

# MODEL BD-3 BELT DAMAGE DETECTOR

**BulkPro**  
SYSTEMS L.L.C.

CE

CSA  
C US



Model BD-3



**Belt Damage Detector (BD-3)** switches are conveyor safety accessories designed to interlock with conveyor shut down systems in the event of a damaged belt. This simple system will shut down the conveyor belt and protect you from costly repairs and downtime due to belt damage.

### Features:

- Simple, reliable construction requiring no maintenance
- Easy installation
- Corrosive resistant yellow finish
- Integral cover, allows for easy access to wiring and adjustments
- Large capacity switch contacts
- Only 4 lbs of force will trigger the micro switches.
- CE Approved
- CSA US Approved, Class II, Div. 1 & 2, Groups E, F & G.

The **Model BD-3** is designed to shutdown a conveyor system, in the event of belt damage. It warns supervisory personnel of impending belt failures due to rips, punctures, splice failures and sharp objects protruding through the belt carcass. Belt damage detectors are mounted in pairs positioned on both sides of the moving conveyor belt. The units are connected by two spans of aircraft cable. One end of the cable mounts permanently to a support bracket and the other connects to a spring loaded ball located on the detector. The aircraft cables loop underneath the belt from each side crossing at the midpoint. A belt problem is detected when an object or piece of damaged belt hangs below the belt surface and sweeps away one or both cables. As the cable is detached, it pulls a spring loaded ball out of a socket, causing two micro switches to trip. One for annunciation to a PLC or alarm system and the other to shut down the conveyor belt lessening the potential damage and downtime that will be caused without this type of detection.

# SPECIFICATIONS

## Model BD-3 Belt Damage Detector

- Rugged die cast aluminum enclosure
- NEMA-4X, IP-66/67
- Yellow epoxy based powder coat paint finish with red actuator arm
- Micro switch rating: 15A @ 115-230 VAC, 30 VDC non-inductive, CSA 10A @ 115-250 VAC
- Outputs: (2) SPDT
- Actuation force: 4lbs
- 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)
- Weight: 12 lbs.
- Cover provides easy access to wiring & internal mechanism
- Safety actuator arm for ease of visual indication
- Manual reset is required

### Options:

- Safety Air Craft Cable
- Cable Clamps



### 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

### SP US Hazardous Approval Rating (model BD-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

### Outline Dimensions

#### All Dimensions in Millimeters (Inches)

