# Safety Interlock Switches ER6022

Rev. 2.11

SpeedSPEC

ER6022

## **Rope Pull Emergency Stop Switch**

- Rope spans up to 80 m (262 ft.) means fewer number of switches required per application
- Tension indicator makes system setup and rop tension maintenance easy
- Contact arrangements of 2 N/C + 1 N/O, 3 N/C + 1 N/O or 2 N/C + 2 N/O
  IP67 (NEMA 6) enclosure enables the ER6022 switch to withstand water washdown cleaning
- 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
- Indicator beacon—the optional dual indicator beacon, available in 24 VDC or 120 VAC, can be wired to flash red to indicate a tripped switch or glow a constant green to indicate a properly reset switch
- E-stop button—the ER6022 has two mounting positions where the optional E-stop button may be installed; the E-stop button may be added or replaced in the field
- Rubber bellows contain UV inhibitor making the switches suitable for outdoor applications



Conforms to IEC947-5-1, IEC947-5-5, EN418, UL508, BS5304 UL and C-UL listed, TUV certified

### Specifications

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Electrical	All Models		
Contact Configurations:	2 N/C + 1 N/O, 3 N/C + 1 N/O, 2 N/C + 2 N/O		
Safety Contacts:	2 N/C, 3 N/C		
Switching Ability	AC: 240 V–3 A, 120 V–6 A, Inductive, DC: 24 V–2.5 A, Inductive		
Auxiliary Contacts:	1 N/O, 2 N/O		
Max Switching Current/Volt/Amp:	240 V/720 VA		
Minimum Current:	5 V 5 mA DC		
Electrical Life:	1 x 10 <sup>6</sup> minimum		
Mechanical			
LED Indicator Beacon:	24 VDC, 120 VAC		
Mechanical	1 million minimum		
Mounting:	Any position		
Mounting Hardware:	4 x M5 screws		
Max Rope Span:	80 m (262 ft.)		
Operation Force:	< 125 N (28 lb.)		
Tensioning Force to Run Position:	130 N (23 lb.) typical		
Case Material:	Standard Versions: Die-cast aluminum alloy		
	Extreme Cold Versions: Die-cast 316 stainless steel		
Eye Nut Material:	Stainless steel		
Wiring Entry:	3 x M20 or 3 x 0.5 in. NPT		
Weight:	880 g (31 oz.)		
Color:	Standard Versions: Yellow		
	Extreme Cold Versions: Stainless steel		
Mechanical Life:	1 x 10 <sup>6</sup> minimum		
Environmental			
Protection:	IP67 (NEMA 6)		
Operating Temperature:	Standard Versions: -25 to 80°C (-13 to 176°F) Extreme Cold Versions: -40 to 80°C (-40 to 176°F)		
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, TUV		

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 rope properly tensioned and the machine able to be started.





#### Operation



**Blue Reset Knob** 

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 ER6022 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.

	<u>0 mm</u> 0 in	<u>3.5</u> 0.14		<u>14.5</u> 0.57		<u>17.0</u> 0.67
2NC + 1NO Versions	Rope Slack	0.14	Tension Range	0.07	Rope Pulled	
11/12						
21/22						
33/34						
3NC + 1NO Versions	Rope Slack		Tension Range		Rope Pulled	
11/12	incpo orada		reneren runge		nopo i unou	-
21/22						
33/34						
43/44						
						_
2NC + 2NO Versions	Rope Slack		Tension Range		Rope Pulled	
11/12						
21/22						
33/34						
43/44						

🗆 Contact Open 🛛 🔲 Contact Closed



Note: Some installations may require a ER6022 on each end.

For a guide to installing, see "Proper Installation of Rope or Wire Pull Switches" in The Safety Library Section of this catalog on page A77.





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#### Dimensions

#### ažunto <u>63</u> 2.48 $\frac{49}{1.93}$ $\frac{40}{1.57}$ (f (+ ¥ -7 4 MTG HOLES CLEARANCE For M5 Screws <u>89</u> 3.5 7 0.28 ξ 23 0.91 86 3.39 <u>23</u> 0.91 ww <u>54</u> 2.13 $\Theta$ <u>32</u> 1.26 222 8.74 MIN - 239 9.41 MAX <u>96</u> 3.78

#### Applications

(mm/in.)

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



#### Ordering

Model	E stan	Indicator Beacon	Contacts	Wining Entry	Part No.
ER Switches with 3 pole contact blocks	E-stop	Indicator Beacon	Contacts	Wiring Entry	Part No.
	Net is also de al	Net is alwale al	0.01/0 . 1.01/0	01400	44500 5010
ER6022-021M	Not included	Not included	2 N/C + 1 N/O	3 x M20	44506-5010
ER6022-021N	Not included	Not included	2 N/C + 1 N/O	3 x 1/2 in. NPT	44506-5020
ER6022-021ME	Included	Not included	2 N/C + 1 N/O	3 x M20	44506-5210
ER6022-021NE	Included	Not included	2 N/C + 1 N/O	3 x 1/2 in. NPT	44506-5220
ER6022-021MEL	Included	Included	2 N/C + 1 N/O	3 x M20	44506-5410
ER6022-021NEL	Included	Included	2 N/C + 1 N/O	3 x 1/2 in. NPT	44506-5420
ER6022-021NELAC	Included	Included, 120VAC	2 N/C + 1 N/O	1/2" NPT	44506-5423
ER Switches with 4 pole contact blocks					
ER6022-031M	Not included	Not included	3 N/C + 1 N/O	M20	44506-5050
ER6022-031N	Not included	Not included	3 N/C + 1 N/O	1/2 in. NPT	44506-5060
ER6022-022M	Not included	Not included	2 N/C + 2 N/O	M20	44506-5070
ER6022-022N	Not included	Not included	2 N/C + 2 N/O	1/2 in. NPT	44506-5080
ER6022-031ML	Not included	Included, 24 VDC	3 N/C + 1 N/O	M20	44506-5150
ER6022-031NL	Not included	Included, 24 VDC	3 N/C + 1 N/O	1/2 in. NPT	44506-5160
ER6022-022ML	Not included	Included, 24 VDC	2 N/C + 2 N/O	M20	44506-5170
ER6022-022NL	Not included	Included, 24 VDC	2 N/C + 2 N/O	1/2 in. NPT	44506-5180
ER6022-031ME	Included	Not included	3 N/C + 1 N/O	M20	44506-5250
ER6022-031NE	Included	Not included	3 N/C + 1 N/O	1/2 in. NPT	44506-5260
ER6022-022ME	Included	Not included	2 N/C + 2 N/O	M20	44506-5270
ER6022-022NE	Included	Not included	2 N/C + 2 N/O	1/2 in. NPT	44506-5280
ER6022-031MEL	Included	Included, 24 VDC	3 N/C + 1 N/O	M20	44506-5450
ER6022-031NEL	Included	Included, 24 VDC	3 N/C + 1 N/O	1/2 in. NPT	44506-5460
ER6022-022MEL	Included	Included, 24 VDC	2 N/C + 2 N/O	M20	44506-5470
ER6022-022NEL	Included	Included, 24 VDC	2 N/C + 2 N/O	1/2 in. NPT	44506-5480
ER6022-031NELAC	Included	Included, 120 VAC	3 N/C + 1 N/O	1/2 in. NPT	44506-5463
ER6022-022NELAC	Included	Included, 120 VAC	2 N/C + 2 N/O	1/2 in. NPT	44506-5483

Accessories	Part No.
SM06-SL500, Replacement Lid 24 VDC	44506-5700
SM06-SL510, Replacement Lid/LED 24 VDC	44506-5710
SM06-SL510AC, Replacement Lid/LED 120 VAC	44506-5711
(consult factory for complete switch with 120 VAC beacon)	
RK5, 5 m Rope Kit, Stainless Steel	44506-2705
RK10, 10 m Rope Kit, Stainless Steel	44506-2710
RK15, 15 m Rope Kit, Stainless Steel	44506-2715
RK20, 20 m Rope Kit, Stainless Steel	44506-2720
RK30, 30 m Rope Kit, Stainless Steel	44506-2730
RK50, 50 m Rope Kit, Stainless Steel	44506-2750
RK80, 80 m Rope Kit, Stainless Steel	44506-2780
R5M, 5 m Rope Only	44506-3705
R10M, 10 m Rope Only	44506-3710
R20M, 20 m Rope Only	44506-3720
R30M, 30 m Rope Only	44506-3730
R50M, 50 m Rope Only	44506-3750
R80M, 80 m Rope Only	44506-3780
R100M, 100 m Rope Only	44506-3711
R126M, 126 m Rope Only	44506-3726

Accessories	Part No.
SM06-TK00, Tensioner Kit (Turnbuckle, 8 Rope Grips &	44506-0700
4 Thimbles)	
SM06-TG00, Tensioner Gripper, Stainless Steel	44506-4700
SM06-EB10, Eye Bolt, Stainless Steel, 8 per pack	44506-4710
SM06-EB20, Eye Bolt, Galvanized	44506-0720
SM06-DL20, Double Loop Clip, Stainless Steel, 4 per pack	44506-4720
SM06-DL21, Double Loop Clip, Galvanized, 4 per pack	44506-4721
SM06-THSS, Thimble, Stainless Steel, 4 per pack	44506-4770
SM06-THGV, Thimble, Galvanized, 4 per pack	44506-4771
SM06-QLSS, Quick Link, Stainless Steel	44506-4772
SM06-TB30, Turnbuckle, Stainless Steel	44506-4730
SM06-TB31, Turnbuckle, Galvanized	44506-4731
SM06-SP30, Spring, Galvanized	44506-0730
SM06-SP50, Spring, Stainless Steel	44506-4750
SM06-RPSS, Rope Pulley, Stainless Steel	44506-4780
SM06-ES60, E-Stop Mechanism	44506-4760
SM06-LF40, Replacement LED Indicator Beacon, 24 VDC	44506-4740
SM06-LF41, Replacement LED Indicator Beacon, 120 VAC	44506-4741

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= Highlighted Rapid Delivery products are available for shipment today or within FIVE days.

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