Modulating Induced Draft System with VSAD 8/10/12-460A Inducer, CPC-3 Controller and 460 volt VFD

WARNING: Improper wiring to the transducer will destroy the transducer. Use caution to ensure that the wiring to the transducer is correct before activating the CPC-3 controller.

Route transducer wiring in metal conduit or use Belden Shield Cable #9939 or equivalent. Make sure the transducer wiring does not contain or cross line voltage wiring or undesired transducer performance may result.

The low voltage VFD communication wiring is to be routed in metal conduit. If longer wiring is desired, see the wire length table below for maximum wire lengths.

Wire Gage | Max. Distance
--- | ---
12 AWG | 110' (34m)
14 AWG | 180' (55m)
16 AWG | 220' (67m)
22 AWG | 390' (119m)

CAUTIONS:
1. All wiring must be in metal conduit (best) or shielded cable.
2. Route transducer wiring in metal conduit or use Belden Shield Cable #9939 or equivalent. Make sure the transducer wiring does not contain or cross line voltage wiring or undesired transducer performance may result.
3. Do not run the VFD's input power and output power wiring in the same conduit. Undesired VFD operation could result.
4. When the system is completely installed, perform the safety interlock and operational test as outlined in the installation manuals. Failure to do these tests could result in an unsafe and/or incorrectly operating system.

NOTES:
1. If the provided 10-foot, 10-wire VFD control cable is not long enough to meet the application needs, use caution to ensure that the connections from the VFD to the CPC-3 controller are correctly located. NB to MB, MC to MC, etc. In addition, refer to the Wire Length Table.
2. Use caulking to seal the electrical box cover to the electrical box, and to seal the conduit holes to hole plugs.
3. For vertical termination of the VSAD venter, connect the S2 position to the orange wire and cap off the gray wire as shown.
4. Improper wiring to this transducer will destroy the transducer. Use caution to ensure that the wiring to the transducer is correct before activating the CPC-3 controller.
5. Verify that the input power voltage matches the VFD's nameplate rating before applying power. Improper supply voltage to the VFD could damage the VFD.
6. Verify that the venter (VSAD 8/10/12-460A) is rated for the output voltage from the VFD. If not correct, severe damage to the venter and/or the VFD could result.

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Cables:
- 10' (3m) Communications Cable Provided with Each VFD
- CPC-3 Control
- 460 VAC Supply / Load Wiring
- 230 VAC Supply / Load Wiring
- Low Voltage / DC Control Wiring
- VFD Communications Cable

Specifications:
- VSAD 8/10/12-460A Inducer
- CPC-3 Controller
- 460 volt VFD

Tjernlund Drive Model: VFD ___-___-460V 4C3
- "4" means "460 VAC"
- "C" means "Closed Loop"
- "3" means "CPC-3 Control"

Legend:
- Low Voltage / DC Control Wiring
- 230 VAC Supply / Load Wiring
- 460 VAC Supply / Load Wiring
- VFD Communications Cable

Wiring:
- Wiring is to be in dedicated metal conduit. Max. length: 100' (30m) @ 460 VAC

For horizontal termination of the VSAD venter, connect the S2 position to the orange wire and cap off the gray wire as shown. For vertical termination of the VSAD venter, connect the S2 position to the gray wire and cap off the orange wire.

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