

SED2 VFD NEMA Type 3R Bypass, and Type 3R Harsh Environment (3RHE) Bypass

Product Description

The SED2 VFD NEMA Type 3R/3RHE, Bypasses are companion packages for the family of SED2 Variable Frequency Drives.

Product Numbers

VBAxxxxx3xxx SED2 VFD NEMA Type 3R/3RHE Bypass

Contents

- SED2 VFD
- NEMA Type 3R/3RHE enclosure
- Control terminals
- Operators: Drive-Off-Bypass switch, Bypass On light, Drive Test On-Off switch (optional)
- Step-down control transformer
- Contactors: Bypass, Output, Input (optional)
- Overload (current) relay
- Line reactor (optional)
- Disconnect switch
- Cooling Fan
- Heater



Accessories

- SED2 NEMA Type 3R VFD & Bypass EMC Filter Assembly for Enclosure Size ABC, 3RHE Sizes B, C: 994-830
- SED2 NEMA Type 3R VFD & Bypass EMC Filter Assembly for Enclosure Size DEF, 3RHE Size D: 994-831
- NEMA Type 3R Reactor Enclosure, Small: 994-816
- NEMA Type 3R Reactor Enclosure, Medium: 994-817
- NEMA Type 3R Reactor Enclosure, Large: 994-818
- Floor Mounting Kit: 994-808

Expected Installation Time

Enclosure Frame Size	Minutes
ABC	15
DE	30
F	60
3RHE B	15
3RHE C	20
3RHE D	25

Warning/Caution Notations

WARNING:		Personal injury/loss of life may occur if you do not follow the procedures as specified.
CAUTION:		Equipment damage, or loss of data may occur if you do not follow the procedures as specified.

Prerequisites



CAUTION:

If installing a SED2 VFD after extended storage, see the Extended Storage: Conditioning of Capacitors section in the *Startup, Operation and Maintenance Manual* (125-3201). If capacitors are not properly recharged, catastrophic damage to the drive can result.

Installation



CAUTION:

Height above sea level: If installing a SED2 VFD at an altitude higher than 3,280 ft (1000 m), derating is required.



CAUTION:

When locating NEMA Type 3R/3RHE enclosure, make certain that the heater/finger guard air inlet (Figures 1 through 3) is not blocked and that any environmental substance (such as snow or sand) or other debris will not potentially block the air inlet.

Mounting

1. Punch appropriate conduit holes for motor and power wiring (Figures 1 through 3).



CAUTION:

To maintain the NEMA Type 3R/3RHE enclosure rating, use only fittings rated 3R or rain tight, or for wet locations.

2. Mount NEMA Type 3R/3RHE Bypass enclosure in location per job drawings. See Table 1 for approximate weights and see Figure 4 for dimensions. Secure enclosure in place.



CAUTION:

Leave 1 foot (305 mm) between the Bypass and any adjacent structure that is not used for mounting purposes. Leave 3 feet (914 mm) between the Bypass and any other Bypass or VFD.

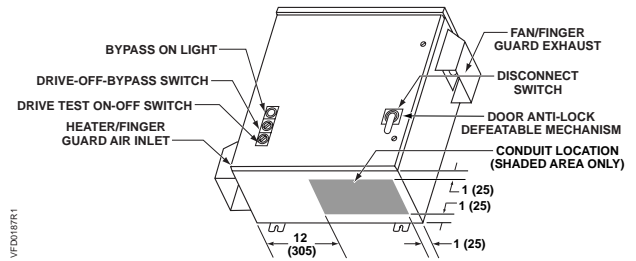


Figure 1. Conduit Location for Enclosure Frame ABC, 3RHE Frame B.

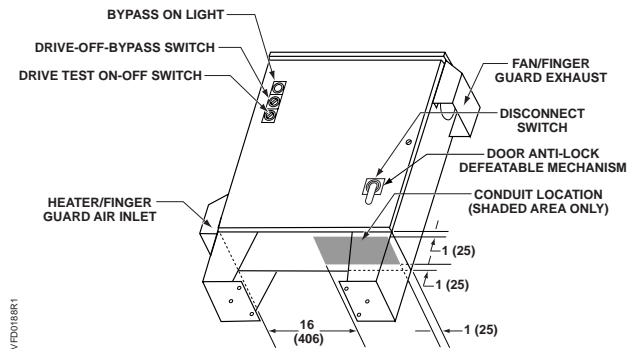


Figure 2. Conduit Location for Enclosure Frame DE, 3RHE, Frame c and D.

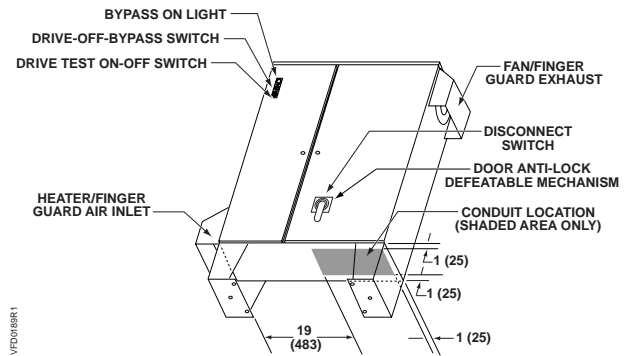
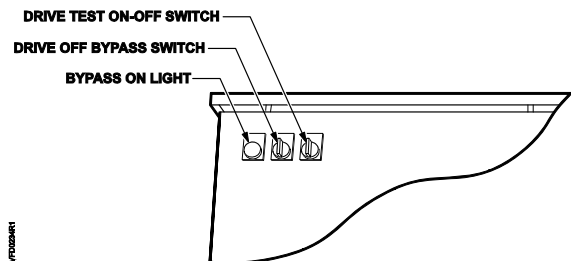


Figure 3. Conduit Location for Enclosure Frame F.



NOTE: The Light/Switch location for Type 3RHE differs from the standard 3R frames as shown above.

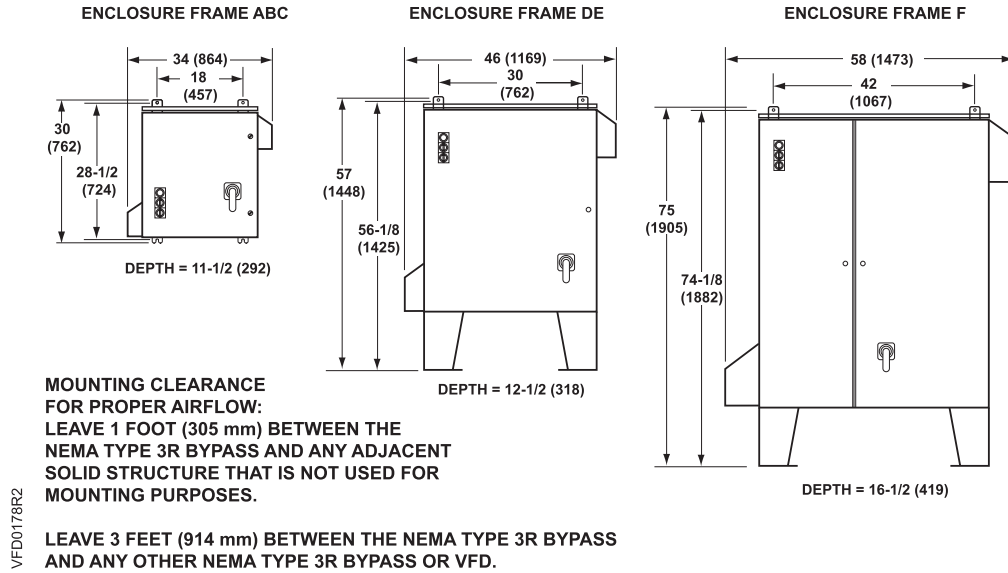


Figure 4. Type 3R Enclosure Dimensions in Inches (Millimeters).

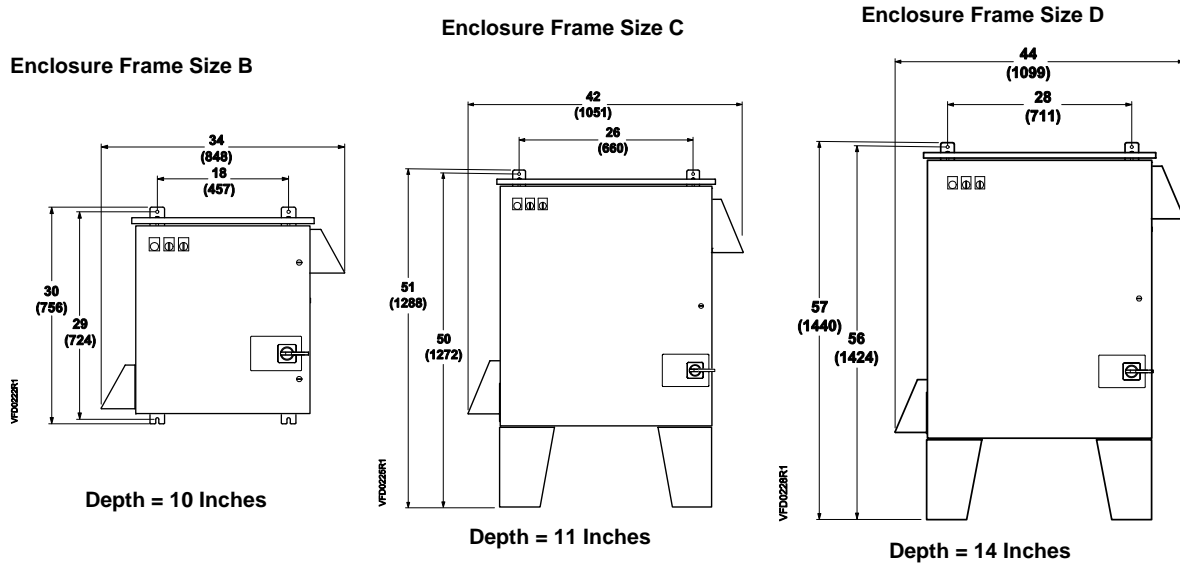


Figure 5. Type 3RHE Enclosure Dimensions in Inches (Millimeters).

Table 1. Approximate Weights.

3R Enclosure Frame Size	Wt. lb (kg)
ABC	130 (59)
DE	300 (136)
F	550 (249)

Table 2. Approximate Weights.

3RHE Enclosure Frame Size	Wt. lb (kg)
B	150 (68)
C	220 (100)
D	330 (150)

NOTE: Exact weight will be affected by actual horsepower/voltage and selected power options.

WIRING

Tightening Torques

Table 3. Wire Sizes and Tightening Torques for NEMA Type 3R/3RHE Bypass with 208V Drive.

Part Number	Bypass Enclosure Frame Size	HP	kW	Amps	Disconnect Switch		Overload				Ground Lug	
					Wire Size *	Torque, lb-in (Nm)	Wire Size *	Torque, lb-in (Nm)	Range, Amps	Max Backup Fuse, Amps	Wire Size *	Torque, lb-in (Nm)
VBA10.5_3_XHT1	ABC	0.5	0.37	2.3	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	1.8 - 2.5	10	14-2	35 (4)
VBA10.7_3_XHT1	ABC	0.7	0.55	3.0	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.2 - 3.2	12	14-2	35 (4)
VBA11.0_3_XHT1	ABC	1.0	0.75	3.9	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.8 - 4	16	14-2	35 (4)
VBA11.5_3_XHT1	ABC	1.5	1.1	5.5	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	4.5 - 6.3	25	14-2	35 (4)
VBA12.0_3_XHT1	ABC	2.0	1.5	7.4	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	5.5 - 8.0	30	14-2	35 (4)
VBA13.0_3_XHT1	ABC	3.0	2.2	10.4	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	7 - 10	40	14-2	35 (4)
VBA15.0_3_X & HT1	ABC	5.0	4.0	16.7	14-4	35 (4)	14-10	18 - 22 (2 - 25)	14 - 20	80	14-2	35 (4)
VBA17.5_3_X	ABC	7.5	5.5	22.0	14-4	35 (4)	14-10	18 - 22 (2 - 25)	20 - 25	100	14-2	35 (4)
VBA17.5_3_XHT1	DE	7.5	5.5	22.0	14-1	50 (4)	14-10	18 - 22 (2 - 25)	20 - 25	100	14-2	35 (4)
VBA110_3_X	ABC	10	7.5	28	14-4	35 (4)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA110_3_XHT1	DE	10	7.5	28	14-1	50 (4)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA115_3_X & HT1	DE	15	11.0	42	14-1	50 (4)	18-3	27 - 40 (3.1 - 4.5)	40 - 50	200	14-2	35 (4)
VBA120_3_X & HT1	DE	20	15.0	54	14-1	50 (4)	10-1/0	36 - 53 (4.1 - 6)	45 - 63	250	14-2	35 (4)
VBA125_3_X & HT1	DE	25	18.5	68	12-1	22 - 27 (2.5 - 3.1)	10-1/0	36 - 53 (4.1 - 6)	57 - 75	300	14-2	35 (4)
VBA130_3_X	DE	30	22.0	80	12-1	22 - 27 (2.5 - 3.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2	35 (4)
VBA130_3_XHT1	F	30	22.0	80	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2/0	35 (4)
VBA140_3_X & HT1	F	40	30.0	104	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)
VBA150_3_X	F	50	37.0	130	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)
VBA160_3_X	F	60	45.0	154	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)

* Wire Size in AWG unless noted otherwise. Use Copper (Cu) wire that is rated 167°F (75°C) minimum, 600 Vac.

Table 4. Wire Sizes and Tightening Torques for NEMA Type 3R/3RHE Bypass with 230V to 240V Drive.

Part Number	Bypass Enclosure Frame Size	HP	kW	Amps	Disconnect Switch		Overload				Ground Lug	
					Wire Size *	Torque, lb-in (Nm)	Wire Size *	Torque, lb-in (Nm)	Range, Amps	Max Backup Fuse, Amps	Wire Size *	Torque, lb-in (Nm)
VBA20.5_3_XHT1	ABC	0.5	0.37	2.2	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	1.8 - 2.5	10	14-2	35 (4)
VBA20.7_3_XHT1	ABC	0.7	0.55	3.0	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.2 - 3.2	12	14-2	35 (4)
VBA21.0_3_XHT1	ABC	1.0	0.75	3.9	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.8 - 4	16	14-2	35 (4)
VBA21.5_3_XHT1	ABC	1.5	1.1	5.5	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	4.5 - 6.3	25	14-2	35 (4)
VBA22.0_3_XHT1	ABC	2.0	1.5	6.8	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	5.5 - 8.0	30	14-2	35 (4)
VBA23.0_3_XHT1	ABC	3.0	2.2	9.6	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	7 - 10	40	14-2	35 (4)
VBA25.0_3_XHT1	ABC	5.0	4.0	15.2	14-4	35 (4)	14-10	18 - 22 (2 - 25)	14 - 20	80	14-2	35 (4)
VBA27.5_3_X	ABC	7.5	5.5	22	14-4	35 (4)	14-10	18 - 22 (2 - 25)	20 - 25	100	14-2	35 (4)
VBA27.5_3_XHT1	DE	7.5	5.5	22	14-1	50 (4)	14-10	18 - 22 (2 - 25)	20 - 25	100	14-2	35 (4)
VBA210_3_X	ABC	10	7.5	28	14-4	35 (4)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA210_3_XHT1	DE	10	7.5	28	14-1	50 (4)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA215_3_X & HT1	DE	15	11.0	42	14-1	50 (4)	18-3	27 - 40 (3.1 - 4.5)	40 - 50	200	14-2	35 (4)
VBA220_3_X & HT1	DE	20	15.0	54	14-1	50 (4)	10-1/0	36 - 53 (4.1 - 6)	45 - 63	250	14-2	35 (4)
VBA225_3_X & HT1	DE	25	18.5	68	12-1	22 - 27 (2.5 - 3.1)	10-1/0	36 - 53 (4.1 - 6)	57 - 75	300	14-2	35 (4)
VBA230_3_X	DE	30	22.0	80	12-1	22 - 27 (2.5 - 3.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2/0	35 (4)
VBA230_3_XHT1	F	30	22.0	80	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2	35 (4)
VBA240_3_X & HT1	F	40	30.0	104	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)
VBA250_3_X	F	50	37.0	130	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)
VBA260_3_X	F	60	45.0	154	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)

* Wire Size in AWG (str.) unless noted otherwise. Use Copper (Cu) wire that is rated 167°F (75°C) minimum, 600 Vac.

Table 5. Wire Sizes and Tightening Torques for NEMA Type 3R/3RHE Bypass with 380V to 480V Drive.

Part Number*	Bypass Enclosure Frame Size	HP	kW	Amps	Disconnect Switch		Overload				Ground Lug	
					Wire Size *	Torque, lb-in (Nm)	Wire Size *	Torque, lb-in (Nm)	Range, Amps	Max Backup Fuse, Amps	Wire Size *	Torque, lb-in (Nm)
VBA30.5_3_X**	ABC, B-HE	0.5	0.37	1.1	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	.7 - 1.0	4	14-2	35 (4)
VBA30.7_3_X**	ABC, B-HE	0.7	0.55	1.6	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	1.1 - 1.6	6	14-2	35 (4)
VBA31._3_X**	ABC, B-HE	1.0	0.75	2.1	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	1.4 - 2.0	8	14-2	35 (4)
VBA31.5_3_X**	ABC, B-HE	1.5	1.1	3.0	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.2 - 3.2	12	14-2	35 (4)
VBA32.0_3_X**	ABC, B-HE	2.0	1.5	3.4	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.8 - 4	16	14-2	35 (4)
VBA33.0_3_X**	ABC, B-HE	3.0	2.2	4.8	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	3.5 - 5	20	14-2	35 (4)
VBA35.0_3_X**	ABC, B-HE	5.0	4.0	7.6	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	7 - 10	40	14-2	35 (4)
VBA37.5_3_X**	ABC, C-HE	7.5	5.5	11	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	9 - 12	45	14-2	35 (4)
VBA310_3_X**	ABC, C-HE	10	7.5	14	14-1	50 (4)	14-10	18 - 22 (2 - 2.5)	11 - 16	60	14-2	35 (4)
VBA315_3_X**	ABC, C-HE	15	11.0	21	14-4	35 (4)	14-10	18 - 22 (2 - 2.5)	17 - 22	80	14-2	35 (4)
VBA320_3_X&HE1	ABC, C-HE	20	15.0	27	14-1	50 (4)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA320_3_XHT1&2	DE, D-HE	20	15.0	27	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA325_3_X**	DE, D-HE	25	18.5	34	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	28 - 40	150	14-2	35 (4)
VBA330_3_X & HT1	DE, D-HE	30	22.0	40	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	28 - 40	150	14-2	35 (4)
VBA340_3_X**	DE, D-HE	40	30.0	52	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	40 - 50	200	14-2	35 (4)
VBA350_3_X	DE	50	37.0	65	14-1	50 (5.6)	10-1/0	36 - 53 (4.1 - 6)	57 - 75	300	14-2	35 (4)
VBA350_3_XHT1	F	50	37.0	65	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	57 - 75	300	14-2/0	35 (4)
VBA360_3_X	DE	60	45.0	77	12-1	22 - 27 (2.5 - 3.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2	35 (4)
VBA360_3_XHT1	F	60	45.0	77	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2/0	35 (4)
VBA375_3_X & HT1	F	75	55.0	96	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	80 - 100	400	14-2/0	50 (5.6)
VBA3100_3_X & HT1	F	100	75.0	124	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)
VBA3125_3_X	F	125	90.0	156	6 - 350 kcmil	120 - 275 (13.5 - 31.1)	6-3/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)

* Wire Size in AWG (str.) unless noted otherwise. Use Copper (Cu) wire that is rated 167°F (75°C) minimum, 600 Vac.

***Numbers may end in WXXHT1 XHT2, XHE2

Table 6. Wire Sizes and Tightening Torques for NEMA Type 3R/3RHE Bypass with 500V to 600V Drive.

Part Number	Bypass Enclosure Frame Size	HP	kW	Amps	Disconnect Switch		Overload				Ground Lug	
					Wire Size *	Torque, lb-in (Nm)	Wire Size *	Torque, lb-in (Nm)	Range, Amps	Max Backup Fuse, Amps	Wire Size *	Torque, lb-in (Nm)
VBA40.5_3__X & HT1	ABC	0.5	0.37	.9	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	.7 - 1.0	4	14-2	35 (4)
VBA40.7_3__X & HT1	ABC	0.7	0.55	1.3	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	.9 - 1.25	5	14-2	35 (4)
VBA41.0_3__X & HT1	ABC	1.0	0.75	1.4	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	1.1 - 1.6	6	14-2	35 (4)
VBA41.5_3__X & HT1	ABC	1.5	1.1	2.1	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	1.8 - 2.5	10	14-2	35 (4)
VBA42.0_3__X & HT1	ABC	2.0	1.5	2.7	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.2 - 3.2	12	14-2	35 (4)
VBA43.0_3__X & HT1	ABC	3.0	2.2	3.9	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	2.8 - 4	16	14-2	35 (4)
VBA45.0_3__X & HT1	ABC	5.0	4.0	6.1	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	4.5 - 6.3	25	14-2	35 (4)
VBA47.5_3__X & HT1	ABC	7.5	5.5	9	14-4	35 (4)	18-14	7 - 10.3 (8 - 1.2)	7 - 10	40	14-2	35 (4)
VBA410._3__X & HT1	ABC	10	7.5	11	14-1	50 (4)	18-14	7 - 10.3 (8 - 1.2)	9 - 2	45	14-2	35 (4)
VBA415._3__X	ABC	15	11.0	17	14-4	35 (4)	14-10	18 - 22 (2 - 2.5)	14 - 20	80	14-2	35 (4)
VBA415._3__XHT1	DE	15	11.0	17	14-1	50 (4)	14-10	18 - 22 (2 - 2.5)	14 - 20	80	14-2	35 (4)
VBA420._3__X	ABC	20	15.0	22	14-4	35 (4)	14-10	18 - 22 (2 - 2.5)	17 - 22	80	14-2	35 (4)
VBA420._3__XHT1	DE	20	15.0	22	14-4	35 (4)	14-10	18 - 22 (2 - 2.5)	17 - 22	80	14-2	35 (4)
VBA425._3__X & HT1	DE	25	18.5	27	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	22 - 32	125	14-2	35 (4)
VBA430._3__X & HT1	DE	30	22.0	32	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	28 - 40	150	14-2	35 (4)
VBA440._3__X & HT1	DE	40	30.0	41	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	36 - 45	175	14-2	35 (4)
VBA450._3__X	DE	50	37.0	52	14-1	50 (5.6)	18-3	27 - 40 (3.1 - 4.5)	40 - 50	200	14-2	35 (4)
VBA450._3__XHT1	F	50	37.0	52	6 - 350 kcmil	120 - 275 (14 - 31.1)	18-3	27 - 40 (3.1 - 4.5)	40 - 50	200	14-2/0	35 (4)
VBA460._3__X	DE	60	45.0	62	12-1	22 - 27 (2.5 - 3.1)	10-1/0	36 - 53 (4.1 - 6)	45 - 63	250	14-2	35 (4)
VBA460._3__XHT1	F	60	45.0	62	6 - 350 kcmil	120 - 275 (14 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	45 - 63	250	14-2/0	35 (4)
VBA475._3__X & HT1	F	75	55.0	77	6 - 350 kcmil	120 - 275 (14 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	70 - 90	350	14-2/0	50 (5.6)
VBA4100_3__X	F	100	75.0	99	6 - 350 kcmil	120 - 275 (14 - 31.1)	10-1/0	36 - 53 (4.1 - 6)	80 - 100	400	14-2/0	50 (5.6)
VBA4125_3__X	F	125	90.0	125	6 - 350 kcmil	120 - 275 (14 - 31.1)	10-1/0	124 - 210 (14 - 23.7)	50 - 200	800	14-2/0	50 (5.6)

* Wire Size in AWG (str.) unless noted otherwise. Use Copper (Cu) wire that is rated 167°F (75°C) minimum, 600 Vac.

Motor Cable Length

Motor cable length is given to ensure performance of only the drive, not the suitability of the motor when connected to a drive at this distance.

Maximum motor cable length is 164 ft (50 m).

See Figure 7 for installation notes.

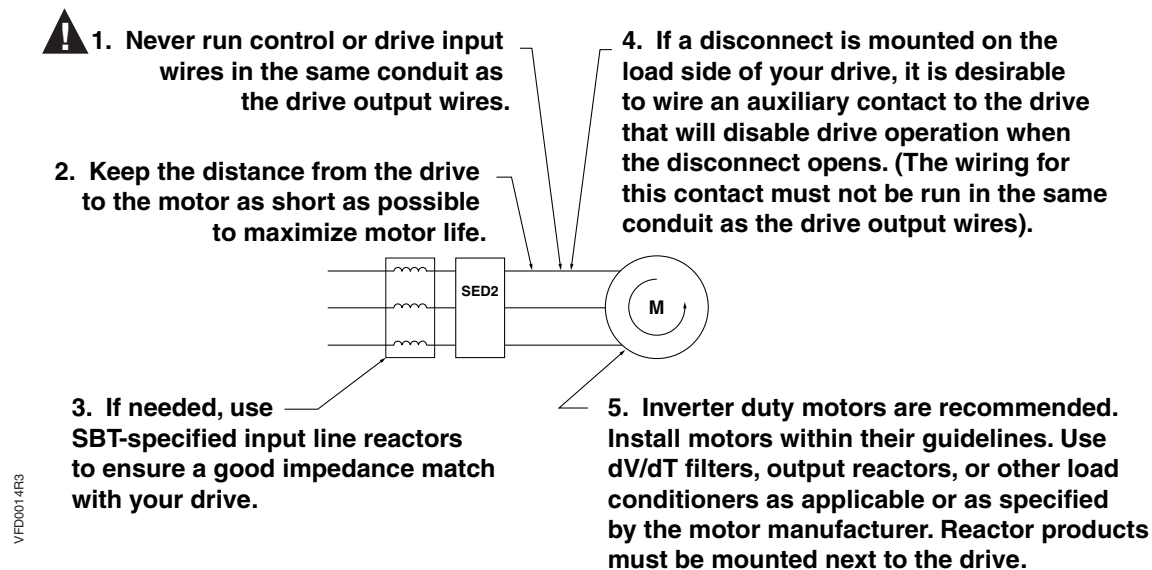


Figure 6. Motor Cable Installation Notes.

Wiring Connections

NOTE: See Figures 11 through 13 for wiring schematic and terminations.

1. Do not mix control, motor, and input wiring in the same conduit. Run separate wire types with maximum possible separation.



WARNING:

Failure to follow appropriate VFD wiring practice can result in sub-standard system operation and may damage control components.

2. Route shielded, twisted pair, 24-gauge minimum cable for control wiring in separate conduit into enclosure (Figures 6 through 8). Connect control wiring per job drawings and Figure 10.

NOTES:

- Terminate shield at control device.
 - Control wiring is 12 to 26 AWG and tightening torque is 5 lb-in.
3. If applicable, route communications wiring (P1) in separate conduit into enclosure (Figures 8 through 10). Continue to route communications wiring to VFD and terminate per *SED2 VFD Startup, Operation, and Maintenance Manual* (125-3201).



CAUTION:

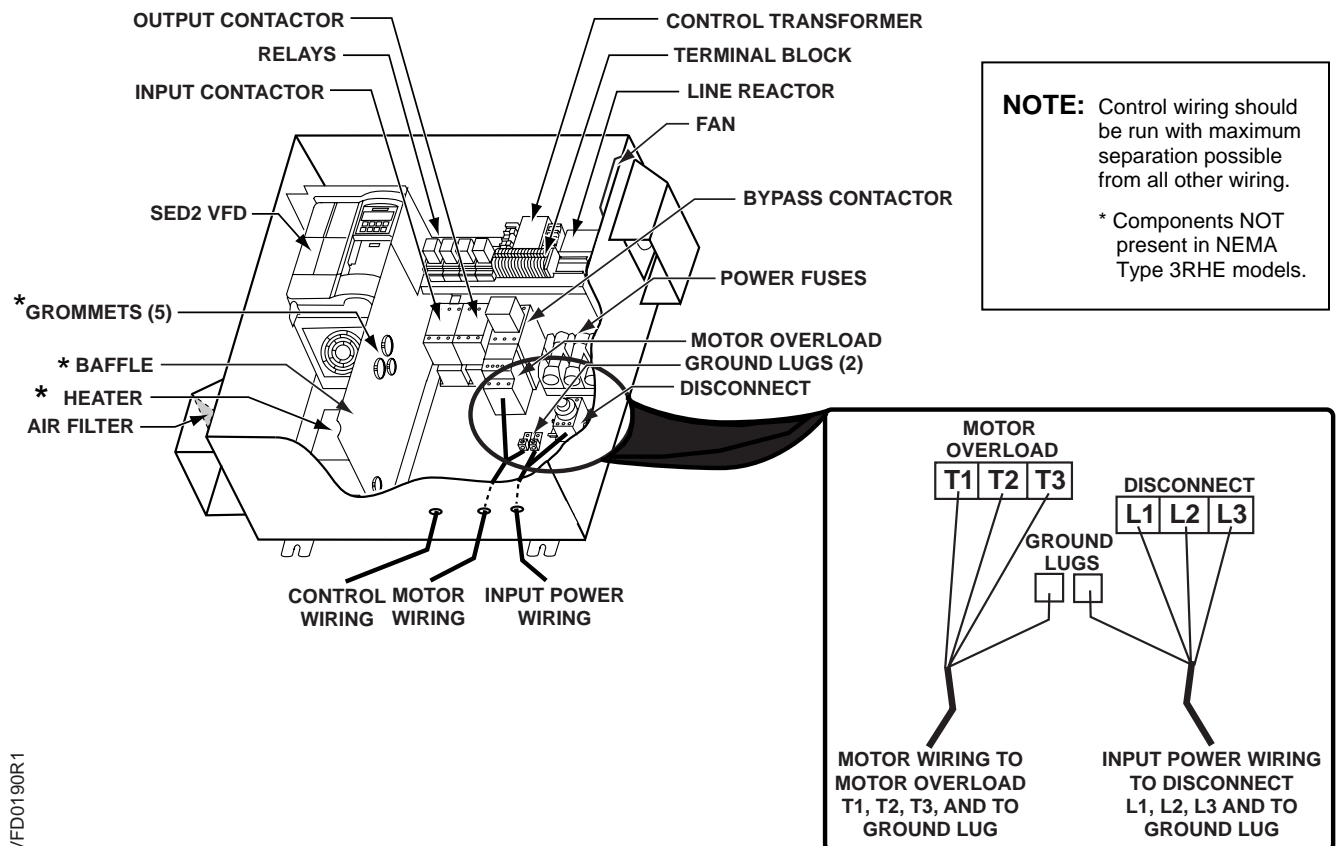
If applicable, route communications wiring with maximum separation from all other wiring. If wiring through bypass enclosure, run communication wiring with maximum separation possible from all other wiring.

4. Route motor wiring in separate conduit into enclosure (Figures 8 through 10). Connect motor wiring to motor overload and ground lug. See Tables 2 through 5 for wire sizes and tightening torques.
5. Route input power wiring in separate conduit into enclosure (Figures 6 through 8). Connect input power wiring to disconnect switch and ground lug or to circuit breaker and ground lug. See Tables 2 through 5 for wire sizes and tightening torques.



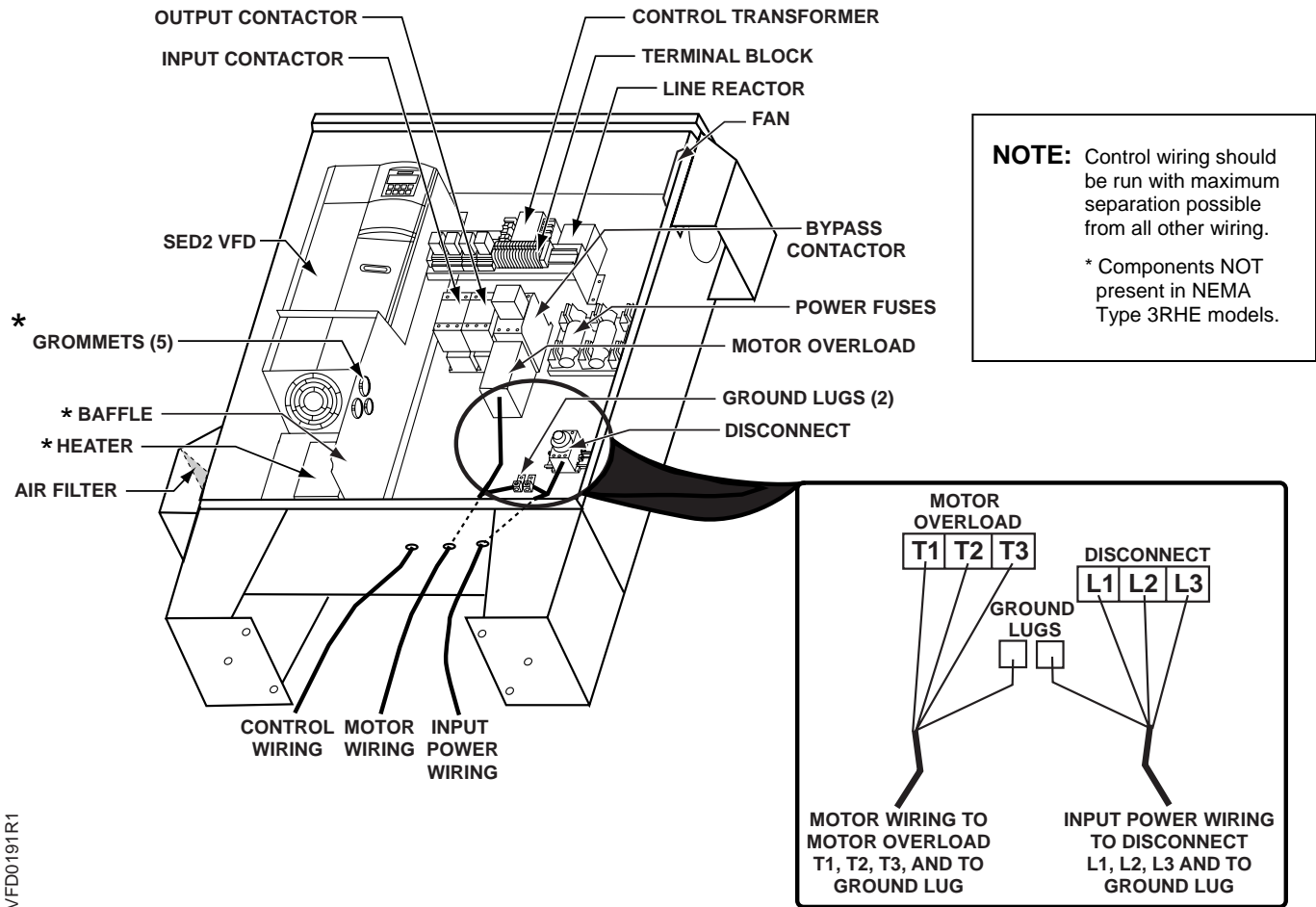
WARNING:

Use only permanently wired input power connections.



VFD0190R1

Figure 7. Motor and Power Connections for Enclosure Frame Size ABC; and 3RHE Frame Size B.



VFD0191R1

Figure 8. Motor and Power Connections for Standard Enclosure Frame Size DE and 3RHE Frame Size C and D.

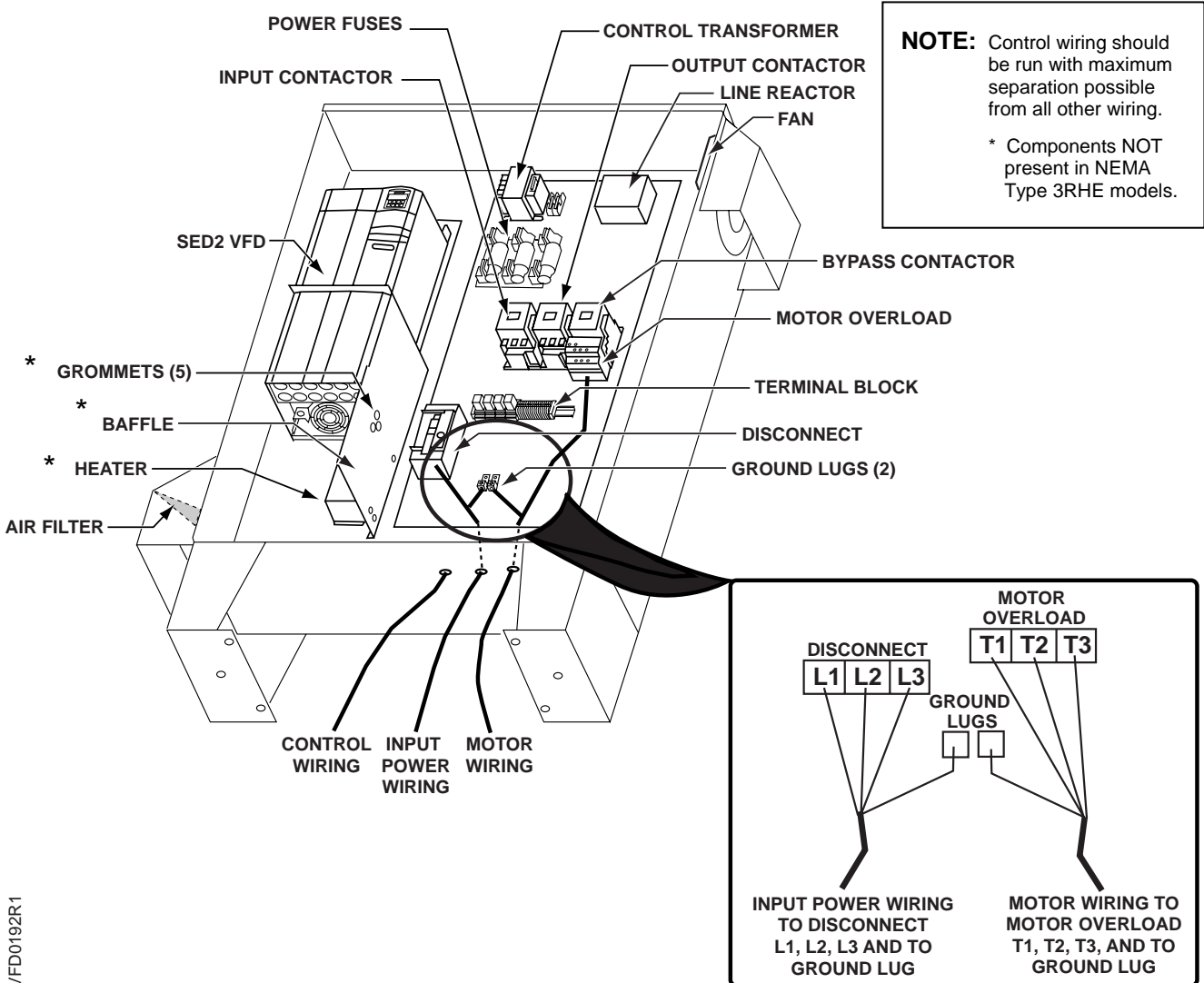
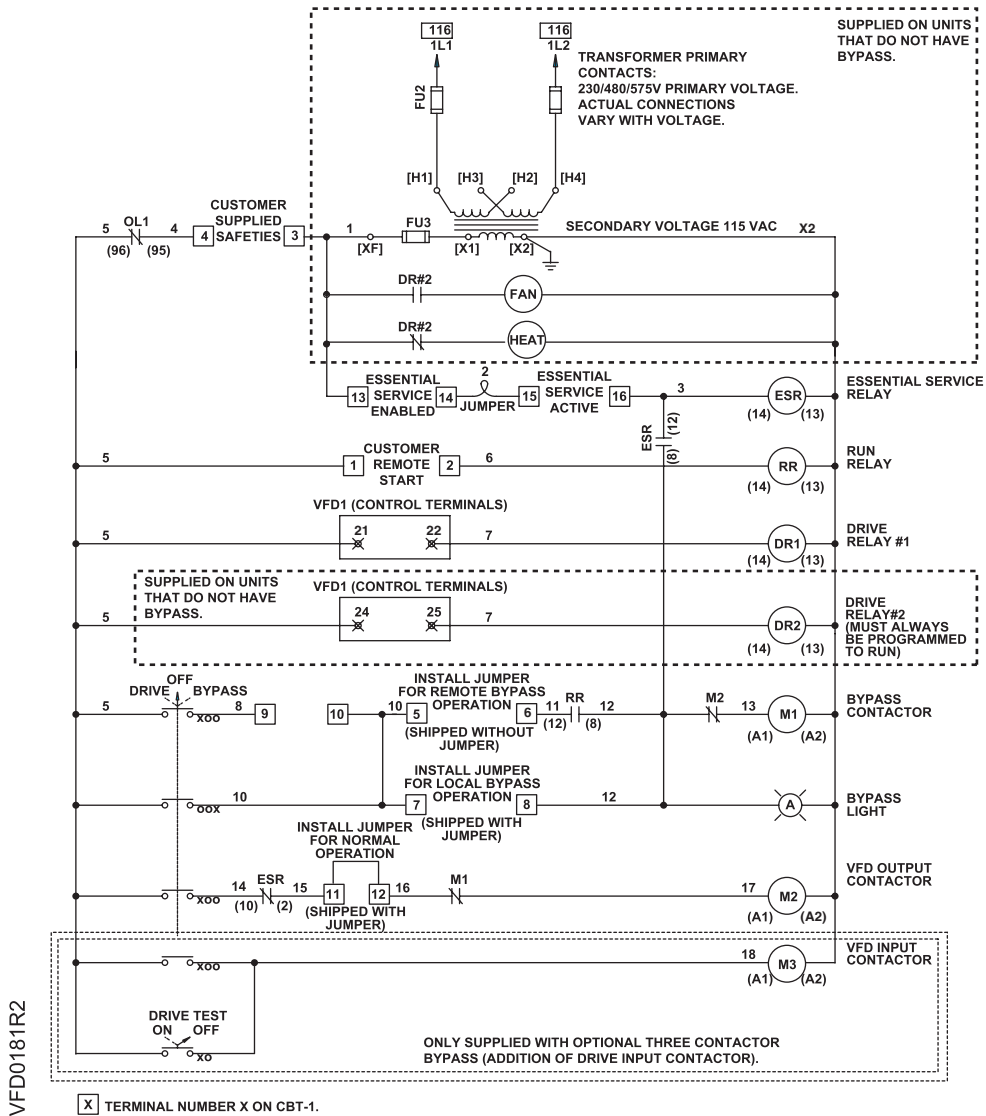


Figure 9. Motor and Power Connections for Standard Enclosure Frame Size F.



[X] TERMINAL NUMBER X ON CBT-1.

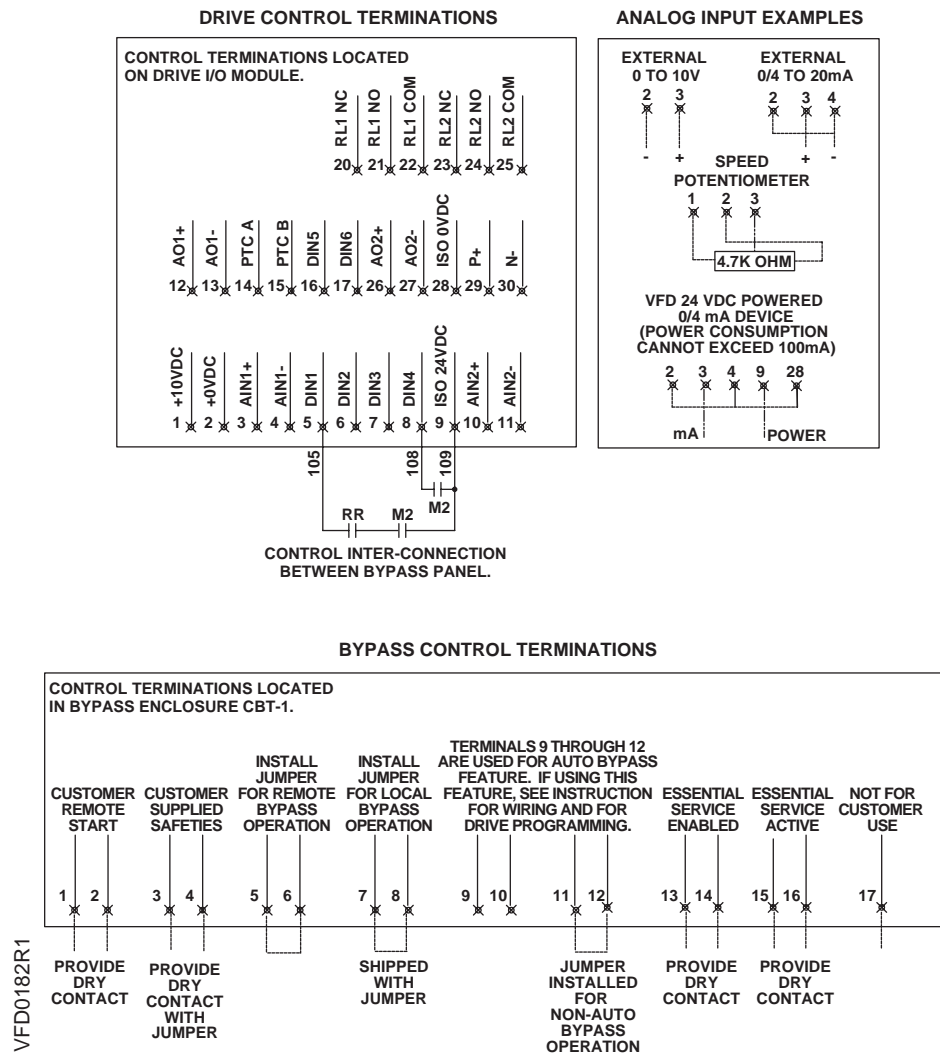
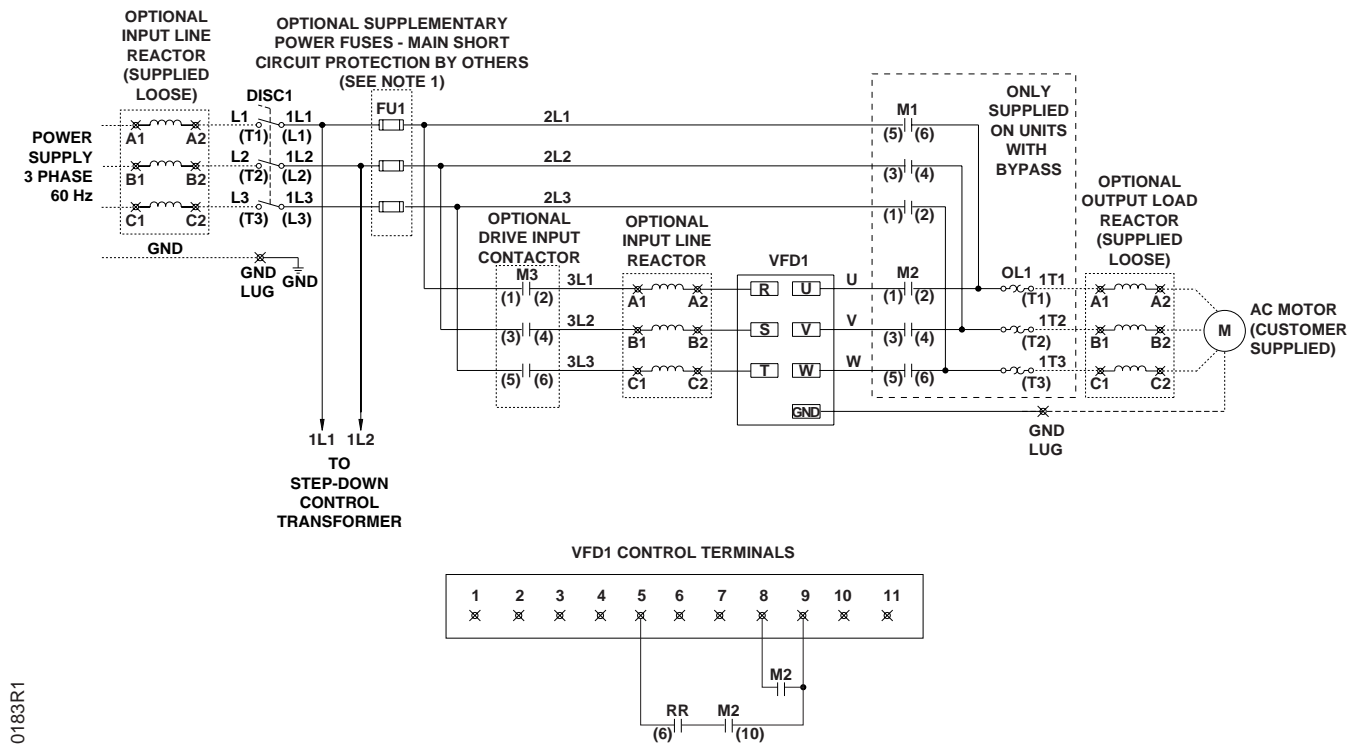


Figure 11. NEMA Type 3R/3RHE Bypass Terminations.



VFD0183R1

Figure 12. NEMA Type 3R/3RHE Bypass Power Circuit.

NOTES:

1. Branch circuit protection to be provided by installer, per UL508A, if not provided with drive.
2. For bypass operation modify these drive parameters: P0704 (0) and P0704 (1) = 3.
3. Control and communication wiring should be 300V UL minimum.
4. Communication wiring should be run with maximum separation possible from all other wiring.
5. Essential service mode operates the motor full speed (bypass) with no protection for the motor or system.
6. Ensure that automatic bypass will not damage the system before activating.
7. See Siemens Publication No. 125-3377 for proper fuse and wire sizes.
8. See Siemens Publication No. 125-3201 for SED2 VFD input/output signal wiring details.

Information in this publication is based on current specifications. The company reserves the right to make changes in specifications and models as design improvements are introduced. Product or company names mentioned herein may be the trademarks of their respective owners.
 © 2009 Siemens Building Technologies, Inc.