

# AC Line Disconnect Kit for FlexPak 3000 and WebPak 3000 Digital DC Drives 1.5 HP to 30 HP @ 230 VAC 3 HP to 60 HP @ 460 VAC

Model Numbers 901FK0101 and 901FK0201

Instruction Manual D2-3292-3



**ATTENTION:** Only qualified personnel familiar with the construction and operation of this equipment and the hazards involved should install, adjust, operate, and/or service this equipment. Read and understand this manual in its entirety before proceeding. Failure to observe this precaution could result in severe bodily injury or loss of life.

**ATTENTION:** The user is responsible for conforming with all applicable local, national, and international codes. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

## Product Description

This instruction manual describes optional AC input line disconnect and lockout kits that can be installed on FlexPak™ 3000 and WebPak™ 3000 Digital DC 1.5 to 60 HP Drives. Each kit includes a line disconnect switch, mounting hardware, and wire assemblies for both chassis mounting and mounting in a NEMA 1 enclosure.

The kits provide a positive disconnect of all AC input leads for the FlexPak 3000 and WebPak 3000 drives. The 1.5-25 / 3-50 HP @ 230 / 460 VAC disconnect is rated for 100 amps at 600 VAC. The 30 / 60 HP @ 230 / 460 VAC disconnect is rated for 150 amps at 600 VAC. To comply with NEC codes, do not use either disconnect for more than 85% of its rated amps.

Table 1 – Verifying that the AC Line Disconnect Matches the Drive

Drive Horsepower/Voltage Rating	AC Line Disconnect Model Number
1.5 HP to 25 HP @ 230 VAC	901FK0101
3 HP to 50 HP @ 460 VAC	901FK0101
30 HP @ 230 VAC	901FK0201
60 HP @ 460 VAC	901FK0201

Table 2 – Contents of the AC Line Disconnect Kit<sup>1</sup>

Item	Description	Qty	Reliance Part Number
1	AC Line Disconnect for M/N 901FK0101 (1.5 HP to 25 HP @ 230 VAC, 3 HP to 50 HP @ 460 VAC)	1	65242-100NSX
	AC Line Disconnect for M/N 901FK0201 (30 HP @ 230 VAC, 60 HP @ 460 VAC)	1	65242-100SSX
2	Label <sup>2</sup> (81,82, 83)	1	410273-2A
3	Lock - left <sup>3</sup>	1	610273-47A
4	Lock - right <sup>3</sup>	1	610273-46A
5	M4 x 12 CCWS <sup>3</sup>	8	719062-1 PGH
6	M4 x 80	4	419062-10AGY
7	M4 x 90 <sup>3</sup>	4	1419062-10AGZ
8	M4 Nut/washer	4	419063-200SG
9	M6 Nut/washer	3	429063-200SJ
10	Standoff Bracket <sup>3</sup>	2	610276-45A
11	Washer (flat) <sup>3</sup>	4	419064-1SG
12	Washer (split)	4	419064-100SG
13	Wire assembly (181)	1	610273-39R
14	Wire assembly (182)	1	610273-39S
15	Wire assembly (183)	1	610273-39T
16	1/4" Washer (split)	3	601748-3J
17	1/4" - 20 x 5/8" RHMS bolt	3	601742-8G

<sup>1</sup>. See figure1 for illustrations of the kit contents.

<sup>2</sup>. Label is to be attached to the disconnect switch.

<sup>3</sup>. Item used only when installing the AC Line Disconnect Kit on a drive with a NEMA 1 enclosure.

## Installing the AC Line Disconnect Kit

Two sets of instructions follow. The first describes installing the AC Line Disconnect on drives not equipped with a NEMA 1 enclosure. The other describes installation on drives with the enclosure. Make sure you follow the instructions appropriate to your drive.

### Installing the AC Line Disconnect Kit on Drives Without a NEMA 1 Enclosure



**ATTENTION:** Do not install modification kits with power applied to the drive. Disconnect and lock out incoming power before attempting such installation. Failure to observe this precaution could result in severe bodily injury or loss of life.

Step 1. Turn off, lockout, and tag power to the drive.

Step 2. Remove the cover from the drive, if necessary.

Step 3. Disconnect the input AC power line connections to the drive's terminal block as shown in figure 2A.

- Step 4. Remove the existing wiring between the terminal block and fuses as shown in figure 2A.
- Step 5. Remove the terminal block by removing the two screws holding it in place as shown in figure 2A.
- Step 6. Attach the label (**Item 2**) to the line disconnect (**Item 1**) as shown in figure 2C.
- Step 7. If the line disconnect (**Item 1**) is to be used as the drive's main disconnect, affix a "MAIN" label (user supplied) to the front of the disconnect. Do not cover any line disconnect mounting screw holes when applying the label.
- Step 8. Install the line disconnect (**Item 1**) on the drive's molded fuse block using the following procedure:
- Position the line disconnect on the drive's molded fuse block so the disconnect's four mounting holes are over the four threaded holes on the fuse block. See figure 2B.
  - Secure the line disconnect in place using four M4 x 80 screws (**Item 6**) and four split washers (**Item 12**) as shown in figure 2B.
- Step 9. Attach the wire assemblies (**Items 13, 14 and 15**) between AC Line Disconnect terminals 181, 182 and 183 and the corresponding line fuse terminals. (For example, connect AC Line Disconnect terminal 181 to line fuse terminal 181.)
- Use the three 1/4-20 x 5/8 RHMS bolts (**Item 17**) and the three 1/4 slit washers (**Item 16**) to attach the wire harnesses to the AC Line Disconnect.
- Use the three M6 Nut/washers (**Item 9**) to attach the wire harnesses to the line fuse terminals. See figure 2B for the location of the AC Line Disconnect terminals and the line fuse terminals. See figure 2C for an illustration of the installed wire assemblies.
- Step 10. Torque the nuts on the AC Line Disconnect terminals and the line fuse terminals to 55 in-lb (6.2 Nm).
- Step 11. Re-attach the incoming AC line wiring to the AC Line Disconnect according to the following table (see figure 2C for the location of the AC Line Disconnect incoming power terminals).

Original Terminal Block Connection	Attach to AC Line Disconnect Terminal
181	81
182	82
183	83

- Step 12. Torque the nuts on AC Line Disconnect terminals 81, 82 and 83 to 55 in-lb (6.2 Nm).
- Step 13. Replace the drive cover, if necessary, and secure it in place with its screws.
- Step 14. Remove the lockout and tag.
- Step 15. Turn on power to the drive.
- Step 16. Check for proper drive operation.

## Installing the AC Line Disconnect on Drives in a NEMA 1 Enclosure



**ATTENTION:** Do not install modification kits with power applied to the drive. Disconnect and lock out incoming power before attempting such installation. Failure to observe this precaution could result in severe bodily injury or loss of life.

- Step 1. Turn off, lockout, and tag power to the drive.
- Step 2. Remove the cover from the drive.
- Step 3. Disconnect the input AC power line connections to the drive's terminal block as shown in figure 2A.
- Step 4. Remove the existing wiring between the terminal block and fuses as shown in figure 2A.
- Step 5. Remove the terminal block by removing the two screws holding it in place as shown in figure 2A.
- Step 6. Attach the label (**Item 2**) to the AC Line Disconnect (**Item 1**) as shown in figure 3C.
- Step 7. If the AC Line Disconnect (**Item 1**) is to be used as the drive's main disconnect, affix a "MAIN" label (user supplied) to the front of the AC Line Disconnect. Do not cover any AC Line Disconnect mounting screw holes when applying the label.
- Step 8. Install the AC Line Disconnect (**Item 1**) on the drive's molded fuse block using the following procedure (see figures 3A and 3B).
- Position a standoff bracket (**Item 10**) on the drive's molded fuse block and mount it using four M4 x 12 screws (**Item 5**) as shown in figure 3B. Repeat this step to install the remaining standoff bracket.
  - Position the AC Line Disconnect on the standoff brackets.
  - Mount the AC Line Disconnect to the brackets (attaching the right and left lock hardware (**Items 3 and 4**) at the same time) using four M4 x 90 screws (**Item 7**), flat washers (**Item 11**), and M4 nuts (**Item 8**). See figure 3B.
- Step 9. Attach the wire assemblies (**Items 13, 14 and 15**) between AC Line Disconnect terminals 181, 182 and 183 and the corresponding line fuse terminals. (For example, connect AC Line Disconnect terminal 181 to line fuse terminal 181.)
- Use the three 1/4-20 x 5/8 RHMS bolts (**Item 17**) and the three 1/4 slit washers (**Item 16**) to attach the wire harnesses to the AC Line Disconnect.
- Use the three M6 Nut/washers (**Item 9**) to attach the wire harnesses to the line fuse terminals. See figure 3B for the location of the AC Line Disconnect terminals and the line fuse terminals. See figure 3C for an illustration of the installed wire assemblies.
- Step 10. Torque the nuts on AC Line Disconnect terminals and the line fuse terminals to 55 in-lb (6.2 Nm).

Step 11. Re-attach the incoming AC line wiring to the AC Line Disconnect according to the following table (see figure 3C for the location of the AC Line Disconnect incoming power terminals).

<b>Original Terminal Block Connection</b>	<b>Attach to AC Line Disconnect Terminal</b>
181	81
182	82
183	83

Step 12. Torque the nuts on AC Line Disconnect terminals 81, 82, and 83 to 55 in-lb (6.2 Nm).

Step 13. Replace the drive cover and secure it in place with its screws (see figure 3D).

Step 14. Remove the lockout and tag.

Step 15. Turn on power to the drive.

Step 16. Check for proper drive operation.

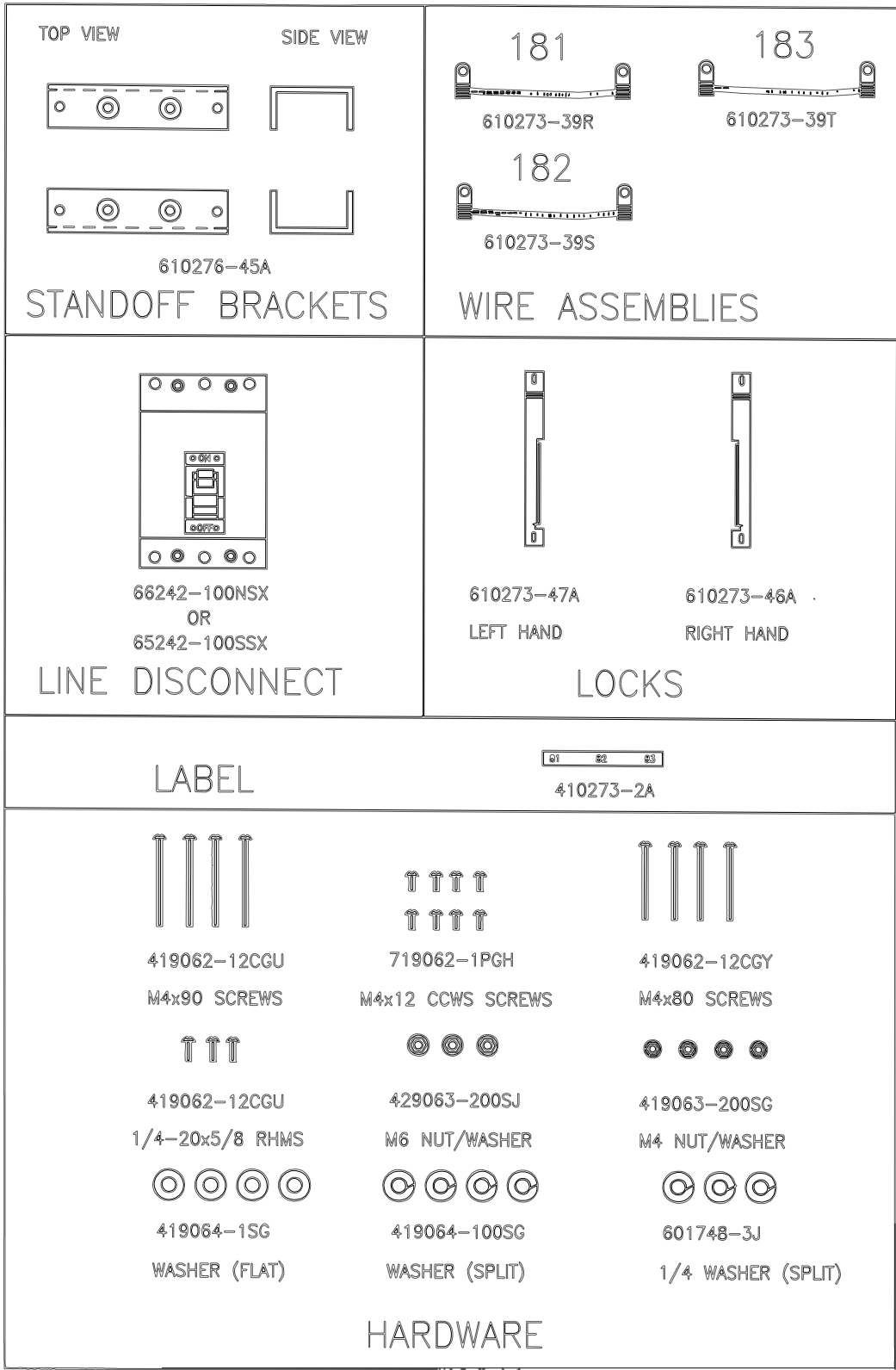
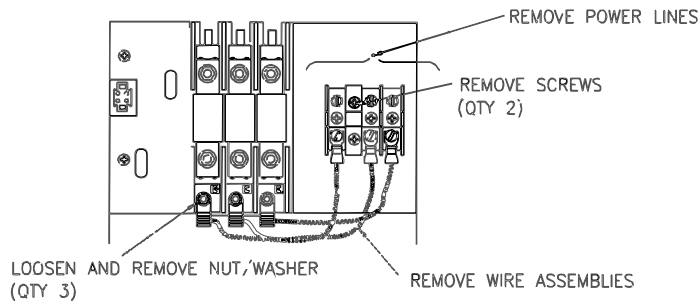


Figure 1 – Line Disconnect Kit Contents

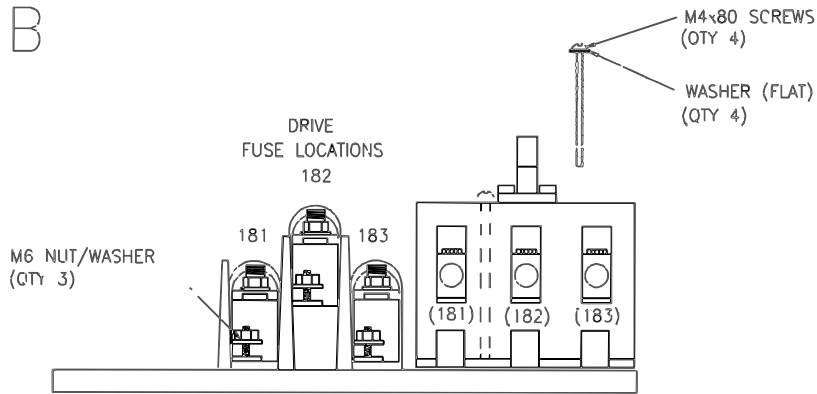
Figure 2 – Installing the AC Line disconnect on a Drive Without a NEMA 1 Enclosure

A



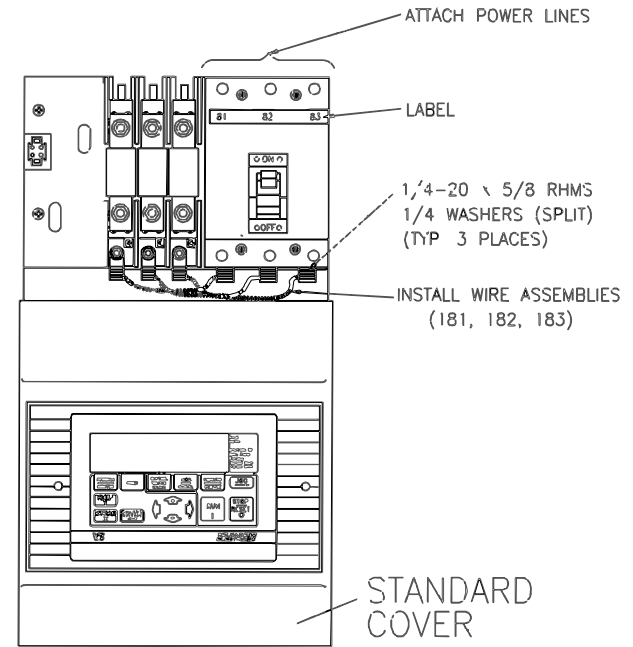
REMOVE TERMINAL BLOCK

B



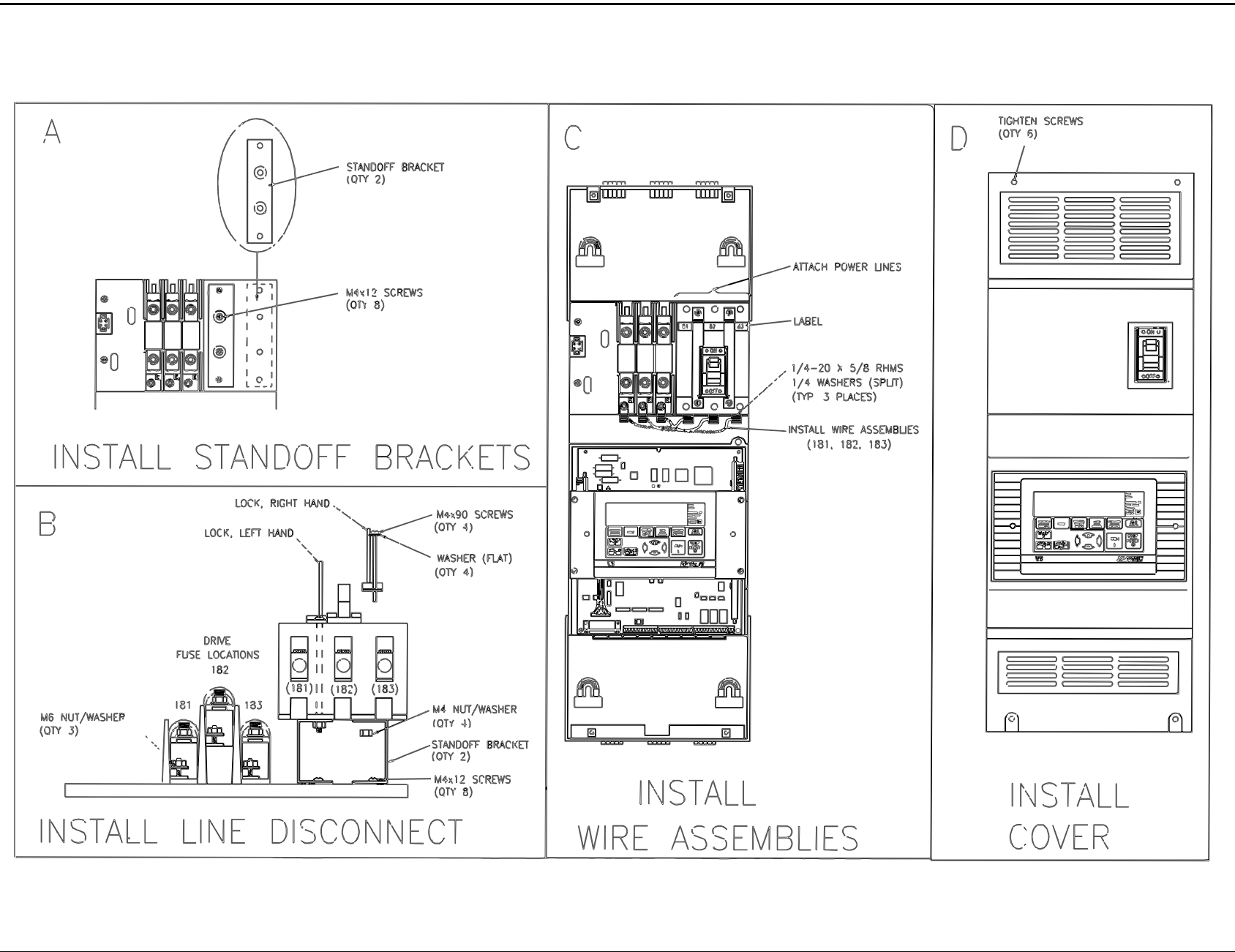
INSTALL LINE DISCONNECT

C



INSTALL WIRE ASSEMBLIES

Figure 3 – Installing the AC Line Disconnect on a Drive With a NEMA 1 Enclosure





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