

## User Information

English translation

### Correct Use

Safety rope switches ZLSE, ZLS and ZLM are designed to be mounted on machines and sections of conveyors which cannot be protected by guards. In contrast to traditional mushroom head type emergency stop buttons, safety rope switches can initiate the emergency command from any point along the installed rope length and provide robust emergency stop rope pull protection for exposed conveyors or machines. A mushroom type E-Stop button (red) can be installed additionally on both sides of the safety rope pull switches.



ZLSE,  
Rope spans up to 80m

ZLS,  
Rope spans up to 80m

ZLM,  
Rope spans up to 50m



This is only the accessories documentation.  
For further details see the rope switch user information.

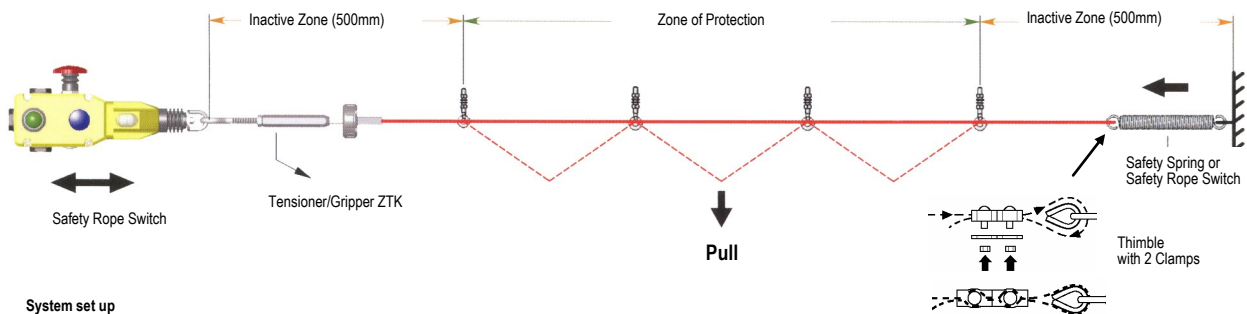


### Safety Precautions



- Installation and commissioning of the device must be performed **only by authorized personnel**.
- Observe the country-specific regulations when installing the device.
- The electrical connection of the device is only allowed to be made with the device isolated.
- The wiring of the device must comply with the instructions in this user information, otherwise there is a risk that the safety function will be lost.
- It is not allowed to open the device, tamper with the device or bypass the safety devices.
- All relevant safety regulations and standards are to be observed.
- The overall concept of the control system in which the device is incorporated must be validated by the user.
- Failure to observe the safety regulations can result in death, serious injury and serious damage.

### Installation



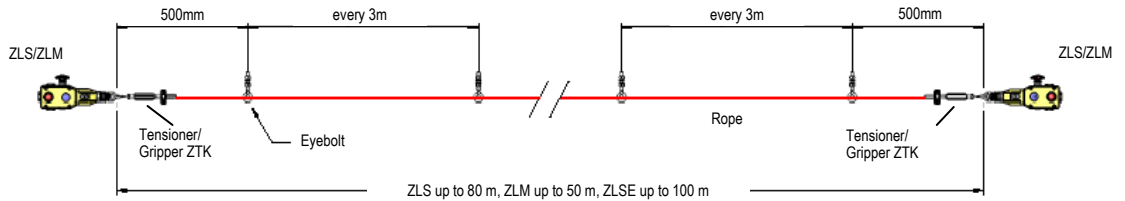
## User Information

### Installation

Rope support eyebolts must be fitted at 2.5 m min. to 3 m. maximum intervals along all rope lengths between switches. The rope must be supported no more than 500 mm from the switch eyebolt or safety spring (if used).

It is recommended when using a safety spring that a maximum of one corner pulley is used.

**It is important that the first 500 mm are not used as part of the active protection coverage.**



### Universal Pulley

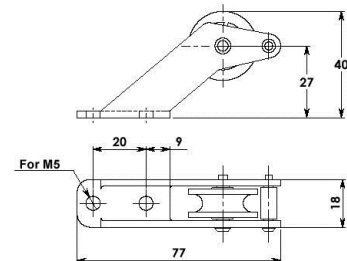
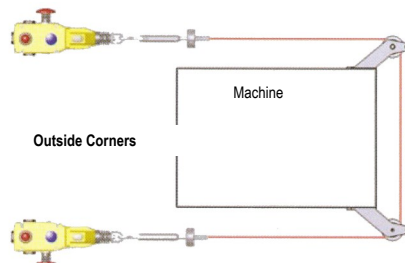
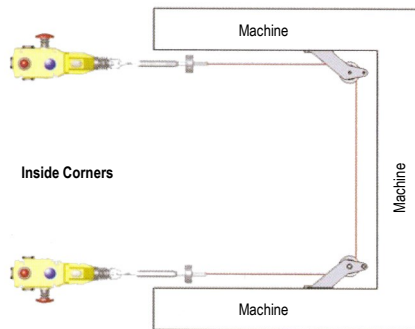
#### Examples of using the universal pulley

Because of the added friction on the eyebolts and rope when navigating corners, ZANDER'S unique 'universal' pulley can be used to navigate inside or outside corners without causing damage to the rope.

The complete lengths of rope must be visible to either the switch or the spring anchorage.

Stainless Steel version is also available.

It is recommended when using a Safety Spring that a maximum of one corner pulley is used.



## User Information

### Tensioner/Gripper ZTK/ZTKE

For greater reliability and ease of installation the Tensioner/Gripper accessory significantly reduces the installation time by offering an eyehook and tensioner thimble and high strength gripper in one assembly to enable rapid connection to the switch eyebolts and fast and accurate tensioning of the Rope. By being in close proximity to the switch viewing window systems can be easily tensioned accurately and quickly.

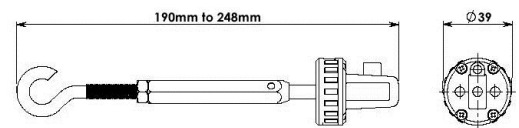
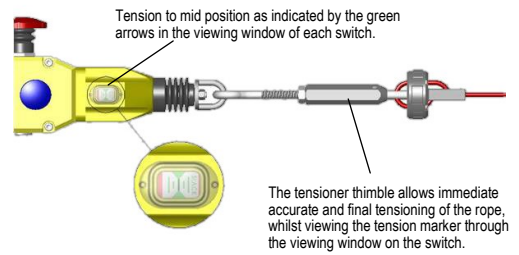
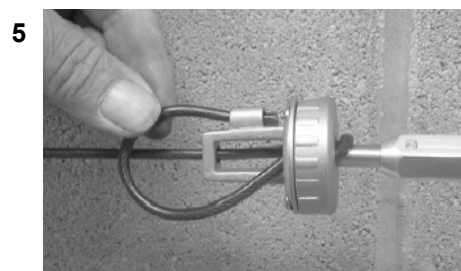
After being fed through the guide hole the rope enters the main housing by going through a feed hole and then is looped back through 180 degrees and is fed through a second feed hole on the opposite side of the mechanism.

The rope is then pulled for maximum tension and is locked in position by a locking bar inside the main housing which is moved by turning an Allen type locking bolt (see figures 1-5.)

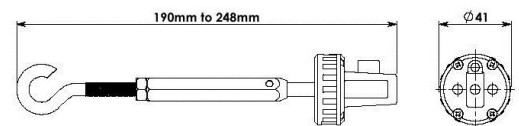
Stainless Steel version is also available (type ZTKE).



Tensioner / Gripper type ZTK  
Withstands 1500 N force



ZTK



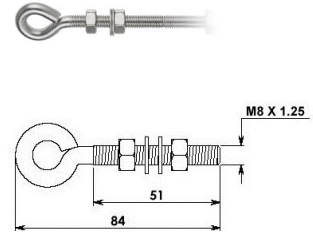
ZTKE

## User Information

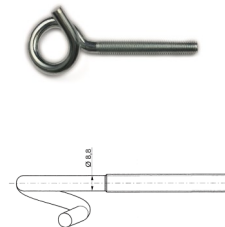
**Safety Spring**  
 235 mm long, stainless steel.  
 Suitable for short rope spans.  
 For all other applications safety rope switch with Tensioner/ Gripper are required on each side. It is recommended when using a safety spring that a maximum of one corner pulley is used.



**Eyebolt**  
**Eyebolt M8**  
 Rope support eyebolts must be fitted each 3 m.  
 The rope must be supported by the eyebolt no more than 500 mm from the rope switch or the safety spring (if used).  
 Stainless steel version is also available.



**Ceiling hook**  
**Ceiling hook M8**  
 Optional, rope ceiling hook's must be fitted each 3m. The rope must be supported by the ceiling hook no more than 500 mm from the rope switch or the safety spring (if used).  
 L:120 mm, M10,  
 Galvanist steel (mounting nut is included)



**Thimble**  
**Thimble**  
 with 2 rope clamps.



**Rope**  
 per meter.  
 Steel Core with red PP sheath,  
 1770 N/mm<sup>2</sup>, cable outer diameter 4.0 mm.



Order-No.

Order-No. 940090	Tensioner / Gripper ZTK, galvanised
Order-No. 940091	Eyebolt M8, 84mm, galvanised
Order-No. 940092	Universal Pulley, 77x40mm, galvanised
Order-No. 940093	Safety Spring, Stainless Steel, 235mm
Order-No. 900166	Rope per Meter
Order-No. 940094	Eyebolt M8, 84mm, Stainless Steel
Order-No. 940095	Tensioner / Gripper ZTKE, Stainless Steel
Order-No. 940096	Universal Pulley, 77x40mm, Stainless Steel
Order-No. 940097	Thimble / 2 Clamps
Order-No. 940098	Stainless Steel Thimble / 2 Clamps
Order-No. 940099	Ceiling hook, galvanized steel, M10x120.