



Conforms to EN418, EN292, EN60947-5-1, EN50041,  
BS5304, ISO13850  
UL and C-UL listed



G

safety interlock switches

# ER4020

## Compact Rope-Activated Emergency Stop Switch

- Compact size allows this switch to be used on smaller machines with a mounting width of 40 mm (1.57 in.) and covering rope spans up to 30 m (98 ft.)
- Status indicator—the status indicator makes the system easy to set up and to maintain the proper rope tension
- Variety of contacts—three or four sets of contacts to satisfy the most demanding applications
- DIN mounting pattern for a globally recognized mounting configuration
- NEMA 6 enclosure enables the ER4020 switch to withstand water washdown cleaning
- Heavy-duty housing—the die-cast housing and stainless steel eye nut makes the ER4020 suitable for demanding industrial applications
- Reset button—the blue reset knob must be turned in order to return to “machine run” condition following switch actuation by a pulled or slacked rope
- Long life—the ER4020 switch is designed for a minimum of one million actuations.



**Go to the Engineering Guide**  
For in-depth information on  
safety standards and use.

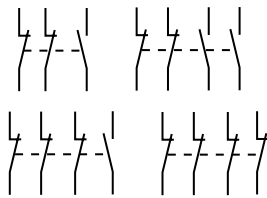
■ Operation



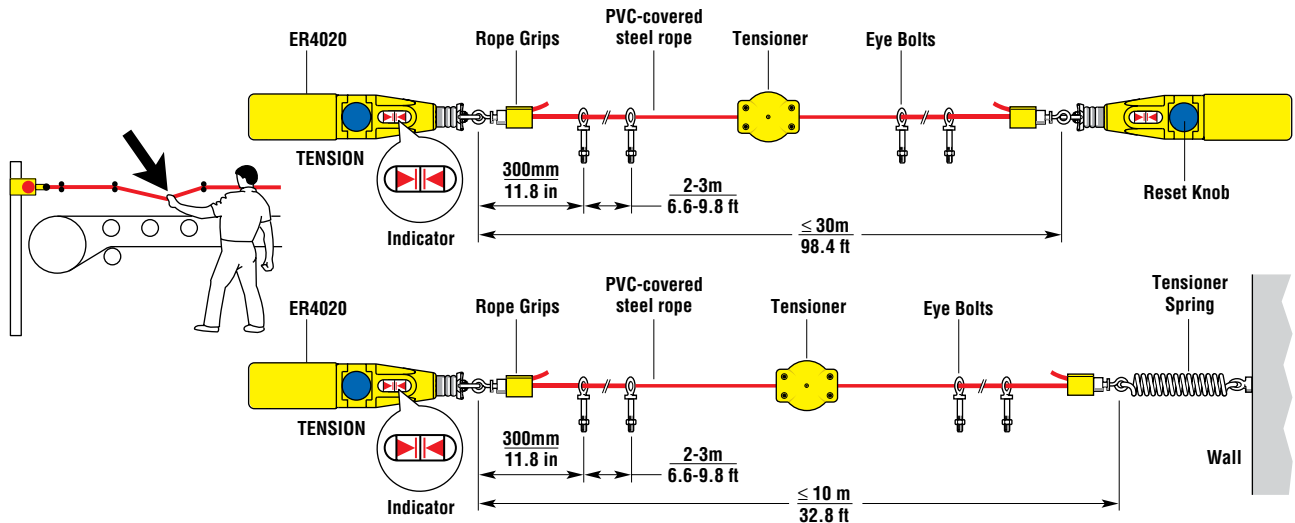
**Blue Reset Knob**

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

**Contact Arrangements**



**Mounting Specification**



Note: If installation is less than 10 m (32.8 ft), the use of a tensioner spring at one end may be considered. However this must be carefully considered against the hazard the machine represents to the operator.

Note: Some installations may require a ER4020 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

**Installation Hardware Available**



**Rope Tension Kits**

The RTK Rope Tension Kits provide a revolutionary tensioning system that substantially reduces set-up time and provides all the necessary components in a single package.



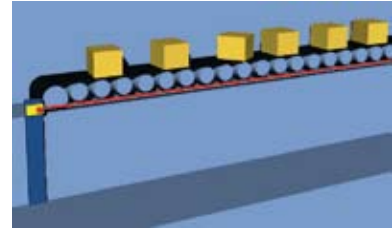
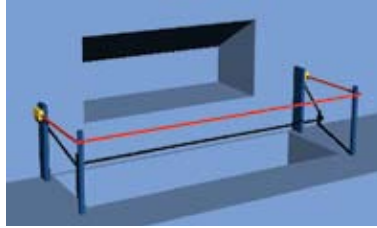
**Installation Hardware**

All conventional hardware items are available and may be ordered as separate items.

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## ■ Applications

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



## ■ Specifications

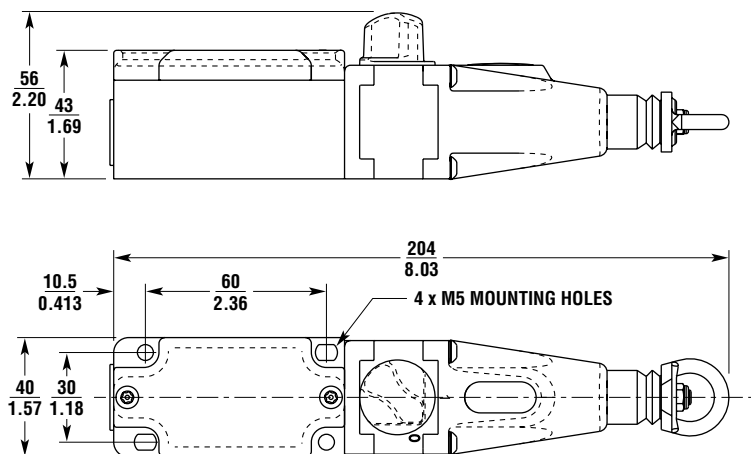
Electrical	All Models
<b>Contact Configurations:</b>	2 N/C + 1 N/O, 2 N/C + 2 N/O, 3 N/C + 1 N/O, 4 N/C
<b>Safety Contacts:</b>	2 N/C, 3 N/C, 4 N/C positive break
<b>Switching Ability</b>	
<b>AC:</b>	500 V–1 A, 250 V–2 A, 100 V–5 A
<b>DC:</b>	250 V–0.5 A, 24 V–2 A
<b>Safety Contact Gap:</b>	2 x 2 mm or 3 x 2 mm or 4 x 2 mm
<b>Auxiliary Contacts:</b>	1 N/O or 1 N/C or 2 N/O
<b>Max Switching Current/Volt/Amp:</b>	500 V/500 VA
<b>Minimum Current:</b>	5 V 5 mA DC
<b>Electrical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Mechanical</b>	
<b>Mounting:</b>	Any position
<b>Mounting Hardware:</b>	4 x M5 screws
<b>Actuator Travel for Positive Opening:</b>	See diagrams on previous page
<b>Max Rope Span:</b>	30 m (98 ft.)
<b>Operation Force:</b>	< 125 N (28 lb.)
<b>Tensioning Force to Run Position:</b>	130 N (23 lb.) typical
<b>Tensioning Force to Lockout:</b>	188 N (42 lb.) typical
<b>Max Actuation Frequency:</b>	1 cycle per sec
<b>Case Material:</b>	Die-cast aluminum alloy
<b>Eye Nut Material:</b>	Stainless steel
<b>Wiring Entry:</b>	1 x 0.5 in. NPT conduit
<b>Weight:</b>	610 g (21 oz.)
<b>Color:</b>	Yellow
<b>Mechanical Life:</b>	1 x 10 <sup>6</sup> minimum
<b>Environmental</b>	
<b>Protection:</b>	IP66 (NEMA 6)
<b>Operating Temperature:</b>	-25 to 80°C (-13 to 176°F)
<b>Cleaning:</b>	Water washdown
<b>Compliance</b>	
<b>Standards:</b>	EN418, EN292, 3N60947-5, EN50041, BS5304, ISO13850
<b>Approvals/Listings:</b>	CE marked for all applicable directives, UL and C-UL

Specifications are subject to change without notice.

Note: The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

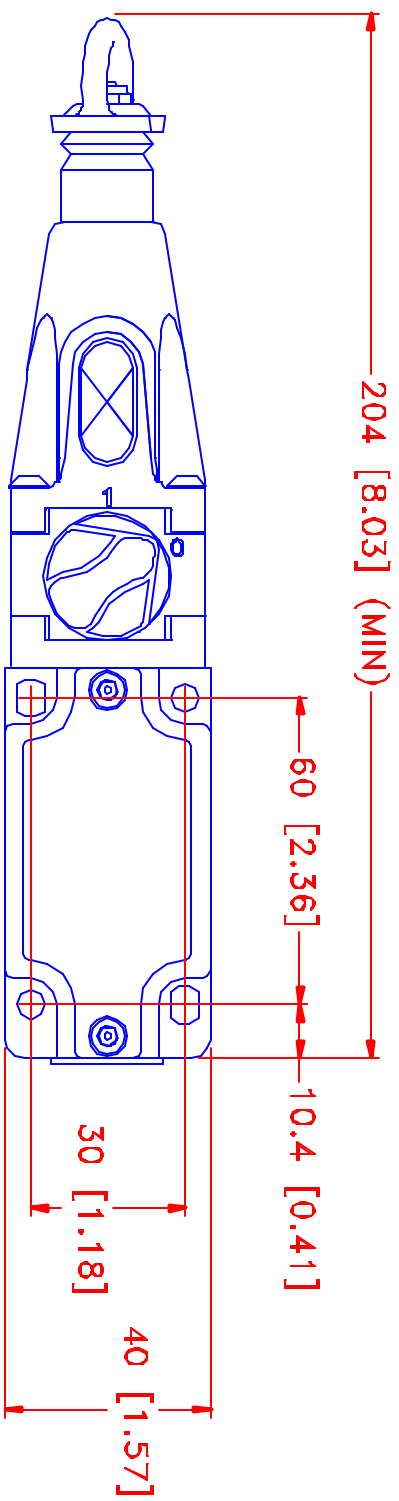
**A** **Go to the Engineering Guide**  
For in-depth information on safety standards and use.

### ■ Dimensions — mm/in.



### ■ Ordering

Model	Contacts	Wiring Entry	Part No.
ER4020-021SN	2 N/C + 1 N/O	1 x 1/2 in. NPT	44506-1010
ER4020-022SN	2 N/C + 2 N/O	1 x 1/2 in. NPT	44506-1020
ER4020-031SN	3 N/C + 1 N/O	1 x 1/2 in. NPT	44506-1030
ER4020-040SN	4 N/C	1 x 1/2 in. NPT	44506-1040
RTK-5, Rope Tension Kit with 5 m of red steel rope			44506-1705
RTK-10, Rope Tension Kit with 10 m of red steel rope			44506-1710
RTK-15, Rope Tension Kit with 15 m of red steel rope			44506-1715
RTK-20, Rope Tension Kit with 20 m of red steel rope			44506-1720
RTK-30, Rope Tension Kit with 30 m of red steel rope			44506-1730
RTK Hardware Only (2 Endpieces and Tensioner)			44506-1700
Tensioner Kit (1 Turnbuckle, 4 Rope Grips, 4 Thimbles)			44506-0700
PVC-Covered Steel Rope (red) 1/8 in. diameter			44506-0710
PVC-Covered Steel Rope (yellow) 1/8 in. diameter			44506-0740
Eye Bolt			44506-0720
Spring			44506-0730
Replacement Eye Nut			44506-0160
Conduit Lights (see pages G239 & G240)			
Accessories (see page G238)			



## ER4020

Drawn to Scale in Decimal Inches  
 For Metric units (mm), multiply by 25.4  
 Dimension as Required  
 For Detailed Dimensions, refer to Catalog

