

MODEL BM-2 BELT MISALIGNMENT SWITCH



Model BM-2



**SAVE MONEY BY REDUCING
DOWNTIME AND MAINTENANCE
COSTS!**

The **Model (BM-2) Belt Misalignment** switches are conveyor safety accessories designed to alarm and/or shut down conveyor systems in the event of a conveyor belt misalignment. The heavy duty rugged design makes them suitable for most industrial applications, requiring long-term reliable equipment. The action of a belt misalignment switch can save you money by reducing downtime and maintenance costs.

Robust die cast aluminum housing with epoxy based powder coat finish and all stainless steel external hardware.

The **Model BM-2 Belt Misalignment Switch** is designed to prevent damage to belts and equipment due to a misalignment condition of the conveyor belt. They are normally located 1-6 feet from the head and tail pulley on both sides of the belt with the roller arm positioned approximately 1 inch from the normal belt position. If the belt begins to wander, it makes contact with the roller arm causing it to spin. As more force is applied to the roller arm it will rotate away from the normal position and at 10° it will actuate the first alarm SPDT micro switch. The first micro switch will annunciate the alarm condition to the control system so corrective action can be taken. If the belt continues to track off it will cause the roller arm to rotate from its 10° position to the 20° position, which will activate the second alarm SPDT micro switch. This second micro switch is wired into the motor starter of the conveyor belt to shut it down. The BM-2 switches will allow you to reduce downtime and maintenance associated with belt tracking problems.

SPECIFICATIONS

MODEL BM-2 BELT MISALIGNMENT SWITCH

- Rugged die cast aluminum enclosure
- NEMA-4X, IP-66/67
- Yellow epoxy based powder coat paint finish with red roller arm
- Micro switch Rating: 15A @ 115-230 VAC, 30 VDC non-inductive
- Outputs: (2) SPDT (one alarm, one shutdown)
- Actuation Angle: 10° and 20° from normal
- Conduit Holes: (2) 3/4" - 14 NPT
- Temperature Rating: -45° to 176° F (-42° to 80°C)
- Rugged design for belt speeds to 1200 FPM
- Bi-Directional action for ease of installation, wiring and component savings
- Cover provides easy access to wiring & internal mechanism
- Two (2) position alarm sequence for preventing costly shutdowns

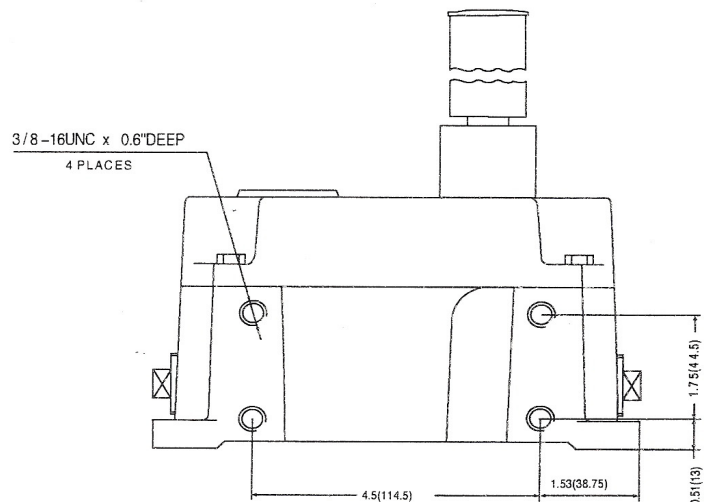
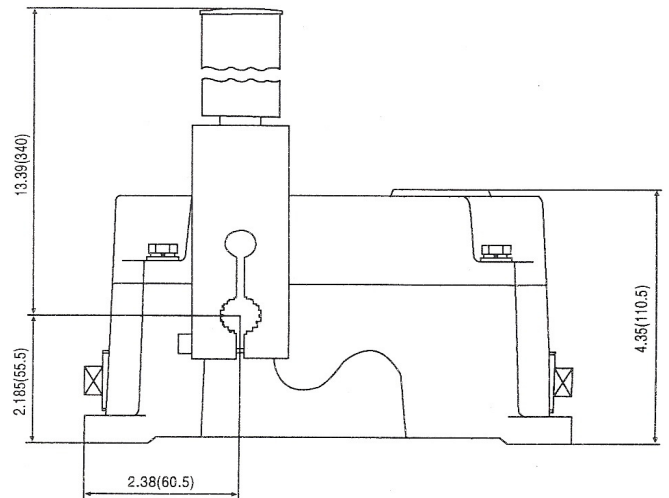
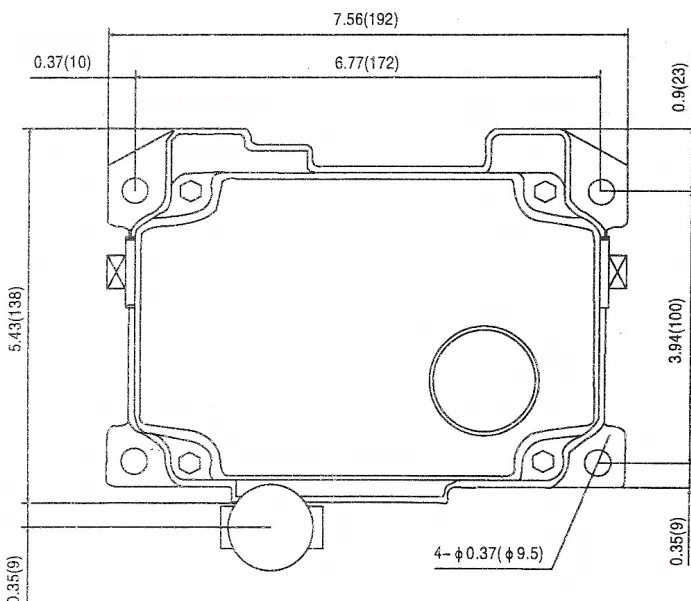
OPTIONS:

- Indicating Lights
- Manual Lock Out
- Adjustable Angle

CE Approvals for Safety:

- Meets Electrical Safety IEC 60204-1: 2005-10
IEC 60947-1: 2004-03
- Meets Mechanical Safety IEC 60204-1: 2005-10
- Meets Functional Safety IEC 60204-1: 2005-10
- Meets Outdoor/Noise/
Vibration IEC 60529: 2001-02

All Dimensions in Inches (Millimeters)



MODEL BM-3 BELT BELT MISALIGNMENT SWITCH



MODEL BM-3

The **Model BM-3 Belt Misalignment Switch** detects conveyor belt misalignment. Two (2) micro switches can trigger an alarm or conveyor shutdown to protect the conveyor belt from damage when belt drift occurs.

When the belt runs off center, the roller arm will be deflected from its normal vertical position and at a preset angle activates the first micro switch which can output an alarm. When the belt further displaces the roller arm at a preset angle, the second micro switch will be activated to shut down the conveyor before damage can occur to the belt or plant.

The BM-3 belt misalignment switches are usually installed in pairs on both sides of the belt and positioned at a distance between 1- 6 feet from the head or tail pulley. Typically, it can be mounted on the top or bottom of the conveyor stringers with the actuating arm trained 1-3 inches away from the outside edge of the belt.

Features:

- Universal mounting, usually at the top or the bottom of the conveyor belt stringer.
- Robust die cast aluminum housing with epoxy based powder coat finish and all stainless steel external hardware.
- Integral cover, permits easy access to the wiring terminals and adjustments.
- Easily removed cover without the requirement of removing the roller arm.
- Roller arm bearings rated to 5000 RPM, suitable for belt speeds up to 1250 FPM.
- Normal roller arm angle adjustment within ± 22.5 degrees.
- Bi-directional roller actuating arm suitable for installing on both sides of the conveyor.
- Provides an alarm when the roller actuating arm moves 10 degrees and shutdown with an actuating angle of 20 degrees.

SPECIFICATIONS

Model BM-3, Belt Misalignment Switches Technical Specifications

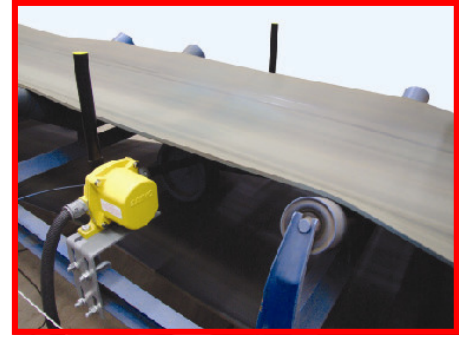
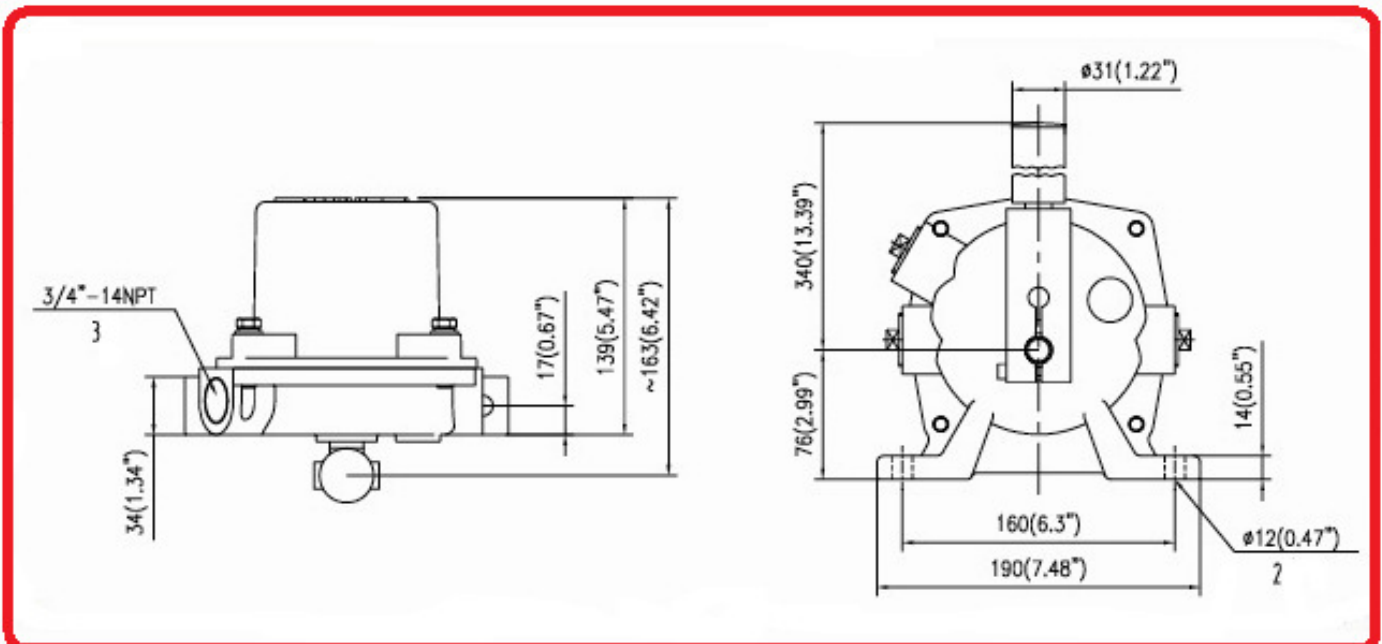
- Rugged die cast aluminum enclosure
- NEMA-4X, IP-66/67
- Yellow epoxy based powder coat paint finish with red roller arm.
- Micro switch rating: 15A @ 115-230 VAC, 30 VDC non-inductive, CSA 10A @ 115-250 VAC
- Outputs: (2) SPDT (one alarm, one shutdown)
- Actuation angle: 10° and 20° from normal
- Conduit holes: (3) 3/4" - 14 NPT
- Temperature rating: -40° to 176° F (-40° to 80°C), CSA -22°F to 140°F (-30° to 60°C)
- Rugged design for belt speeds to 1200 FPM
- Bi-Directional action for ease of installation, wiring and component savings
- Cover provides easy access to wiring & internal mechanism
- Two (2) position alarm sequence for preventing costly shutdowns

Options

- Indicating Lights
- Manual Lock Out
- Adjustable Angle

Outline Dimensions

All Dimensions in Millimeters (Inches)



Applications:

- Conventional Belt Conveyors
- Shuttle Conveyors
- Ship Loading/Unloading Systems
- Stockpile/Reclaim Systems
- Cranes, Shovels and Drag Lines
- Apron Feeders
- Weigh Belt Feeders
- Heavy Duty Switch



Hazardous Approval Rating (model BM-3X)

- Class 2258-02-Process Control Equipment-For Hazardous Locations.
- Class 2258-82-Process Control Equipment-For Hazardous locations-Certified to U.S. Standards.
- Approved for Class II, Div. 1 & 2, Groups E, F & G Hazardous Locations
- NEMA-9