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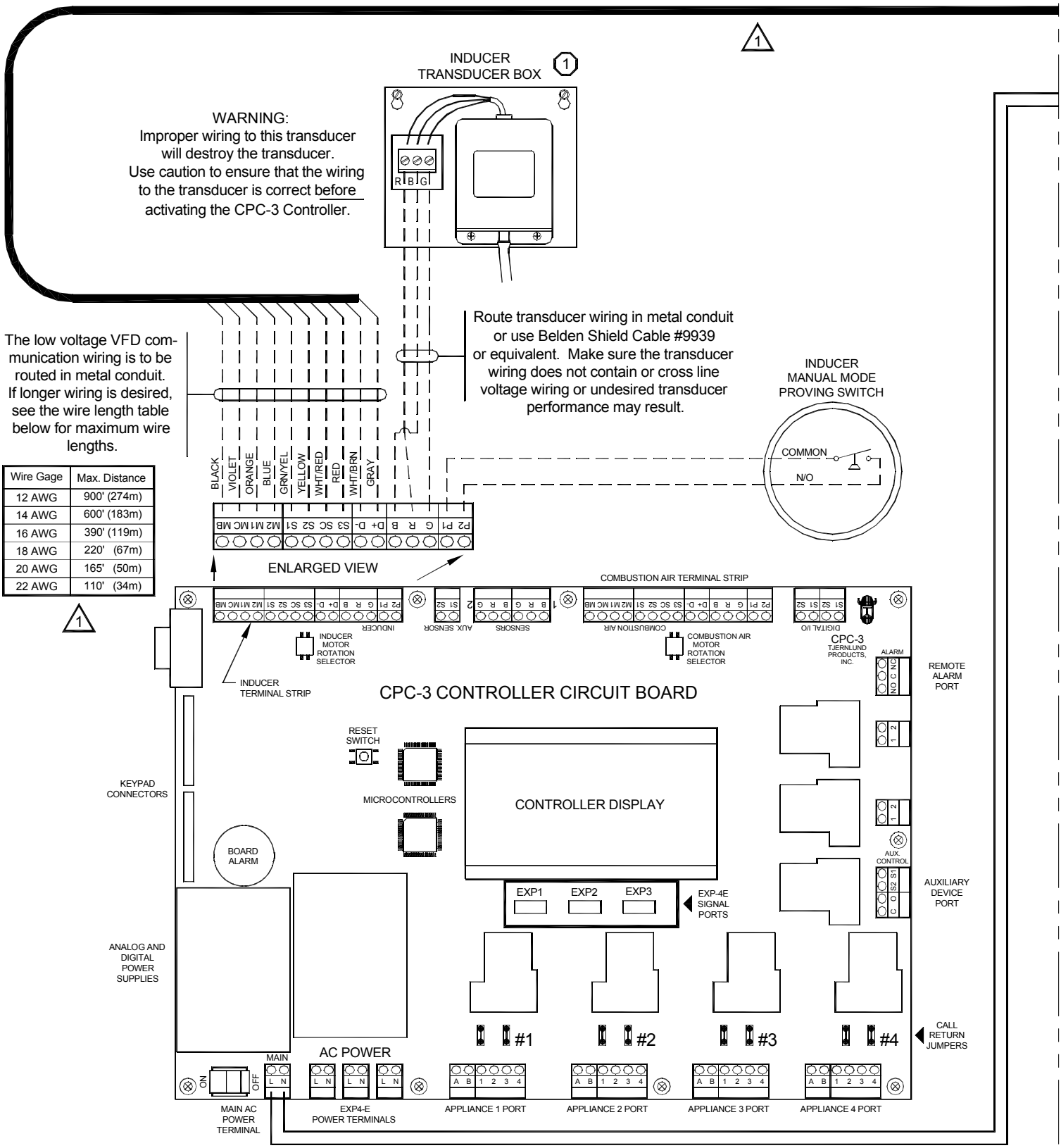
Modulating Induced Draft System with VSAD 8/10/12-460A Inducer, CPC-3 Controller and 460 volt VFD

11/18/04
8052016 SHEET 1

PROJECT:_____

10' (3m) COMMUNICATIONS CABLE PROVIDED WITH EACH VFD



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	900' (274m)
14 AWG	600' (183m)
16 AWG	390' (119m)
18 AWG	220' (67m)
20 AWG	165' (50m)
22 AWG	110' (34m)

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LEGEND:

- LOW VOLTAGE / DC CONTROL WIRING
- 230 VAC SUPPLY / LOAD WIRING
- 460 VAC SUPPLY / LOAD WIRING
- VFD COMMUNICATIONS CABLE

FIGURE 8052016 11/18/04

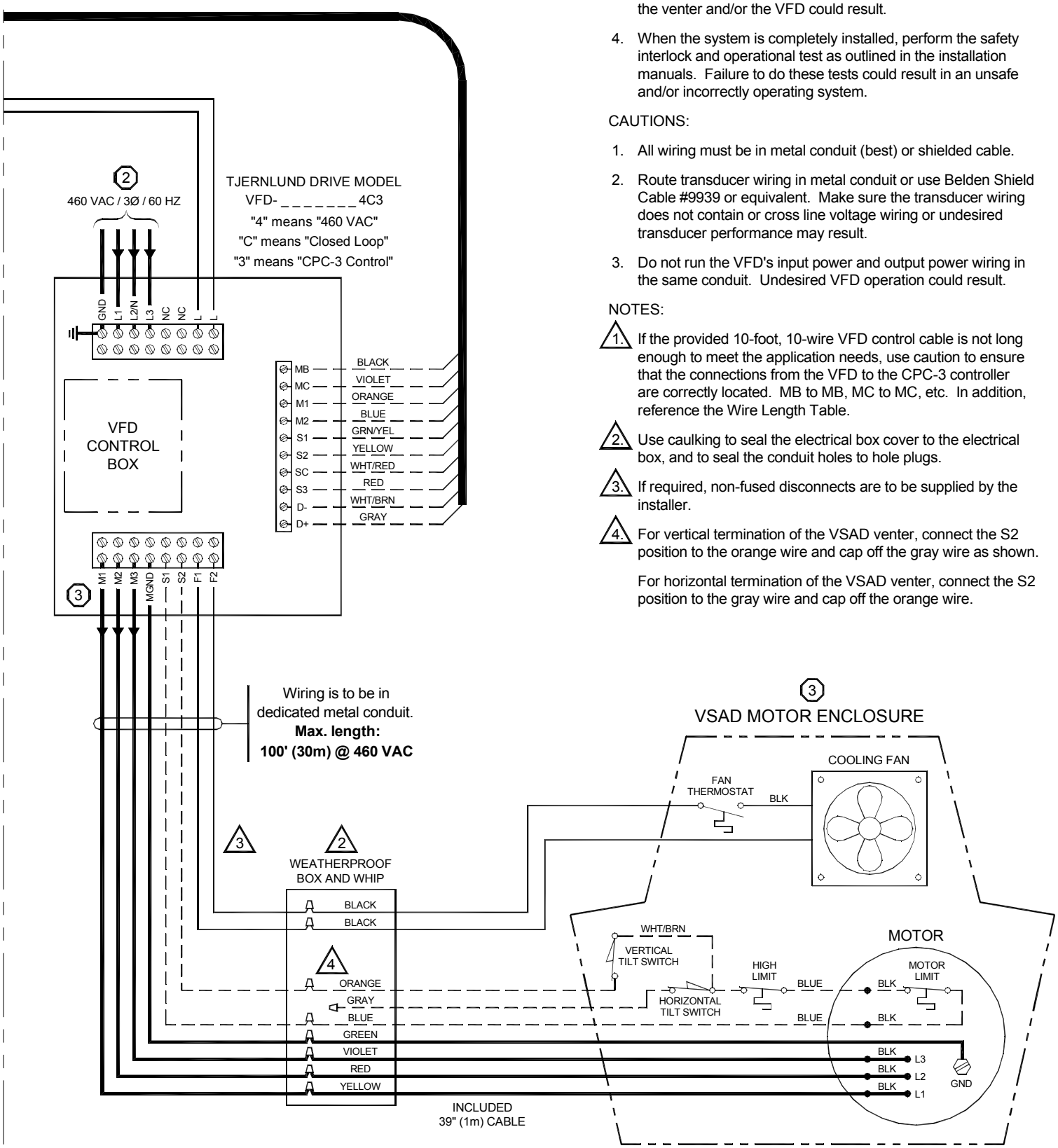
WARNINGS:

1. 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.
2. Verify that the input power voltage matches the VFD's name-plate rating before applying power. Improper supply voltage to the VFD could damage the VFD.
3. 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.
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.

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.

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. MB to MB, MC to MC, etc. In addition, reference 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. If required, non-fused disconnects are to be supplied by the installer.
4. For vertical termination of the VSAD venter, connect the S2 position to the orange wire and cap off the gray wire as shown.

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