



# Photo Eye Kits & Photo Eye Bracket Kits

Installation, Maintenance and Parts Manual



Photo Eye Kit



Photo Eye Bracket Kit

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## Introduction

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### CAUTION

**Some illustrations may show guards removed. DO NOT operate equipment without guards.**


Upon receipt of shipment:

- Compare shipment with packing slip. Contact factory regarding discrepancies.
- Inspect packages for shipping damage. Contact carrier regarding damage. Accessories may be shipped loose.
- See accessory instructions for installation.

The Dorner Limited Warranty applies.

Dorner 7400 Series conveyors have patents pending.

Dorner reserves the right to make changes at any time without notice or obligation.

Dorner has convenient, pre-configured kits of Key Service Parts for all conveyor products. These time saving kits are easy to order, designed for fast installation, and guarantee you will have what you need when you need it. Key Parts and Kits are marked in the Service Parts section of this manual with the Performance Parts Kits logo .

# Warnings – General Safety

## WARNING

The safety alert symbol, black triangle with exclamation, is used to alert you to potential personal injury hazards.

## DANGER



### SEVERE HAZARD!

**KEEP OFF CONVEYORS.** Climbing, sitting, walking or riding on conveyor will cause severe injury.

## DANGER



### EXPLOSION HAZARD!

- **DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.** The electric gearmotor generates heat and could ignite combustible vapors.
- Failure to comply will result in death or serious injury.

## WARNING

Controller must be properly grounded. Failure to properly ground controller may cause personal injury.

## DANGER



### SEVERE HAZARD!

Hazardous voltage will cause severe injury or death. **LOCKOUT POWER BEFORE WIRING.**

## WARNING



### SEVERE HAZARD!

Exposed moving parts can cause severe injury. **DO NOT ATTEMPT ADJUSTMENTS WITH CONVEYOR RUNNING. LOCK OUT POWER** before removing guards or performing maintenance.

## WARNING



### SEVERE HAZARD!

- Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.
- When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, **CHECK FOR POTENTIAL PINCH POINTS** and other mechanical hazards before system start-up.
- Failure to comply could result in serious injury.

# Product Description

## Photo Eye Kit

Refer to Figure 1 for typical components.

Typical Components	
1	Photo Eye Assembly
2	Reflector Assembly
3	M6-1.00 16mm Low Head Cap Screws (x4)
4	Drop In T-Bars (x2)

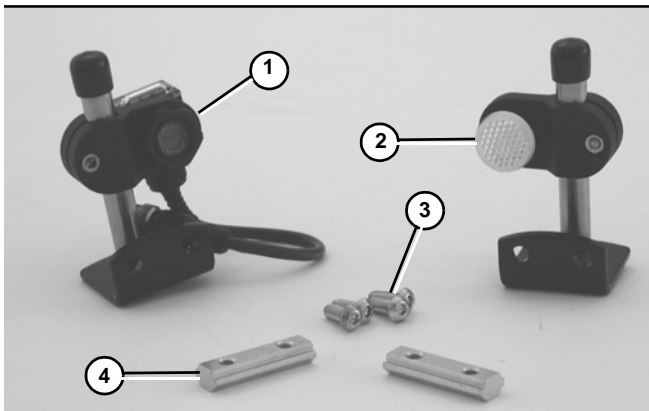


Figure 1

## Photo Eye Bracket Kit

Refer to Figure 2 for typical components.

Typical Components	
1	Photo Eye Bracket Assembly
2	Reflector Assembly
3	M6-1.00 16mm Low Head Cap Screws (x4)
4	Drop In T-Bars (x2)

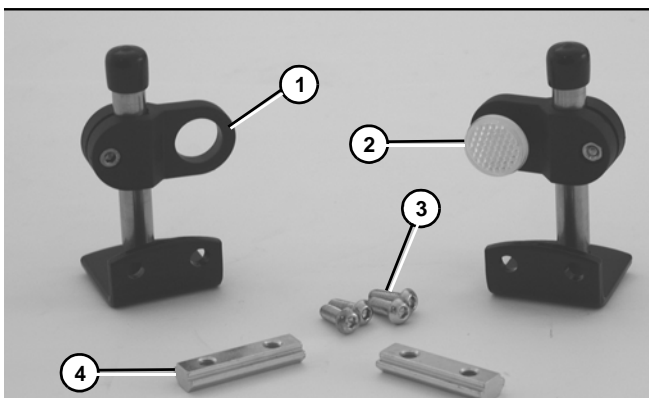


Figure 2

## Linking Cable Kit

Refer to Figure 3 for typical components.

Typical Components	
1	Cable - 4P Mirco Connect
2	Wire Ties (x3)
3	Drop In T-Bars (x3)
4	M6-1.00 20mm Low Head Cap Screws (x3)
5	Mounting Cable Ties (x3)
6	T-Slot Strip Closures (x3)
7	Hex Key

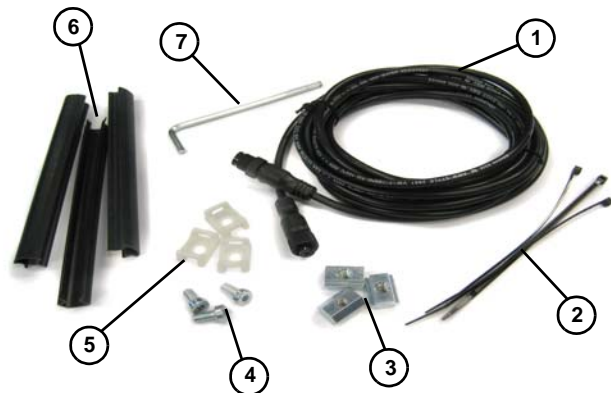


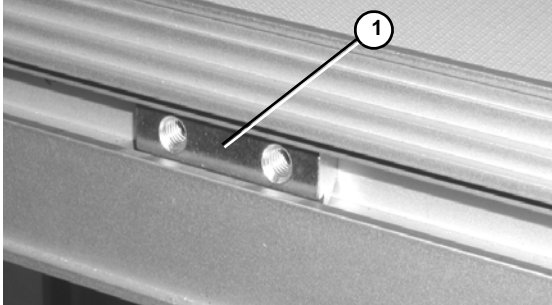
Figure 3

## Required Tools

6 mm hex head wrench

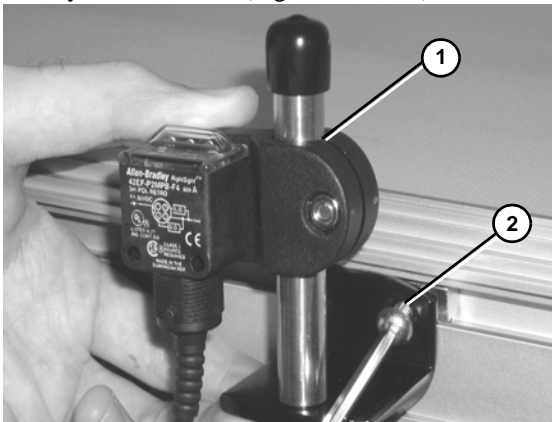
## Mounting to Conveyor

1. Install t-bars (Figure 4, item 1) into conveyors t-slot.



**Figure 4**

2. Attach photo eye assembly (Figure 5, item 1) to conveyor with screws (Figure 5, item 2).



**Figure 5**

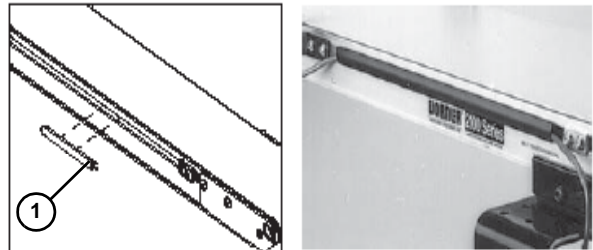
3. Slide photo eye to its desired mounting location along conveyor and tighten both screws.
4. Repeat steps 1-3 for the reflector assembly on opposite side on the conveyor.
5. Attach linking cable to photo eye assembly cable. As shown in Figure 6.



**Figure 6**

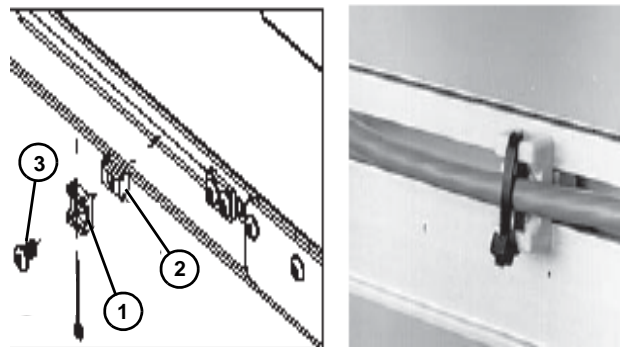
## Linking Cable Kit

1. To contain a long run of wiring cable in the conveyor t-slot, use several short lengths of t-slot strip closures (Figure 7, item 1).



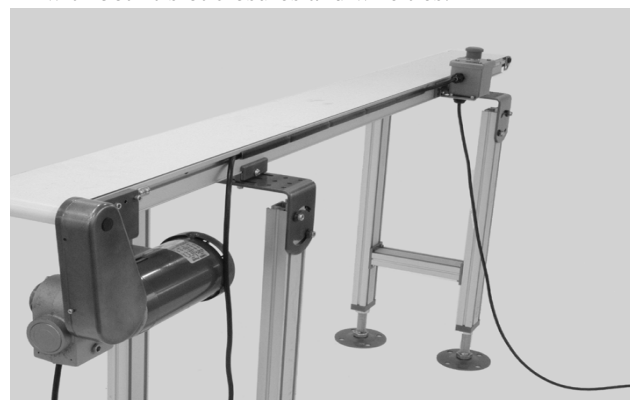
**Figure 7**

2. To route cable over a previously mounted component or to anchor the cable use the mounting cable ties (Figure 8, item 1) and single drop-in-t-bars (Figure 8, item 2). Secure with screws (Figure 8, item 3).



**Figure 8**

3. Figure 9 shows a typical wire routing or an accessory kit connection to the conveyor using the conveyors t-slot with both t-slot closures and wire ties.



**Figure 9**

# Applications

## Conveyor End Stop

Conveyor will run until the photo eye is blocked.

To create an end stop application, connect the photo eye cable (Figures 10 or 11, item 1) to the blue port (Figures 10 or 11, item 2) on the bottom of the controller.

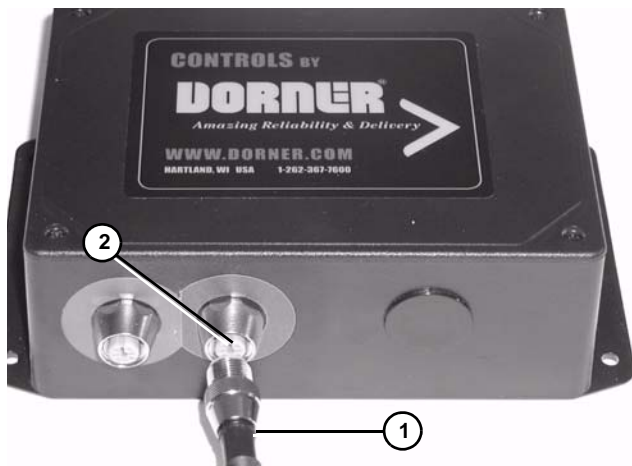


Figure 10

Single Input VFD Motor Control

## Conveyor Indexing

Conveyor is stopped and will run when the photo eye is blocked.

To create an indexing application, connect the photo eye cable (Figures 12 or 13, item 1) to the green port (Figures 12 or 13, item 2) on the bottom of the controller.

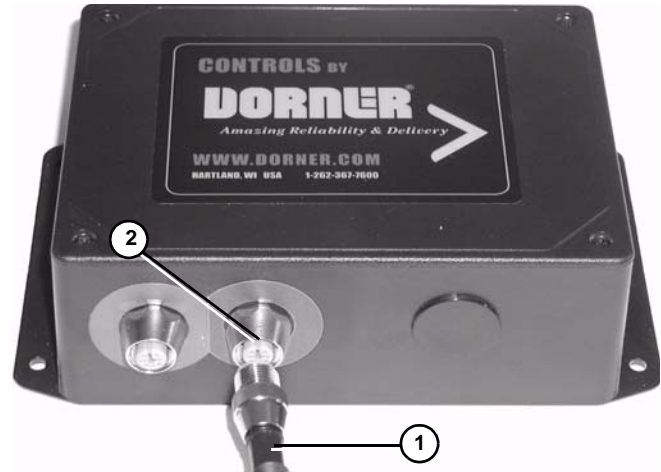


Figure 12

Single Input VFD Motor Control

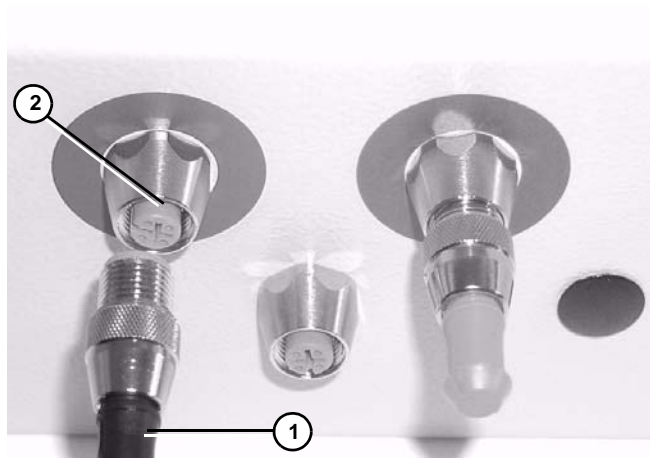


Figure 11

Dual Input VFD Motor Control

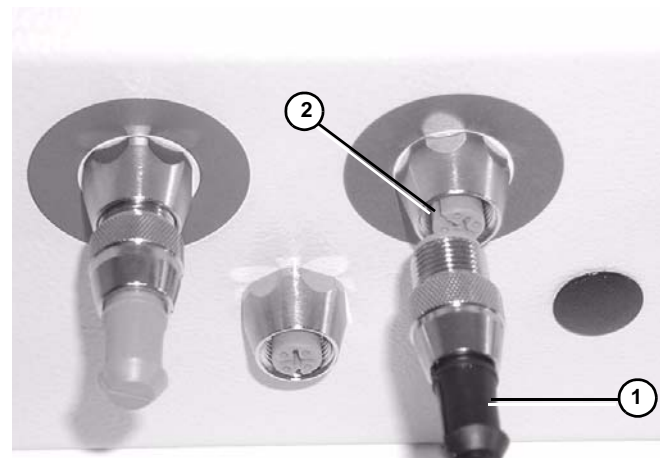


Figure 13

Dual Input VFD Motor Control

For dual input VFD Motor Controller see Motor Controls Manual 851-614 for indexing time delay adjustment options in Preventive Maintenance and Adjustment section.



## To Add Push Button “Bypass Option”

The bypass option will allow the conveyor to run while the push button is pressed independent of the photo eye.

### Single Input VFD Motor Control

1. Connect push button unused accessory port (Figure 14, item 1).

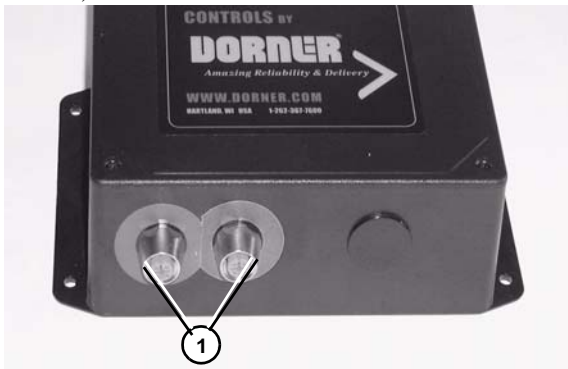


Figure 14

### Dual Input VFD Motor Control

1. Connect push button to user selectable port (Figure 15, item 1).

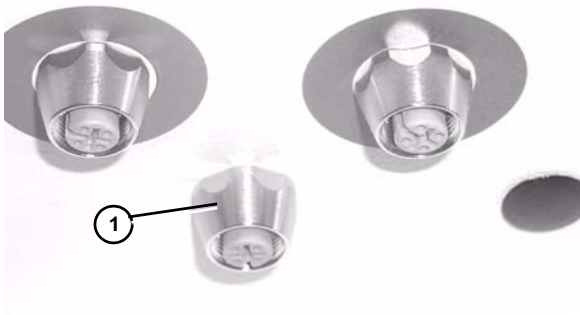


Figure 15

2. Move the internal jumper (Figure 16, item 1) to the left to bypass the device in the blue port. Move the jumper to the right to bypass the device in the green port.

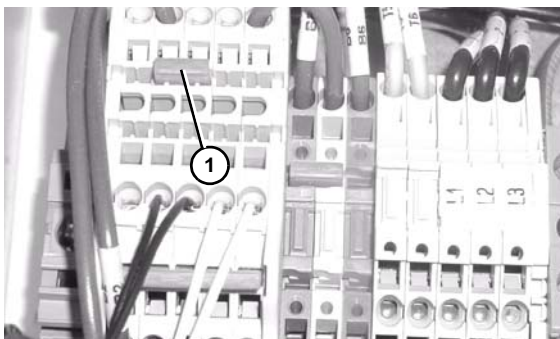


Figure 16

Jumper in the neutral position (Figure 17, item 1). The user selectable port will have no function (factory default).

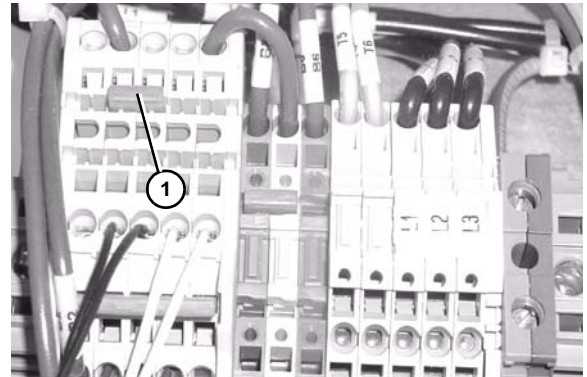


Figure 17

Jumper in the “Left” or blue port position (Figure 18, item 1). The user selectable port will function the same as the blue port.

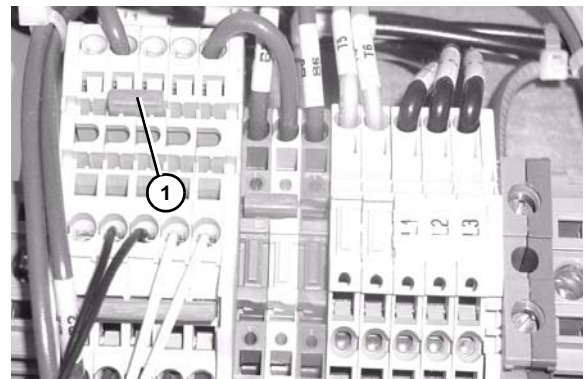


Figure 18

Jumper in the “Right” or green port position (Figure 19, item 1). The user selectable port will function the same as the green port.

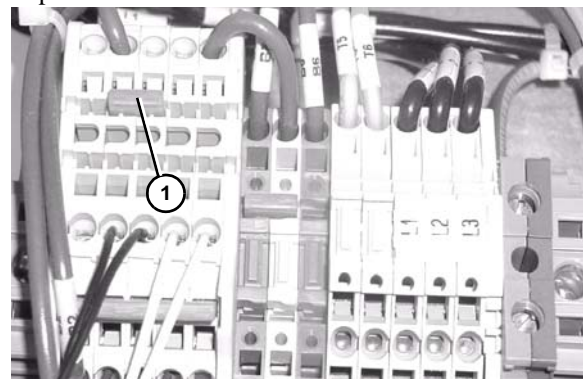



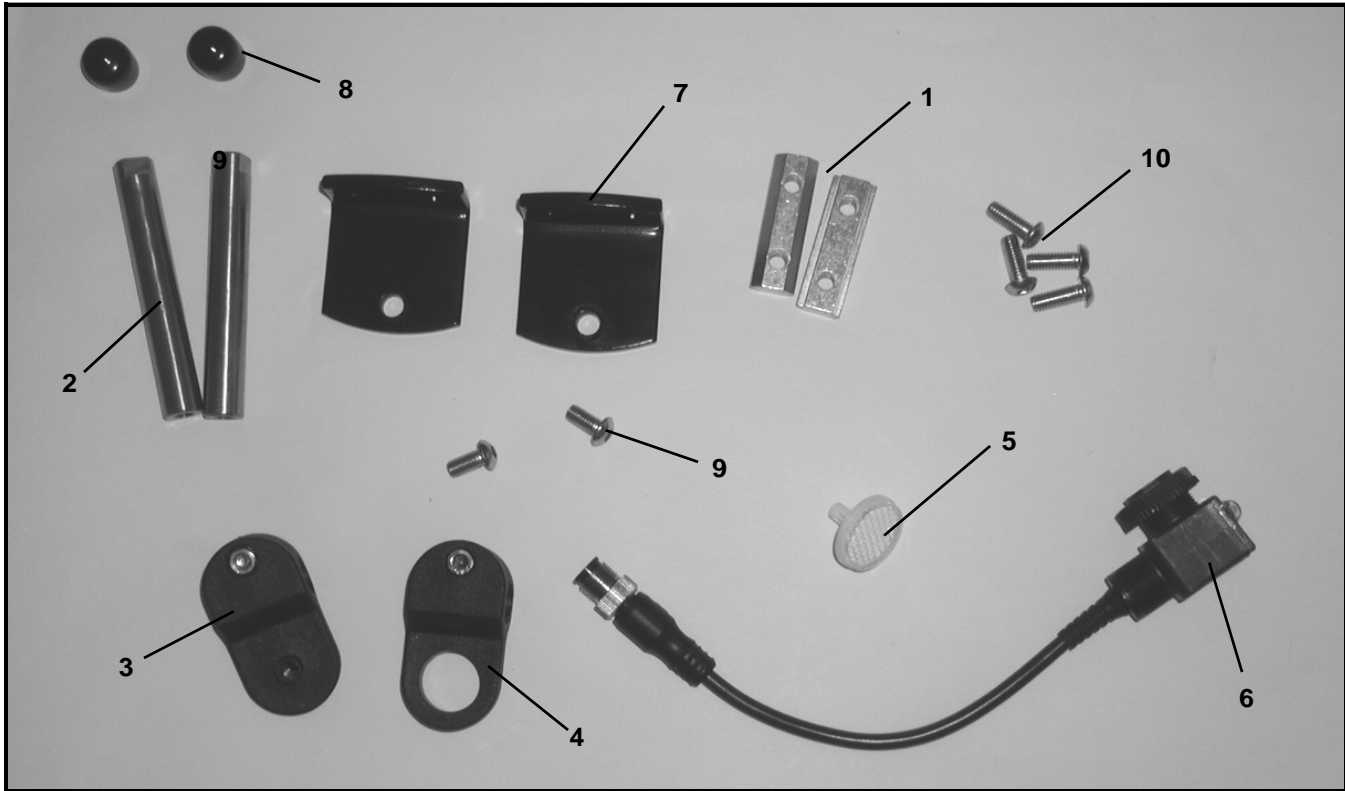
Figure 19

# Service Parts

## NOTE

For replacement parts other than those shown in this section, contact an authorized Dorner Service Center or the factory. Key Service Parts and Kits are identified by the Performance Parts Kits logo . Dorner recommends keeping these parts on hand.

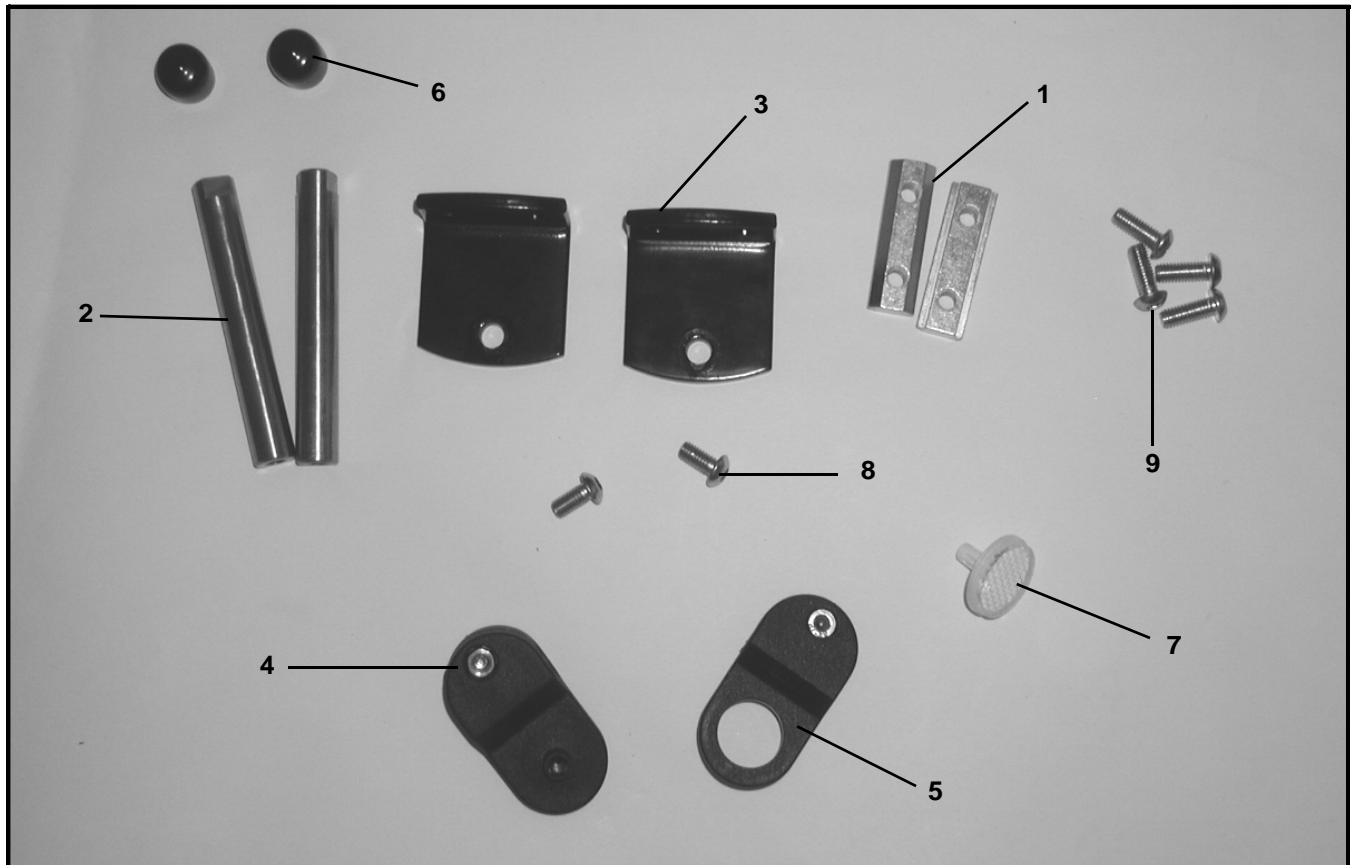
## Photo Eye Kit



Item	Part Number	Description
1	200830M	Drop-In T-Bar
2	201104	2" Mounting Sensor Shaft
	202027M	5" Mounting Sensor Shaft
3	807-1390	Reflector Mount Clamp
4	807-1391	Photo-Eye Mount Clamp
5	809-289	Reflector Sensor
6	809-315	Photo-Eye Sensor
7	202004	Mounting Bracket
8	807-948	Shaft Cap
9	920692M	Low Head Cap Screw M6-1.00 x 12mm
	920693M	Low Head Cap Screw M6-1.00 x 16mm



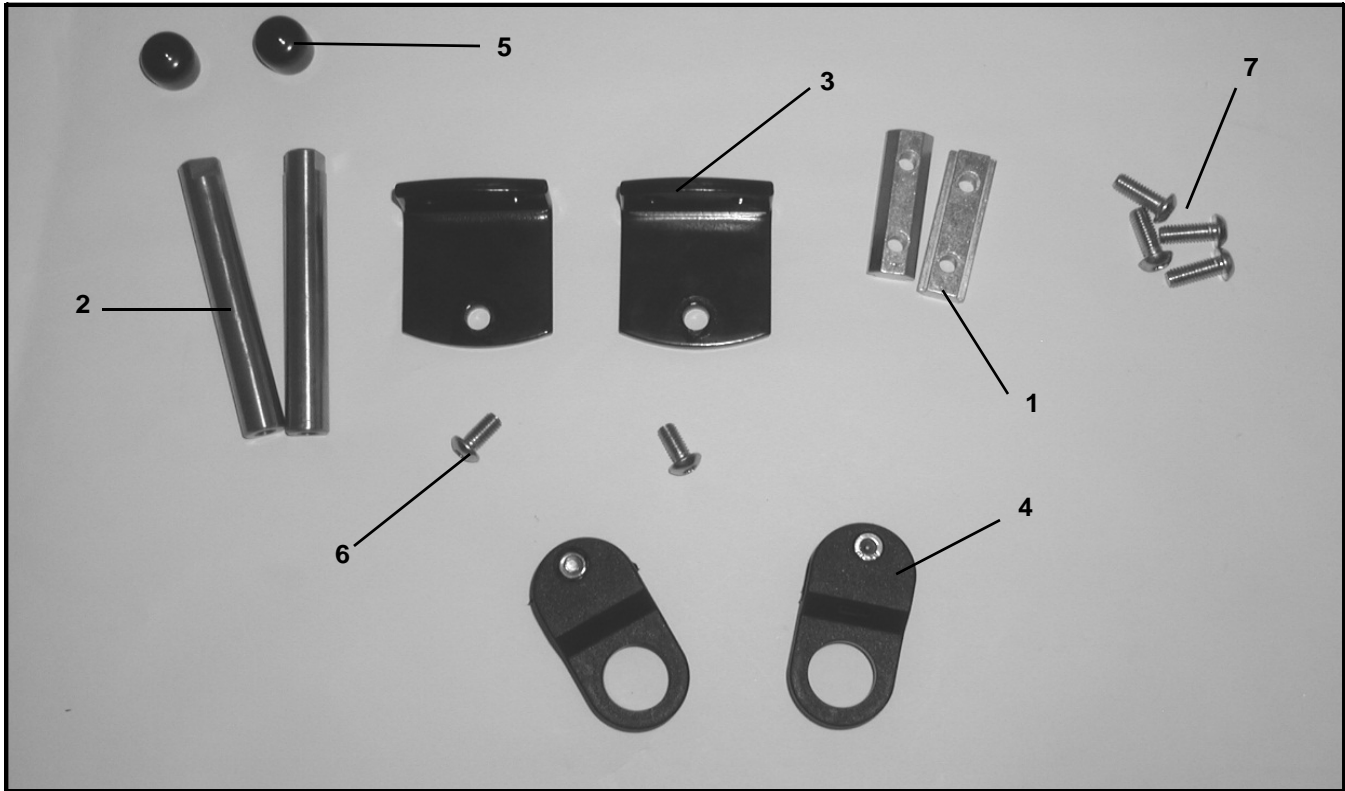
## Photo Eye Bracket Kit - Reflective



Item	Part Number	Description
1	200830M	Drop-In T-Bar
2	201104	2" Mounting Sensor Shaft
	202027M	5" Mounting Sensor Shaft
3	202004	Mounting Bracket
4	807-1390	Reflector Mount Clamp
5	807-1391	Photo-Eye Mount Clamp
6	807-948	Shaft Cap
7	809-289	Reflector Sensor
8	920692M	Low Head Cap Screw M6-1.00 x 12mm
9	920693M	Low Head Cap Screw M6-1.00 x 16mm

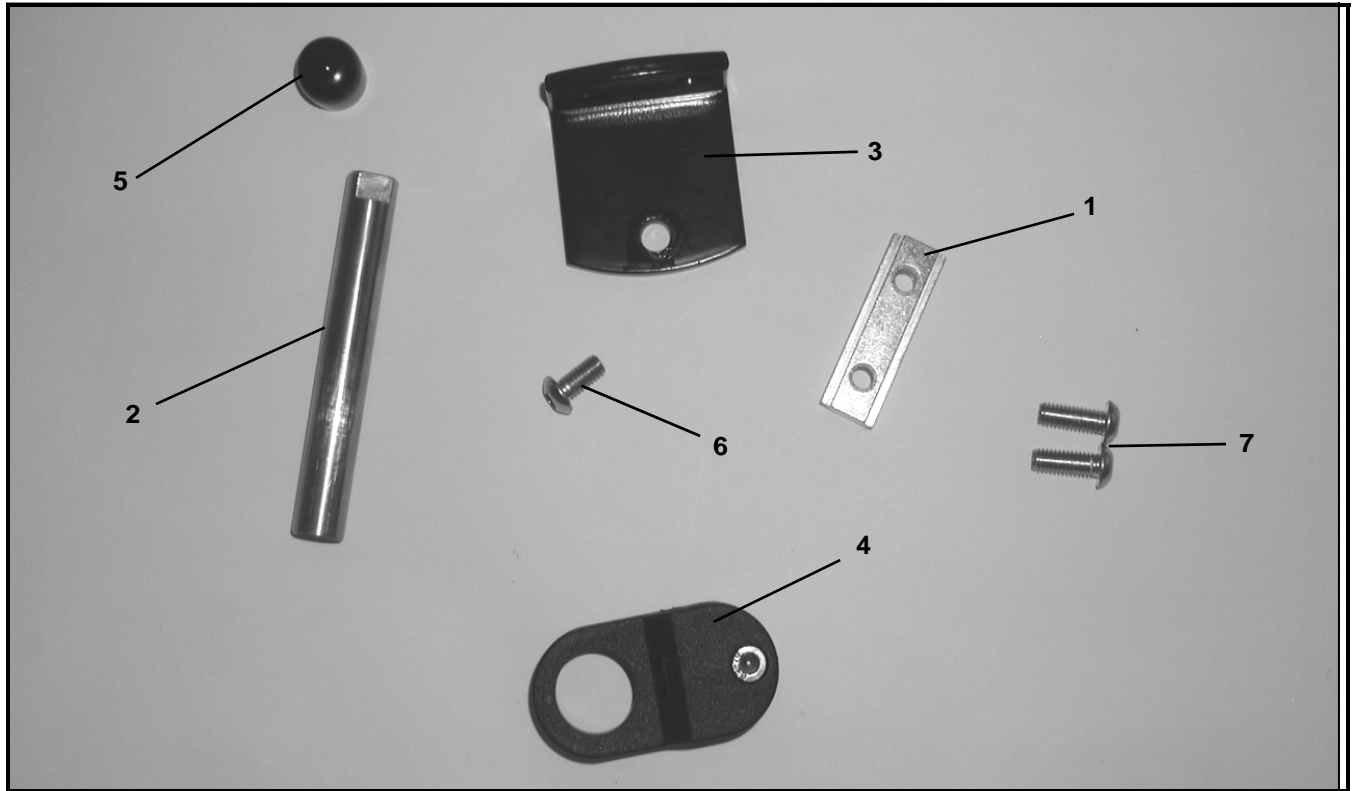
# Service Parts

## Photo Eye Bracket Kit - Through Beam



Item	Part Number	Description
1	200830M	Drop-In T-Bar
2	201104	2" Mounting Sensor Shaft
	202027M	5" Mounting Sensor Shaft
3	202004	Mounting Bracket
4	807-1391	Photo-Eye Mount Clamp
5	807-948	Shaft Cap
6	920692M	Low Head Cap Screw M6-1.00 x 12mm
7	920693M	Low Head Cap Screw M6-1.00 x 16mm

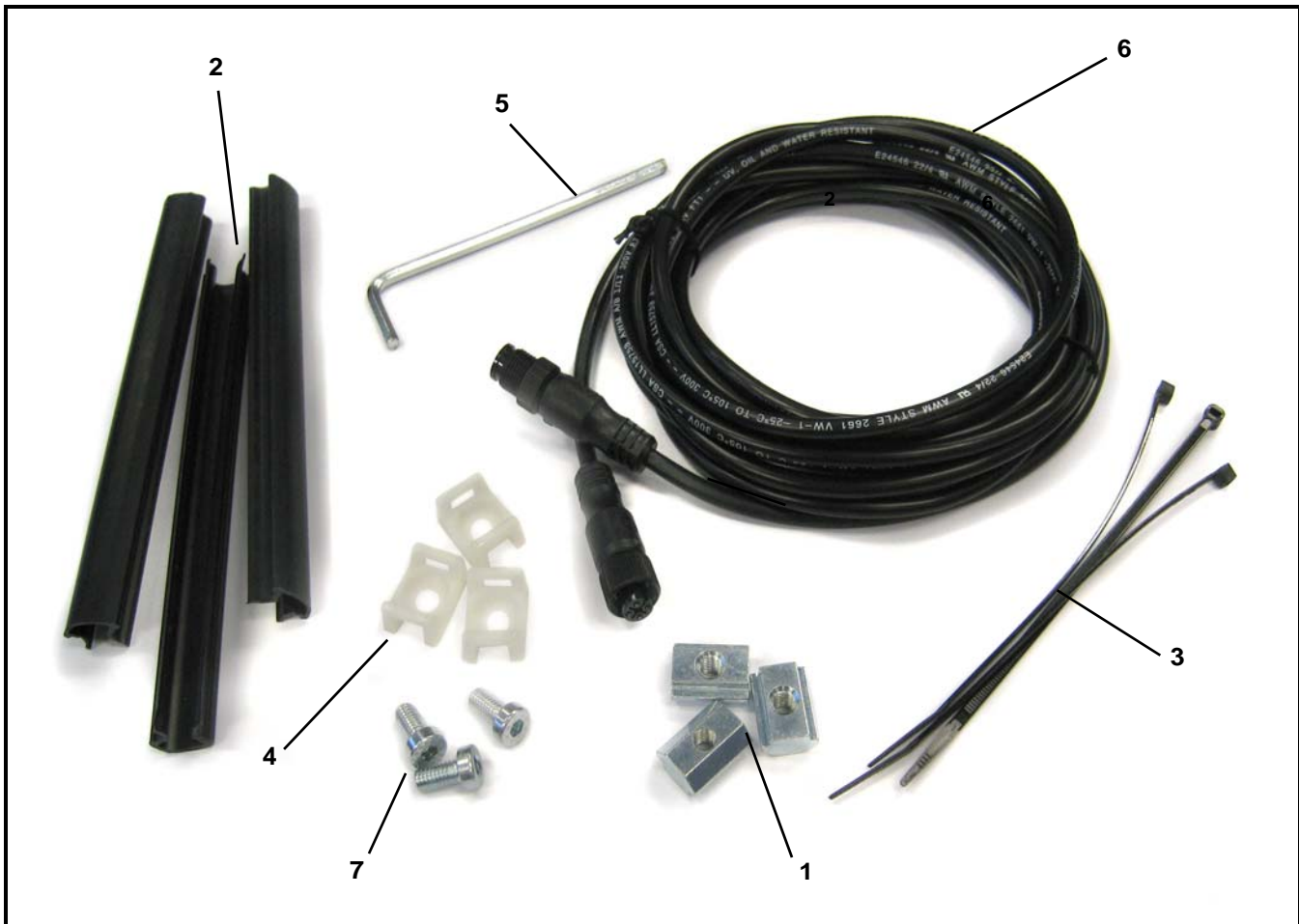
## Photo Eye Bracket Kit - Convergence



Item	Part Number	Description
1	200830M	Drop-In T-Bar
2	201104	2" Mounting Sensor Shaft
	202027M	5" Mounting Sensor Shaft
3	202004	Mounting Bracket
4	807-1391	Photo-Eye Mount Clamp
5	807-948	Shaft Cap
6	920692M	Low Head Cap Screw M6-1.00 x 12mm
7	920693M	Low Head Cap Screw M6-1.00 x 16mm

# Service Parts

## Linking Kit



Item	Part Number	Description
1	639971M	Single Drop-In T-Bar
2	675232	T-Slot Strip Closure
3	805-063	Wire Tie
4	805-608	Mounting Cable Tie
5	807-565	Hex Key
6	809-312	2 meter Cable
	809-313	5 meter Cable
7	920692M	Low Head Cap Screw M6-1.00 x 12mm





# Return Policy

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor:

1. Name and address of customer.
2. Dorner part number(s) of item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number.

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization number for reference.

There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items.

## **Conveyors and conveyor accessories**

Standard catalog conveyors	30%
MPB Series, cleated and specialty belt conveyors	50%
7400 & 7600 Series conveyors	non-returnable items
Engineered special products	case by case
Drives and accessories	30%
Sanitary stand supports	non-returnable items

## **Parts**

Standard stock parts	30%
MPB, cleated and specialty belts	non-returnable items

Returns will not be accepted after 60 days from original invoice date.

The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory.

If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Technical Sales, Catalog Sales and Service Teams will gladly help with your questions on Dorner products.

For a copy of Dorner's Warranty, contact factory, distributor, service center or visit our website at [www.dorner.com](http://www.dorner.com).

For replacement parts, contact an authorized Dorner Service Center or the factory.



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