



# Standard Duty Safety Rope Pull Switches

## GLS and GLS-SS Series



- **Mount on Machines and Conveyors Which Cannot be Protected by Guards**
- **Protect Conveyors Up to:**
  - GLS Series:**
    - 80 m (262.5') Using Two Switches or 60 m (197') Using a Single Switch
  - GLS-SS Series:**
    - 100 m (328') Using Two Switches or 80 m (262.5') Using a Single Switch
- **Mushroom Type Emergency Stop Button**
- **Reset Button—Push to Reset Following Switch Activation by Rope Pull**
- **Wire-Breakage Monitoring**



GLS-142075A



GLS-SS-144020A

All models shown smaller than actual size.

GLS and GLS-SS Series safety rope switches are designed to be mounted on machines and sections of conveyors which cannot be protected by guards. In contrast to traditional mushroom head type emergency stop buttons, GLS and GLS-SS Series safety rope switches can initiate the emergency command from any point along the installed rope length and provide robust emergency stop rope pull protection for exposed conveyors or machines. In combination with a dual channel safety monitoring relay, GLS and GLS-SS Series safety rope systems can be used as emergency stop devices monitored for up to PLe to ISO13849-1. All GLS and GLS-SS Series safety rope emergency stop switches conform to ISO13850 and EN60947-5-5. They have a positive mechanical linkage between the switch contacts and the wire rope. The switches have wire-breakage monitoring. On pulling the rope the safety contacts are positively opened and the auxiliary contacts are closed. The switches are mechanically latched and can then only be returned to the operational condition by pressing the blue reset button as required by ISO13850.

GLS Series are general/standard duty robust die-cast safety rope pull switch designed to protect conveyor lengths where protection is required up to 80 m (262.5') using two switches or up to 60 m (197') using a single switch. They provide a reliable general purpose safety solution for conveyors and offer a choice of fittings depending upon the application. They can be supplied with a mushroom type emergency stop button which can be fitted to the side of the switch to offer an extra traditional emergency stop function close to the switch, or can be fitted later after installation without any extra wiring. A bi-color LED is also available to show switch status from a distance. Rugged internal sealing bellows means the GLS Series can be high pressure hosed and they are suitable for internal or external use.

The GLS-SS Series are general/standard duty stainless steel safety rope pull switches designed to protect long conveyor lengths up to 100 m (328'). The 316 SS housings are designed specifically to withstand the harsh environments found in the food and pharmaceutical industries. The fixing holes are under the cover of the switch to prevent food trap areas and will survive chemical and detergent washdown by providing all stainless steel parts and robust IP67 and IP69K sealing by using integral bellows and gaskets. An easily visible bi-color LED is available to show switch status from a distance. Shorter rope spans up to 80 m (262.5') can be achieved by using just one switch therefore making a cost effective solution and reducing electrical wiring runs.

### Specifications

**Standards:** EN60947-5-1, EN60947-5-5, EN62061, UL508, ISO13850, ISO13849-1

### SAFETY CLASSIFICATION AND RELIABILITY DATA

**Mechanical Reliability B10d:** 1.5 x 10<sup>6</sup> operations at 100 mA load

**ISO13849-1:** Up to PLe depending upon system architecture

**EN62061:** Up to SIL3 depending upon system architecture

**Safety Data—Annual Usage:** 8 cycles per hour/24 hours per day/365 days

**PFHd:** <1.0 x 10<sup>-7</sup>

**Proof Test Interval (Life):** 21 years

**MTTFd:** 214 years

### Enclosure Material:

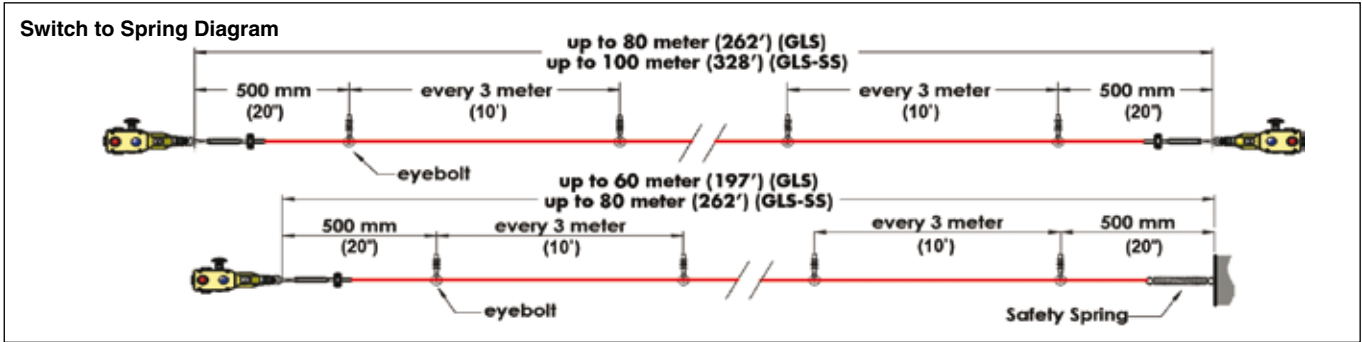
**GLS Series:** Die cast (painted yellow)

**GLS-SS Series:** 316 SS

### IP Rating:

**GLS Series:** NEMA 6 (IP67)

**GLS-SS Series:** NEMA PW12 (IP67K), NEMA 6 (IP67)



**Note:** It is important that the first 500 mm (19.68") is not used as part of the active protection coverage. If protection is required in this first 500 mm (19.68") then it is recommended to use switches fitted with a mushroom type E-Stop button. OMEGA also recommends using a safety spring when a maximum of one corner pulley is used.

**Rope Span:**

**GLS:** Up to 80 m (262.5') (2 switches), 60 m (197') (1 switch)

**GLS-SS:** Up to 100 m (328') (2 switches), 80 m (262.5') (1 switch)

**Rope Tension Device:** Tensioner/gripper (quick fixing)

**Rope Type:** 4.00 mm outside dia, steel inner, PVC sheath

**Mounting:** 4 x M5

**Mounting Position:** Any

**Conduit Entries:** 3 x 1/2 NPT

**Tongue Settings:** Mounting M5 4.0 Nm, Lid T20 Torx M4 1.5 Nm, Terminals 1.0 Nm

**Operating Ambient Temperature:** -25 to 80°C (-13 to 176°F)

**Vibration Resistance:** 10 to 500 Hz, 0.35 mm

**Shock Resistance:** 11 ms, 15 g

**Tension Force (Typical Mid Setting):** 130N

**Typical Operating Force (Rope pulled):** <125N, <300 mm deflection

**Contact Type:** EN60947-5-1, double break type Zb, snap action 3 NC (positive break) 1 NO (auxiliary)

**Contact Material:** Silver

**Termination:** Clamp up to 2.5 mm<sup>2</sup> conductors

**Rating:**

**GLS:** Utilization category AC15

**GLS-SS:** Utilization category AC15, A300

**Operational Rating:** 240V 3 A

**Thermal Current (I<sub>th</sub>):** 10 A

**Rated Insulation Voltage (U):** 500V

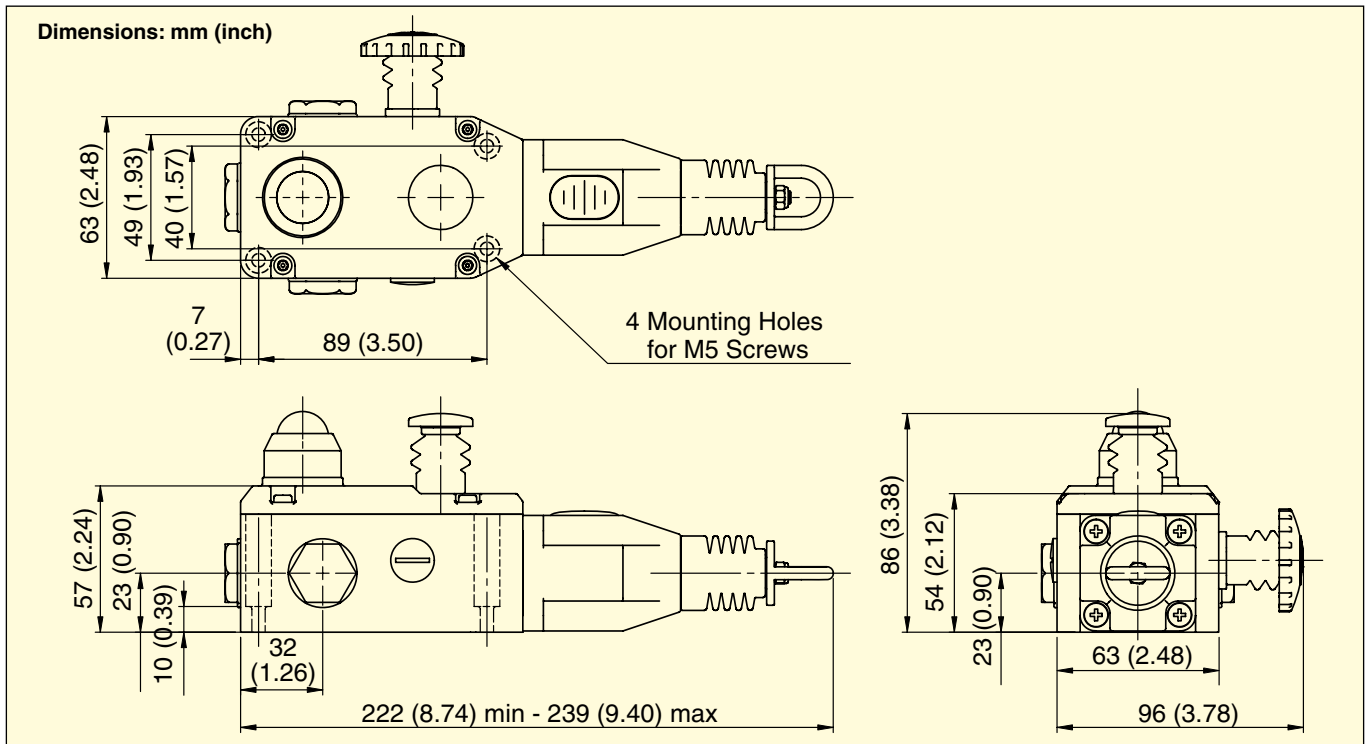
**Withstand Voltage (U<sub>imp</sub>):** 2500V

**Short Circuit Overload Protection:** Fuse externally 10A (FF)

**Weight:**

**GLS Series:** 735 g (26 oz)

**GLS-SS Series:** 1815 g (64 oz)





<b>To Order</b>					
<b>Safety Rope Pull Switches—Up to 80 m (262.5') Runs (Switch-to-Switch), 60 m (197') (Switch-to-Spring)</b>					
Model No.	Description	Material	Contacts	Conduit Entry	Fittings
GLS-142051	Safety rope pull switch	Die Cast	3 NC 1 NO	3 x ½ NPT	—
GLS-142075A	Safety rope pull switch	Die Cast	3 NC 1 NO	3 x ½ NPT	E-Stop, 24 Vdc LED
GLS-142075B	Safety rope pull switch	Die Cast	3 NC 1 NO	3 x ½ NPT	E-Stop, 110 Vac LED
<b>Safety Rope Pull Switches—Up to 100 m (328') Runs (Switch-to-Switch), 80 m (262.5') (Switch-to-Spring)</b>					
GLS-SS-144002	Safety rope pull switch	316 SS	3 NC 1 NO	3 x ½ NPT	—
GLS-SS-144020A	Safety rope pull switch	316 SS	3 NC 1 NO	3 x ½ NPT	E-Stop, 24 Vdc LED
GLS-SS-144020B	Safety rope pull switch	316 SS	3 NC 1 NO	3 x ½ NPT	E-Stop, 110 Vac LED

**Ordering Example:** GLS-142075A safety rope pull switch with E-Stop and 24 Vdc LED, 140006 rope kit galvanized, 50 m (164.1'), 140043 stainless steel safety spring and one 140046 (8-pack) eyebolts, galvanized.

<b>Rope Kits (Includes rope, eyebolts, tensioner/gripper, allen key)</b>						
Model No.	Description	Material	Rope QL (Quick Link)	Eyebolts 84 mm L (3.3")	Tensioner/ Gripper	Allen Key
				Qty. Included in Kit		
140001	Rope kit	Galvanized	5 m (16.4')	3	1	1
140002	Rope kit	Galvanized	10 m (32.8')	5	1	1
140003	Rope kit	Galvanized	15 m (49.2')	7	1	1
140004	Rope kit	Galvanized	20 m (65.6')	9	1	1
140005	Rope kit	Galvanized	30 m (98.4')	12	1	1
140006	Rope kit	Galvanized	50 m (164.1')	20	1	1
140007	Rope kit	Galvanized	80 m (262.5')	30	2	2
140008	Rope kit	Galvanized	100 m (328.1')	37	2	2
140009	Rope kit	Galvanized	126 m (413.4')	45	2	2
140010	Rope kit	Stainless steel	5 m (16.4')	3	1	1
140011	Rope kit	Stainless steel	10 m (32.8')	5	1	1
140012	Rope kit	Stainless steel	15 m (49.2')	7	1	1
140013	Rope kit	Stainless steel	20 m (65.6')	9	1	1
140014	Rope kit	Stainless steel	30 m (98.4')	12	1	1
140015	Rope kit	Stainless steel	50 m (164.1')	20	1	1
140016	Rope kit	Stainless steel	80 m (262.5')	30	1	1
140017	Rope kit	Stainless steel	100 m (328.1')	37	1	1
140018	Rope kit	Stainless steel	126 m (413.4')	45	1	1

**Accessories**

Model No.	Description
140019	Tensioner gripper, galvanized
140020	Tensioner gripper, stainless steel
140021	Pully (inside or outside), stainless steel
140043	Safety spring, stainless steel, 220 mm (7.8") long
140045	Eyebolt, stainless steel, 8-pack, 84 mm (3.3") long, thread length 51 mm (2.0") M8 x 1.25
140046	Eyebolt, galvanized, 8-pack, 84 mm (3.3") long, thread length 51 mm (2.0") M8 x 1.25
140121	316 SS gland ½ NPT