

Wire-rope type Emergency Stop Switch

MATSUSHIMA
MACHINERY LABORATORY CO., LTD.

Compliant with International Safety Standards

Emergency Stop Switch **PULLSTOP**



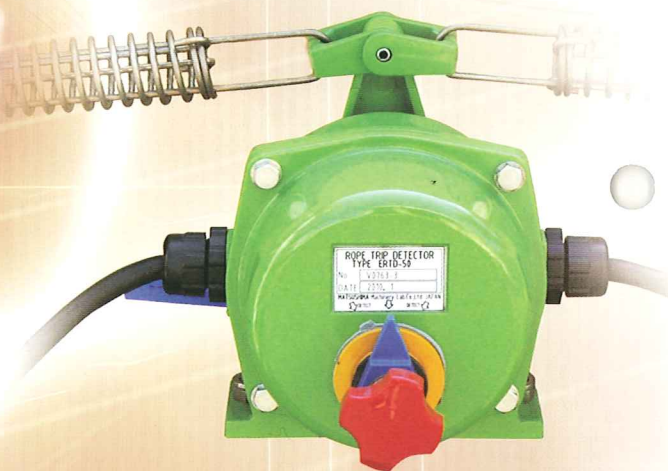
Compliant with European, International and JIS Safety Standards
A New Emergency Rope Trip Detector Featuring a Unique Mechanism

Just One Unit Covers a Wide Range of Emergency Actions

Ideal Replacement for a Multitude of Emergency-Stop Pushbuttons

The Emergency Rope Trip Detector is a switch that is used to stop a conveyor line or similar long-distance transport line by pulling on the conveyor's wire rope. The switch also stops the transport line when the wire rope becomes slack or breaks.

With an emergency stop pushbutton equipped on the main unit as a standard feature, this device can easily stop transport machinery even without pulling the wire rope.



High Reliability in Compliance with European and International Safety Standards

- Compliant with EN 418, ISO 13850, and JIS B9703
- In combination with a commercially available safety relay unit, this device can be used for stop category 1 or 0.



• EN 418



• ISO 13850



• JIS B9703

Operational Even in Adverse Environments

- Provided with an IP67 enclosure, this device can be installed even near equipment that needs to be washed with water or where it is exposed to excessive dust.
- The lever-type construction allows widening of the detection range of the wire rope's pulled movement, to eliminate the chance of false detection due to thermal expansion or stretch/shrinkage of the wire rope. Ideal for outdoor applications as well.
- The required number of devices can be reduced as this device can detect the pulled movement of the wire rope in both leftward and rightward directions.

Meets Diverse Safety Requirements

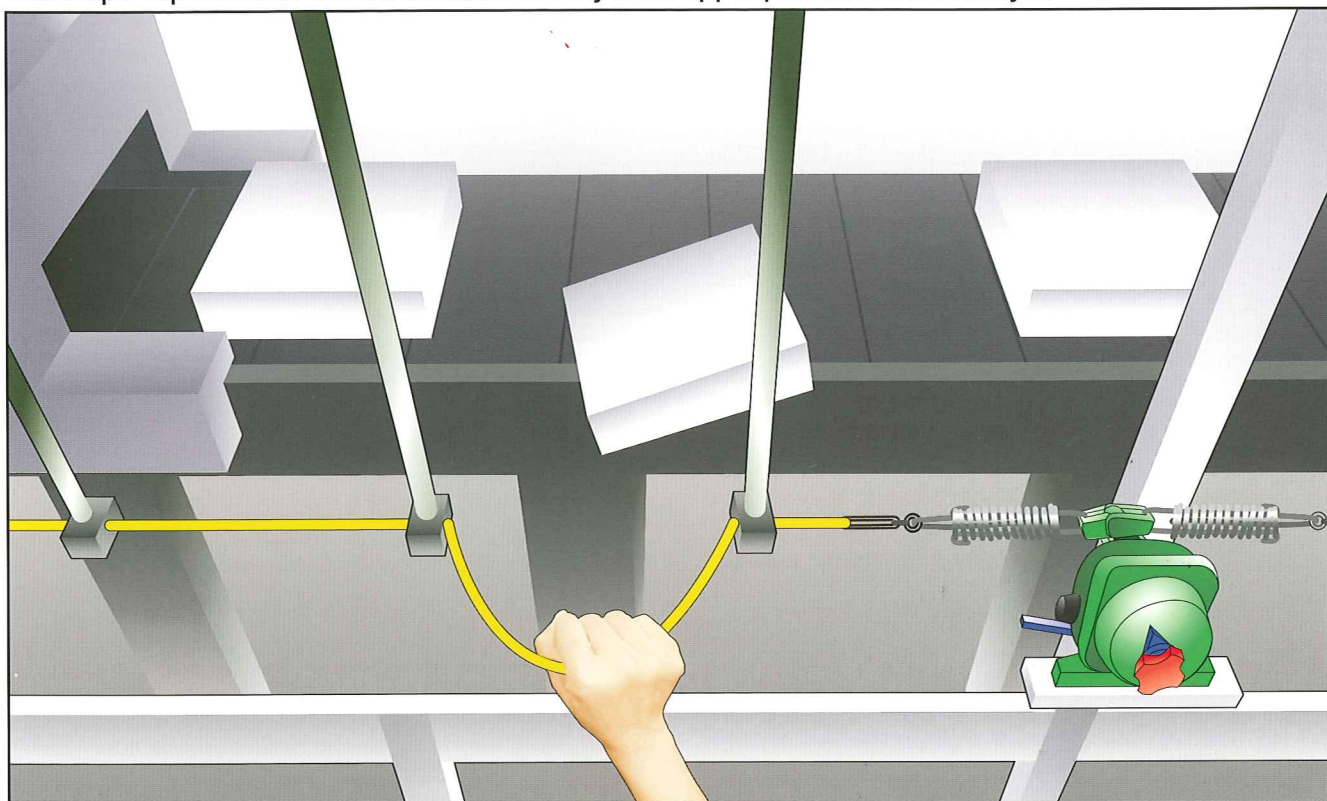
- The operation lever locks upon detection of the pulled movement of the wire rope, which allows the operator to confirm safety before restoring the transport line to operation.
- The detection range of the pulled movement of the wire rope can be easily adjusted by adjusting the wire rope tension with the turnbuckles and tension springs.
- With the emergency stop pushbutton provided, an emergency stop can be activated without pulling the rope.
- The status of the detection operation can be easily determined by checking the degree of the tilt in the operation lever. (Operation of the emergency stop pushbutton can be confirmed by checking the status of the tilt in the reset knob as well.)
- With two built-in limit switches that operate simultaneously, one device can securely perform detection even if the other fails.

Requirements for Emergency Stop Devices in Risk Assessment (Partial)

- ✓ Pushbuttons, levers, or any other components used as actuators of an emergency stop device must be designed and installed so that they can be distinctly and visually identified, and easily operated.
- ✓ Emergency stop pushbuttons or any other such components must be safely and easily accessible to operators and workers on site.
- ✓ The device must be capable of promptly stopping the machinery and equipment without generating any new hazards. If this condition cannot be met, it should be reconsidered whether the emergency stop is the best way to secure safety.
- ✓ Resetting an emergency stop must not cause the machinery or equipment to restart immediately.
- ✓ The resetting operation for an emergency stop must be possible only at the position where the emergency stop was initiated.
- ✓ Control devices with appropriately high reliability and performance must be selected.

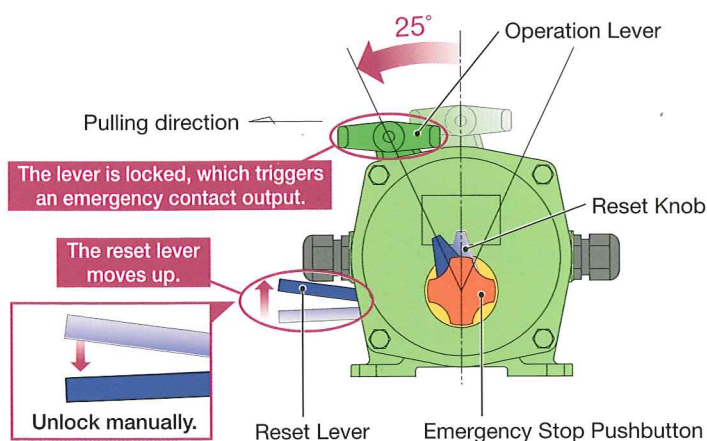
Application Example

This Rope Trip Detector can be installed directly in an upper position on a conveyor.

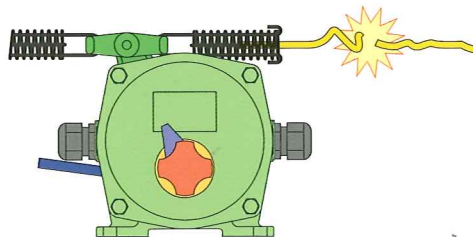


Principle of Operation

A pull on the wire rope, which is fixed to the operation lever, causes the operation lever to be locked at a position 25 degrees from the upright position, which triggers the emergency stop signal output. Pressing down on the reset lever will bring the operation lever back to the upright position, and will release the lock. When the emergency stop operation is activated by detection, the emergency stop status will be retained until the lock is manually released. (The emergency stop pushbutton operates in the same manner.)



The tension springs provided on the both sides of the operation lever enable detection of wire rope breakage.



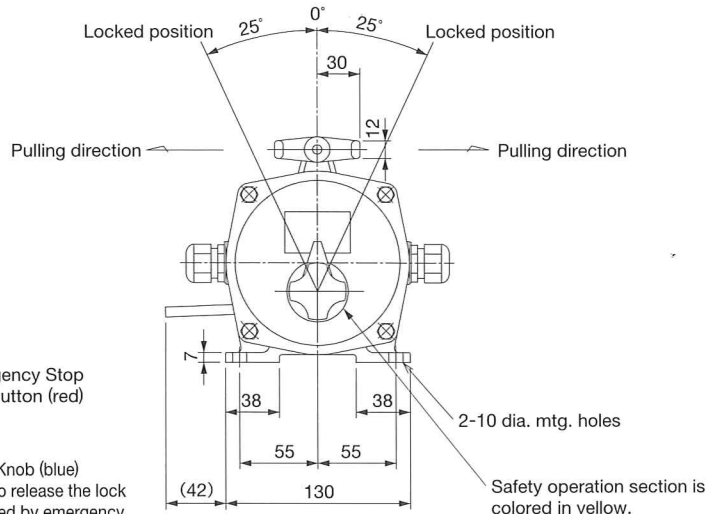
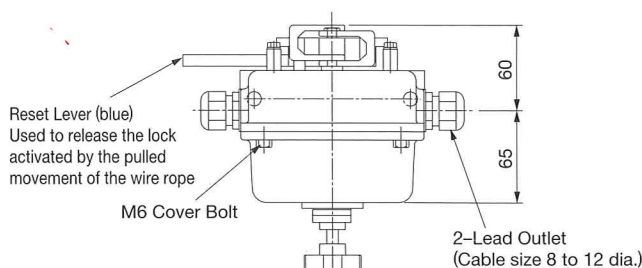
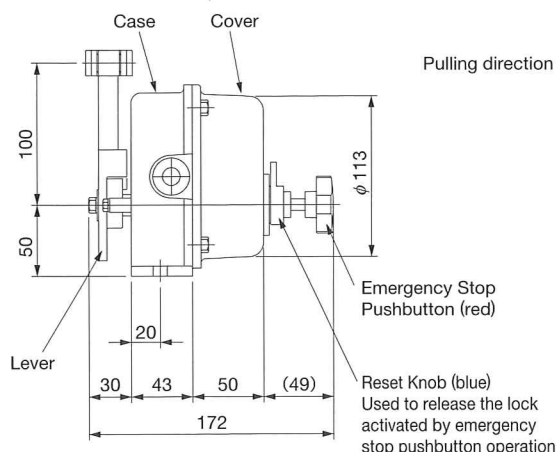
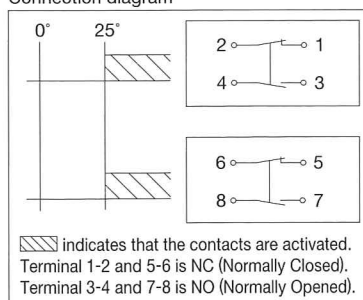
Specifications

Model	ERTD-50
Enclosure	IP67
Operating force	98N (with the tension spring)
Allowable temperature	-20 °C to 50 °C
Mass	Approx. 2.2 kg

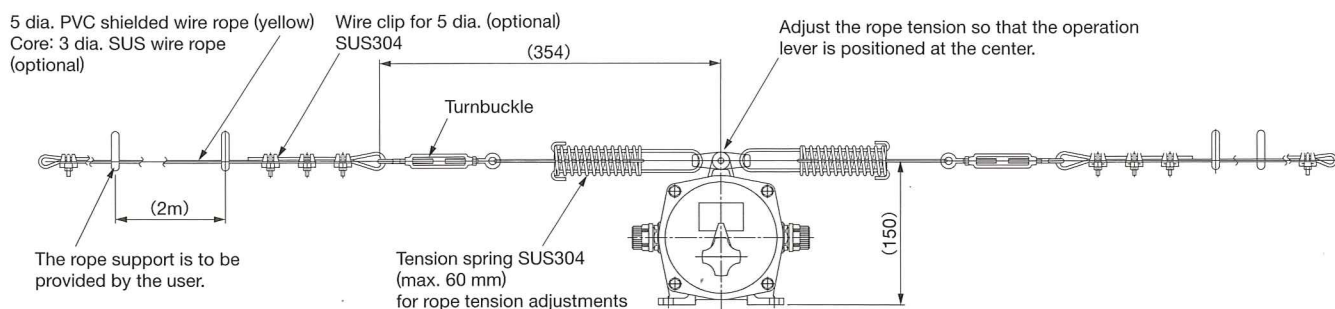
Contact capacity	AC-15: 120V/6A, 240V/3A, 380V/1.9A
	DC-13: 120V/1.1A, 240V/0.55A
Number of contacts	DPDT×2 contacts
Coating color	Munsell 7.5 GY 6/10

●Dimension Diagrams in mm

Connection diagram



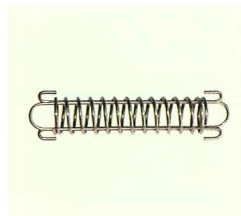
●Installation Diagram (Example)



●Attachments



Turnbuckle



Tension Spring

●Optional



Wire Clip



Wire Rope

Specifications are subject to change without notice.
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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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