

- Keeps damage costs due to belt misalignment low by ensuring properly aligned belt.
- Highly visible red epoxy coated roller of 1-1/4" diameter with nylon bushings.
- Cast aluminum housing and optional cast iron housings available.
- Allows for shut down along entire belt length.



Description

The Model TA Conveyor Belt Alignment Switch protects conveyor belts from damage due to belt misalignment or runoff. These controls are used in pairs with one switch placed on each side of the conveyor belt. Each unit can be equipped with two limit switches to produce signals indicating belt misalignment at two deviation points. The first signal point could indicate small belt deviation by sounding an alarm. The second signal point could guard against extreme belt runoff by shutting down the conveyor. Each control consists of an aluminum housing with a red epoxy coated roller. The roller is adjustable up to 90° in both directions and is positioned approximately 1" from the conveyor belt. The switch actuation points are adjustable from 0° to 45° by a simple change of the actuating cam(s). The model Model TA can be furnished with general purpose or explosion-proof construction. Cast iron and epoxy-coated housings are also available. The output contacts of the Model TA can control up to two separate circuits, one for machinery shutdown and one for an alarm. The TA is a conveyor belt protection system that saves the time, money, process downtime and product loss associated with replacing a damaged conveyor belt.

Principle of Operation

The Model TA works to ensure the proper alignment of conveyor belts. Typically, to ensure that adequate coverage is provided, four units are installed on the conveyor. Two Units are installed at the head and tail of the conveyor to make sure the belt has sufficient coverage. When Conveyors are longer than 1500 Ft. it is recommended that an additional four units are used on the belt to ensure that the entire length of conveyor belt is being monitored. The red epoxy coated roller moves up to 90° to provide the required angle of alarm for the TA. The limit switches are programmed to alarm at a given angle so there can be a warning angle for slight misalignment and a shutdown angle for extreme misalignment of belts. These units can be made with either one or two limit switches depending on facility preference.



Application photo of a set of TA-1 Units



Product Specifications

Model TA specifications	
Weight	12-13 Lbs. (Models Vary)
Environment	
Certified Ambient Temperature	-40 °C to +65.5 °C [-40°F to 150°F]
Enclosure Material	319 cast aluminum (optional cast iron)
Enclosure Rating (UL)	NEMA Type 4/5 -7/9
Mounting	3 holes at Ø 13/32" (Surface mount)
Switch	
Switch Type	SPDT 1 or 2
Contact Type	Dry Contact
Contact Rating	20A @ 480V max AC; 10A, tungsten @ 125 V AC; 1 hp 125V AC; 2 hp 250V AC; ½ A @ 125V DC; ¼ A @ 250V DC
Electrical Action	Non-latching
Electrical Connection	¾" NPT x 1
Actuator	
Type	Belt alignment control
Mechanism	Sprung roller lever with rotating cam
Non-activated Position	Field adjustable neutral position 0° to 360°
Activated Position	Field adjustable: 0° to 45° from neutral (roller travel is not bound by the activation limit)
Range of Travel	Bidirectional 0° to 90° from neutral
Cable Length	100' on each side
Action	Non-latching
Options	
Finish	Uncoated(standard or (epoxy coating, option E)
Roller Material	Nylon Bearings with red powder coated Steel Roller (standard option)
	Nylon bearings with red powder coated stainless steel roller (option SS)
	Heavy-Duty ball bearings with red powder coated steel roller (option BB)

Specifications subject to change without notice.

Product Certification

Standard	Class	Division	Group(s)
UL 508	N/A	N/A	N/A
CSA 3211-06	N/A	N/A	N/A

Ordering

Model #	Part Number	Description
TA-2	800-002000	2 (SP/DT) Microswitches*
TA-5	800-002200	2 (DP/DT) Microswitches*
TA-2X	800-002100	2 (SP/DT) Microswitches**
TA-5X	800-002300	2 (DP/DT) Microswitches**
TA-2D	800-002600	2 (SP/DT) Microswitches***
TA-5D	Call Sales	2 (DP/DT) Microswitches***

*GENERAL PURPOSE NEMA TYPE 3S, 4, 4X, & 5

**EXPLOSION PROOF NEMA TYPE 7: Class I (Div. 1 & 2), Groups C & D; Type 9: Class II (Div. 1 & 2), Groups E, F & G

***DUAL RATED NEMA TYPE Type 3S, 4, 4X, 5; Type 9: Class II (Div. 1 & 2), Groups E, F & G

Complete System Includes

- Pairs of Model TA -1/2 Units

Common Applications Typical Industries

- | | |
|---------------------|-----------------|
| • Conveyors | • Grain |
| • Production Lines | • Manufacturing |
| • Assembly Lines | • Mining |
| • Material Handling | • Construction |

Additional Information

For more information about the Model TA, please contact us at:

Email: sales@electro-sensors.com

Tel: (800)328-6170

Fax: (952)930-0130

We also have more information online at:
www.electro-sensors.com

