DAMAGED BELT DETECTOR - BELT TEAR SWITCH INFRARED AND ROPE TYPE: Series: DBD

SMARTsaa has developed Damaged Belt Detector Infrared and Rope Type for early detection of Belt Damage. It prevents production loss and reduces conveyor downtime.

Generally two types of damages are observed:

1. **Damages Occurred Due To Usage**:
   Damage of belt due to excessive usages, heavy loads, wearing and tearing of belt edges, poor vulcanizing of joints, peeling of steel cord, peeling of rubber portion of the belt etc.
2. **Damage due to unhealthy working condition**:
   Cutting of belt due to locking of sharp object at discharge chute.
   As the belt is moving, the sharp metal piece cuts the belt longitudinally.

To protect conveyor belt against above damage, SMARTsaa recommend two types of protective devices. Use of both type of devices is recommended at multiple locations as per requirement.

DAMAGED BELT DETECTOR / BELT TEAR SWITCH: ROPE TYPE: DBD R

This detector will protect belt against damage happened due to usages. It consists of pair of switches. The steel cord rope which are to be installed below the belt in a gap of approximately 500 Meters. The rope, one end of which is fixed with the end clamp, other end is provided with steel ball. The rope is fixed below the belt by keeping gap approx. 50 mm. The ball is held in catch. The switch lever gets pressed when the ball is fixed in catch.

When belt gets damaged sue to excessive use, its cord starts coming out, the rubber starts peeling off. The rubber or steel cord will stars peeling off and hits the rope. The ball comes off the catch and switch gets operated. The contacts are interlocked in circuit and the operator gets early warning.

One additional pair of DBD R can also be installed just after the return idler on return path to detect the belt damage of top belt surface.

DAMAGED BELT DETECTOR / BELT TEAR SWITCH: INFRARED TYPE: DBD I

This detector is designed to detect belt damage due to unhealthy condition. When belt gets cut longitudinally, the carried material like coal or iron ore starts falling through the belt cut. The DBD I consist of infrared light curtain Detector and Controller. The sensors forms invisible curtain of invisible light. The curtain is installed below the carrying side of belt. The location is generally after 20-30 Meters just after the discharge chute. The curtain gets disturbed due to falling of material through the cut slot of belt. The signal is triggered when piece of carried material passes through light curtain.

Specification: Damaged Belt Detector / Belt Tear Switch: Rope Type: DBD R

Consist of Pair of Switch assembly, Rope and hook, and bracket
Enclosure : Cast Al., with Epoxy Powder Coating
Protection : IP 65
Output Contacts : 2 C/O
Rating : 10 A Resistive at 230 VAC.
Cable / Rope : 5 Meters
Powder Coated, Paint shade: Light Grey, Shade 631 As per IS -5

Specification: Damaged Belt Detector / Belt Tear Switch: Infrared Type: DBD I

Type: DBD I 16 450 30,

Consist of:

Transmitter : 1 NOS
Receiver : 1 NOS
Cable : 2 Meters
Controller : 1 No.
Enclosure : IP 65

Sensor: Transmitter and receiver

- Suitable for particle size of above 30 mm
- Transmitter, Receiver: 16 Beam
- Resolution / Beam Pitch / Detectable Object-Particle Size: 30 mm minimum
- Protection Height: 450 mm, Total Height: 530 mm. Please specify
- Led Indication: Red LED
- Range: 5 Meters
- Supply Voltage for Sensor: 12 TO 24 VDC from controller
- With Connector, with 2 Meter PVC Cable
- With Bypass facility

Controller:

- Supply : 230 V AC / 110 v ac / 24 V DC Please specify
- O/P : 1 C/O relay Contact rated for 5 Amp resistive at 230 V AC
- Enclosure: IP 65 Field Mounting type

Note: Periodic Cleaning of sensor face is required for proper operation

Damaged Belt Detector / Belt Tear Switch Seris : DBD



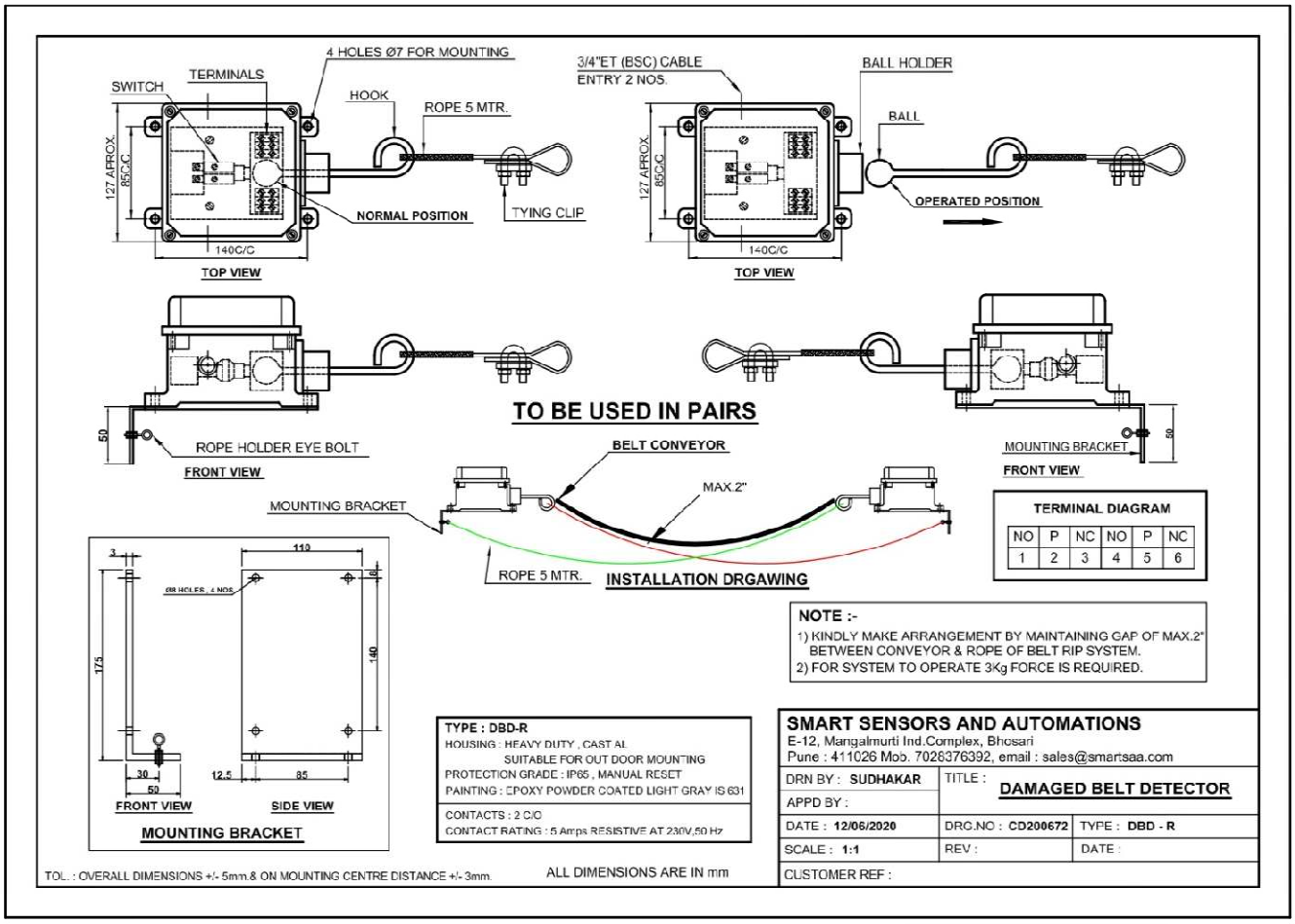
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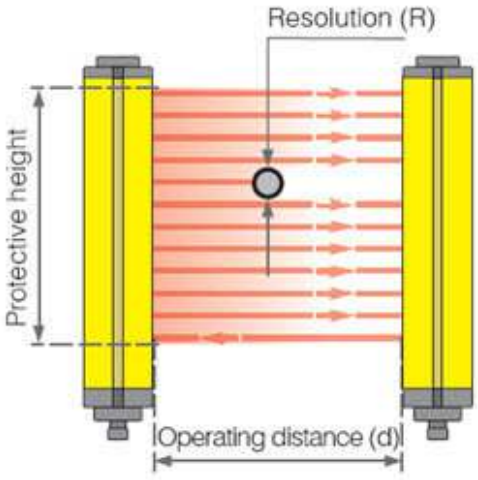
Infrared Type

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MOUNTING ARRANGMENT OF DAMAGED BELT DETECTOR / BELT TEAR SWITCH: ROPE TYPE: DBD R



MOUNTING ARRANGMENT DAMAGED BELT DETECTOR/BELT TEAR SWITCH INFRARED TYPE: DBD I



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