

# AC Line Filter Kit for FlexPak 3000 Digital DC Drives 400 HP to 600 HP @ 460 VAC

Model Number 918FK0601

Instruction Manual D2-3424



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

**ATTENTION:** All interconnecting wiring must be sized and installed in conformance with applicable local, national, and international codes. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

## Product Description

The AC Line Filter kit should be used when the primary of the drive source power transformer is greater than 2300 V RMS. The AC Line Filter consists of six capacitors, arranged in three pairs of two capacitors connected in series. The kit helps to attenuate high voltage spikes that capacitively couple from the transformer primary to the secondary. Kit installation consists of connecting the capacitor grid from the AC input line to ground of the transformer secondary.

## Checking the Contents of the Kit

Table 1 lists the contents of the AC Line Filter kit. Note that the user must provide three (3) pieces of 600 V, 14 AWG wire (each approximately 1.2 m (4 ft) in length) to connect the kit to the drive's AC input bus bars.

Table 1 – AC Line Filter Kit

Model 918FK0601		
Description	Qty	Reliance Part Number
Capacitor Assembly	1	802276-925R
Fuse Block, Triple	1	49454-19C
Fuse (7.5 A, 600 V)	3	64676-64N
Wire Harness	1	802276-924R
Spade Connector (Female)	6	411066-15B
M6 x 25 Self-Threading Screw	2	419062-100PJM
M4 x 12 Self-Threading Screw	6	419062-100PGH
M6 Star Washer	2	419064-101SJ
M4 Flat Washer	6	419064-1SG
Plastic Cover	1	802276-920R



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# Installation



**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.

Refer to figures 1 and 2 while performing this installation.

This procedure assumes that the drive is wired and operational, and that incoming power is connected to the drive at input line fuse terminals 181, 182, and 183.

## Mounting the AC Line Filter Kit

**Important:** The kit must be mounted in such a location/position that the wire length between the fuse block and the drive's AC bus bars does not exceed 1.2 m (4 ft).

**Important:** The star washers provided in the kit must be used when installing the capacitor assembly to ensure a good ground connection.

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

Step 2. Refer to figure 1. Using the mounting dimensions as a guide, drill two (2) 0.221" holes (for mounting the capacitor assembly) and six (6) 0.147" holes (for mounting the fuse block and the plastic cover). The kit can be mounted horizontally (as shown in the drawing) or vertically.

Step 3. Attach the capacitor assembly using two (2) M6 star washers and two (2) M6 x 25 self-threading screws (see figure 2). Tighten to 5.1 Nm (45 in-lb).

Step 4. Attach the fuse block using two (2) M4 flat washers and two (2) M4 x 12 self-threading screws (see figure 2). Tighten to 1.4 Nm (12 in-lb).

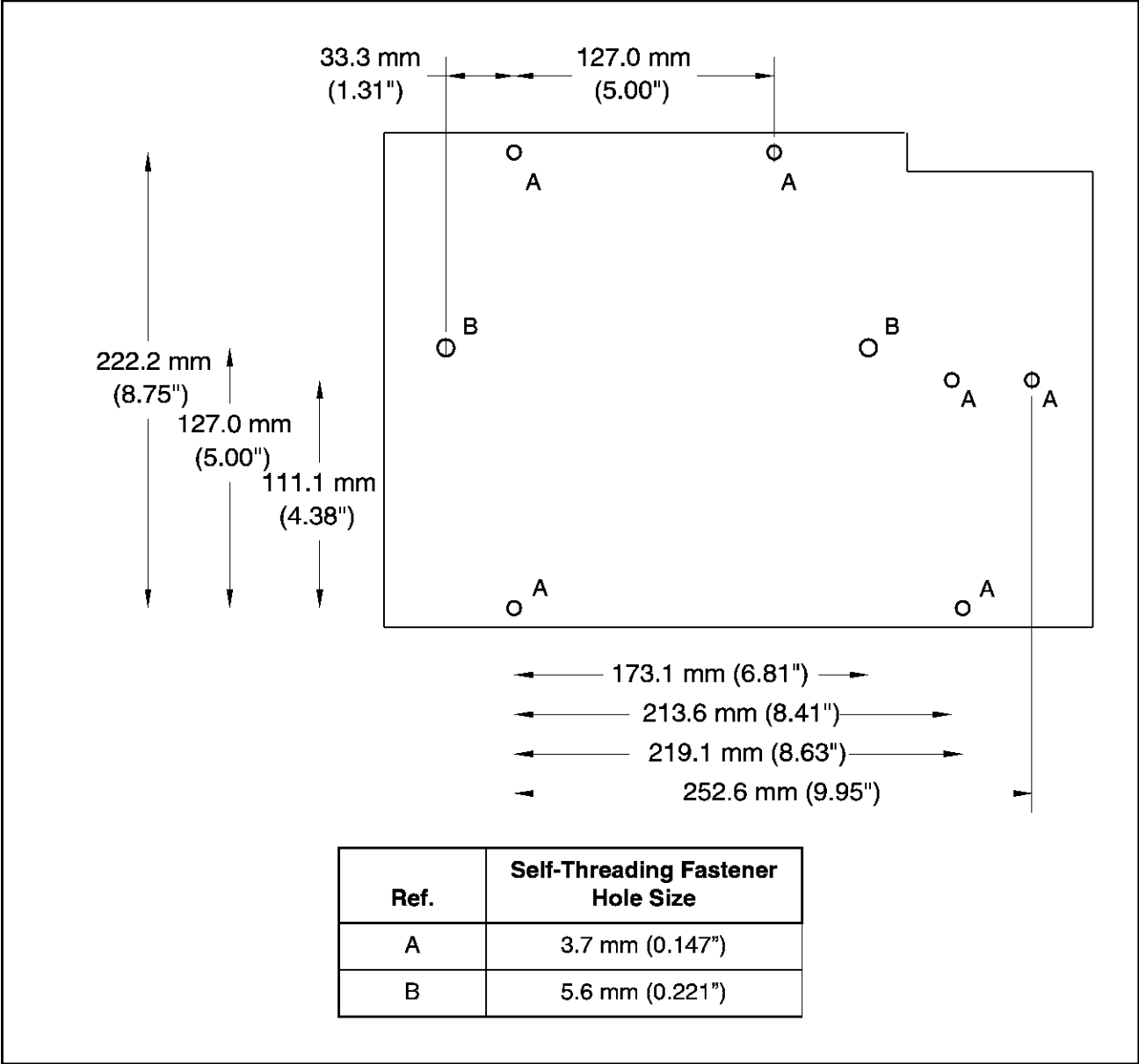


Figure 1 – Mounting Dimensions for the AC Line Filter Kit

## Wiring the AC Line Filter Kit

Refer to figure 2 to wire the AC Line Filter kit.

- Step 1. Cut three (3) pieces of 600 V, 14 AWG wire (maximum length 1.2 m (4 ft) each). These wires should be of sufficient length to connect the spade terminals on the fuse block to the connectors on each of the drive's AC input bus bars. Terminate the ends of each wire with the female spade terminals provided in the kit.
- Step 2. Connect one end of each wire to one of the male spade terminals on each of the drive's three AC input bus bars. Connect the other end of these wires to the three male spade terminals on the fuse block.
- Step 3. Connect the spade terminals on one end of the wire harness supplied in the kit to each of the three male terminals on the capacitor assembly. Connect the spade terminals on the other end of the wire harness to the three remaining male spade terminals on the fuse block.
- Step 4. Install the three (3) 7.5 A fuses provided in the kit into the fuse block.
- Step 5. Install the plastic cover using four (4) M4 flat washers and four (4) M4 x 12 self-threading screws (see figure 2). Tighten to 1.4 Nm (12 in-lb).

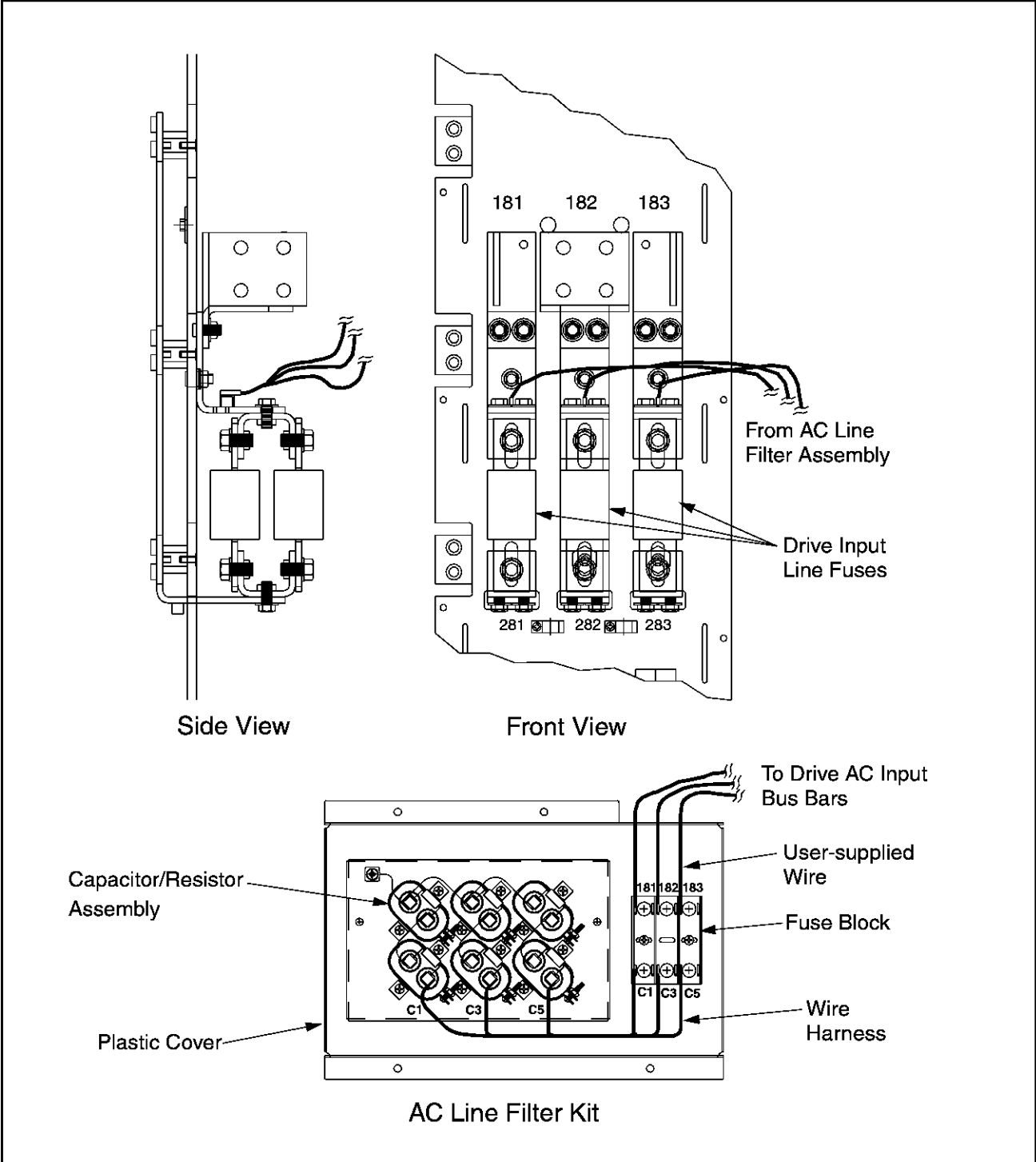


Figure 2 – Wiring the AC Line Filter Kit

# Wiring Diagram

Figure 3 shows a wiring diagram for the AC Line Filter.

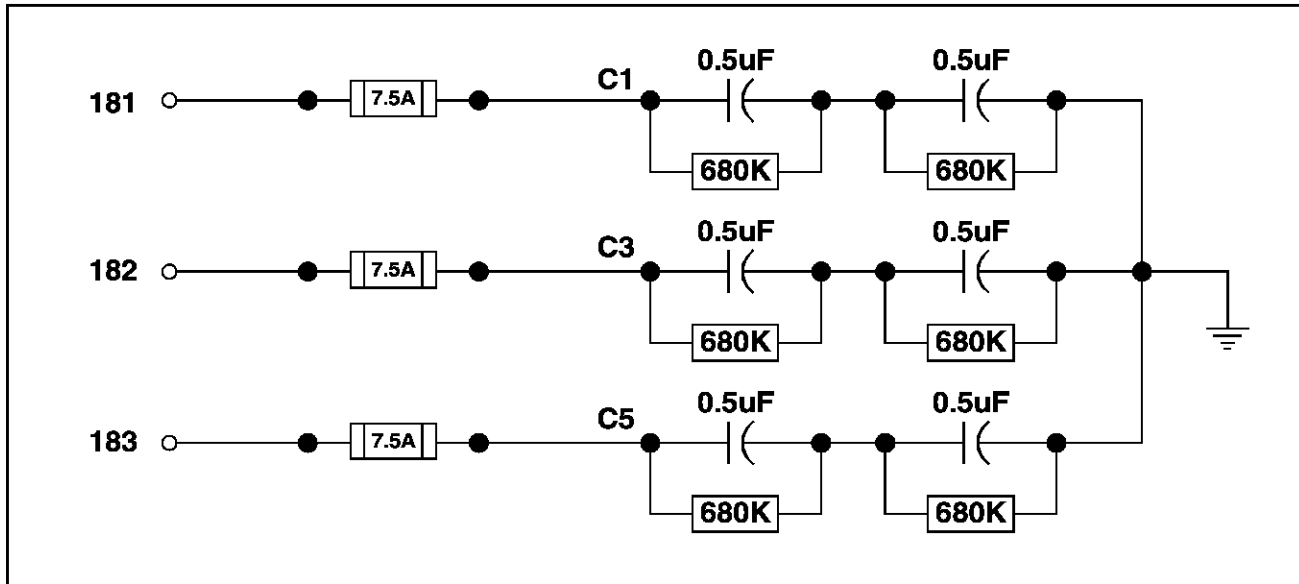


Figure 3 – Wiring Diagram for the AC Line Filter

## Replacement Parts

Table 2 lists the AC Line Filter replacement part numbers.

Table 2 – Replacement Parts

Description	Reliance Part Number
0.5 $\mu$ F Capacitor	66057-16AB
Resistor Assembly (680 K resistor with attached spade connectors)	604303-1R
7.5 A, 600 V Fuse	64676-64N

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