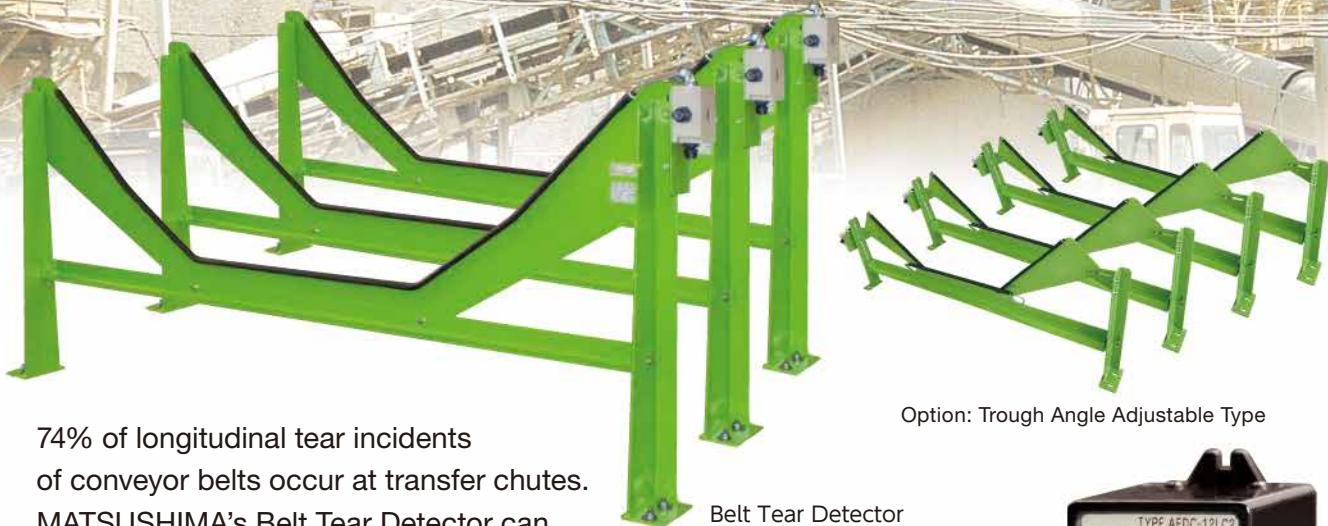


Tear accident detection for conveyor belts

BELT TEAR DETECTOR



Longitudinal tears occurred on conveyor belts can be detected in their earliest stages.



Option: Trough Angle Adjustable Type

Belt Tear Detector



Transducer

74% of longitudinal tear incidents of conveyor belts occur at transfer chutes.

MATSUSHIMA's Belt Tear Detector can instantly detect longitudinal tears of conveyor belts occurred by steel pieces and/or bars.

When detecting longitudinal tears of conveyor belts, the detectors make the belt conveyors stop at once and minimize the damages of conveyor belt.

Instant detection of conveyor belt longitudinal tears:

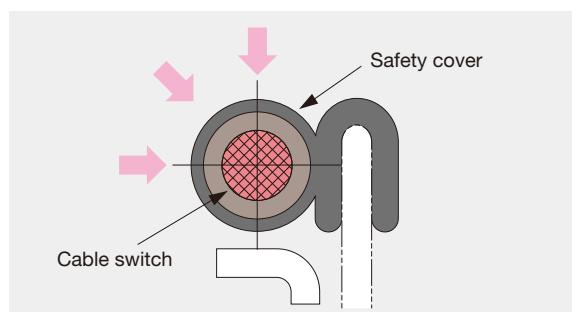
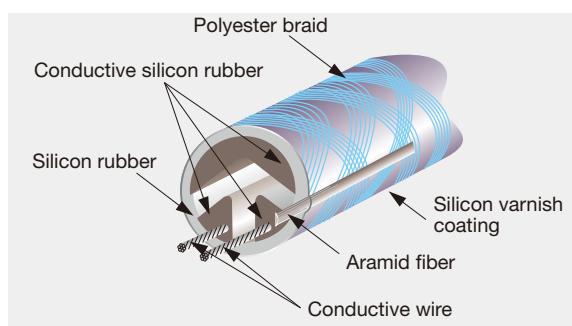
The high sensitive cable switch is integrated into the sensor part. Therefore, the detector detects the accident at once, because the point pushed instantly becomes the contact.

Keep high operating sensitivity:

As the electricity transmission part of touch switch is protected by the safety cover, dusts and/or materials to be transported do not adhere to the sensor and the sensor can be operated without influence of ozone, ultraviolet ray, moisture, salt water, etc. Therefore, the operating sensitivity is not lowered under the severe environments.

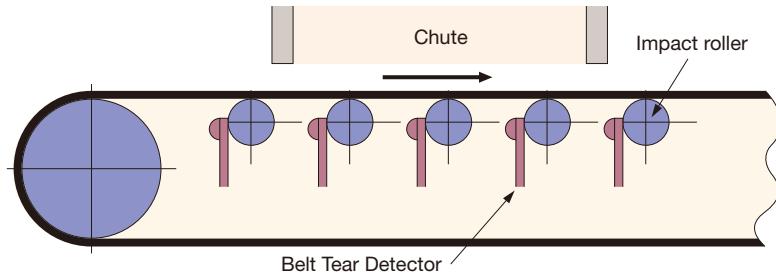
Easy installation:

Our detector can be installed without any modifications of belt conveyor. Moreover, it can be installed while the conveyor is operating.



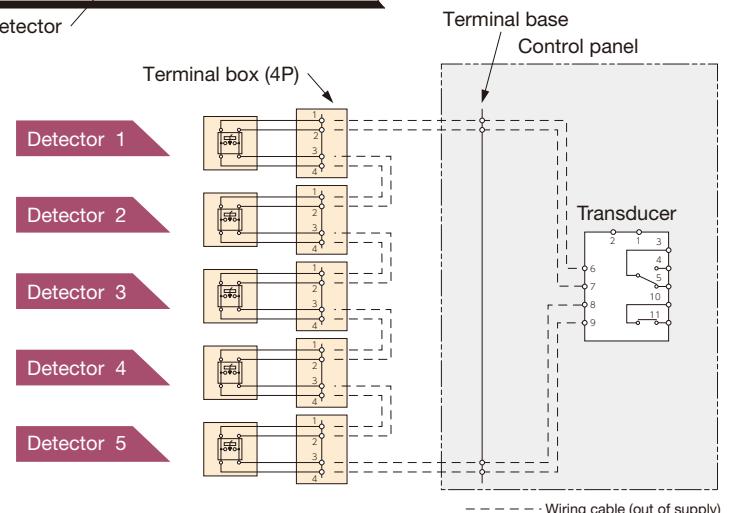
Operating principle of detectors

- ① Steel plates and/or woods that get mixed in materials to be transported charged into a transfer chute pierce the conveyor belt.
- ② Foreign materials pierced move ahead with the conveyor belt and push the sensor provided beneath the conveyor belt.
- ③ An electric current is sent, the detector operates, and then an on-action holding signal is output by the converter.
- ④ The belt conveyor is stopped by this holding signal.



Connecting diagram

- Max. 5 units of detectors can be connected to one transducer. The output-selfholding type transducer continues to hold the contact output once the detector actuates, so far as it is reset with a reset button or the power is cut.
- The connection is in series and if any breakage occurs at the connection cables and switches, the breakage will be output immediately.



Specifications of detector

Item	Specifications
Type	SCPT- a: Belt width b: Trough angle
Protection	IP55
Allowable temperature	-10 to +50°C
Belt width*	600 to 2,000mm
Trough angle*	20°, 30°, 35°, 45°
Sensor type	CB807
Finish color	MUNSELL 7.5 GY 6/10

Please specify required belt width and trough angle.
Please ask us if you require Trough Angle Adjustable Type.

Trough angle adjustable mechanism

Trough angle adjustable mechanism is available for more helpful mounting work at the site.

Chain block is not necessary because the mechanism does not require the conveyor belt to be lifted up.

Mounting work (incl. setup time) becomes half or less.

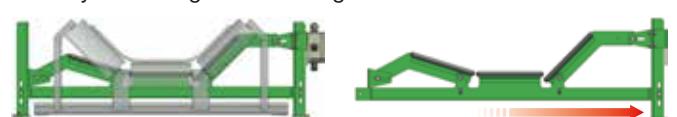
Trough angle is adjustable by removing only two screws at the site.

* : Trough angle adjustable mechanism is optional.

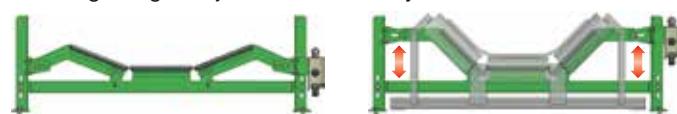
Specification of transducer

Item	Specifications
Type	AEDC-12 LC2
Protection	IP40
Allowable temperature	-10 to +50°C
Function	• Output self-holding type • Wire-breakage alarm
Delay timer	0.5 to 9 sec.
Power	90 to 245V 50-60Hz
Output	Detection 1c, Alarm 1a
Contact capacity	AC250V 2A
Indicating lamp	POWER, DETECT, ALARM
Wiring distance from sensors	1km max.
Weight	0.4kg
power consumption	5VA

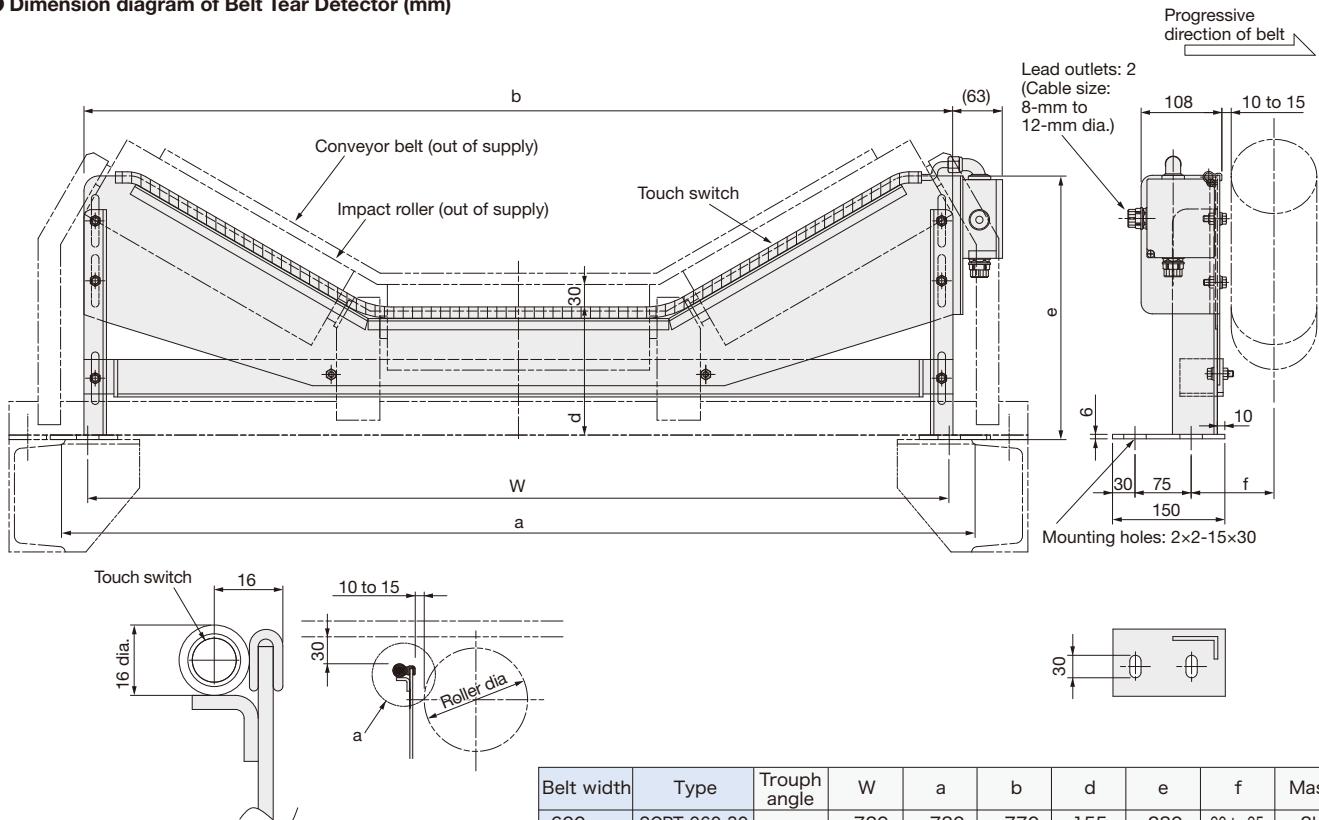
① Easy mounting/dismounting without a chain block



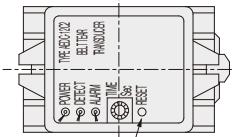
② Trough angle adjustable to conveyors at the site



● Dimension diagram of Belt Tear Detector (mm)



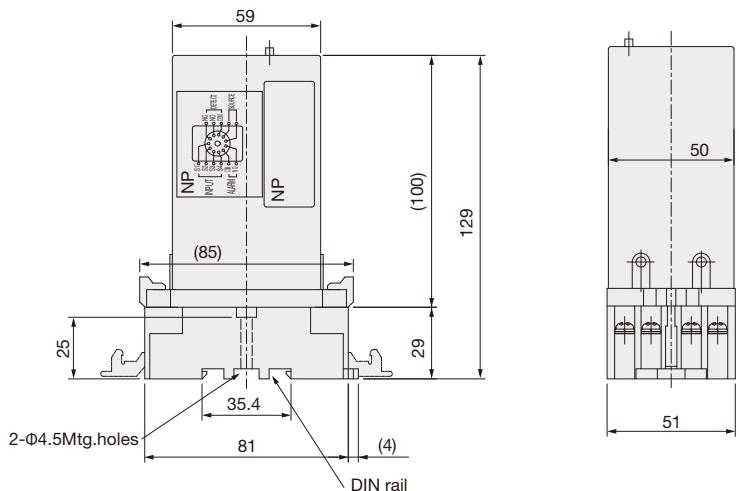
● Dimension diagram of Transducer (mm)



Belt width	Type	Trough angle	W	a	b	d	e	f	Mass
600mm	SCPT-060-30	30°	720	780	770	155	280	90 to 95	8kg
750mm	SCPT-075-30		900	960	880	177	305	109 to 114	11kg
900mm	SCPT-090-30		1,030	1,110	1,050	177	320	103 to 108	12kg
1,000mm	SCPT-100-30		1,150	1,220	1,140	207	352	103 to 108	12kg
1,050mm	SCPT-105-30		1,180	1,250	1,170	220	394	121 to 126	13kg
1,200mm	SCPT-120-30		1,380	1,450	1,370	220	418	116 to 121	14kg
1,400mm	SCPT-140-30		1,660	1,740	1,660	303	530	132 to 137	15kg
1,600mm	SCPT-160-30		1,750	1,830	1,803	303	578	134 to 139	18kg
1,800mm	SCPT-180-30		2,055	2,135	2,125	333	625	130 to 135	25kg
2,000mm	SCPT-200-30		2,220	2,302	2,282	333	657	129 to 134	35kg

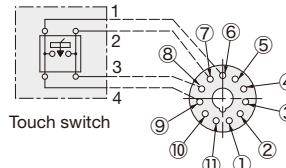
Dimensions may change according to conveyor design.
Please ask us if you require Trough Angle Adjustable Type.

Reset button (To release detection of contacts)



Specifications are subject to change without notice.
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● Touch switch



① OV	⑥ S1 ← 1
② 90V~245V	⑦ S2 ← 2
③ COM	⑧ S3 ← 3
④ NO	⑨ S4 ← 4
⑤ NC	⑩ COM
	⑪ NO

Out detect Input
Out alarm

Caution

- Read the instructions to ensure correct and suitable application of products.
- Contact our nearest sales office when using our products for any systems used in situations which may be life threatening.

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