



Heavy-Duty Safety Rope Pull Switches



GLHD-141002A shown smaller than actual size.

GLHD Series



- ✓ **Mount on Machines and Conveyors Which Cannot be Protected by Guards**
- ✓ **Protect Conveyors Up to:**
250 m (820') Using Two Switches or
200 m (656') Using a Single Switch
- ✓ **Mushroom Type Emergency Stop Button**
- ✓ **Reset Button—Push to Reset Following Switch Activation by Rope Pull**
- ✓ **Wire-Breakage Monitoring**

GLHD 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, GLHD 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, GLHD Series safety rope systems can be used as emergency stop devices monitored for up to PLe to ISO13849-1. All GLHD 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.

GLHD Series are heavy-duty safety rope pullswitches designed to protect long conveyor lengths up to 250 m (820'). The die-cast housings are robust to survive indoor or outdoor use including washdown NEMA 6 (IP67) rating. Lengths over 2 Km can be achieved with less than 20 switches. An easily visible bi-color LED is available to show switch status from a distance. GLHD Series switches have 4NC 2NO contacts to ensure flexibility with all modern control applications. Shorter rope spans up to 200 m (656') 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: 1.5×10^6 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: $<1.0 \times 10^{-7}$

Proof Test Interval (Life): 21 years

MTTFd: 214 years

Enclosure/Cover Material: Die-cast (painted yellow)

External Parts: Stainless steel

IP Rating: NEMA 6 (IP67)

Rope Span: 250 m (820') dual head

Rope Tension Device: Tensioner/gripper (quick fixing)



Rope Type: 4 mm (15.75") outside dia, steel inner, PVC sheath

Mounting: 4 x M5

Mounting Position: Any

Conduit Entries: 4 x ½ 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 (0.013")

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 4NC (positive break) 2NO (auxiliary)

Contact Material: Silver

Termination: Clamp up to 2.5 mm² conductors

Rating: Utilization category AC15 A300

Operational Rating: 240V 3A

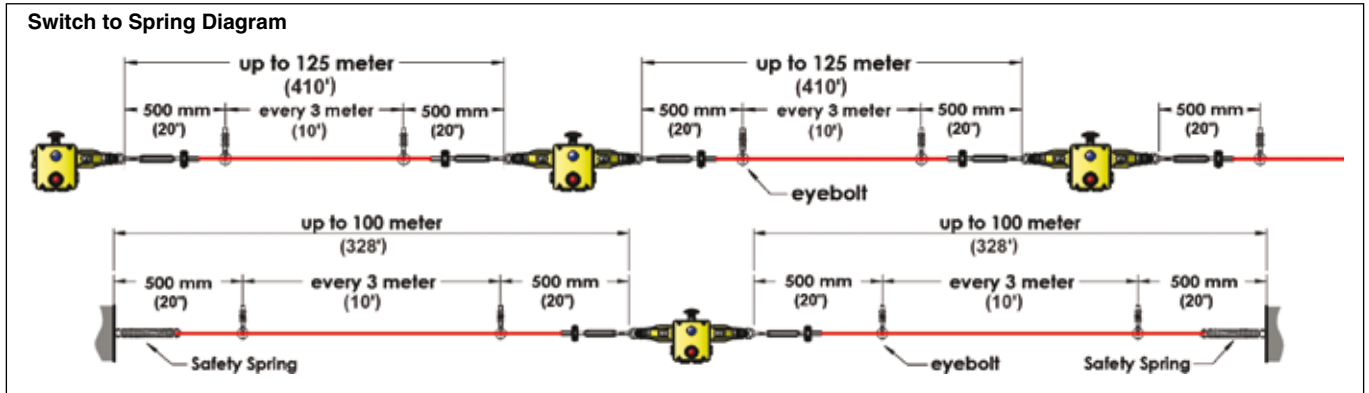
Thermal Current (Ith): 10A

Rated Insulation Voltage (U): 500V

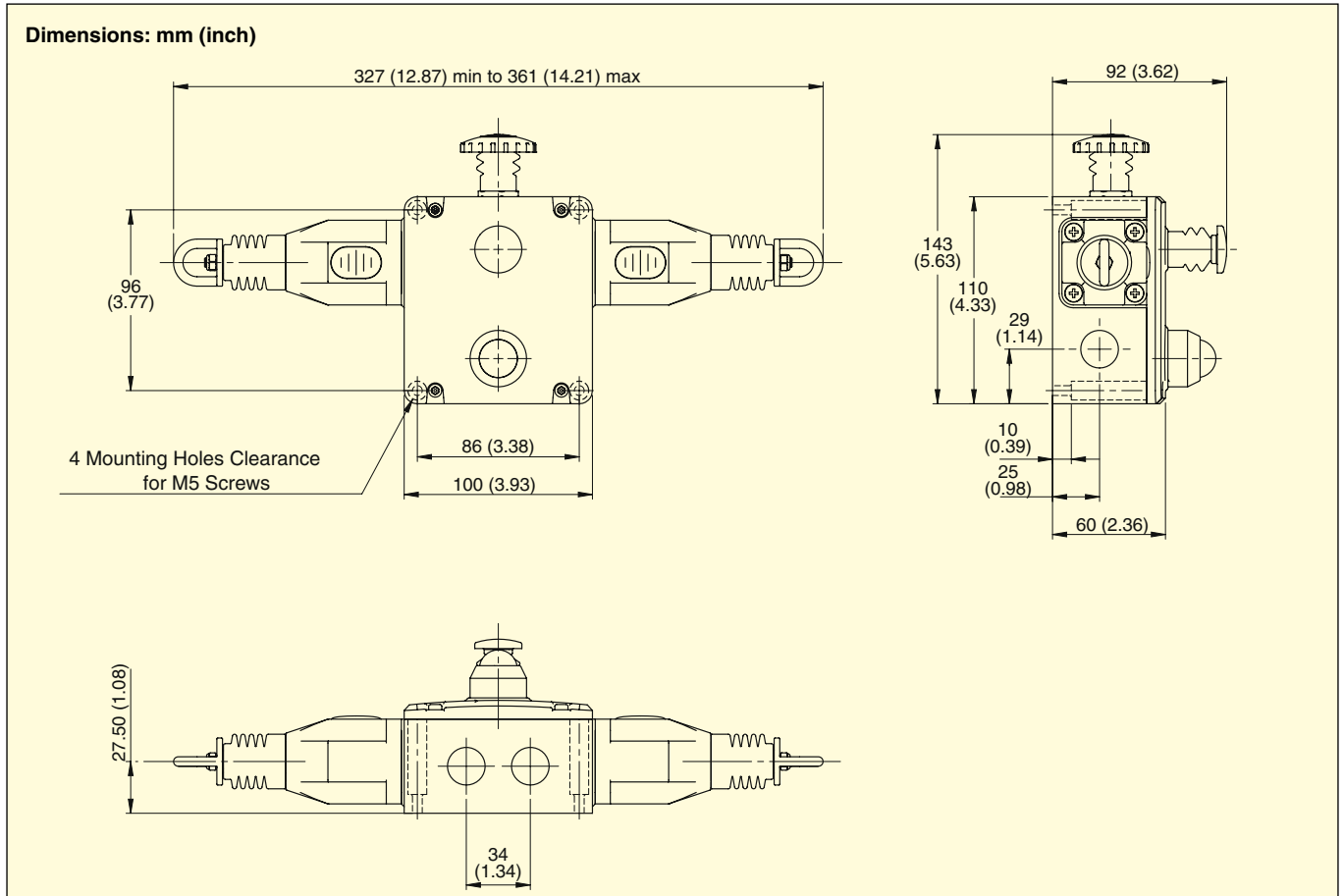
Withstand Voltage (Uimp): 2500V

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

Weight: 1350 g (48 oz)



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. TRODEKS also recommends using a safety spring when a maximum of one corner pulley is used.





To Order				
Safety Rope Pull Switches—Up to 250 m (820') Runs (Switch-to-Switch), 200 m (656') (Switch-to-Spring)				
Model No.	Description	Contacts	Conduit Entry	Fittings
GLHD-141042	Heavy-duty safety rope pull switch	4NC 2NO	4 x ½ NPT	—
GLHD-141002A	Heavy-duty safety rope pull switch	4NC 2NO	4 x ½ NPT	E-Stop, 24 Vdc LED
GLHD-141002B	Heavy-duty safety rope pull switch	4NC 2NO	4 x ½ NPT	E-Stop, 110 Vac LED

Ordering Example: **GLHD-141002A** safety rope pull switch with E-Stop and 24 Vdc LED, two **140006** rope kits galvanized, 50 m, two **140043** stainless steel safety springs and one **140046** (8-pack) eyebolts.

Rope Kits (Includes rope, eyebolts, tensioner/gripper, allen key)						
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