

- Monitor Belt Integrity
- Provides Easy Belt Shutdown
- Seperate shutdowns for alarm and belt
- Provides safety to personnel
- Prevent destructive belt failures



Description

The DBD100 is an economical and easy to install monitoring device that guards your conveyor systems. The DBD100 works to warn personnel of impending belt failure. Common causes of belt failure are rips, punctures, splice failures, or sharp objects protruding through the belt fabric. The protection offered by the DBD100 is a must for facilities using conveyor belts. When you compare the average cost of a failed conveyor belt to the cost of installing a damaged belt detector you can see that one belt failure would cost the facility more than the installation of a monitoring system to safeguard your equipment. These units are relatively maintenance free, they can be wired normally open or closed. When you think about facility safety consider a damaged belt detector to protect your investment.

Common Applications

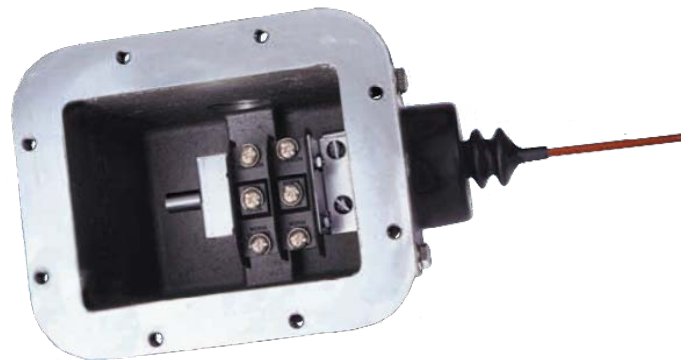
- Belt Monitoring
- Personnel Safety

Typical Industries

- Grain
- Mining
- Agriculture
- Production & Assembly

Principle of Operation

The damaged belt detector operates using a spring-loaded ball and socket connected to two plunger type microswitches. As an object hanging below the belt sweeps away the cable, it pulls the ball connector from its socket. The 4 lb pressure needed to set off the alarm is sufficient to detect belt splicing, yet strong enough to ensure that accidental stoppage does not occur. Micro sensors within the device are triggered which in turn sets off an alarm to notify personnel that an event has occurred on the Conveyor belt. In addition to the alarm feature of the DBD100 it also provides a means to shut down the conveyor.



**Top View of the DBD100*

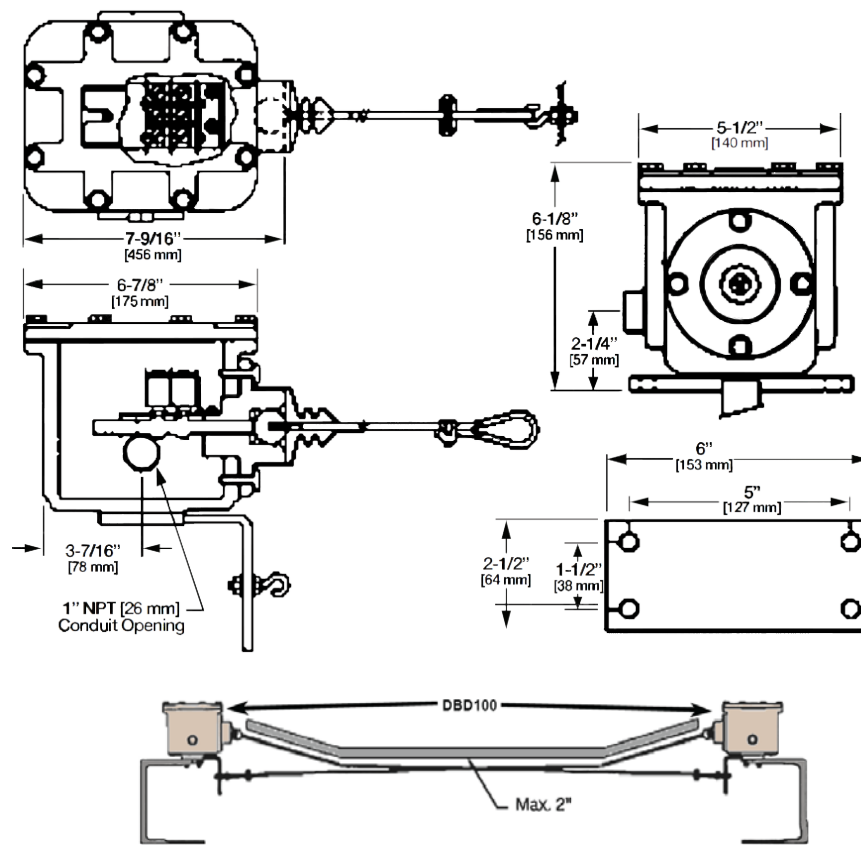
Uncomplicated Maintenance

Damaged Belt Detectors are virtually maintenance free — thanks to their simple, yet tough construction. The units can be wired normally open or normally closed. Everything you need to install your system is included, and accessory or replacement items are always available for immediate shipment.

Installations Notes

When installing a damaged belt detector it is important to remember the following points:

- The force required to extract the ball end of the pull cable from a detector increases proportionally with the distance from the detector. Therefore, the cable extending beyond the midpoint of the opposite side, is considered inactive for damaged detection purposes. Thus, a second unit is mounted opposite the first to effectively cover this inactive section. (See accompanying drawing)
- A damaged portion of a belt may in certain instances be confined to the top surface of the belt. This renders it undetectable by a system mounted between belt surfaces. However, this damaged section will fall below the surface on the belt's return run. In order to detect this type of damage to a belt, a second detection system can be installed below the return belt's surface. This will provide even more reliable protection for your belt systems.
- Detection units must be mounted high enough for the cables to cover the entire active area under the belt. In other words, the cables must follow the contour of the belt closely enough to detect damaged sections of the belt both at the center or near the edge.



* *DBD100 Dimensional Drawing*

Specifications

Product	
Weight	11 Lbs
NOTE: Typically Used in Pairs	
Environment	
Ambient Temperature	-20 to +40 °C [-4 to +104 °F]
Enclosure Material	319 cast aluminum
Enclosure Rating	NEMA Type 4, 4X
Mounting	4 holes at Ø 13/32" [10 mm] horizontal surface mount
Switch	
Switch Type	SPDT x2
Contact Type	Dry Contact
Contact Rating	20A @ 125V, 250V or 480V AC; 1 hp @ 125V AC; 2 hp @ 250V AC; ½ A @ 125V DC; ¼ A @ 250V DC
Electrical Action	Latching (via actuator)
Electrical Connection	1" NPT x 2
Actuator	
Cable Length	10' (3M) Standard Length
Cable Material	galvanized aircraft cable
Mechanism	Ball & socket with spring shaft
Actuation Force	4Lbs (other forces available)
Options (Factory Options, Non-Adjustable)	
Finish	Uncoated (standard) or Epoxy
Activation Force	4 lb. [18 N] (DB-100), 8 lb. [36 N] (DB-108) and 16 lb. [71 N] (DB-116) pull models available (factory option only, non-adjustable).

Product Certification

Standard	Class	Division	Group(s)
UL Listing File		NMFT.E83971	
cUL Listing File		NMFT7.E83971	



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Ordering

Model Number	Part Number
DBD100	800-003500

Complete System Includes

- 2 DBD100 Units (Sold Separately)
- Aircraft Cable (10ft per unit)

Options and Accessories & Spare Parts (Inquire for Pricing)

Option	Lbs
Cable End Fitting	0.8 oz.
Conduit Plug, 1" NPT	3.5 oz.
DB ball & 10 foot cable assembly with protective rubber boot	0.75 lbs.

Mounting

The DBD100 has a fully integrated vertical mounting bracket. This allows for placement very near to the conveyor belt being monitored. The bracket can be attached to many surfaces allowing for convenient installation.

**Vertical mounting bracket*

