

Installation Instructions for the **MICRO SWITCH Momentary Cable Pull Limit Switch**

ISSUE 4
PK 81580

▲ WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.
- Failure to comply with these instructions could result in death or serious injury.

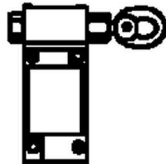
GENERAL INFORMATION

- A pull on the actuating cable will cause all switch contacts to change state: NC (normally closed) to open and NO (normally open) to close. When cable is released, switch contacts return to their original state.

SINGLE HEAD VERSION (Figure 1)

- Available basic switch options:
 - Direct acting switch contacts: 1 NO 1 NC.
 - Snap action switch contacts: 1 NO 1 NC. (NC circuit does not meet requirements for positive break and is not electrically isolated from the NO circuit.)
- Head may be positioned in any of four directions.

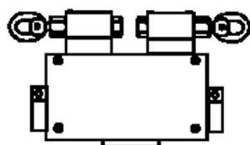
Figure 1: Single Head Version



DUPLEX HEAD VERSION (Figure 2)

- Primary basic switch (left side of switch):
 - Direct acting switch contact: 1 NC.
 - Auxiliary contact: 1 NO.
- Auxiliary Basic Switch (right side of switch):
 - Four options available.
- Heads may be positioned in any of three directions, allowing actuating cables to run in opposite directions or at right angles to one another.

Figure 2: Duplex Head Version



AUXILIARY CONTACTS

- Used for monitoring or signaling, i.e., indicators, pilot lights and alarms.

MAXIMUM ACTUATING CABLE LENGTH

- Depending upon variations in ambient temperature, maximum cable length in a single direction is 200 ft. (60 m) for a total of 400 ft. (120 m).

OTHER AVAILABLE FEATURES

- Conduit openings and indicator/pilot light options.
- Hardware kits and cables for various length installations.

Figure 3: Typical Single Head Switch Installation

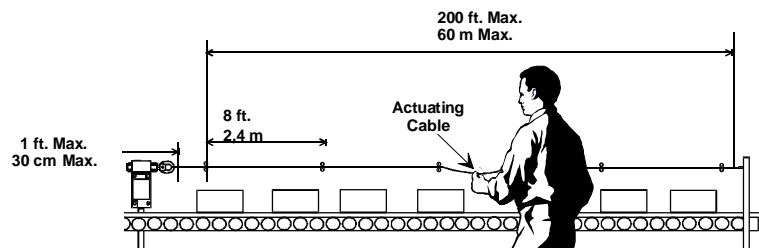
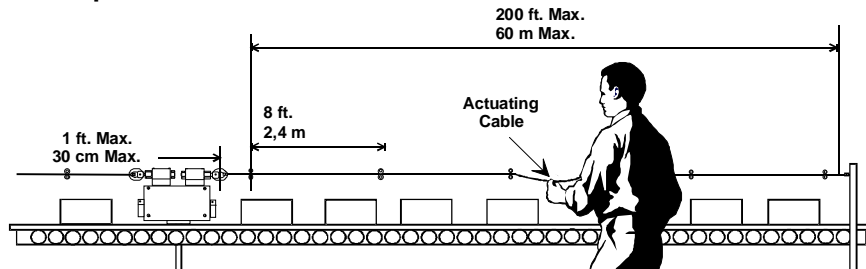


Figure 4: Typical Duplex Head Switch Installation



SWITCH MOUNTING, WIRING AND SEALING

Step 1 - Ensure you have the following:

- Switch.
- (2) #10-32 UNF screws.
- #14-#22 AWG solid or stranded wire (for single head).
- #14-#16 AWG stranded or #16-#18 solid wire (for duplex head).

Step 2 - Mount switch:

CAUTION

SWITCH DAMAGE

Do NOT mount switch upside down or at low point of conduit runs. Condensation problems may develop. Failure to comply with these instructions may result in product damage.

- Single head: Mount using (2) #10-32 UNF screws from either front or back of switch. Ensure a minimum of four threads of engagement. Torque to 43-52 in.-lb (4.9-5.9 N-m).
- Duplex head: Mount using (2) #10-32 UNF screws through mounting feet on left and right of switch enclosure. Ensure a minimum of four threads of engagement. Torque to 43-52 in.-lb (4.9-5.9 N-m).

Step 3 - Wire switch:

- Connect stranded or solid wire to switch's pressure type connector terminals. (Refer to circuit diagram on switch housing. Diagram depicts switch contacts when cable is at proper tension.) Torque terminal screws and ground screw to 7-9 in.-lb (0.8-1 N-m).

Step 4 - Seal conduit connection:

- Seal with Teflon tape or pipe dope. If connector is used to secure cable to enclosure, torque connector to 16-19 in. lb (1.8-2.2 N-m).

ACTUATING CABLE INSTALLATION

Step 1 - Ensure you have the following (Figures 3 and 4):

- Plastic coated aircraft cable 1/8 in. (3,18 mm) to 3/16 in. (4,76 mm) dia. Use a distinctive color, such as red, to differentiate actuating cable from other wires or cables in the area.
- Thimbles, U-bolt clamps.
- Cable supports (eyebolts).

Step 2 - Attach cable to switch:

- Ensure cable is fully seated and tightly fitted in thimble groove.
- Attach using two U-bolt clamps. U-bolt clamps should be installed as close as possible to thimble.
- Tighten U-bolts to 4.5 in.-lb. (0,51 N-m) for 1/8 in. (3,18 mm) cable and 7.5 in.-lb. (0,85 N-m) for 3/16 in. (4,76 mm) cable.

Step 3 - Install cable supports:

CAUTION

SWITCH DAMAGE

Do NOT allow excessive side loads that could bend the switch operating shaft. Failure to comply with these instructions may result in product damage.

- Install a cable support as close as practical to end of shaft without interfering with switch operation.
- If cable tension adjusting turnbuckle is in mid-span of cable, the first cable support should be in line with, and no further than, 12 in. (30 cm) from the end (eye) of the shaft. If adjusting turnbuckle is attached directly to shaft eye, this distance may be increased to 18 in. (46 cm).
- Support cable at intervals no greater than 8 ft. (2,4 m).

OPTIONAL CABLE TENSION (Figures 5 and 6)

The actuating cable does not need to be under tension. A small amount of slack is permissible. If cable tension is desired, install a turnbuckle (see Actuating Cable installation, Step 2). Use jam nuts to maintain adjustment.

⚠ WARNING

IMPROPER INSTALLATION

Do NOT install turnbuckle too closely to cable supports or other barriers that may hinder proper operation. Failure to comply with these instructions could result in death or serious injury.

- Increase cable tension until the switch operating shaft just starts to move out of its guide bushing. The cable is now under proper tension.
- If desired, an endspring may be attached in the same manner as the turnbuckle.
- Periodically check and adjust cable tension as necessary.

OTHER ADJUSTMENTS

To reposition operating head, loosen the four captive screws, place head in desired position. Securely tighten the four screws to 12-16 in.-lb (1,36-1,80 N-m).

RECOMMENDED REPLACEMENT

Replace entire switch every 100,000 operations.

Figure 5: Single Head Version with Turnbuckle

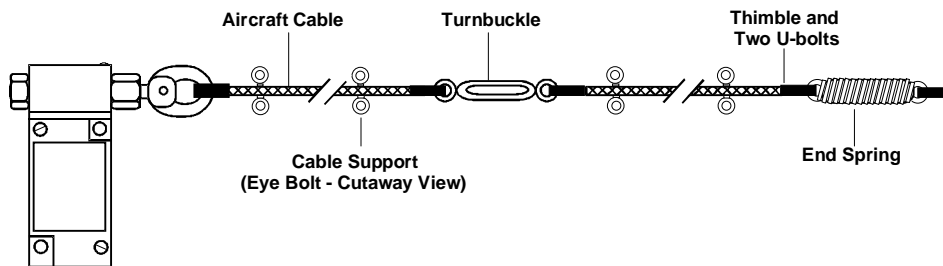
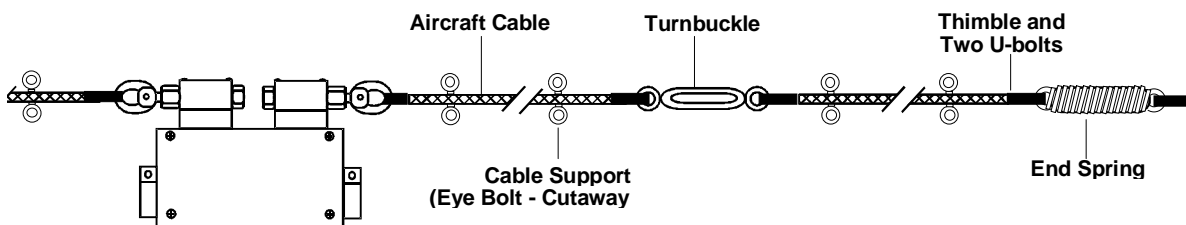


Figure 6: Duplex Head Switch with Turnbuckle



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WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective material and faulty workmanship. Commencing with date of shipment, Honeywell's warranty runs for 18 months. If warranted goods are returned to Honeywell during that period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, express or implied, including those of merchantability and fitness for a particular purpose.**

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