Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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CE (UL) c US

Conforms to EN418, EN292, ISO/IEC13850, EN60947-5-1
UL and C-UL listed

# ER6019

## Combination Rope and Push-Button Actuated Emergency Stop Switch

- Long rope spans of up to 75 m (246 ft.) for standard model and up to 125 m (410 ft.) for extended model means fewer number of switches required per application

- Heavy-duty housing—the die-cast housing and stainless steel eye nut make the ER6019 suitable for demanding industrial applications

- NEMA 6 enclosure enables the ER6019 switch to withstand water washdown cleaning

- Integral E-stop—the lid-mounted E-stop button provides emergency stopping capability at the extreme end of the installation

- Status indicator—the lid-mounted 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

- Vibration tolerant—the snap-acting switch contacts protect against nuisance tripping due to vibration

- Long life—the ER6019 switch is designed for a minimum of one million actuations

- Conduit beacons are available to provide visual status indication (order separately from accessories section)

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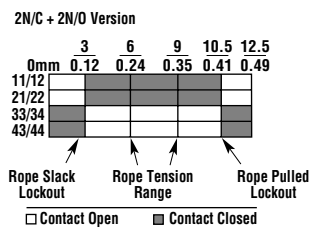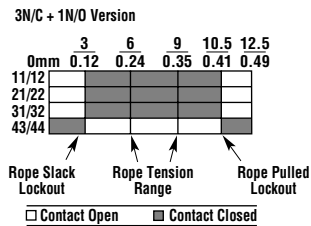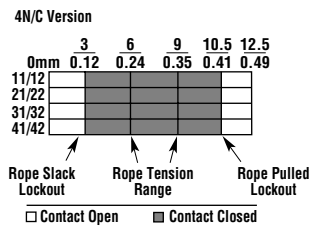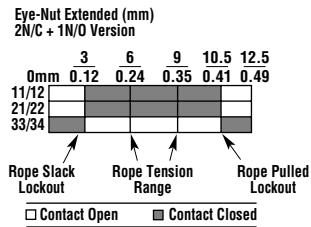For in-depth information on safety standards and use.

**OMRON SCIENTIFIC TECHNOLOGIES, INC.**
**USA** Tel. 1/888/510-4357     **Canada** Tel. 1/866/986-6766

For the Latest Information
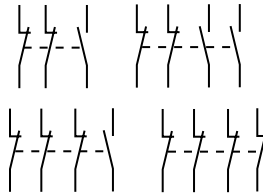On the Internet: **www.sti.com** or **www.omron.ca**

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## ■ Operation

### Rope-Status Indicator on Lid



The rope status indicator makes the system easy to set up and maintain for spans up to 410 ft.

### 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.
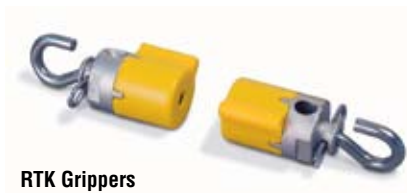


**Installation Hardware**
All conventional hardware items are available and may be ordered as separate items.
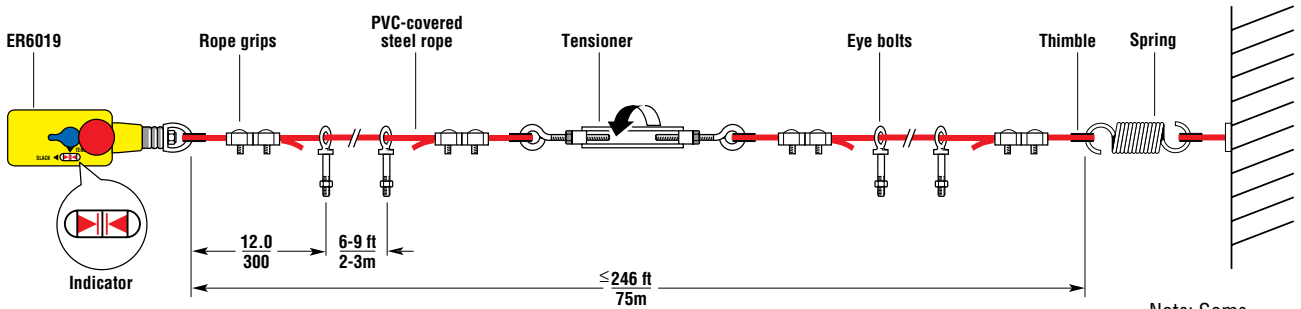


**RTK Tensioner**



**RTK Grippers**

### Contact Arrangements



**Eye-Nut Extended (mm)**
**2N/C + 1N/O Version**

| 0mm | 3 0.12 | 6 0.24 | 9 0.35 | 10.5 0.41 | 12.5 0.49 |
|---|---|---|---|---|---|
| 11/12 | | | | | |
| 21/22 | | | | | |
| 33/34 | | | | | |

Rope Slack Lockout — Rope Tension Range — Rope Pulled Lockout

□ Contact Open   ■ Contact Closed

**4N/C Version**

| 0mm | 3 0.12 | 6 0.24 | 9 0.35 | 10.5 0.41 | 12.5 0.49 |
|---|---|---|---|---|---|
| 11/12 | | | | | |
| 21/22 | | | | | |
| 31/32 | | | | | |
| 41/42 | | | | | |

Rope Slack Lockout — Rope Tension Range — Rope Pulled Lockout

□ Contact Open   ■ Contact Closed

**3N/C + 1N/O Version**

| 0mm | 3 0.12 | 6 0.24 | 9 0.35 | 10.5 0.41 | 12.5 0.49 |
|---|---|---|---|---|---|
| 11/12 | | | | | |
| 21/22 | | | | | |
| 31/32 | | | | | |
| 43/44 | | | | | |

Rope Slack Lockout — Rope Tension Range — Rope Pulled Lockout

□ Contact Open   ■ Contact Closed

**2N/C + 2N/O Version**

| 0mm | 3 0.12 | 6 0.24 | 9 0.35 | 10.5 0.41 | 12.5 0.49 |
|---|---|---|---|---|---|
| 11/12 | | | | | |
| 21/22 | | | | | |
| 33/34 | | | | | |
| 43/44 | | | | | |

Rope Slack Lockout — Rope Tension Range — Rope Pulled Lockout

□ Contact Open   ■ Contact Closed

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**safety interlock switches**

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## ■ *Operation (continued)*

### *Mounting Specifications*

**Standard Model**

ER6019 | Rope grips | PVC-covered steel rope | Tensioner | Eye bolts | Thimble | Spring

SLACK

Indicator

12.0
300

6-9 ft
2-3m

≤246 ft
75m

Note: Some installations may require a ER6019 on both ends.

**Extended Model**

Lifeline 4 | Cable grips | Steel cable | Tensioner | Tensioner | P. bolts | E-Stop button

SLACK

Tension

Indicator

Reset knob

12.0
300

6.5-9 ft
2-3m

246-410 ft
75-125m
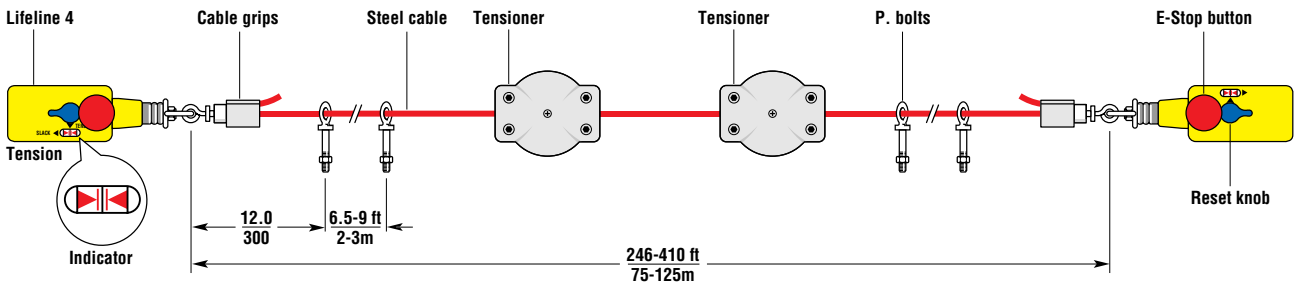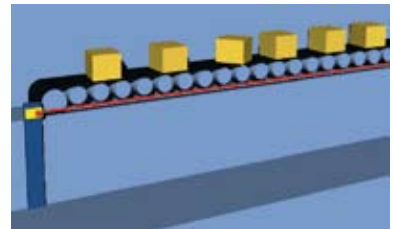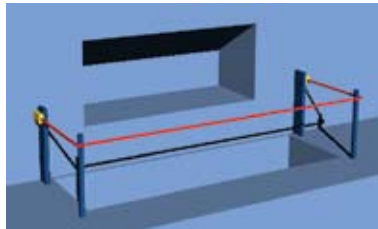
For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in the Engineering Section of this catalog.

## ■ *Applications*

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

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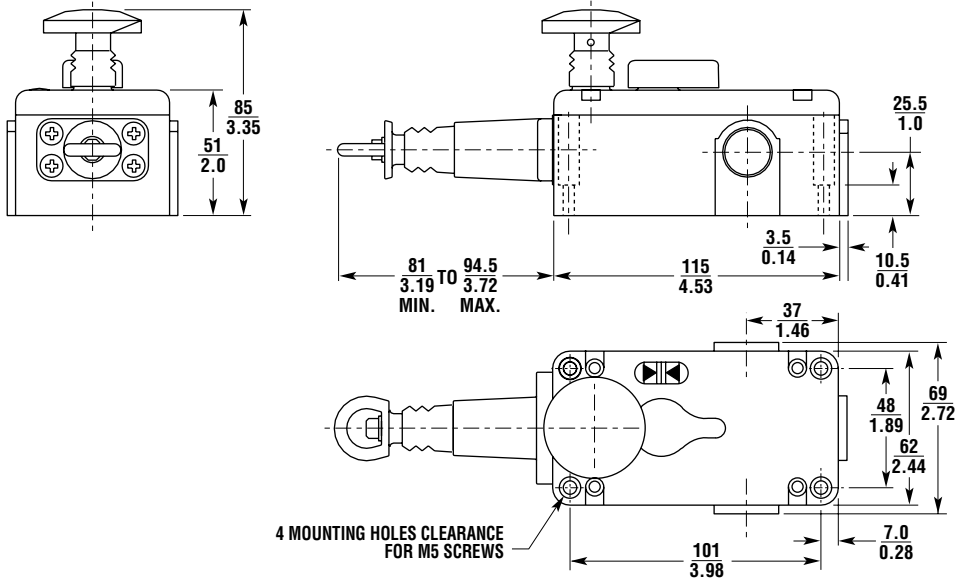
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### ■ *Specifications*

| Electrical | All Models |
|---|---|
| Contact Configurations: | 2 N/C + 1 N/O , 2 N/C + 2 N/O, 3 N/C + 1 N/O, 4 N/C |
| Safety Contacts: | 2 N/C, 3 N/C, 4 N/C positive break |
| Switching Ability | |
| AC: | 500 V–1 A, 250 V–2 A, 100 V–5 A |
| DC: | 250 V–0.5 A, 125 V–1 A, 24 V–2 A |
| Safety Contact Gap: | 2 x 2 mm or 3 x 2 mm or 4 x 2 mm |
| Auxiliary Contacts: | 1 N/O or 1 N/C or 2 N/O |
| Max Switching Current/Volt/Amp: | 500 V/500 VA |
| Minimum Current: | 5 V 5 mA DC |
| Electrical Life: | 1 x $10^6$ minimum |
| **Mechanical** | |
| Mounting: | Any position |
| Mounting Hardware: | 4 x M5 screws |
| Actuator Travel for Positive Opening: | See diagram on previous page |
| Max Rope Span: | 75 m (246 ft.) for standard model |
| | 75 to 125 m (246 to 410 ft.) for extended model |
| Break Contact Min Force: | < 125 N (28 lb.) |
| Max Actuation Speed: | N/A |
| Max Actuation Frequency: | 1 cycle per sec |
| Case Material: | Die-cast alloy |
| Eye Nut Material: | Stainless steel |
| Wiring Entry: | 3 x 0.5 in. NPT conduit |
| Weight: | 630 g (22.2 oz.) |
| Color: | Yellow body, Red E-stop button |
| Mechanical Life: | 1 x $10^6$ minimum |
| **Environmental** | |
| Protection: | IP66 (NEMA 6) |
| Operating Temperature: | -25 to 80°C (-13 to 176°F) |
| Cleaning: | Water washdown |
| **Compliance** | |
| Standards: | EN418, EN292, ISO/IEC13850, EN60947-5-1 |
| Approvals/Listings: | CE marked for all applicable directives, UL and C-UL |

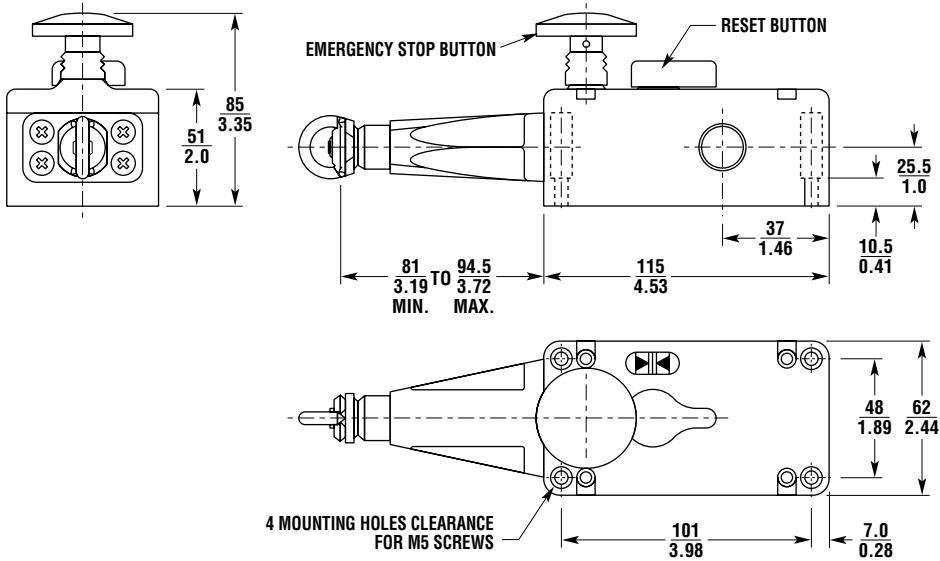Specifications are subject to change without notice.
Note:  The safety contacts of the Omron STI switches are described as normally closed (N/C)—i.e., with the guard closed, actuator in place, and the machine able to be started.

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safety interlock switches

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## ■ *Dimensions — mm/in.*

### Standard Model



85 / 3.35

51 / 2.0

25.5 / 1.0

3.5 / 0.14

10.5 / 0.41

81 / 3.19 MIN. TO 94.5 / 3.72 MAX.

115 / 4.53

37 / 1.46

48 / 1.89

69 / 2.72

62 / 2.44

7.0 / 0.28

4 MOUNTING HOLES CLEARANCE FOR M5 SCREWS

101 / 3.98

### Extended Model



EMERGENCY STOP BUTTON

RESET BUTTON

85 / 3.35

51 / 2.0

25.5 / 1.0

37 / 1.46

10.5 / 0.41

81 / 3.19 MIN. TO 94.5 / 3.72 MAX.

115 / 4.53

48 / 1.89

62 / 2.44

7.0 / 0.28

4 MOUNTING HOLES CLEARANCE FOR M5 SCREWS

101 / 3.98

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## ■ *Ordering*

| Model | Contacts | Wiring Entry | Part No. |
|---|---|---|---|
| ER6019-021SN | 2 N/C + 1 N/O | 3 x 0.5 in. NPT conduit | 44506-0050 |
| ER6019-021SM | 2 N/C + 1 N/O | 3 x M20 | 44506-0100 |
| ER6019-022SN | 2 N/C + 2 N/O | 3 x 1/2 in. NPT | 44506-2020 |
| ER6019-031SN | 3 N/C + 1 N/O | 3 x 1/2 in. NPT | 44506-2030 |
| ER6019-040SN | 4 N/C | 3 x 1/2 in. NPT | 44506-2040 |
| ER6019-022SNE | 2 N/C + 2 N/O | 3 x 1/2 in. NPT | 44506-3020 |
| ER6019-031SNE | 3 N/C + 1 N/O | 3 x 1/2 in. NPT | 44506-3030 |
| ER6019-040SNE | 4 N/C | 3 x 1/2 in. NPT | 44506-3040 |
| 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-50, Rope Tension Kit with 50 m of Red Steel Rope | | | 44506-1750 |
| RTK-75, Rope Tension Kit with 75 m of Red Steel Rope | | | 44506-1775 |
| RTK Hardware Only (2 Grippers and Tensioner) | | | 44506-1700 |
| RTK Tensioner Only (with Allen Wrench) | | | 44506-1701 |
| RTK Gripper (2 Pack) | | | 44506-1702 |
| RTK Extended Hardware Only (2 Tensioners, 2 Grippers) | | | 44506-1703 |
| Tensioner Kit (1 Turnbuckle, 8 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 |
| Eyebolt | | | 44506-0720 |
| Replacement Eye Nut | | | 44506-0160 |
| Spring | | | 44506-0730 |
| Spare Lid with E-Stop Button | | | 44506-0150 |
| Conduit Lights (see pages G239 & G240) | | | |
| Accessories (see page G238) | | | |

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