

Accessory Setup & Installation Guide

Electric Clutch/Brake Kit (75-60)

The Electric Clutch/Brake Kit can be ordered and factory installed onto a NEMA 56C Face motor of a Dorner 2100 or 3100 Series Conveyor.

This Kit includes instructions, the clutch/brake assembly (factory-installed onto the conveyor drive motor), Cabling, Tools and Metric Mounting Hardware to aid in the installation with a Dorner *impac* Conveyor Controller.

Additional Tools Needed for Installation

- Small flat-bladed screwdriver
- Permanent marking pen
- Electrical tape

Clutch/Brake Specifications

Manufacturer: Stearns

Type: SM1020/1040 Series

Control Voltage: 24 volts D.C.

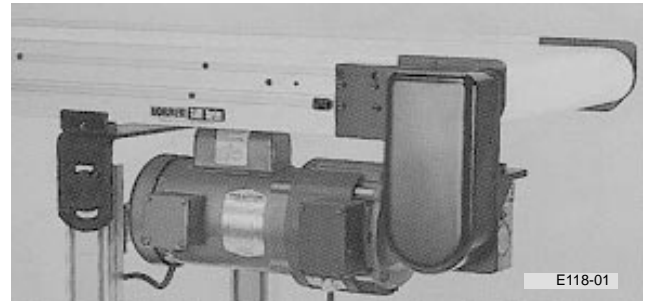


Figure 1: Electric Clutch/Brake Kit Installed (75-60)

Covered under Dorner patent numbers 156,260 & 174,435 and corresponding patents and patent applications in other countries.

Item	Qty.	Description
A	1	Electric Clutch/Brake Assembly (683133) Including DC Clutch Brake* (816-025), 15-ft 5-Conductor Cable (818-114), Two Cord Grips (824-320) & Locknut (824-013)
B	5	M6 x 10 mm Button Head Screw (910610M)
C	5	Zip Tie Mount (805-608)
D	5	Single Drop-In T-bar (639971M)
E	5	Zip Tie (805-063)
F	5	T-slot Cover Strip (675232)
G	2	Label (823-107)
H	1	4 mm Hex Key Wrench (807-564)

* Includes One Relay (805-867), Five Insulated Lugs (805-511), One 6" Jumper Wire (818-128) & One Wire Nut (805-057)

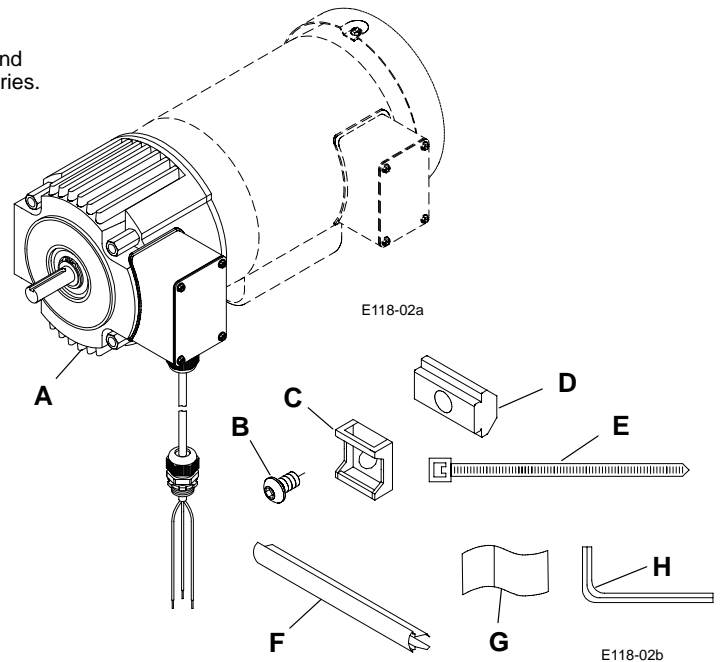


Figure 2: Electric Clutch/Brake Kit (75-60) Components

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Clutch/Brake Installation/Testing/Operation

1. Verify all kit parts are present.

WARNING

Disconnect power to the Conveyor and to the *impac* Conveyor Controller. Due to the wide variety of setups & applications, guarding is the responsibility of the end user.

2. Refer to the appropriate conveyor Parts, Assembly & Maintenance Manual for installing the electric motor, with clutch/brake assembly, onto the conveyor.
To make Cable routing easier, mount the *impac* Conveyor Controller on same side of the conveyor as the drive motor.
3. Route the cable from the clutch/brake to the *impac* Conveyor Controller.
 - a. Cable routing should not run near any moving conveyor parts, where it could possibly be damaged or cause damage to the conveyor.
 - b. The conveyor T-slots or optional 6 ft (1829 mm) or 12.5-ft (3810 mm) Wire Troughs (Dorner #75-85-6 or #75-85-12) can be used to route wiring cable. For additional Wire Trough information, refer to the separate Setup & Installation Guide (not provided).
 - c. To contain a long run of wiring cable in the conveyor T-slot channel, use several short lengths of T-slot Cover Strips (F of Figure 3). Or, to completely contain a long run of cable, purchase T-slot Cover Strip (645656P) at length required.

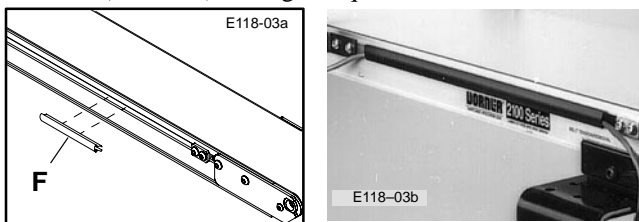


Figure 3: T-slot Cover Strip Mounting Detail

- d. To route Cable over a previously mounted component or to anchor the Cable, use the Zip Tie Mounts (C) and Single Drop-in T-bars (D), (Figure 4). Secure each Zip Tie Mount with an M6 x 10 mm Button Head Cap Screw (B). Tighten the Screws with the 4 mm Hex Key Wrench (H) provided.
- e. Figure 5 shows a typical example of a clutch/brake kit, Photo-Eye kit and *impac* Conveyor Controller. Use the conveyor and the Support Stand Leg T-slots for routing the cable between the *impac* and the clutch/brake (A). Anchor and protect the cable with both T-slot Cover Strips (F of Figure 3) and Zip Ties (E of Figure 4).

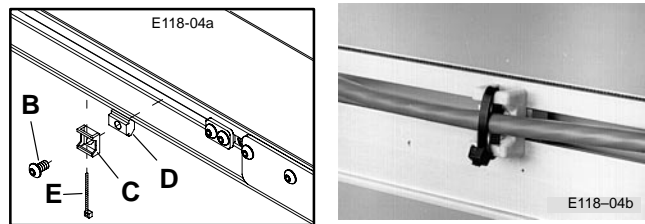


Figure 4: Zip Tie Mounting Detail

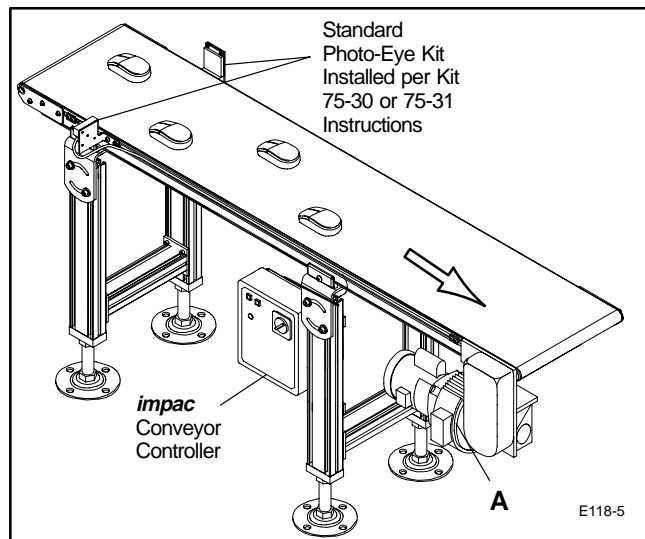


Figure 5: Sample Application showing an Electric Clutch/Brake Kit Routing to an *impac* Conveyor Controller

4. Install the Cable into the *impac* Conveyor Controller:
 - a. Using a flat-bladed screwdriver, remove the knock-out plug from bottom of *impac* Conveyor Controller.
 - b. Remove the Locknut (Figure 6), from the Cord Grip, and insert the Cord Grip through the appropriate hole at the bottom of the controller cabinet. Attach and tighten the Locknut with an adjustable wrench.
 - c. Extra Cable should be neatly and securely coiled up behind the *impac* Conveyor Controller cabinet. Mount a Zip Tie Mount to one of the tapped holes on the mounting bracket on the rear of the *impac* Conveyor Controller. Then, use a Wire Tie to anchor the extra Cable to the Zip Tie Mount.
5. Label both ends of the Clutch/Brake Cable using the blank Labels (G) provided and a permanent marking pen.
The Label should be wrapped around the Cable near the Clutch/Brake and inside the *impac* Conveyor Controller to identify the Cable. When multiple Kits are used, make sure all Cables are uniquely labelled. (i.e., K1 for Kit #1, K2 for Kit #2,... etc.).

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NOTE:

The following connections are for a typical application of a conveyor which is controlled by a Clutch/Brake which is normally stopped and runs only when a part blocks the beam of the Photo-Eye located at the infeed end of the conveyor. Refer to the *impac* Application Guide for details on other application designs and wiring connections.

In addition, when inserting a wire into a Terminal Block termination, be sure to tightly anchor the wire by tightening the screw and double-check that wire has been fully secured by giving it a light tug.

Use the flat-bladed screwdriver furnished with the *impac* Conveyor Controller kit. As necessary, use the wiring diagram shown in the *impac* Application Guide for your particular application.

Connect the Photo-Eye to the Impac 100:

- Insert wire #1 (Red) into terminal 24V.
- Insert Wire #2 (Black) into terminal COM.
- Insert wire #3 (Green) into terminal 24V.
- Insert Wire #4 (Brown) into terminal SP1.
- Wire #5 (Yellow) is not used and should be taped off.

Connect the Clutch/Brake to the Impac 100:

- Insert wire #1 (Red) into terminal 24V.
- Insert Wire #2 (Black) into terminal COM.
- Insert Wire #4 (Brown) into terminal SP1.
- Wires #3 & #5 (Green & White) are not used and should be taped off.

6. Wire the Clutch/Brake to the *impac* Conveyor Controller Terminal Block (Figure 6).

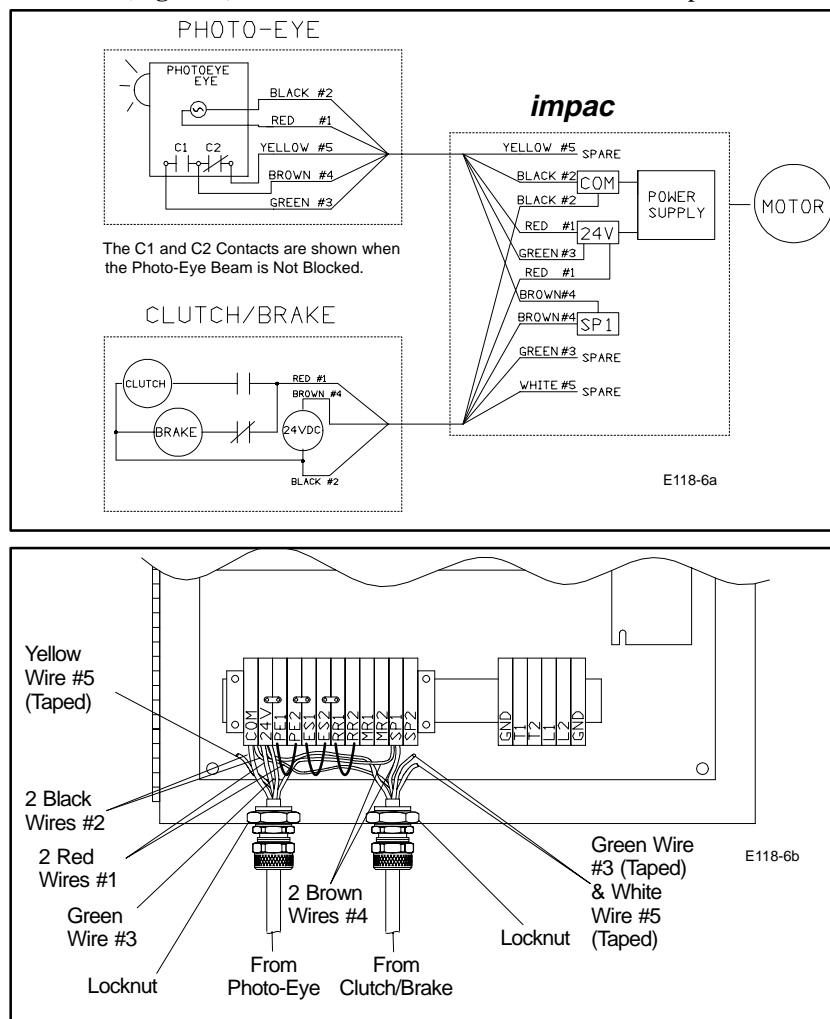


Figure 6: Sample Photo-Eye & Clutch/Brake to *impac* Wiring

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7. Test the sample application operation as follows:

- a. Be sure the **impac** On/Off Switch is OFF and that Conveyor is ready to run. Then, begin the test by re-connecting power to the **impac**. Do not, however, turn on power at this time. Keep the **impac** On/Off Switch OFF.
- b. Operation of the Conveyor may vary depending on the chosen application. Consult the **impac** Application Guide for your particular application.
- c. Shown here is an application in which the conveyor, which is controlled by a Clutch/Brake, is normally stopped and runs only when a parts blocks the beam of the Photo-Eye (Figure 7).
- d. Turn **impac** On/Off Switch to ON.
- e. Verify that the motor is running and the conveyor is stopped
- f. Test that, when a part is in front of the Photo-Eye beam, Conveyor should run and when part moves out of beam, Conveyor should stop running.
- g. After correct operation is exhibited, normal operation processes can be continued.

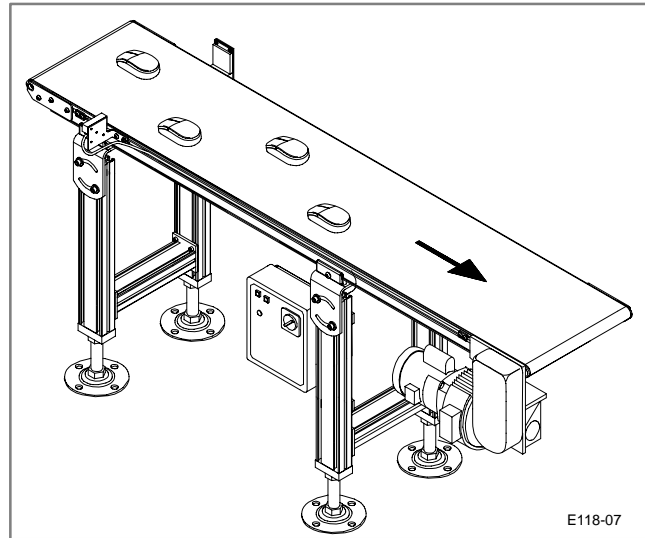


Figure 7: Sample Electric Clutch/Brake & Photo-Eye Application

Standard Available IMPAC Accessory Kits

- Standard Photo-Eye Kit, Fixed Mount (75-30)
- Standard Photo-Eye Kit, Adjustable Mount (75-31)
- Timing Photo-Eye Kit, Fixed Mount (75-32)
- Timing Photo-Eye Kit, Adjustable Mount (75-33)
- Emergency Stop Kit, Illuminated (75-40)
- Emergency Stop Kit, Non-Illuminated (75-41)
- Emergency Stop Kit, Pull Cord (75-42)
- Jog Kit (75-10)
- Foot Switch Kit (75-20)
- Start/Stop Kit (75-70)
- Electric Clutch/Brake Kit (75-60)
- Controller to Controller Linking Cable Kit (75-80)
- Wire Way Trough Kits
6-ft (1829 mm) (75-85-6)
12.5-ft (3810 mm) (75-85-12)
- T-slot Extension Kit (307000M)
- Light Duty End Stop Kits
2100 Series (215502M – 215524M)
3100 Series (315504M – 315540M)
- Adjustable Stop Kits
(307602M – 307640M)

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