

# AFA and AFAX Conveyor Belt Alignment Switches

Post Style or Large Roller Style.

**NEC/CEC — AFAX Series:**  
Class I, Division 1 and 2, Groups C, D  
Class II, Division 1 and 2, Groups E, F, G  
Class III  
NEMA 7CD, 9EFG

**NEC/CEC — AFA Series:**  
NEMA 3, 4, 4X, 12

## Applications

- Emergency stop switch for conveyer or lines and bulk handling systems which become misaligned or run off their tracks due to excessive speed, uneven load, leveling, breakage or other problems.
- Used where alarm or computer interface capabilities are needed.
- Used in the control circuit of magnetic motor starters to shut down motor driven conveyors in case of abnormal belt misalignment or run-off.
- For installation in:
  - Steel mills
  - Mining (ore and coal) handling operations
  - Automotive and other assembly lines
  - Warehouses
  - Loading docks
  - Other industrial processes.
- AFAX Series is used in Class I and II areas where flammable vapors or highly combustible dusts are present.
- AFA Series has a gasketed cover rated for NEMA 3, 3R, 4, 4X.
- Unit is used in pairs with one switch placed on each side of the conveyor belt. Recommended installation locates switches near the tail and head pulleys on conveyors 91.44 meters (300 feet) and longer.

## Features

- AFA10, AFA20, AFAX10, AFAX20:
  - Each unit can be equipped with two micro switches to produce signals indicating belt misalignment at two deviation points.
  - The first signal point could indicate small belt deviations by sounding an alarm.
  - The second signal point could guard against extreme belt runoff by shutting down the conveyor.
  - Operating arm has 247.65 mm (9.75") high and 31.75 mm (1.25") diameter roller and moves 90 degrees in both directions.
  - 3/4" NPT standard conduit opening.
  - Spring loaded arm returns to original position when belt is realigned.
- AFA1, AFA2, AFAX1, AFAX2:
  - Roller is 3.5" high and actuates with 0.25" travel.
  - Unit should be mounted about 1" from belt to eliminate false signals.
  - Operating temperatures are -40 °C to +65 °C (-40 °F to +149 °F).
  - One 1/2" NPT standard, conduit opening.

## Standard Materials

- AFA10, AFA20, AFAX10, AFAX20:
  - Housing: cast aluminum
  - Actuating arm contains: red epoxy coated steel roller with stainless steel shaft
  - Hardware: stainless steel
- AFA1, AFA2, AFAX1, AFAX2:
  - Steel coated with enamel paint

## Standard Finishes

- Standard enclosure: peened



**AFA1, AFA2, AFAX1, AFAX2**  
Large Roller Style



**AFA10, AFA20, AFAX10, AFAX20**  
Post Style (No Accessories)

## Options

- Epoxy powder coated switches for AFA10, AFA20, AFAX10 and AFAX20 add suffix **-G1**.
- AFA1, AFA2, AFAX1, AFAX2:
  - Breakaway mounting bracket: **AFABMB**.
  - Breakaway mounting bracket with switch: **AFABMBS**.
  - Breakaway mounting bracket with explosionproof switch: **AFABMBSX**.

## NEC/CEC Certifications and Compliances

- UL Standards: UL 508, UL 698
- UL Listed: E10449
- CSA Standards: C22.2 No. 14M, C22.2 No. 25, C22.2 No. 30
- CSA Certified: 700921

CONTROLS: NEC/CEC EXPLOSIONPROOF CONVEYOR SWITCHES

Appleton®

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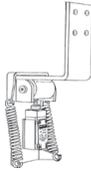
Post Style

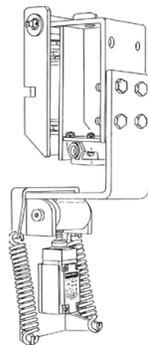


Large Roller Style

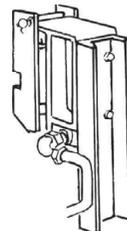
	Classification	Switch Quantity/Description	Switch Rating	Catalog Number
	NEMA 3, 4X	1 – sp/dt	1	<b>AFA10</b>
	NEMA 3, 4X	2 – sp/dt	1	<b>AFA20</b>
	NEMA 7: Class I; Groups C, D	1 – sp/dt	1	<b>AFAX10</b>
	NEMA 9: Class II; Groups E, F, G	2 – sp/dt	1	<b>AFAX20</b>
	NEMA 3, 4X	1 – sp/dt	1	<b>AFA1</b>
	NEMA 3, 4X	1 – dp/dt	2	<b>AFA2</b>
	NEMA 7: Class I; Groups C, D	1 – sp/dt	3	<b>AFAX1</b>
	NEMA 9: Class II; Groups E, F, G	1 – dp/dt	2	<b>AFAX2</b>

## Breakaway Mounting - AFA1, AFA2, AFAX1, AFAX2 Accessories

	Classification	Switch Description	Description	Catalog Number
		Designed especially for high speed conveyors. This new feature allows the switch to perform its job of shutting down the system, but automatically moves it out of the way if a high speed belt does run off before stopping. Automatically returns to unactuated position when belt is realigned.		<b>AFABMB</b>
	NEMA 1, 3, 4X, 13	1 – sp/dt 10 Amp	Dust and weathertight	<b>AFABMBS</b>
	NEMA 7: Class I; Groups C, D NEMA 9: Class II; Groups E, F, G	1 – sp/dt 10 Amp	Explosionproof	<b>AFABMBSX</b>



Switch Mounting with Breakaway Mount



Typical Application

### Switch Electrical Ratings:

1. 20 Amp at 125, 250 or 480 Vac; 1 HP at 125 Vac; 2 HP at 250 Vac; 1/2 Amp at 125 Vdc; 1/4 Amp at 250 Vdc.
2. 10 Amp at 125 or 250 Vac; 0.3 Amp at 125 Vac; 0.15 Amp 250 Vdc.
3. 10 Amp at 125, 250 or 480 Vac; 1/2 Amp at 125 Vdc; 0.15 Amp 250 Vdc.

