

# Top-Entrance Rope Safety Switches

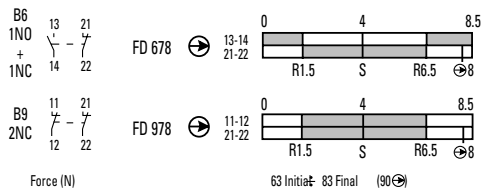
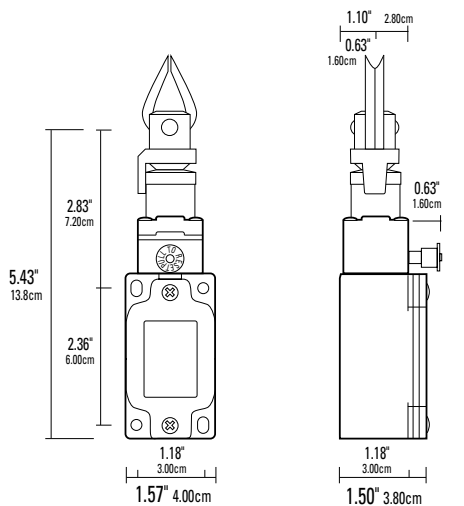
## FD 678

### Description

These rope operated safety switches are installed on machines or belts. They enable the stop command at any point of the machine simply by pulling the rope by hand. Being equipped with a self-checking function, they constantly test their right operation and signal by the opening of the contacts, if an accidental loosening or break of the rope may happen. These safety switches maintain the contacts open after operation, even if the rope is released.



### FD 678 / FD 978



The maximum cable length is 4 ft (12m) with eye bolts

### General Specifications

#### Enclosure

Die cast metal w/ baked epoxy powder coating

#### Compliance

Low Voltage Directive	73/23/CEE
Directive	93/68/CEE
Machinery Directive	89/392/CEE

#### Conduit entry

One entry	PG 13.5
Adapter not furnished	Order P/N IN12135

#### Mechanical endurance

Life Cycle	1 million operations
Operating temperature range	-13° to +175°F (-25° to +80° C)
Minimum Activating Speed	0.039 inches/sec (1mm/sec)

#### Standards

Safety Switch is in compliance with standards: UL508, CSA, EN 292, EN 418, EN 1088, EN 60204, EN 60947-5-1, IEC 204, IEC 947-5-1. Positive Break Contacts are in compliance with standards: EN 60947-5-1, EN 60947-5-1.

#### Protection class

IP 66 (according to IEC529, CE 170-1)

#### Terminal Screws

Captive with self-lifting pressure plates

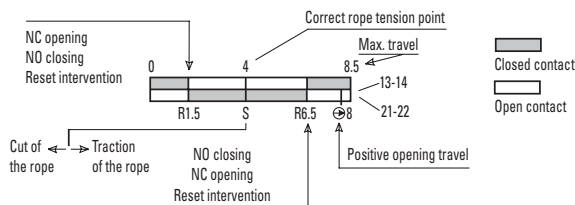
#### Operating Force

Minimum	14 lbs. (64 N)
Maximum	18 lbs. (83 N)

#### Recommended Maximum Operating Distance

Without intermediate supports	19.5 feet (6 meter)
With intermediate support	39.4 feet (12 meter)
(Intermediate support every 9.8 feet (3 meters))	

### How to read diagrams



### Order Information

### Electrical Specifications

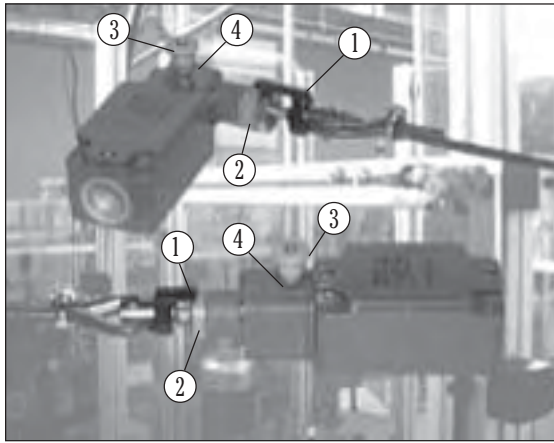
Model Number	Body Material	Reset Operation	Contact <sup>1</sup> Config.	Contact Operating Voltage, Max.	Short Circuit Protection, Max.
FD 678	Die Cast Metal	Manual	1 N.O.+1 N.C.	600 VAC, 300 VDC <sup>3</sup>	10A fuse
FD 978	Die Cast Metal	Manual	2 N.C.	600 VAC, 300 VDC <sup>3</sup>	10A fuse

### Contact rating<sup>2</sup>

UL/CSA	10A A600/Q300 <sup>3</sup>			DC13		
IEC	AC15			24	125	250
Volts	250	400	500	24	125	250
Current (A)	6	3	1	6	1.1	0.4

**Warning— Each electrical rating is an individual maximum and cannot be exceeded!**

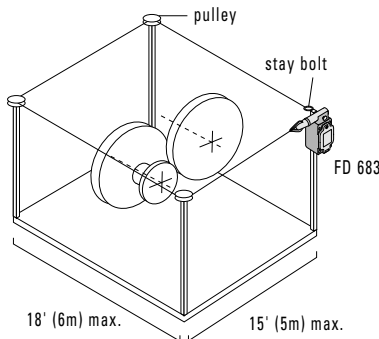
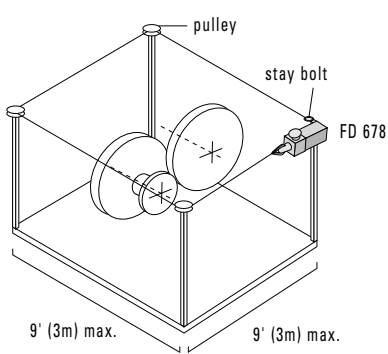
- Configuration with rope in tension
- POSITIVE DOUBLE BREAK CONTACTS. Electrically isolated contacts allow different voltages placed on contact poles.
- UL508



**Installation**

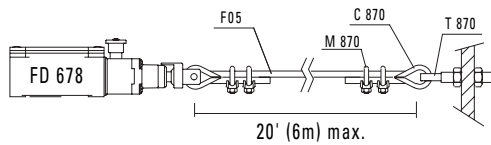
- Tighten the rope connected to the switch until the indicator's end (1), reaches about half of the green ring (2). Afterwards, pull the pommel (3) to close the safety contacts inside the switch (a green ring (4) will appear).
- The safety circuit must be connected to the contacts NC (21-22 or 11-12). The contacts 13-14 shall be used for signals only.
- It is recommended to use only original accessories (rope, thimble, etc.), otherwise the declared performances will not be guaranteed.

**Installation Examples**

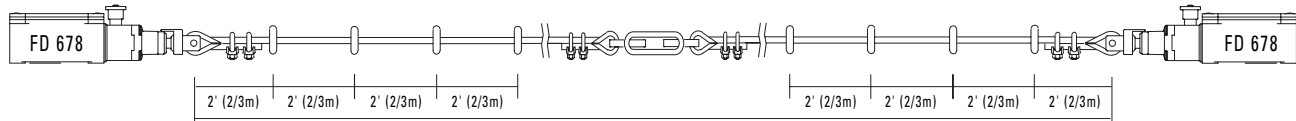
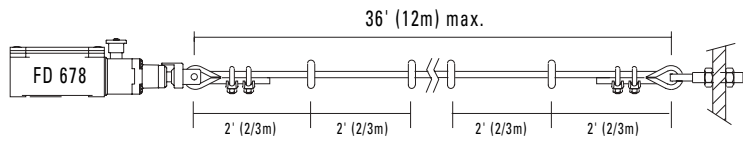


**Rope Installation**

application with rope without any support

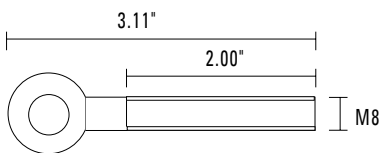


application with rope supported by eyebolts every 2'

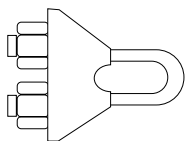


application with rope supported by eyebolts every 10'

**Accessories**



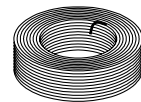
**T 870**  
stay bolt suitable for setting the rope in tension correctly (1 pc.)



**M 870**  
rope clamp (2 or 4 pcs.)



**C 870**  
thimble (1 pc.)



**F 05-100**  
Rope: 100m (~300')  
5mm Diameter (~3/16")