Installation Instructions – ZS 71 Belt Rip Detector Switch & Wire Kit

Kinder Australia product:	ZS 71 Belt Rip Detector Switch & Wire Kit
Product category:	Safety & Electrical Conveyor Technology
Issue date:	3.7.24
Revision:	1

K-ZS-71-WZ-1O-1S-VD-G-24V-45N

K-BELTRIP-WIREKIT-5M

⚠ WARNING!!

Always obey all applicable safety rules.
Be sure all power to the conveyor has been disconnected and controls are locked out.

ABN: 28 006 489 238

Issue: KDOC00160

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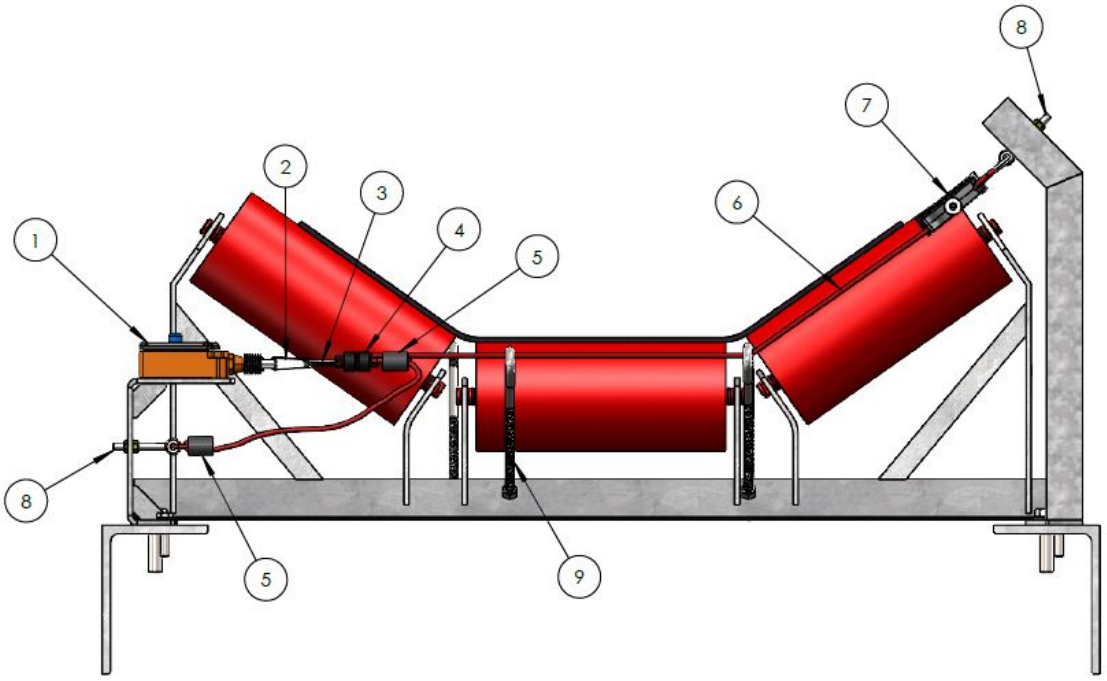
Belt Rip Detector Switch System Overview

2 Belt sides monitoring



ITEM	DESCRIPTION	QTY.	KINDER PART NO.
1	Belt Rip Detector Switch	1	K-ZS-71-WZ-1O-1S-VD-G-24V-45N
2	Stainless Steel Carabiner Clip	1	K-BELTRIP-WIREKIT-5M
3	Stainless Steel Key Ring	1	
4	Safety Clutch	1	
5	Plastic Rope Grip	2	
6	Steel Wire Rope	5m	
7	TS 65 Cable Tensioner	1	
8	Stainless Steel Closed M8x70	2	
9	Stainless Steel Rope Guides	2	

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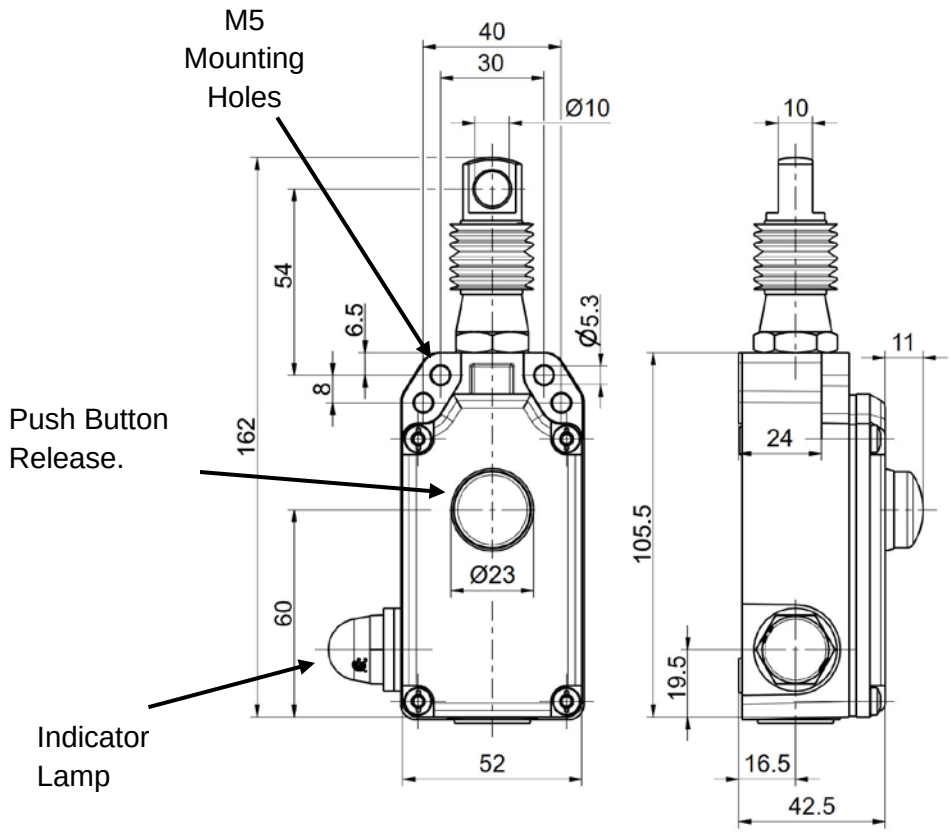
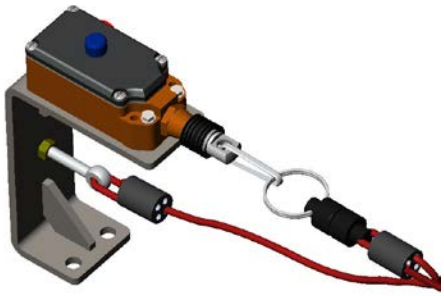
Belt Rip Detector Switch dimensions



Belt Rip Detector Switch mounting



4 x Ø5.3 Holes are provided as mounting points for the switch. Only 2 are required to securely mount the switch.

Required Hardware:

2 x M5 x 50 Hex Bolts

2 x M5 Nuts

4 x M5 Washers

Contact Kinder Australia for brackets or mount yourself.

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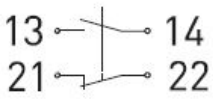
⚠ WARNING!!

ALL ELECTRICAL WIRING TO BE CARRIED OUT BY A QUALIFIED ELECTRICIAN.

Be sure all power to the conveyor has been disconnected and controls are locked. out.

WIRING

SWITCHING DIAGRAM	DESCRIPTION	CONTACTS
	When the Rip Detector wire is pulled, the NC contacts, 21-22 are opened and the NO contacts, 13-14 are closed and then locked in this position. The switch can only be released by pressing the blue push button.	

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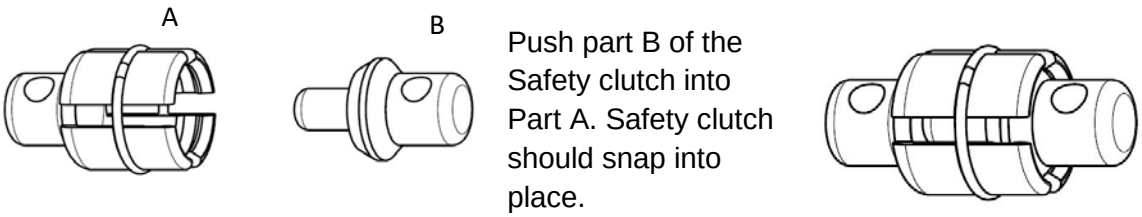
APPLICATION

- The device's connection cables through the 1 x M20 x 1.5 cable entry holes, must have a fixed installation and be set up in a manner that protects them from mechanical damage.
- Use device only within the permitted electrical load limits (see technical data).
- For short-circuit protection, use fuse size 6 A (gG/gN).
- Use device only within the permitted ambient temperature range (see product label and technical data).

Safety Clutch Installation

The safety clutch already comes pre-assembled with the safety spring and rope grips:



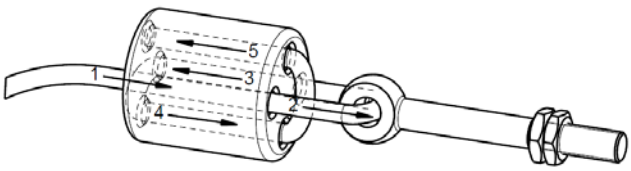
Push part B of the Safety clutch into Part A. Safety clutch should snap into place.

Safety Clutch Technical Data

- The Pull force required to separate the safety clutch with the steel snap ring installed is approximately 250N. This assists in having a less sensitive activation pull on the wire rope.
- The Pull force required to separate the safety clutch without the steel snap ring installed is approximately 100N. For installations where a more sensitive actuation of the switch is required.

Rope Grip Installation

The wire kit is supplied with rope grips installed. For rope adjustment depending on the belt width, the below pattern is used.



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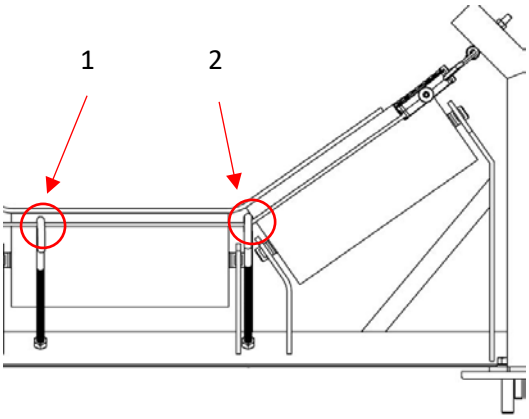
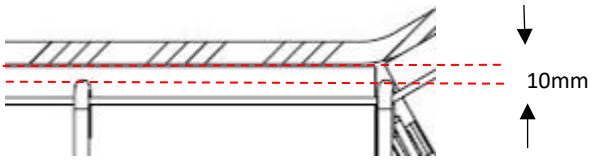
Rope Guide Installation

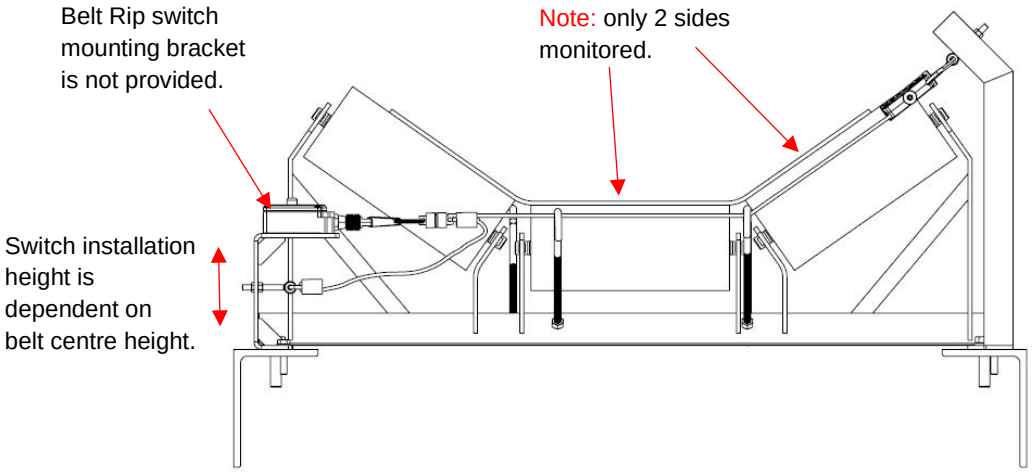


The rope guides should be positioned such that the first guide is under the belt and the 2nd on the trough change. Ensure there is approximately a 10mm gap between the rope guides and the belt surface as shown below, taking into account, belt sag under operating conditions:



Once both guides' heights have been adjusted, tighten the M10 nuts on each rope guide.

It is important that the switch be positioned in the below horizontal position, with the rope parallel to the middle section of the belt and following the belt profile to the terminating end.



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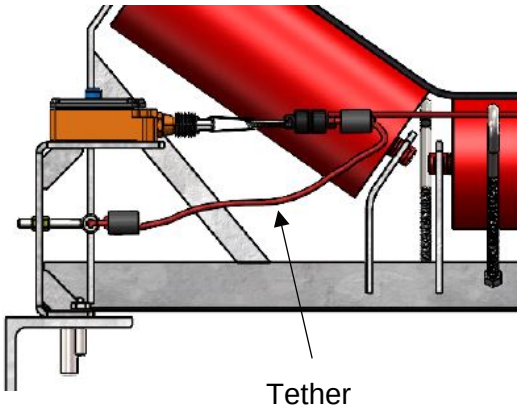
OPERATION

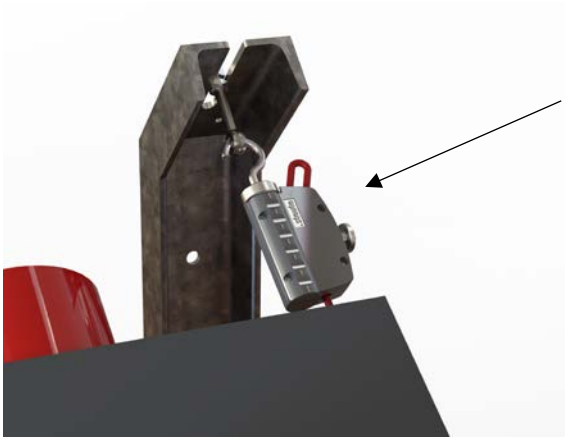


Tether

The tether keeps the rope attached to the eyebolt when the safety clutch separates if a belt rip occurs, and a piece of wire snags the rope.

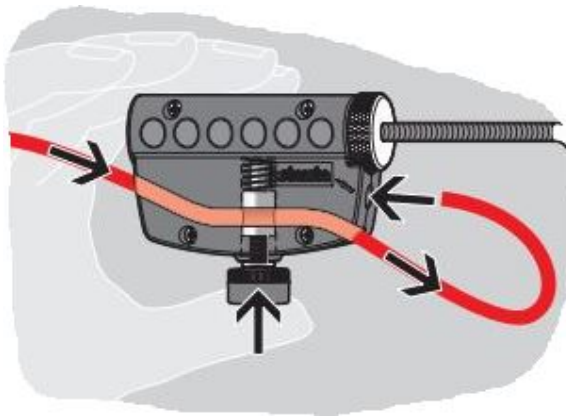
As soon as the Normally Closed Contact is forced open due to the rope being pulled, the indicator lamp of the switch is illuminated, and the conveyor shuts down immediately.

When the rip in the belt has been fixed, the switch is reset via the Blue push button.



Adjusting the rope tension at the terminating end via the TS-65 pull-wire tensioner:

Adjustable threaded hook, up to 55mm.



Push down on the thumb screw and feedthrough the rope to adjust the length of rope required. When the desired tension is reached, lock the rope into place by screwing in tight the thumb screw. Cut off excess rope and terminate the end inside the tensioner as shown.

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MAINTENANCE

With careful mounting as described above, only minor maintenance is necessary. A recommended routine maintenance is as follows:

- Check Belt rip detector safety clutch function.
- Removal of dirt around Belt rip detector switch Push button and LED lamp.
- Check sealing of the cable or conduit connection through the M20 cable entry points.
- Check rope grips are tightened to prevent wire rope from detaching.
- Check LED Light is functioning when switch is activated.
- Check that Rope Guides are firmly secured, ensuring nuts are not loose.
- Check to make sure thumb screw on TS-65 tensioner is fully tightened.

CLEANING:

⚠ WARNING!!

Live parts. Electric shock hazard! Clean in accordance with degree of protection IP65/66/67 (see product label)

- Clean by hand with a hand brush or cloth. Use mild, non-scratching, non-chafing cleaners.
- Do not use knives or sharp-edged tools.
- Do not use any aggressive cleaners or solvents.

⚠ WARNING!!

Electric Shock hazard! Do not repair defective or damaged devices. Replace them. Alternative: Repair of defective device by trained personnel in agreement with Steute and with Steute spare parts.

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TECHNICAL DATA	
Applied standards	EN 60947-5-1
Enclosure	Aluminium die-cast, powder-coated
Cover	Thermoplastic,Fibreglass-reinforced, impact resistant, self-extinguishing UL 94 V-0
Tightening Torque	Cover screws: 1.8 Nm
Degree of protection	IP65 to IEC/EN 60529
Contact material	Silver
Switching Elements	1 NC/1 NO, type Zb
Switching System	Snap action, positive break NC contacts
Connection	Screw connection terminals
Cable cross-section	Max. 2.5 mm² (incl. conductor ferrules)
Cable Entry	1 x M20 x 1.5
Rated impulse withstand voltage U_{imp}	6kV
Rated insulation voltage U_i	400V
Conventional thermal current I_{the}	6A
Utilisation category	AC-15
Rated operating current/voltage I_e/U_e	6 A/400 VAC;
Short-circuit protection	6 A gG/gN fuse
Ambient temperature	-25°C … +70°C
B_{10d} (10% Load)	200 000
Mechanical life	> 100,000 operations
Rated operating current/voltage I_e/U_e	Max. 100N
Approvals	UKCA EAC

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