

# Emergency stop Grab Wire Safety Switch

# Stop-Line

## Approvals:

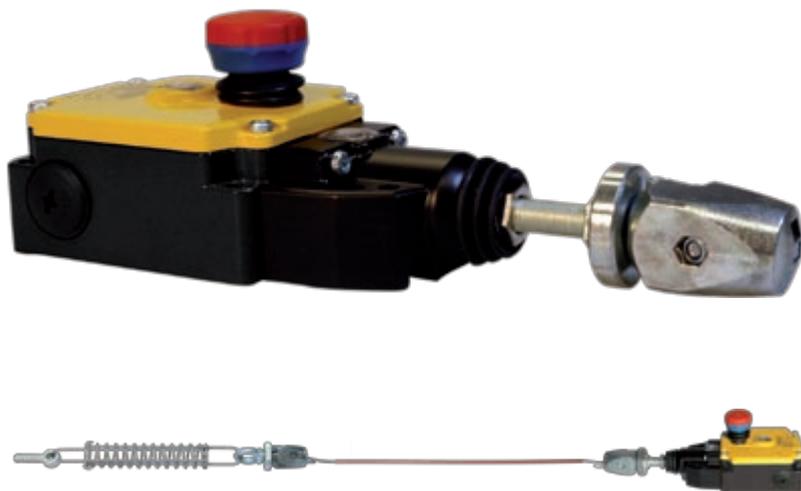


## Application:

Emergency stop Grab Wire Safety Switch along machines or conveyors

## Features:

- Duplicate extraction in two directions
- Up to 75 m length
- Robust
- IP 67
- Integrated emergency stop button
- Warned before the safety circuit is broken



### Duplicated safety in both directions

Stop-Line is used for easy reach of an emergency stop along machines, conveyors and processes. Stop-Line is easier to install than a system of several emergency stop buttons along a carriage path. Stop-Line indicates operation status, reset or triggered mode. There is also indication of how taut the wire is.

Stop-Line can be used as protection for conveyors with low risks. The wire can, for example, be installed at waist height in front of the conveyor, which provides an emergency stop if someone falls towards the conveyor.

Stop-Line has four contacts. If someone pulls the wire or if the wire is broken, all the contacts are affected. In both cases, the machine is emergency-stopped. Just before the safety contacts are broken an indication is given since the wire may accidentally trigger the stop signal as a result of temperature differences.

To reset the Stop-Line the combined emergency- and reset button must be pulled out.

### Forced Disconnected Contacts

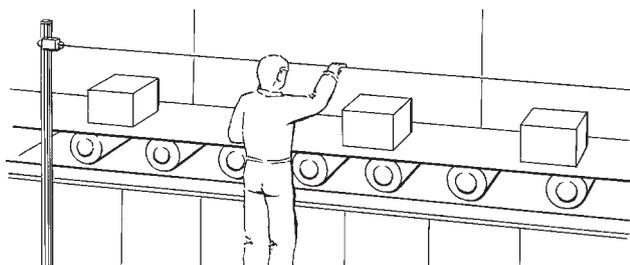
The contacts of the Stop-Line are forced-disconnected. Forced disconnection means that the contacts are mechanically pulled apart, thus ensuring protection against contact welding or sticking.

### Safety level

The forced disconnected contacts provide a high level of safety. To achieve a high level of safety in respect to the connection with the machine control system, it is appropriate to use a safety relay manufactured by ABB Jokab Safety. Stop-Line can be combined with Tina devices for use in a safety circuit containing other safety devices and emergency stops according to PL e.

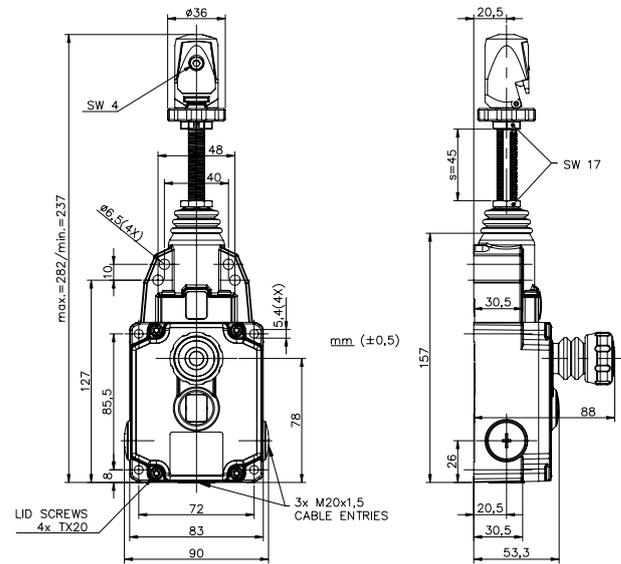
### Regulations and Standards

The Stop-Line is designed and approved in accordance with relevant standards. See technical data.



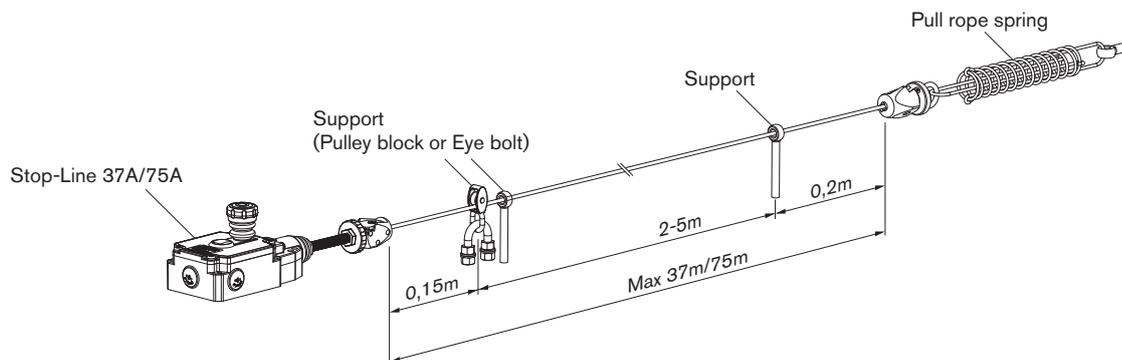
*Emergency-stop Grab Wire easily accessible during normal work operation along a machine*

Technical data – Stop-Line	
<b>Manufacturer:</b>	ABB AB/Jokab Safety, Sweden
<b>Article number/ Ordering data</b>	
Stop-Line 75A	2TLJ020041R0000
Stop-Line 37A	2TLJ020042R0000
Stop-Line 75B	2TLJ020041R0100
Stop-Line 37B	2TLJ020042R0100
<b>Colour</b>	Black with yellow label
<b>Level of safety</b>	Cat. 4/PL e, EN ISO 13849-1
<b>Housing Material</b>	Cast aluminium
<b>Lid Material</b>	Cast aluminium
<b>Operating temperature</b>	-30°C to +80°C
<b>Switching contacts</b>	2 NC + 2 NO
<b>Protection class</b>	IP 67, EN 60529
<b>Mechanical life</b>	100 000 switching cycles
<b>Max. switching frequency</b>	20/min
<b>Reset method</b>	mushroom-head slam button
<b>Max. wire length</b>	37,5 m./75 m.
<b>Mounting</b>	4 x M5/4 x M6
<b>Terminals</b>	Screw terminal, 8 x M4
<b>Cable access</b>	3 x M20 x 1.5
<b>Weight</b>	0,9 kg
<b>Max. voltage</b>	250 VAC
<b>Information output</b>	
Rated voltage	Ue 10-30 V DC
Rated current	Ie 50mA
<b>Thermal current</b>	10A
<b>Utilisation category</b>	AC 15, DC 13
<b>Short-circuit protection</b>	Melting Fuse 6A DII type gG
<b>Conformity</b>	EN ISO 13849-1, EN ISO 13850, EN60947-1, EN 60947-5-1, VDE 0113, EN ISO 12100-1, -2 och VDE 0660 T200.



## Mounting – Stop-Line

The wire should be mounted at least 20 mm from the underlying surface. If the wire is longer than 25 m it must be supported with low friction supports. The ambient temperature during installation should be the same as during operation. For the Stop-Line type A.. After installation, pull the wire strongly several times and then adjust the tension to compensate for any extensions due to deformation of the thimbles.



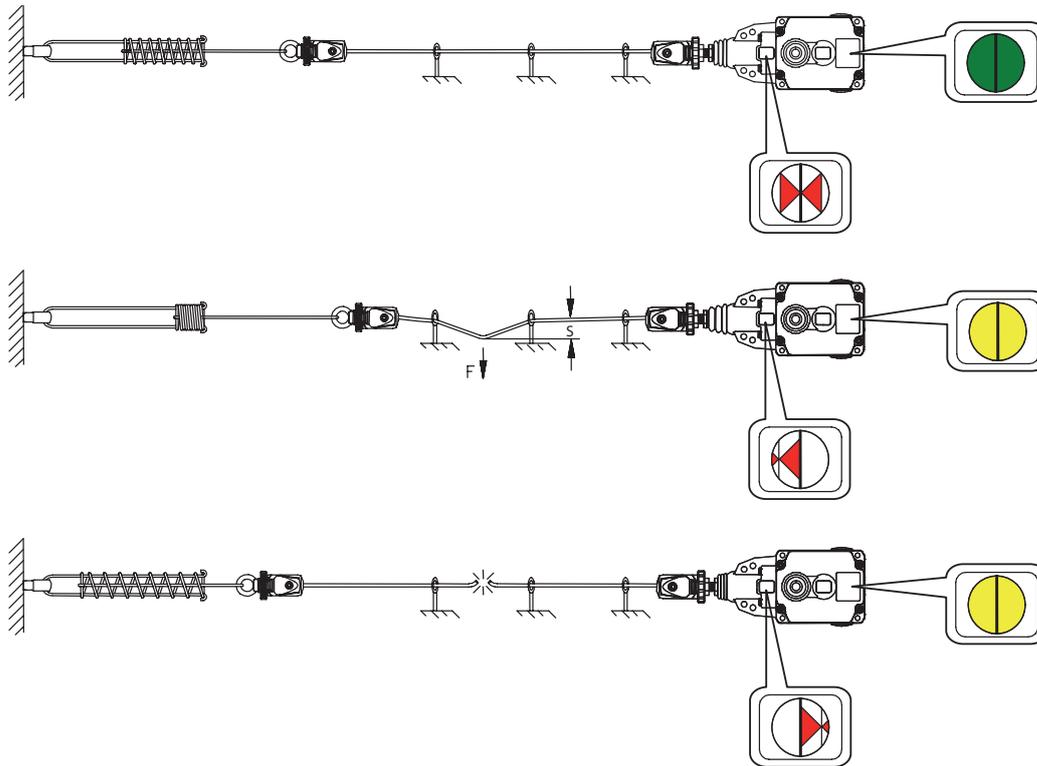
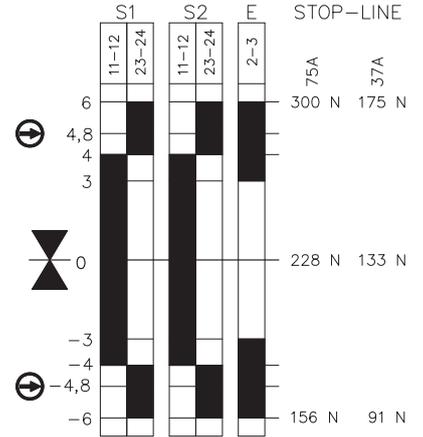
## Contact Adjustment Stop-Line

The tension is adjusted using the built-in set screw until the arrowhead is aligned with the label in the window (see picture below). When the combined emergency- and reset button is then pulled making the status window show green, all contact pairs are in operational mode and the machine can be started.

Pulling the wire, or if the wire is broken, all the contact pairs shift position and the machine is stopped. Before doing so, an electronic warning signal is provided which can be used to alert an operator to compensate for slow variations of the tension in the Stop-Line wire. This is useful to avoid unnecessary stops caused by e.g. ambient temperature variations.

Tolerance: distance  $\pm 0.5$  mm, power  $\pm 15\%$

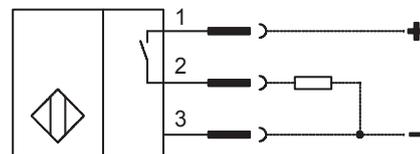
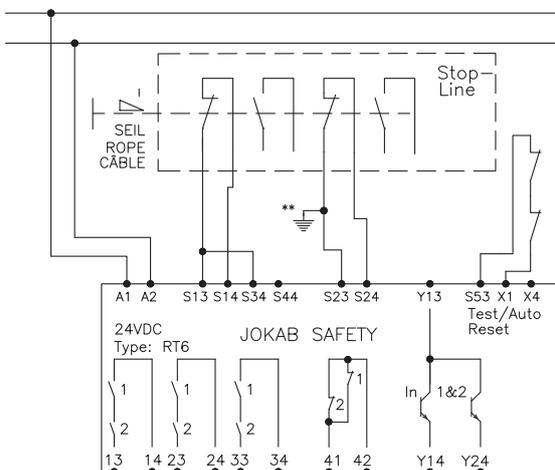
- on (closed)
- off (open)
- ⊕ for contacts 11-12



## Electrical Connection Stop-Line

Electrical connection of Stop-Line, highest level of safety.

24VDC/  
24VAC/  
48VAC/  
115VAC/  
230VAC/



Connection terminal 1 and 3:  
Connection of supply voltage 10-30V DC

Connection terminal 2 and 3:  
Connection to signal circuit or lamp for indication

**Note!** The connection shows the Stop-Line in a correctly tensioned condition.