025211A-L0000 VS025211A-LK900 VS025211A-LK9P6 VS025211A-LP600	VSD Bypass 25 hp 230V TYPE 1, LON VSD Bypass 25 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 25 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 25 hp 230V TYPE 1, LON, 3 Cont
VS025211A-N0000 VS025211A-NK900 VS025211A-NK9P6 VS025211A-NP600	VSD Bypass 25 hp 230V TYPE 1, N2 VSD Bypass 25 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 25 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 25 hp 230V TYPE 1, N2, 3 Cont
VS030111A-00000 VS030111A-0K900 VS030111A-0K9P6 VS030111A-0P600	VSD Bypass 30 hp 208V TYPE 1 VSD Bypass 30 hp 208V TYPE 1, Aux Cont VSD Bypass 30 hp 208V TYPE 1, Aux Cont, 3 Cont VSD Bypass 30 hp 208V TYPE 1, 3 Cont
VS030111A-L0000 VS030111A-LK900 VS030111A-LK9P6 VS030111A-LP600	VSD Bypass 30 hp 208V TYPE 1, LON VSD Bypass 30 hp 208V TYPE 1, LON, Aux Cont VSD Bypass 30 hp 208V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 30 hp 208V TYPE 1, LON, 3 Cont
VS030111A-N0000 VS030111A-NK900 VS030111A-NK9P6 VS030111A-NP600	VSD Bypass 30 hp 208V TYPE 1, N2 VSD Bypass 30 hp 208V TYPE 1, N2, Aux Cont VSD Bypass 30 hp 208V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 30 hp 208V TYPE 1, N2, 3 Cont
VS030211A-00000 VS030211A-0K900 VS030211A-0K9P6 VS030211A-0P600	VSD Bypass 30 hp 230V TYPE 1 VSD Bypass 30 hp 230V TYPE 1, Aux Cont VSD Bypass 30 hp 230V TYPE 1, Aux Cont, 3 Cont VSD Bypass 30 hp 230V TYPE 1, 3 Cont
VS030211A-L0000 VS030211A-LK900 VS030211A-LK9P6 VS030211A-LP600	VSD Bypass 30 hp 230V TYPE 1, LON VSD Bypass 30 hp 230V TYPE 1, LON, Aux Cont VSD Bypass 30 hp 230V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 30 hp 230V TYPE 1, LON, 3 Cont
VS030211A-N0000 VS030211A-NK900 VS030211A-NK9P6 VS030211A-NP600	VSD Bypass 30 hp 230V TYPE 1, N2 VSD Bypass 30 hp 230V TYPE 1, N2, Aux Cont VSD Bypass 30 hp 230V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 30 hp 230V TYPE 1, N2, 3 Cont

VS Series 480V IntelliPass Drives

Table 4. VS Series 480V IntelliPass Drives

Part Number	Description
Frame 4	
VS001411A-00000 VS001411A-0K900 VS001411A-0K9P3 VS001411A-0K9P6 VS001411A-0P300 VS001411A-0P600	VSD Bypass 1 hp 480V TYPE 1 VSD Bypass 1 hp 480V TYPE 1, Aux Cont VSD Bypass 1 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 1 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 1 hp 480V TYPE 1, w/Fuse VSD Bypass 1 hp 480V TYPE 1, 3 Cont
VS001411A-L0000 VS001411A-LK900 VS001411A-LK9P3 VS001411A-LK9P6 VS001411A-LP300 VS001411A-LP600	VSD Bypass 1 hp 480V TYPE 1, LON VSD Bypass 1 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 1 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 1 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 1 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 1 hp 480V TYPE 1, LON, 3 Cont
VS001411A-N0000 VS001411A-NK900 VS001411A-NK9P3 VS001411A-NK9P6 VS001411A-NP300 VS001411A-NP600	VSD Bypass 1 hp 480V TYPE 1, N2 VSD Bypass 1 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 1 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 1 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 1 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 1 hp 480V TYPE 1, N2, 3 Cont
VS002411A-00000 VS002411A-0K900 VS002411A-0K9P3 VS002411A-0K9P6 VS002411A-0P300 VS002411A-0P600	VSD Bypass 2 hp 480V TYPE 1 VSD Bypass 2 hp 480V TYPE 1, Aux Cont VSD Bypass 2 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 2 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 2 hp 480V TYPE 1, w/Fuse VSD Bypass 2 hp 480V TYPE 1, 3 Cont
VS002411A-L0000 VS002411A-LK900 VS002411A-LK9P3 VS002411A-LK9P6 VS002411A-LP300 VS002411A-LP600	VSD Bypass 2 hp 480V TYPE 1, LON VSD Bypass 2 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 2 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 2 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 2 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 2 hp 480V TYPE 1, LON, 3 Cont
VS002411A-N0000 VS002411A-NK900 VS002411A-NK9P3 VS002411A-NK9P6 VS002411A-NP300 VS002411A-NP600	VSD Bypass 2 hp 480V TYPE 1, N2 VSD Bypass 2 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 2 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 2 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 2 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 2 hp 480V TYPE 1, N2, 3 Cont
VS003411A-00000 VS003411A-0K900 VS003411A-0K9P3 VS003411A-0K9P6 VS003411A-0P300 VS003411A-0P600	VSD Bypass 3 hp 480V TYPE 1 VSD Bypass 3 hp 480V TYPE 1, Aux Cont VSD Bypass 3 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 3 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 3 hp 480V TYPE 1, w/Fuse VSD Bypass 3 hp 480V TYPE 1, 3 Cont
VS003411A-L0000 VS003411A-LK900 VS003411A-LK9P3 VS003411A-LK9P6 VS003411A-LP300 VS003411A-LP600	VSD Bypass 3 hp 480V TYPE 1, LON VSD Bypass 3 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 3 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 3 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 3 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 3 hp 480V TYPE 1, LON, 3 Cont
VS003411A-N0000 VS003411A-NK900 VS003411A-NK9P3 VS003411A-NK9P6 VS003411A-NP300 VS003411A-NP600	VSD Bypass 3 hp 480V TYPE 1, N2 VSD Bypass 3 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 3 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 3 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 3 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 3 hp 480V TYPE 1, N2, 3 Cont
VS005411A-00000 VS005411A-0K900 VS005411A-0K9P3 VS005411A-0K9P6 VS005411A-0P300 VS005411A-0P600	VSD Bypass 5 hp 480V TYPE 1 VSD Bypass 5 hp 480V TYPE 1, Aux Cont VSD Bypass 5 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 5 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 5 hp 480V TYPE 1, w/Fuse VSD Bypass 5 hp 480V TYPE 1, 3 Cont
VS005411A-L0000 VS005411A-LK900 VS005411A-LK9P3 VS005411A-LK9P6 VS005411A-LP300 VS005411A-LP600	VSD Bypass 5 hp 480V TYPE 1, LON VSD Bypass 5 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 5 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 5 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 5 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 5 hp 480V TYPE 1, LON, 3 Cont

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Table 4. VS Series 480V IntelliPass Drives (Continued)

Part Number	Description
VS005411A-N0000 VS005411A-NK900 VS005411A-NK9P3 VS005411A-NK9P6 VS005411A-NP300 VS005411A-NP600	VSD Bypass 5 hp 480V TYPE 1, N2 VSD Bypass 5 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 5 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 5 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 5 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 5 hp 480V TYPE 1, N2, 3 Cont
VS007411A-00000 VS007411A-0K900 VS007411A-0K9P3 VS007411A-0K9P6 VS007411A-0P300 VS007411A-0P600	VSD Bypass 7-1/2 hp 480V TYPE 1 VSD Bypass 7-1/2 hp 480V TYPE 1, Aux Cont VSD Bypass 7-1/2 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 7-1/2 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 480V TYPE 1, w/Fuse VSD Bypass 7-1/2 hp 480V TYPE 1, 3 Cont
VS007411A-L0000 VS007411A-LK900 VS007411A-LK9P3 VS007411A-LK9P6 VS007411A-LP300 VS007411A-LP600	VSD Bypass 7-1/2 hp 480V TYPE 1, LON VSD Bypass 7-1/2 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 7-1/2 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 7-1/2 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 7-1/2 hp 480V TYPE 1, LON, 3 Cont
VS007411A-N0000 VS007411A-NK900 VS007411A-NK9P3 VS007411A-NK9P6 VS007411A-NP300 VS007411A-NP600	VSD Bypass 7-1/2 hp 480V TYPE 1, N2 VSD Bypass 7-1/2 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 7-1/2 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 7-1/2 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 7-1/2 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 7-1/2 hp 480V TYPE 1, N2, 3 Cont
Frame 5	
VS010411A-00000 VS010411A-0K900 VS010411A-0K9P3 VS010411A-0K9P6 VS010411A-0P300 VS010411A-0P600	VSD Bypass 10 hp 480V TYPE 1 VSD Bypass 10 hp 480V TYPE 1, Aux Cont VSD Bypass 10 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 10 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 10 hp 480V TYPE 1, w/Fuse VSD Bypass 10 hp 480V TYPE 1, 3 Cont
VS010411A-L0000 VS010411A-LK900 VS010411A-LK9P3 VS010411A-LK9P6 VS010411A-LP300 VS010411A-LP600	VSD Bypass 10 hp 480V TYPE 1, LON VSD Bypass 10 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 10 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 10 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 10 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 10 hp 480V TYPE 1, LON, 3 Cont
VS010411A-N0000 VS010411A-NK900 VS010411A-NK9P3 VS010411A-NK9P6 VS010411A-NP300 VS010411A-NP600	VSD Bypass 10 hp 480V TYPE 1, N2 VSD Bypass 10 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 10 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 10 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 10 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 10 hp 480V TYPE 1, N2, 3 Cont
VS015411A-00000 VS015411A-0K900 VS015411A-0K9P3 VS015411A-0K9P6 VS015411A-0P300 VS015411A-0P600	VSD Bypass 15 hp 480V TYPE 1 VSD Bypass 15 hp 480V TYPE 1, Aux Cont VSD Bypass 15 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 15 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 15 hp 480V TYPE 1, w/Fuse VSD Bypass 15 hp 480V TYPE 1, 3 Cont
VS015411A-L0000 VS015411A-LK900 VS015411A-LK9P3 VS015411A-LK9P6 VS015411A-LP300 VS015411A-LP600	VSD Bypass 15 hp 480V TYPE 1, LON VSD Bypass 15 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 15 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 15 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 15 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 15 hp 480V TYPE 1, LON, 3 Cont
VS015411A-N0000 VS015411A-NK900 VS015411A-NK9P3 VS015411A-NK9P6 VS015411A-NP300 VS015411A-NP600	VSD Bypass 15 hp 480V TYPE 1, N2 VSD Bypass 15 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 15 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 15 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 15 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 15 hp 480V TYPE 1, N2, 3 Cont
VS020411A-00000 VS020411A-0K900 VS020411A-0K9P3 VS020411A-0K9P6 VS020411A-0P300 VS020411A-0P600	VSD Bypass 20 hp 480V TYPE 1 VSD Bypass 20 hp 480V TYPE 1, Aux Cont VSD Bypass 20 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 20 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 20 hp 480V TYPE 1, w/Fuse VSD Bypass 20 hp 480V TYPE 1, 3 Cont

Table 4. VS Series 480V IntelliPass Drives (Continued)

Part Number	Description
VS020411A-L0000 VS020411A-LK900 VS020411A-LK9P3 VS020411A-LK9P6 VS020411A-LP300 VS020411A-LP600	VSD Bypass 20 hp 480V TYPE 1, LON VSD Bypass 20 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 20 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 20 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 20 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 20 hp 480V TYPE 1, LON, 3 Cont
VS020411A-N0000 VS020411A-NK900 VS020411A-NK9P3 VS020411A-NK9P6 VS020411A-NP300 VS020411A-NP600	VSD Bypass 20 hp 480V TYPE 1, N2 VSD Bypass 20 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 20 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 20 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 20 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 20 hp 480V TYPE 1, N2, 3 Cont

Frame 6

VS025411A-00000 VS025411A-0K900 VS025411A-0K9P3 VS025411A-0K9P6 VS025411A-0P300 VS025411A-0P600	VSD Bypass 25 hp 480V TYPE 1 VSD Bypass 25 hp 480V TYPE 1, Aux Cont VSD Bypass 25 hp 480V TYPE 1, Aux Cont, w/Fuse VSD Bypass 25 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 25 hp 480V TYPE 1, w/Fuse VSD Bypass 25 hp 480V TYPE 1, 3 Cont
VS025411A-L0000 VS025411A-LK900 VS025411A-LK9P3 VS025411A-LK9P6 VS025411A-LP300 VS025411A-LP600	VSD Bypass 25 hp 480V TYPE 1, LON VSD Bypass 25 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 25 hp 480V TYPE 1, LON, Aux Cont, w/Fuse VSD Bypass 25 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 25 hp 480V TYPE 1, LON, w/Fuse VSD Bypass 25 hp 480V TYPE 1, LON, 3 Cont
VS025411A-N0000 VS025411A-NK900 VS025411A-NK9P3 VS025411A-NK9P6 VS025411A-NP300 VS025411A-NP600	VSD Bypass 25 hp 480V TYPE 1, N2 VSD Bypass 25 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 25 hp 480V TYPE 1, N2, Aux Cont, w/Fuse VSD Bypass 25 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 25 hp 480V TYPE 1, N2, w/Fuse VSD Bypass 25 hp 480V TYPE 1, N2, 3 Cont
VS030411A-00000 VS030411A-0K900 VS030411A-0K9P6 VS030411A-0P600	VSD Bypass 30 hp 480V TYPE 1 VSD Bypass 30 hp 480V TYPE 1, Aux Cont VSD Bypass 30 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 30 hp 480V TYPE 1, 3 Cont
VS030411A-L0000 VS030411A-LK900 VS030411A-LK9P6 VS030411A-LP600	VSD Bypass 30 hp 480V TYPE 1, LON VSD Bypass 30 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 30 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 30 hp 480V TYPE 1, LON, 3 Cont
VS030411A-N0000 VS030411A-NK900 VS030411A-NK9P6 VS030411A-NP600	VSD Bypass 30 hp 480V TYPE 1, N2 VSD Bypass 30 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 30 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 30 hp 480V TYPE 1, N2, 3 Cont
VS040411A-00000 VS040411A-0K900 VS040411A-0K9P6 VS040411A-0P600	VSD Bypass 40 hp 480V TYPE 1 VSD Bypass 40 hp 480V TYPE 1, Aux Cont VSD Bypass 40 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 40 hp 480V TYPE 1, 3 Cont
VS040411A-L0000 VS040411A-LK900 VS040411A-LK9P6 VS040411A-LP600	VSD Bypass 40 hp 480V TYPE 1, LON VSD Bypass 40 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 40 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 40 hp 480V TYPE 1, LON, 3 Cont
VS040411A-N0000 VS040411A-NK900 VS040411A-NK9P6 VS040411A-NP600	VSD Bypass 40 hp 480V TYPE 1, N2 VSD Bypass 40 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 40 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 40 hp 480V TYPE 1, N2, 3 Cont

Frame 7

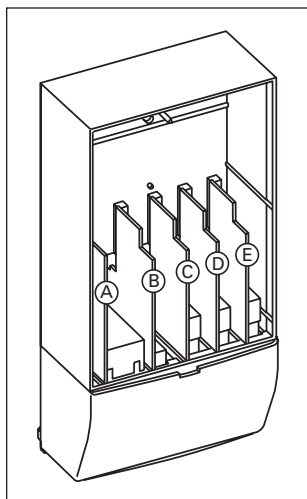
VS050411A-00000 VS050411A-0K900 VS050411A-0K9P6 VS050411A-0P600	VSD Bypass 50 hp 480V TYPE 1 VSD Bypass 50 hp 480V TYPE 1, Aux Cont VSD Bypass 50 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 50 hp 480V TYPE 1, 3 Cont
VS050411A-L0000 VS050411A-LK900 VS050411A-LK9P6 VS050411A-LP600	VSD Bypass 50 hp 480V TYPE 1, LON VSD Bypass 50 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 50 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 50 hp 480V TYPE 1, LON, 3 Cont
VS050411A-N0000 VS050411A-NK900 VS050411A-NK9P6 VS050411A-NP600	VSD Bypass 50 hp 480V TYPE 1, N2 VSD Bypass 50 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 50 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 50 hp 480V TYPE 1, N2, 3 Cont

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Table 4. VS Series 480V IntelliPass Drives (Continued)

Part Number	Description
VS060411A-00000 VS060411A-0K900 VS060411A-0K9P6 VS060411A-0P600	VSD Bypass 60 hp 480V TYPE 1 VSD Bypass 60 hp 480V TYPE 1, Aux Cont VSD Bypass 60 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 60 hp 480V TYPE 1, 3 Cont
VS060411A-L0000 VS060411A-LK900 VS060411A-LK9P6 VS060411A-LP600	VSD Bypass 60 hp 480V TYPE 1, LON VSD Bypass 60 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 60 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 60 hp 480V TYPE 1, LON, 3 Cont
VS060411A-N0000 VS060411A-NK900 VS060411A-NK9P6 VS060411A-NP600	VSD Bypass 60 hp 480V TYPE 1, N2 VSD Bypass 60 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 60 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 60 hp 480V TYPE 1, N2, 3 Cont
VS075411A-00000 VS075411A-0K900 VS075411A-0K9P6 VS075411A-0P600	VSD Bypass 75 hp 480V TYPE 1 VSD Bypass 75 hp 480V TYPE 1, Aux Cont VSD Bypass 75 hp 480V TYPE 1, Aux Cont, 3 Cont VSD Bypass 75 hp 480V TYPE 1, 3 Cont
VS075411A-L0000 VS075411A-LK900 VS075411A-LK9P6 VS075411A-LP600	VSD Bypass 75 hp 480V TYPE 1, LON VSD Bypass 75 hp 480V TYPE 1, LON, Aux Cont VSD Bypass 75 hp 480V TYPE 1, LON, Aux Cont, 3 Cont VSD Bypass 75 hp 480V TYPE 1, LON, 3 Cont
VS075411A-N0000 VS075411A-NK900 VS075411A-NK9P6 VS075411A-NP600	VSD Bypass 75 hp 480V TYPE 1, N2 VSD Bypass 75 hp 480V TYPE 1, N2, Aux Cont VSD Bypass 75 hp 480V TYPE 1, N2, Aux Cont, 3 Cont VSD Bypass 75 hp 480V TYPE 1, N2, 3 Cont

VS Series IntelliPass Option Boards



The VS Series IntelliPass drives can accommodate a wide selection of expander and adapter option boards to customize the drive for your application needs. The drive's control unit is designed to accept a total of five option boards. See **Figure 1**.

The VS Series IntelliPass factory installed standard option board configuration includes an A9I/O board, A2 relay output board and a B5 output board which are installed in slots A, B and C respectively. Two slots (D, E) for extended I/O and communication cards.

Figure 1. VS Series IntelliPass Drive

Table 5. Option Boards

Option Board Description ^①	Allowed Slot Locations ^②	Option Number	Factory Installed
			Suffix Number
Basic I/O Cards			
2 RO, (NC/NO)	B	OPTA2	Standard
6 DI, 1 DO 2 AI, 1 AO small terminal block	A	OPTA9	Standard
3 RO	C	OPTB5	Standard
Extended I/O Cards			
1 AI, 2 AO	C, D	OPTB4	B4
3 RO	C, D	OPTB5	B5
Communication Cards ^③			
Johnson Controls N2 LONWORKS® Network	D, E D, E	OPTC2 OPTC4	CA C4

^① AI = Analog Input; AO = Analog Output; DI = Digital Input; DO = Digital Output; RO = Relay Output.

^② Option card must be installed in one of the slots listed for that card. Slot indicated in bold is the preferred location.

^③ Only one communication card can be installed.

Dimensions

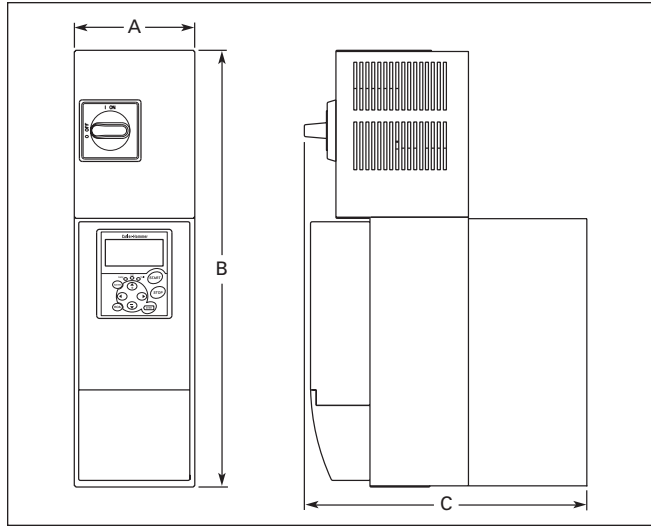


Figure 2. VS Series IntelliPass Drive

Table 6. 480V TYPE 1 IntelliPass Drive Dimensions

Drive Horsepower (VT)			Approximate Dimensions — in Inches (mm)			Weight in Lbs. (kg)
208V AC	230V AC	480V AC	A	B	C	
Frame Size — FR4						
1 – 3	1 – 3	1 – 7-1/2	5.04 (128)	18.25 (464)	12.13 (308)	21 (9.5)
Frame Size — FR5						
5 – 7-1/2	5 – 10	10 – 20	5.50 (140)	23.25 (591)	15.00 (381)	35 (15.9)
Frame Size — FR6						
10 – 20	15, 20	25 – 40	7.50 (191)	29.38 (746)	15.25 (387)	67 (30.4)
Frame Size — FR7						
25, 30	25, 30	50 – 75	9.10 (231)	37.53 (953)	16.00 (419)	108 (49.0)

Wiring Diagrams

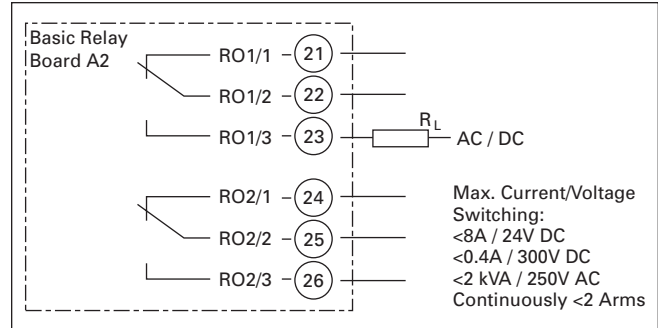


Figure 3. A2 Board Control Wiring

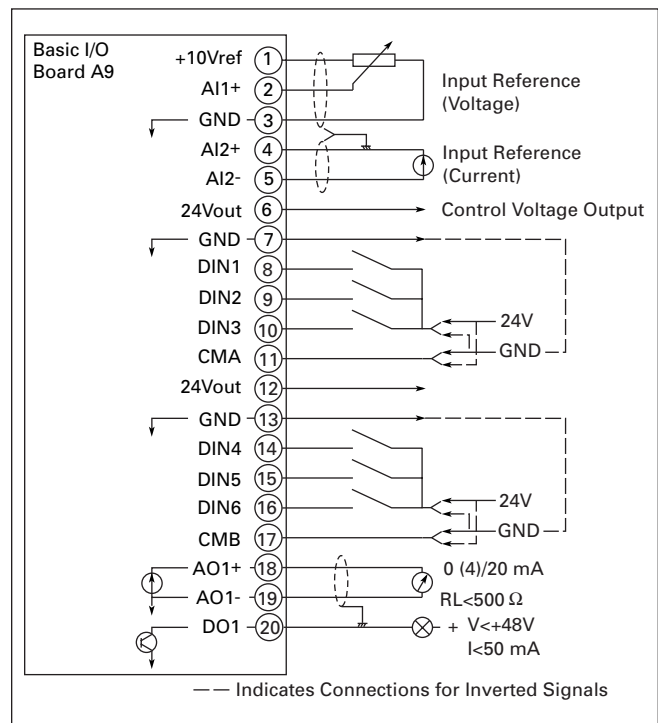


Figure 4. A9 Board Control Wiring

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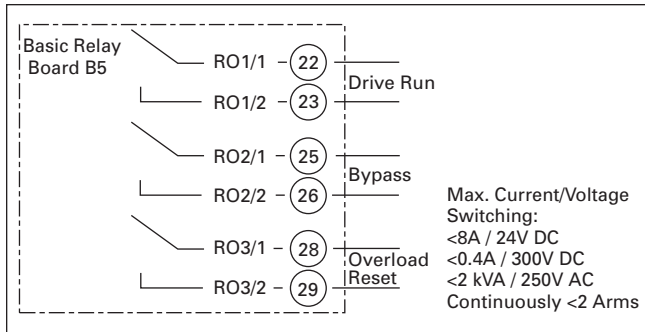


Figure 5. B5 Board Control Wiring

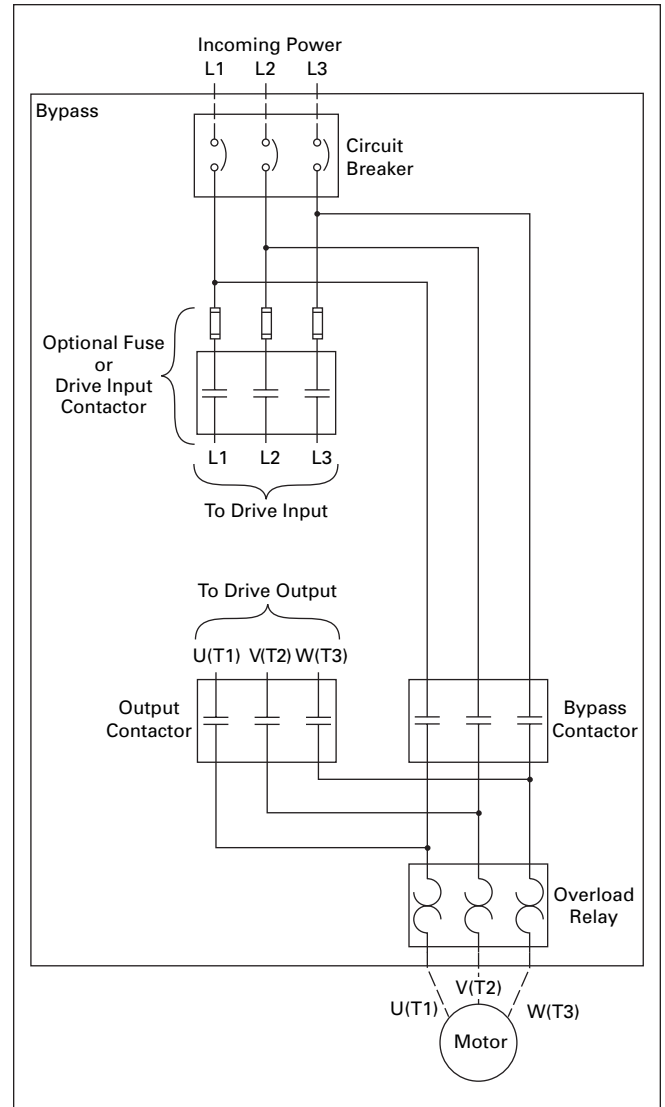


Figure 6. VS Series IntelliPass Drive Power Wiring