DORNER®

Setup & Installation Guide

Motion Sensor Switches
74-02-00
74-02-01
74-02-02
74-02-03

Electrical Characteristics

Dry Contact Switch:	Provides One (1) Pulse per Revolution or Approximate 3.5″ (90 mm) of Belt Movement
Voltage (Switching): . . .	200 volts D.C. Maximum 140 volts A.C. (RMS) Maximum
Current (Switching): . . .	1.0 Amperes Maximum
(Carrying): . . .	2.5 Amperes Maximum
Wattage:	15 Watts Maximum
Resistance (Initial Contact):	0.100 Ohms Maximum
(Insulation):	10^6 Megohms
Operating Temperature: .	–55 to +125°C
Operate Time (including bounce)	0.5 Milliseconds
Maximum Switch Speed	1.0 KHz

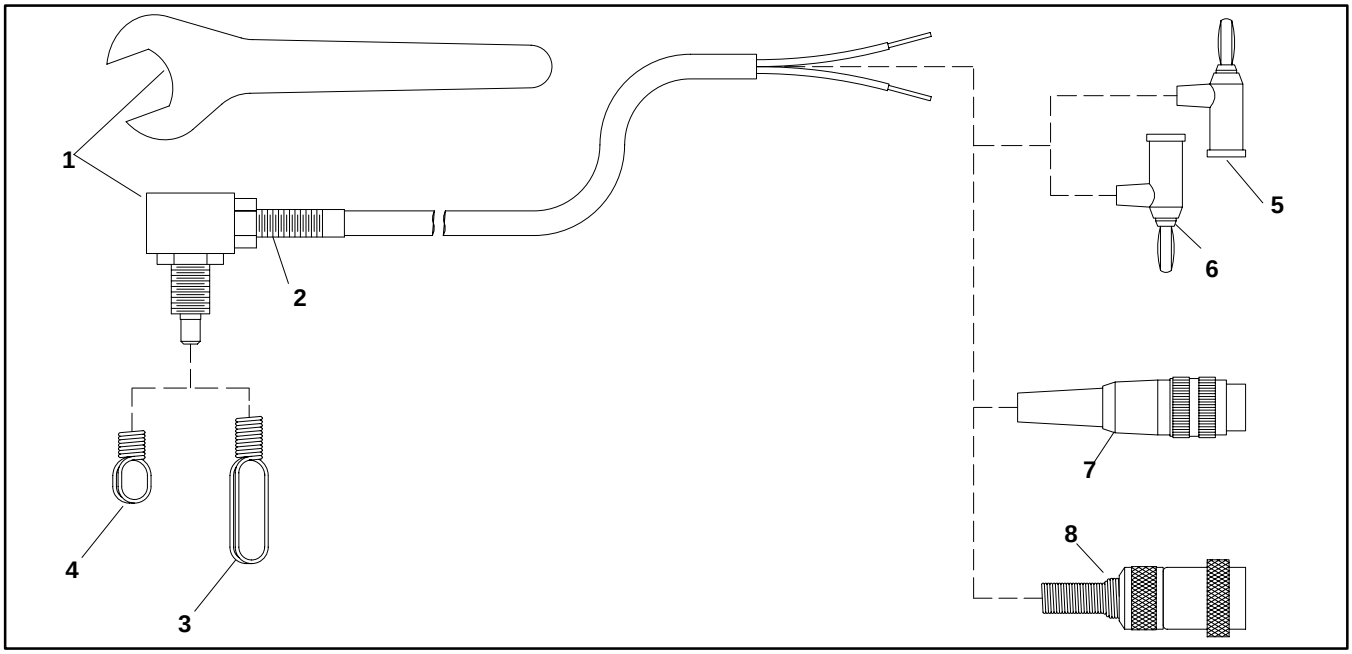

Figure 1: Components Reference Drawing (above) & Listing Table (below)

Item	Part No.	Part Description
1	673188P	Switch Body (& Mounting Wrench)
2	809-210	Reed Switch
3	673190P	Spring for 3″ (70 mm) and Wider Conveyors
4	673189P	Spring for 2″ (44 mm) Conveyor
5	805-858	Banana Plug, Black
6	805-859	Banana Plug, Red
7	805-860	Lumberg Connector
8	44-04-02	Amphenol Connector

The motion sensor switch assembly is available in any one of four (4) wire termination variations. The switch body is designed to be installed onto the idler end spindle hex broach of a 2100 or 4100 series Dorner Conveyor (Figure 2). Each assembly is shipped with the 3″ (70 mm) and wider conveyor spring (Item 3 of Figure 1) installed onto the switch body shaft. The 2″ (44 mm) wide conveyor spring (Item 4 of Figure 1) is furnished with a tag that directs “Do NOT Discard”. As necessary, remove and replace the 3″ spring with the 2″ spring, before installing switch body into idler end spindle. Proceed with the installation as follows:

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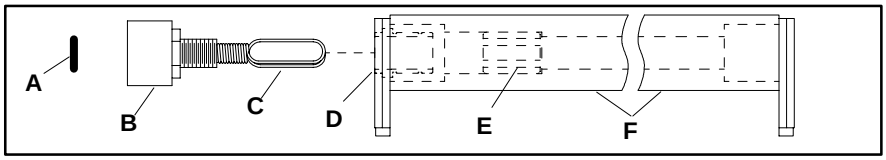


Figure 2: Installation Detail

Installation

1.. Remove and discard the cap plug (A of Figure 2) from the retaining sleeve (D).

2.. Properly position and install the switch body (B) and spring assembly (C). Insert the Spring (C), into the hex broach (E) of spindle (F), as shown.

NOTE:

On conveyors that are 5″ (153 mm) and wider, the hex broach of the spindle is offset. If hex broach is not located on side where switch needs to be mounted, the idler end spindle can be repositioned following the spindle removal information in your conveyor Parts, Assembly & Maintenance Manual.

3.. With the spring (C of Figure 2) properly engaged into the hex, align the threads of the switch body (B) with the tap in the retaining sleeve (D). Using the wrench provided (G of Figure 3), thread the body into the retaining sleeve until it is snug.

NOTE:

Do not over-tighten. When properly attached, outer switch housing (H) will rotate freely.

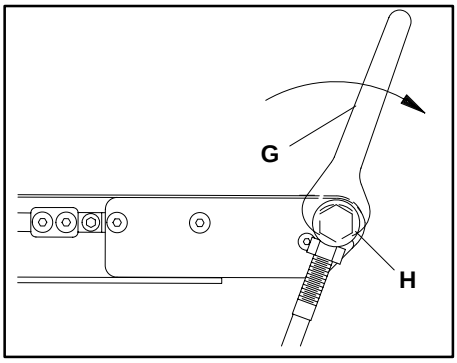
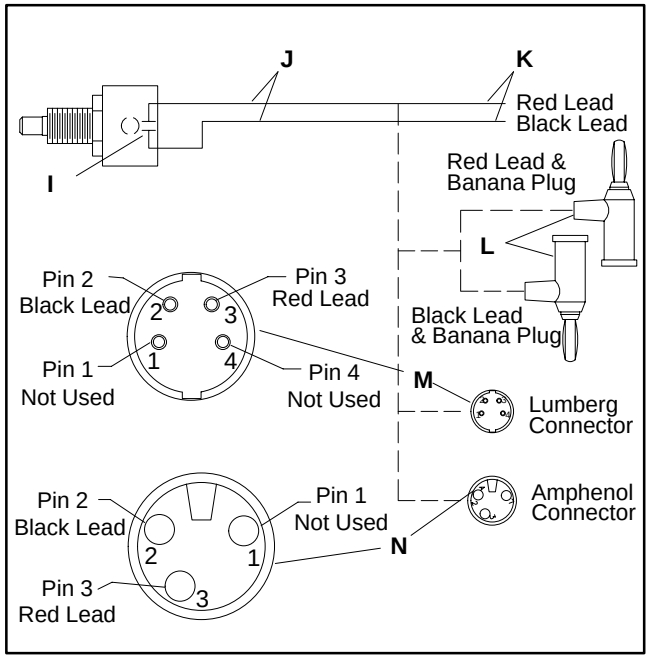


Figure 3: Switch Body Attachment Detail with Wrench

Wiring

After the switch is secured into the idler end spindle, the wiring leads (J of Figure 4), which are connected to the reed switch (I), can be routed to the machine control, PC, PLC, or Dorner Motion Monitor Control Box. The dry contacts, of the reed switch, provide 1 pulse per spindle rotation or approximately 3.5″ (90 mm) of conveyor belt movement. Refer to Figure 4 for the appropriate wire color information on your particular Kit terminations.



K Field Supplied Terminations (74-02-00 Kit)
L Banana Plugs (74-02-01 Kit)
M Lumberg Connector (74-02-02 Kit)
N Amphenol Connector (74-02-03 Kit)

Figure 4: Wiring Details

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