

## Compact Rope Pull Emergency Stop Switch

# ER5018

- Compact size allows this switch to be used on smaller machines with a mounting width of 40 mm and covering rope spans up to 40 m
- Tension indicator—the tension indicator makes the system easy to set up and to maintain the proper rope tension
- Contact arrangements of 2 N/C + 1 N/O or 3 N/C
- IP67 (NEMA 6) enclosure enables the ER5018 switch to withstand water washdown cleaning
- Heavy-duty housing—the die-cast housing and stainless steel eye nut makes the ER5018 suitable for demanding industrial applications
- Integral E-Stop—the optional E-stop provides emergency stopping at the extreme end of the installation
- Reset button—the blue reset button must be pushed in order to return to “machine run” condition following switch actuation by a pulled or slacked rope
- Long life—the ER5018 switch is designed for a minimum of one million actuations
- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration



### Operation

#### Blue Reset Button



A blue reset button is provided to easily return the unit back to its machine-run position after actuation.

#### Emergency Push Button



The emergency push button may be installed or repositioned in the field. The ER5018 has two possible mounting positions for the emergency stop button.

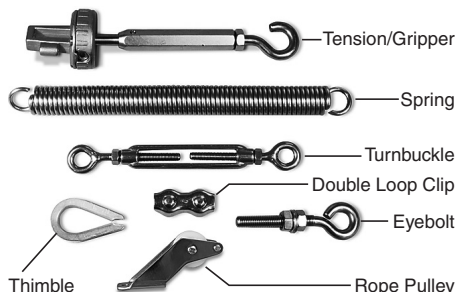
### Installation Hardware Available

#### RK Rope Tension Kit



The RK Rope Tension Kit comes with all of the required hardware for most installations. A spring is required as shown in the installation example below.


#### Installation Hardware



Individual hardware items may be purchased for specific installation requirements.



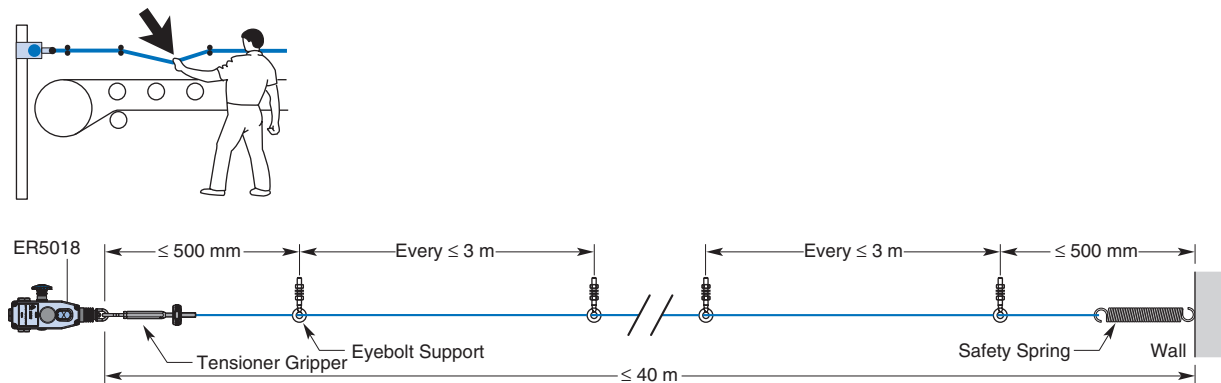
## Contact Arrangements



	0 mm	3.5 mm	14.5 mm	17.0 mm
2NC + 1NO Versions	Rope Slack		Tension Range	Rope Pulled
	11/12			
	21/22			
33/34				
3NC Versions	Rope Slack		Tension Range	Rope Pulled
	11/12			
	21/22			
31/32				

□ Contact Open    ■ Contact Closed

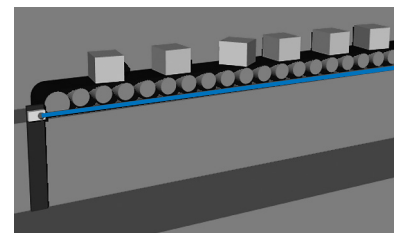
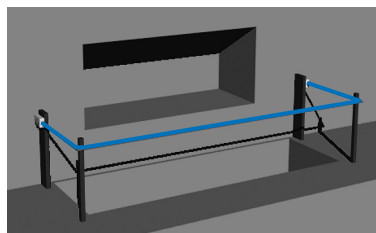
## Mounting Specification



**Note:** Some installations may require a ER5018 on each end.

## Applications

Typical applications are on conveyor systems and across rotating machinery, and around hazardous areas.



## Ordering information

### Compact Rope Pull Emergency Stop Switch

E-Stop	Contacts	Wiring Entry	Model
Not included	2 N/C + 1 N/O	3 x M20	ER5018-021M
Not included	3 N/C	3 x M20	ER5018-030M
Included	2 N/C + 1 N/O	3 x M20	ER5018-021ME
Included	3 N/C	3 x M20	ER5018-030ME

### Accessories

Item	Model
Replacement Lid	SM06-SL400
Rope Kit, 5 m, Stainless Steel	RK5
Rope Kit, 10 m, Stainless Steel	RK10
Rope Kit, 20 m, Stainless Steel	RK20
Rope Kit, 50 m, Stainless Steel	RK50
Rope Only, 5 m	R5M
Rope Only, 10 m	R10M
Rope Only, 20 m	R20M
Rope Only, 50 m	R50M
Rope Only, 100 m	R100M
Rope Only, 126 m	R126M
Tensioner Gripper, Stainless Steel	SM06-TG00
Eye Bolt Stainless Steel, 8 per pack	SM06-EB10
Double Loop Clip, Stainless Steel, 4 per pack	SM06-DL20
Thimble Stainless Steel, 4 per pack	SM06-THSS

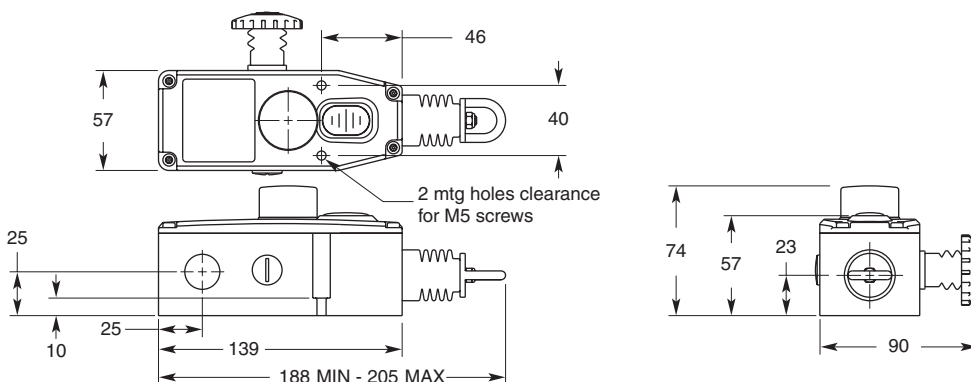
Item	Model
Turnbuckle, Stainless Steel	SM06-TB30
Spring, Stainless Steel	SM06-SP50
Rope Pulley, Stainless Steel	SM06-RPSS
E-Stop Mechanism	SM06-ES60

## Specifications

Electrical	Contact Configurations	2 N/C + 1 N/O, 3 N/C
	Safety Contacts	2 N/C, 3 N/C
	Switching Ability	AC: 120 V–6 A, 240 V–3 A, Inductive DC: 24 V–2.5 A, Inductive
	Auxiliary Contacts	1 N/O
	Max Switching Current/Volt/Amp	240 V/720 VA
	Minimum Current	5 V, 5 mA DC
	Electrical Life	1,000,000 minimum
Mechanical	Mounting	Any position
	Mounting Hardware	2 x M5 screws
	Actuator Travel for Positive Opening	See diagrams on previous page
	Max Rope Span	40 m
	Operation Force	< 125 N
	Tensioning Force to Run Position	130 N typical
	Case Material	Die-cast aluminum alloy
	Eye Nut Material	Stainless steel
	Wiring Entry	3 x M20
	Weight	675 g
	Color	Yellow
	Mechanical Life	1,000,000 minimum
	Environmental	Protection
Operating Temperature		-25 to 80°C
Cleaning		Water washdown
Compliance	Standards	IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304
	Approvals/Listings	CE marked for all applicable directives, UL and C-UL

**Note:** The safety contacts of the Omron ST1 switches are described as normally closed (N/C)—i.e., with the rope properly tensioned and the machine able to be started.

## Dimensions



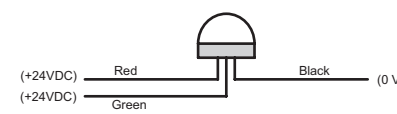
## Safety precautions

### Operating instructions

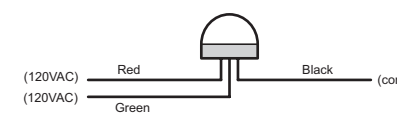
Installation must be in accordance with the following steps and stated specifications and should be carried out by suitably competent personnel. Adherence to the recommended maintenance instructions forms part of the warranty.

**WARNING** Do not defeat, tamper, remove or bypass this unit. Severe injury to personnel could result.

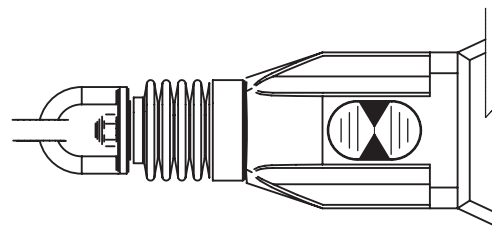
**Optional 24 VDC Indicator Beacon**  
 When +24VDC is applied to the **red** wire, the beacon will illuminate red and flash.  
 When +24 VDC is applied to the **green** wire, the beacon will illuminate green.



**Optional 120 VAC Indicator Beacon**  
 When +120VAC is applied to the **red** wire, the beacon will illuminate red and flash.  
 When +120 VAC is applied to the **green** wire, the beacon will illuminate green.



**Tension Indicator**  
 Indicator shown with steel rope properly adjusted.



### WARNING

1. Installation of all Safety Rope Switch systems must be in accordance with a risk assessment for the individual application. Installation must only be carried out by competent personnel and in accordance with these instructions.
2. Rope support eyebolts must be fitted at 2.5 m. min. to 3 m. max. 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 important that this first 500 mm is not used as part of the active protection coverage.
3. M5 mounting bolts must be used to fix the switches. Tightening torque for mounting bolts to ensure reliable fixing is 4 Nm. Tightening torque for the lid screws, conduit entry plugs and cable glands must be 1.5 Nm to ensure IP seal. Only use correct sizing glands for conduit entry and cable outside diameter.
4. Tensioning of rope is achieved by use of tensioner / gripper assemblies. Upon installation, tension to mid-position as indicated by the red arrows in the viewing window of each switch. Check operation for all switches and the control circuits by pulling the rope at various locations along the active protection area and resetting each switch by depressing the Blue Reset button. Ensure each time that the switches latch off and require manual resetting by depressing the Blue Reset button. Increase the system tension further, if required, depending upon the checks along the active length of coverage. If fitted with a Mushroom type E-Stop button (Red) then test and reset each switch to ensure function of control circuits. Typical operational conditions for successful operation of system is less than 75 N. pulling force and less than 150 mm deflection of rope between eyebolt supports. If the optional LED is fitted but is not used, ensure that the conductors remain coiled and tied to the tie hole in the LED flange.
5. Every week: Check correct operation of system at locations along all coverage length. Check for nominal tension setting, re-tension rope if necessary. Every 6 months: Isolate power and remove cover. Check screw terminal tightness and check for signs of moisture ingress. Never attempt to repair any switch.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

