Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to strictly follow all instructions may result in DEATH or SERIOUS INJURY. Before servicing, shut down and physically LOCK-OUT the conveyor system. Disconnect power before servicing.

**TOOLS NEEDED**
- Adjustable wrenches
- 7/16 and 1/2” wrenches
- 3/32” hex wrench (included)
- Various mounting hardware as needed per customer application

**PARTS INCLUDED**
- Electric drill
- Tape measure
- Pencil, marker or scribing tool

**INSTALLATION**

**WARNING!** Failure to strictly follow all instructions may result in DEATH or SERIOUS INJURY. Before servicing, shut down and physically LOCK-OUT the conveyor system. Disconnect power before servicing.

**STEP 1 OVERVIEW:** The model TA-M-TPS is a heavy-duty limit switch commonly used to aid the positioning of the “tripper” on a conveyor with multiple discharge points or discharge chutes. Each control consists of an aluminum housing with a heavy-duty acetal roller. The roller is adjustable up to 90° in both directions. The microswitch actuation points are adjustable from 0° to 45° by a simple change of the actuating cam(s). The model TA-M-TPS is furnished in general purpose construction only. Epoxy coated housings are available.

**MANUAL RESET:** The unit will positively lock out the microswitches once it has been tripped to approximately 30° in either direction. This unit requires manual reset before the system can be restarted. To reset this unit, the tripper equipment must be realigned to clear it from the device. While gently pulling on the roller arm to release tension on the lockout pin, pull out on the reset ring, located on the opposite side of the housing from roller arm. Once the lock pin has been disengaged, gently return the roller arm to its normal position. Then, release the manual reset ring. The unit is now ready for operation.

**STEP 2 ROLLER POSITION AND ACTUATION SETUP:**

a. The quantity of Model TA-M-TPS tripper position controls required will vary for each conveyor system. Either a single unit or a pair of units can be used depending on the arrangement of the shuttle conveyor.

b. The microswitch(es) can be wired to trigger a warning signal or be connected directly to the motor starter circuit to stop a conveyor.

c. The control unit should be mounted on supports so that the roller is positioned perpendicular to the tripper mechanism and positioned to intercept the roller at its midpoint. The roller center is approximately 5.94” (151 mm) high, and the point of interception should be at or above this point.

d. Field wiring must meet or exceed the requirements of the National Electrical Code and any other agency or authority having jurisdiction over the installation. Conduit fittings must meet applicable UL/CSA standards.

The Model TA-M-TPS is shipped with the switch cam(s) centered with the roller arm. During the installation, the switch cam and the roller arm should be re-positioned to ensure switch actuation at the desired roller position. Note: check set and reset points with a continuity tester. Microswitch hysteresis will affect the reset points when working with minimal or small, tight amounts of roller travel (deflection).
STEP 2 CONTINUED:

1. Roller Position: Use a 1/2" wrench to loosen the roller clamp and pivot the roller so that it is in the preferred standby position. Tighten the roller clamp.

2. Switch Cam Adjustment: Lock out all power to the switch unit and remove the cover. Use the 3/32" hex wrench provided to loosen the #10-32 set screws on the switch cam.

3. The cams may be set for non-directional indication, where both microswitches actuate in either roller direction. The two switch cams can be positioned independently as desired (See Figure 1). Optionally, the cams may be set for bi-directional indication, where one microswitch actuates with roller movement in one direction and the second microswitch actuates in the opposite direction (See Figure 2).

4. Pivot the roller to the desired position for microswitch actuation.

5. Adjust the cam in the same direction, as the roller will move until the microswitch trips, then tighten the set screw.

6. Pivot the roller to the desired position for second trip point if needed. Adjust the second cam as in step 5.

WIRING:

To properly wire to the microswitches on the Model TA-M-TPS, avoid contact with the microswitch levers and other moving parts inside the enclosure.

Note: TWIST WIRES TOGETHER BEFORE INSERTING UNDER SCREW TERMINAL. (ENROULEZ LES FILS ENSEMBLE AVANT LES INTRODUIRE DANS LA BORNE.)

Figure 1: Cams set for non-directional indication

Figure 2: Cams set for bi-directional indication

Figure 3: SP/DT 2-MICROSWITCH SCHEMATIC

Figure 4: DP/DT 2-MICROSWITCH SCHEMATIC
**TECHNICAL INFORMATION:**

1. Individual Switch Contact Ratings:
   - Note: Special units with gold plated microswitch contacts rated 0.1 Amps at 125 VAC are available upon request.
2. Conduit opening: 3/4" NPT, quantity: 1
3. Actuating Arm:
   - Roller is acetal with stainless steel roller shaft on a zinc-plated steel arm.
   - Roller arm travel is 90° from vertical in both directions.
4. External Hardware: Stainless Steel (shaft holder arm zinc-plated steel).
5. Operating Temperature: -50°C to 65°C (-58°F to 104°F)
   - Manual Reset models are not available in Hazardous Locations enclosure types.

<table>
<thead>
<tr>
<th>Table 1: Contact Information</th>
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<tbody>
<tr>
<td>SP/DT switches:</td>
</tr>
<tr>
<td>20 Amps, 125/250/480 VAC</td>
</tr>
<tr>
<td>10 Amps, 125 VAC Inductive</td>
</tr>
<tr>
<td>1 hp, 125 VAC</td>
</tr>
<tr>
<td>2 hp, 250 VAC</td>
</tr>
<tr>
<td>½ Amp, 24 VDC</td>
</tr>
<tr>
<td>½ Amp, 125 VDC</td>
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<tr>
<td>¥Amp, 250 VDC</td>
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</tbody>
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**WIRE ROUTING:**

To properly wire to the microswitches on the Model TA-M-TPS, route incoming wires over the shaft and microswitches. Avoid contact with the microswitch levers and other moving parts inside enclosure.

For DP/DT microswitches, use hand crimp tool 0640014100 or crimp head 0640054100 for AT-200 pneumatic hand tool to attach insulated, flag quick-disconnects to wires.

**Figure 5:** Terminal Identification SP/DT

**Figure 6:** Terminal Identification DP/DT

**Figure 7:** Wire Routing Path
**Figure 8: Dimensions and Mounting**

- 6 in [152 mm]
- 1 3/8 in [35 mm]
- 1 3/8 in [35 mm]
- Ø13/32 in [10 mm] 3 Places
- 3 7/8 in [98 mm]

**Figure 9: Dimensions and Roller Travel**

- Cover Screws: 6 Places
- 7/16 in [11 mm] Wrench Size
- 3/4 in [19 mm]
- 2 7/16 in [62 mm]
- 2 1/2 in [63 mm]
- 6 3/4 in [171 mm]
- 63/8 in [171 mm]
- 2 3/4 in [70 mm]
- 1 5/8 in [41 mm]
- 7/8 in [22 mm]
- 3/4 in [19 mm]
- 2 1/2 in [63 mm]
- 6 3/4 in [171 mm]