



BY JOHNSON CONTROLS

Form 100-010 I (FEB 2009)

INSTALLATION GUIDELINE

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Replaces: E100-010 I (JUL 2005)
Dist: 1, 1a, 1b, 1c, 4, 4b, 4c

VARIABLE SPEED DRIVE
AIR-COOLED INSTALLATION GUIDELINE
Quick Start Guide

Additional Wiring Information - 090-400 SB

A. Installation Checks

- 1. Branch circuit conductor protection must be provided. Drive packages, that come with an integral main fused disconnect, are sized to protect the drive package.
2. Environmental Concerns
a. Clean: Keep construction debris out of drive and/or cabinet.
b. Dry: maximum 95% relative humidity noncondensing
c. Cool: 32°F - 104°F Ambient temperature. Confirm air flow into cabinet.
d. Elevation: 3300 feet above sea level w/o derate. Contact drive manufacturer for derate multiplier above 3,300 ft. (1000 meters)
e. Heat: If the drive is to operate below 32°F, ambient space heaters are required
3. Mounting
a. N1 drives are floor mounted or wall mounted, vertical, with minimum 4" space required on sides and top for cooling
4. Wiring - Refer to manual 090-400 SB for specific wiring requirements.
a. Separate grounded metal conduits must be provided for 3-phase input power from the source, as well as output power to the motor, and control wiring. Failure to provide separate conduits could result in disruption of other electrical devices due to the RFI/EMI generated by the drive as well as harmonics
b. Conduit should be bonded to ground in drive cabinet
c. On drives with bypasses, the interlock and remote run commands are at 120VAC potential. See wiring diagram in drive enclosure for connection detail
d. Use conduit knockouts provided. Avoid metal shavings in the drive enclosure. Clean out all debris
e. Protect signal wires from noise. Be sure to use shielded and properly grounded signal wires. Noisy input signal wires can cause erratic drive operation
f. Ground each drive package per instructions in 090-400 SB

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