DORNER®

impac™

Accessory Setup & Installation Guide

Emergency Stop Kit, Pull Cord 75-42 [30 Ft (9 m)] or 75–43 [100 Ft (30 m)]

The Pull Cord Emergency Stop (E-Stop) Kits are pre-packaged and pre-wired electrical signalling assemblies that can be installed on a Dorner 2100 or 3100 Series Conveyor. The 75-42 and 75-43 Kits differ only by the maximum Conveyor length each Kit is designed to be used on.

Both Kits include these instructions, a Pull Cord E-Stop Box assembly, the 30 ft (9 m) or 100 ft (30 m) Pull Cord, Pull Cord Anchor assemblies, attaching Brackets, Tools and Metric Mounting Hardware to aid in the installation and inter-connection with a Dorner ***impac*** Conveyor Controller.

Additional Tools Needed for Installation

- Small flat-bladed screwdriver
- Adjustable wrench

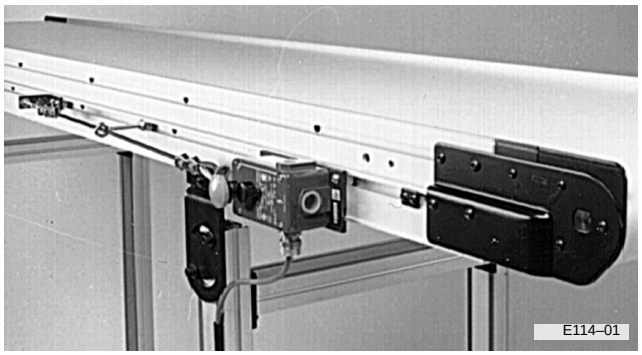


Figure 1: Pull Cord E-Stop Kit Installed

- Permanent marking pen
- Electrical tape

Pull Cord E-Stop Specifications

Manufacturer: Guardmaster® Ltd.
UL Approved

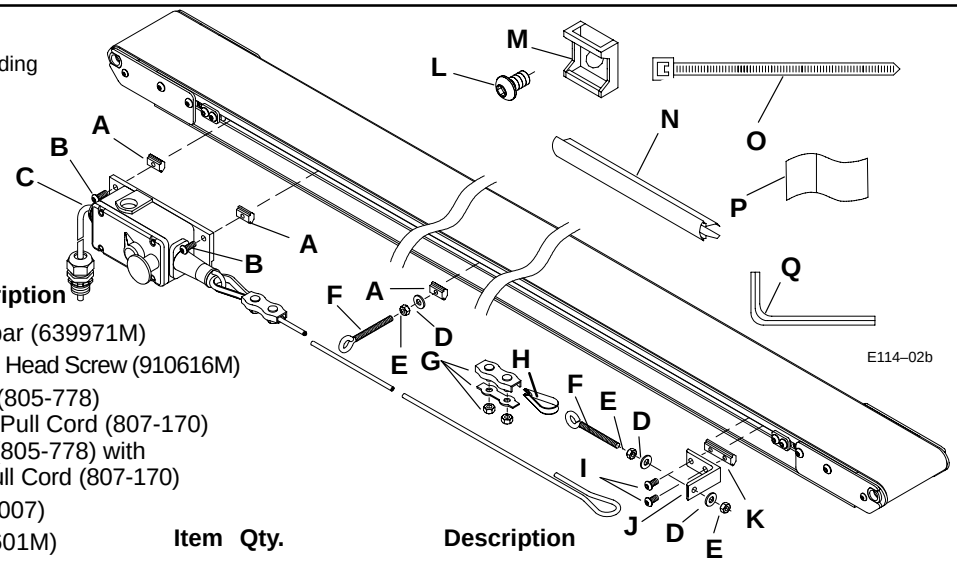
Safety Contacts: 1 N.O. & 1 N.C. Series Break Before Make Contact Block

Contact Rating: 100 Volts 5 Ampere, 250 Volts 2 Amperes 500 Volts 1 Ampere Maximum

Case: Heavy-duty Die Cast Aluminum Alloy, Painted

Conduit Entry: 1/2 NPT

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



Item	Qty.	Description
A	9*	Single Drop-In T-bar (639971M)
B	2	M6 x 16 mm Button Head Screw (910616M)
C	1	Switch Assembly (805-778) with 30 ft (9 m) of Pull Cord (807-170)
	1	Switch Assembly (805-778) with 100 ft (30 m) of Pull Cord (807-170)
D	4*	Flat Washer (911-007)
E	4*	M6 Hex Nut (990601M)
F	3*	M6 x 60 x 60 Eye Bolt (807-829)
G	1	Clamp Assembly (807-830))
H	1	Thimble (807-838)
I	2	M6 x 12 mm Button Head Screw (910612M)
J	1	End Fitting Bracket (677443M)
K	1	Drop-In T-bar (200626M)

Item	Qty.	Description
L	5	M6 x 10 mm Button Head Screw (910610M)
M	5	Zip Tie Mount (805-608)
N	5	T-slot Cover Strip (675232)
O	5	Zip Tie (805-063)
P	2	Label (823-107)
Q	1	4 mm Hex Key Wrench (807-564)

E114–02a

*** Quantity is for 75-42 Kit; 75-43 Kit has 6 additional parts.**

Figure 2: Pull Cord E-Stop Kits (75-42 & 75-43) Components

Accessory Setup & Installation Guide

Pull Cord E-Stop Installation Procedures

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.

NOTE:

For shipping, Drop-in T-bars (A) are pre-assembled

to Mounting Plate and Plate is pre-assembled to E-Stop Box assembly(G). Detach T-bars and attaching hardware before proceeding.

2. **Refer to Figure 2 and select the desired location and mount the Pull Cord E-Stop Box assembly.**

   a. Insert two of the Single Drop-in T-bars into Conveyor side channel by rolling each one into position (Figure 3).

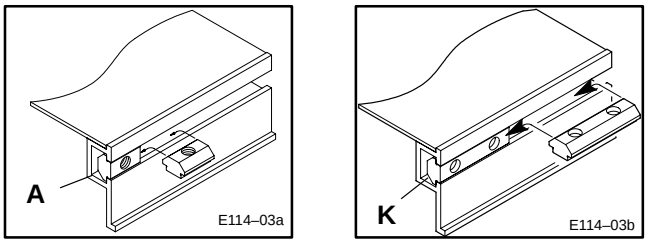


Figure 3: Single (& Double) Drop-in T-bar Installation Details

   b. Refer to Figure 4 and attach Box assembly Mounting Plate to the two Single Drop-in T-bars , using the M6 x 16 mm Button Head Cap Screws (B). Tighten Screws with 4 mm Hex Key Wrench (Q) provided.

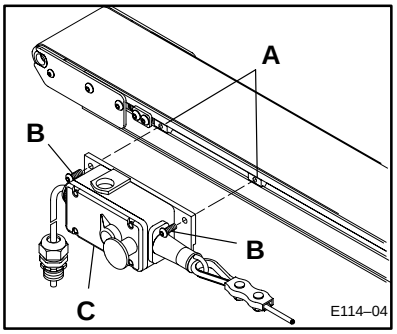


Figure 4: E-Stop Box Assembly to Conveyor Attachment Detail

3. **Install the Pull Cord Holder Eye-Bolt assemblies [as many as 2 for 30 ft (9 m) or as many as 8 for 100 ft (30 m) Pull Cord units], at appropriate positions along the entire length of the Conveyor, in the manner shown:**

NOTE:

The number of Pull Cord Holder Eye Bolt assemblies can be from none (0) to two (2), for up to 30 ft (9 m) Conveyors, or from 3 to eight (8), for 31 to 100 ft (9.3 to 30 m) Conveyors. Distance between Eye Bolts should never exceed 10 feet (3 meters).

   c. Insert a Single Drop-in T-bar into Conveyor side channel by rolling each one into position (Figure 3).

   d. Secure the Anchor Eye-Bolt to the Single Drop-in T-bar by tightening Jam Nut (E) against Conveyor side channel, after the desired position is obtained (Figure 5).

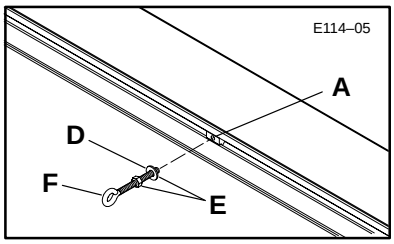


Figure 5: Eye Bolt Attachment Detail

4. **Route the Pull Cord by passing it through the Eye-Bolts (F) [as many as 2 for 30 ft (9 m)Pull Cord units or as many as 8 for 100 ft (30 m) Pull Cord units].**

Determine the final mounting position of the End Fitting Mounting Bracket (J). Then, install the Bracket in the following manner:

   e. Insert the Drop-in T-bar (K) into Conveyor side channel by rolling each one into position (Figure 3).

   f. Select the desired mounting location and attach just the End Fitting Mounting Bracket to the Drop-in T-bar using the two (2) M6 x 12 mm Button Head Cap Screws (I) as shown in Figure 6. Tighten Screws with 4 mm Hex Key Wrench provided.

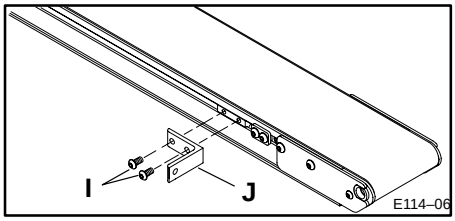


Figure 6: End Fitting Mounting Bracket Attachment Detail

g. Accurately measure distance from face of Switch Box to corresponding face of End Fitting Mounting Bracket, this is dimension "A" . Calculate Pull Cord cut-off dimension "B" by subtracting 4″ (95 mm) from dimension "A". Cut Pull Cord off at dimension "B" measured from end of Clamp assembly (on Switch Box end of Rope), as shown in Figure 7.

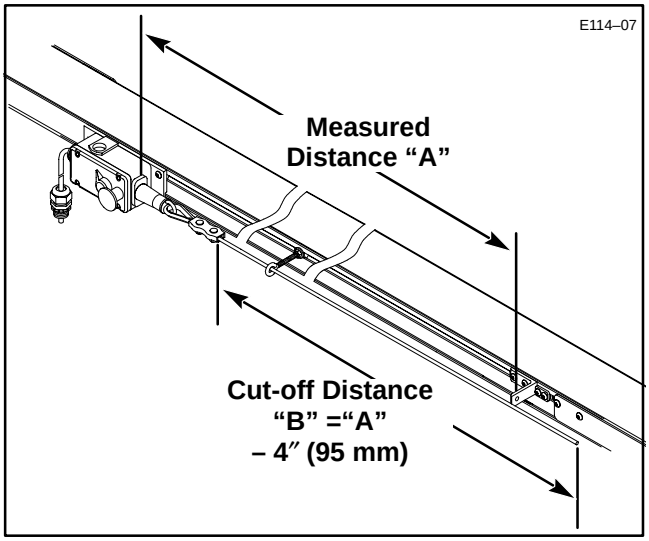


Figure 7: Pull Cord Shortening Detail

h. After correct length of Pull Cord is obtained, the Thimble and Clamp assembly can be attached to Rope and Rope can be attached to Eye of Fitting Mounting Bracket Eye Bolt in the manner shown (Figure 8).

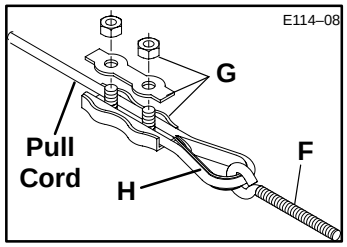


Figure 8: Pull Cord Clamp Assembly and End Fitting Mounting Bracket Eye Bolt Attachment Detail

i. Refer to Figure 9 and assemble Eye Bolt to End Fitting Mounting Bracket with hardware provided. Once Pull Cord is attached to the End Fitting Mounting Bracket, Rope tension and associated switch contact positioning must be established using the information provided under step 9 (see page 5).

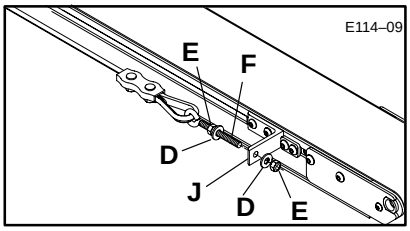


Figure 9: Pull Cord Attachment Detail

5. Route the cable from the E-Stop Box 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-Slot channel 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 wire. For additional Wire Trough information, refer to separate data sheet (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 (N) (Figure 10). Or, to completely contain a long run of cable, purchase T-slot Cover Strip (645656P) at length required.

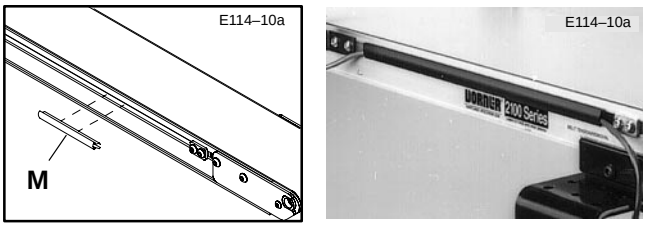


Figure 10: Closure Strip Mounting Details

d. To route Cable over a previously mounted component or to anchor the Cable, use the Zip Tie Mounts (M) and Single Drop-in T-bars, (Figure 11). Secure each Zip Tie Mount with an M6 x 10 mm Button Head Cap Screw (L). Tighten the Screws with the 4 mm Hex Key Wrench provided.

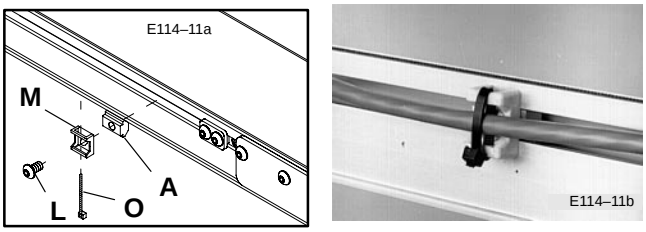


Figure 11: Zip Tie Mounting Detail

e. Figure 12 shows a typical wire routing of an E-Stop connection to an ***impac*** Conveyor Controller using the Conveyor's T-slot with both T-Slot Closure Strips and Zip Ties (O).

6. Install the Cable into the *impac* Conveyor Controller.

a. Using a flat-bladed screwdriver, remove the knock-out plug from bottom of ***impac*** Controller.

b. Remove the Locknut (Figure 14), from the Cord Grip, and insert the Cord Grip through the 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 brackets on the rear of the ***impac*** Conveyor Controller. Then, use a Wire Tie to anchor the extra Cable to the Zip Tie Mount.

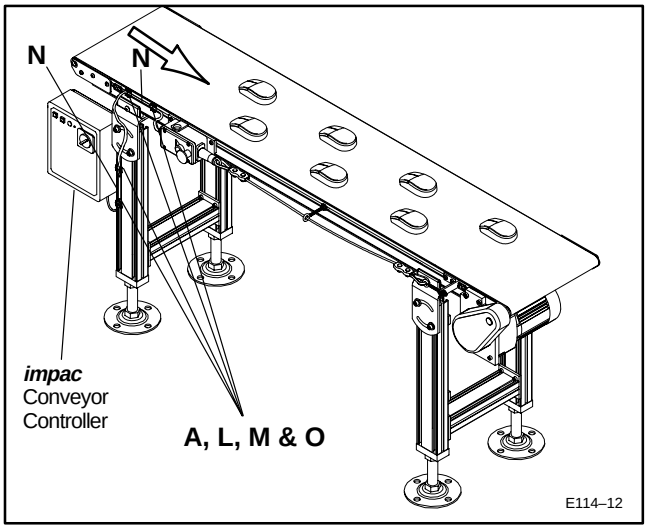


Figure 12: Pull Cord E-Stop Cable Routing to impac Conveyor Controller

7. **Label both ends of the E-Stop Cable with the blank Labels (L) provided (Figure 13), using a permanent marking pen.**
The Label should be wrapped around the Cable near the Photo-Eye 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.).

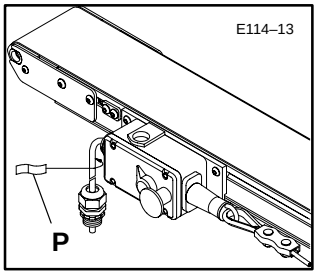
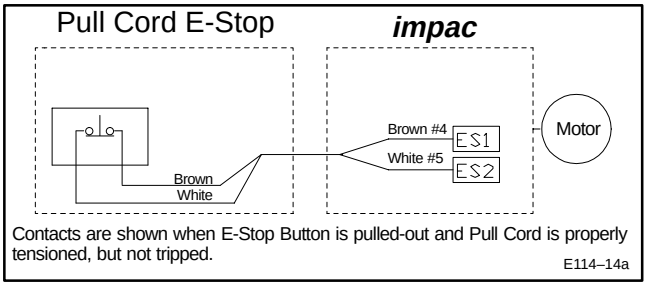


Figure 13: Cable Labeling (Detail provided only on Pull Cord E-Stop End of Cable)

NOTE:
The following connections are for a sample application that requires conveyor to stop when Pull Cord E-Stop is pulled. **Refer to the *impac* Application Guide for details on other application designs and wiring connections.** When inserting a wire into a Terminal Block, 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.

8. **Wire the E-Stop to the *impac* Conveyor Controller Terminal Block (Figure 14).**
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.
   a. Remove factory jumper from between terminals ES1 and ES2.
   b. Insert wire #4 (Brown) into the terminal ES1.
   c. Insert wire #5 (White) into the terminal ES2.
   d. Wires #2 (Black), #1 (Red) and #3 (Green) should be individually taped-off since they are not used in this application.



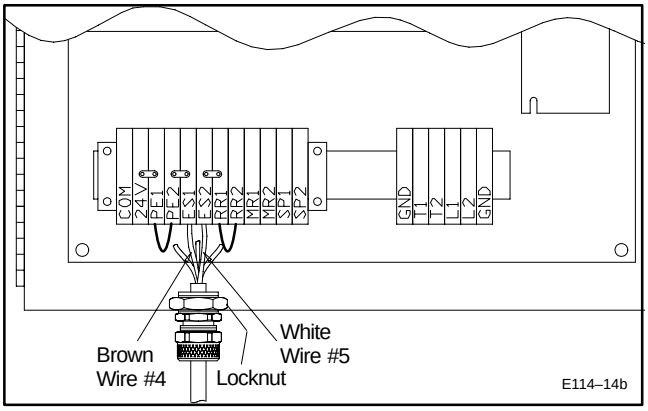


Figure 14: Sample E-Stop to impac Wiring Connections

9. Refer to Figure 15 and adjust the correct Pull Cord tension using the Eye Bolt installed through the hole in the End Fitting Mounting Bracket as follows:

WARNING

Correct and proper operation of the Pull Cord E-Stop is critically dependent upon correct Pull Cord tension adjustment. Correct Pull Cord tension establishes the crucial E-Stop Switch closed contact position.

NOTE:

To set and maintain the proper E-Stop switch contact setting, use the conveyor motor which is controlled by the ***impac*** Conveyor Controller. To make the switch contact setting, be sure that the proper wiring connections are made per the details in step 8.

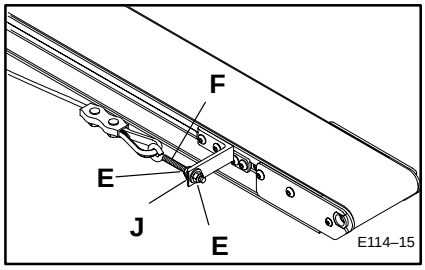


Figure 15: Pull Cord and Eye Bolt to End Fitting Mounting Bracket Attachment Detail

a. Loosen the inner Eye Bolt Nut approximately 1/2″ (13 mm).

b. Slowly rotate the outer nut clockwise, until the tension indicator mark is between the red arrows.(The tension indicator mark is viewed through the window on the switch.)

c. Turn the "RESET" knob to the "RUN" position.

NOTE:

Before the conveyor motor will start, the Reset Knob will have to be rotated from the "OFF" to the "RUN" position. Then, the switch contacts will have transferred from open to closed.

d. With the proper Pull Cord tension established, tighten the inner Nut to lock the Eye Bolt position.

10. Test 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 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 using the Pull Cord E-Stop to stop a Conveyor (Figure 16).

d. Turn ***impac*** On/Off Switch to ON and observe that conveyor runs.

e. Test E-Stop operation by pulling the Cord. When Cord is pulled, the Knob should rotate from the "RUN" position to the "OFF" position and conveyor should stop. Rotate the "RESET" knob to "RUN" to reset the switch; the conveyor should start moving.

f. After correct operation is exhibited, normal operation processes can be continued.

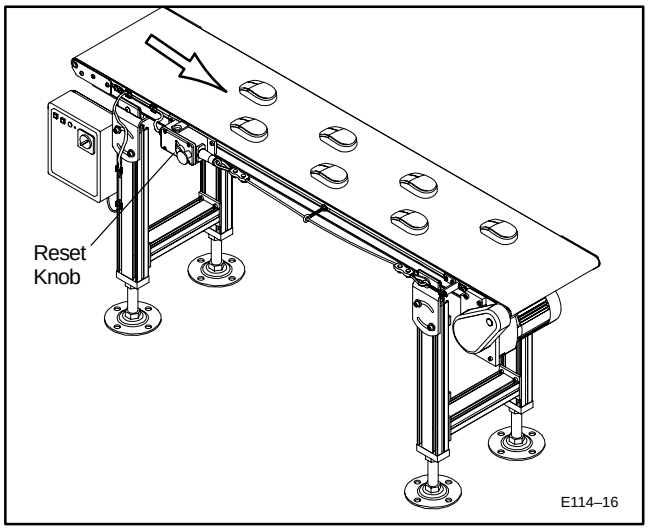


Figure 16: Sample Pull Cord E-Stop & impac Conveyor Controller

Notes

Notes

Accessory Setup & Installation Guide

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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DORNER MFG. CORP.
580 Industrial Drive, PO Box 20
Hartland, WI 53029-0020 USA
USA
TEL 1-800-397-8664 (USA)
FAX 1-800-369-2440 (USA)
Outside the USA:
TEL 1-414-367-7600, FAX 1-414-367-5827

DORNER
Arnold-Sommerfeld-Ring 2
D-52499 Baesweiler
Germany
TEL (02401) 80 52 90
FAX (02401) 80 52 93