

# Guardian Line Mini Duty - Type: GLM

## Protection up to 50 meters

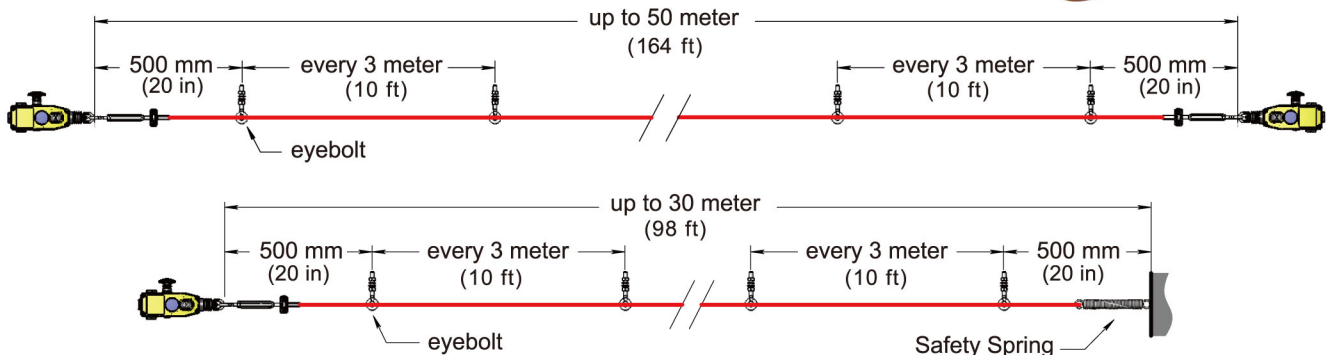


The GLM is a compact yet robust die-cast Mini Duty Safety Rope Pull switch designed to protect short conveyor lengths where protection is required up to 50m. using two switches or up to 30m. using a single switch.

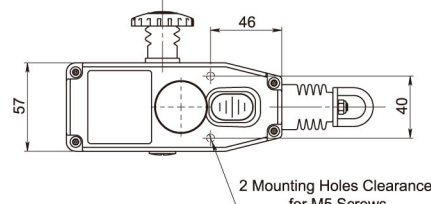
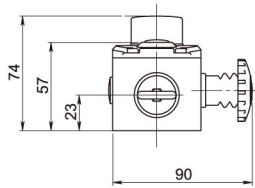
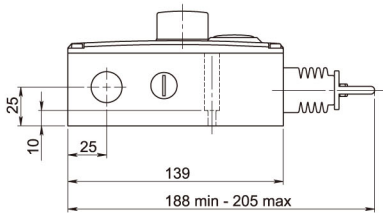
They provide reliable, cost effective safety solutions for conveyor systems and can be enhanced by adding external mushroom type E Stop at the switch or bi-colour LED available to show switch status from a distance.

They have a choice of 3 or 4 pole contacts to ensure flexibility with all modern control applications.

Rugged integral sealing bellows means they can be high pressure hosed.



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.



All Dimensions in mm

Sales Number	Conduit	Contacts	Fittings
143001	M20	2NC 1NO	
143002	1/2" NPT	2NC 1NO	
143003	M20	3NC	
143004	1/2" NPT	3NC	
143005	M20	2NC 1NO	E Stop
143006	1/2" NPT	2NC 1NO	E Stop
143007	M20	3NC	E Stop
143008	1/2" NPT	3NC	E Stop
143050	M20	3NC 1NO	
143051	1/2" NPT	3NC 1NO	
143052	M20	2NC 2NO	
143053	1/2" NPT	2NC 2NO	
143054	M20	4NC	
143055	1/2" NPT	4NC	
143056	M20	3NC 1NO	E Stop
143057	1/2" NPT	3NC 1NO	E Stop
143058	M20	2NC 2NO	E Stop
143059	1/2" NPT	2NC 2NO	E Stop
143060	M20	4NC	E Stop
143061	1/2" NPT	4NC	E Stop
143062	M20	3NC 1NO	LED
143063	1/2" NPT	3NC 1NO	LED
143064	M20	2NC 2NO	LED
143065	1/2" NPT	2NC 2NO	LED
143066	M20	3NC 1NO	E Stop & LED
143067	1/2" NPT	3NC 1NO	E Stop & LED
143068	M20	2NC 2NO	E Stop & LED
143069	1/2" NPT	2NC 2NO	E Stop & LED
143009	Replacement Lid		
143010	Replacement Lid / LED		LED
For LED models add voltage code to Sales Number			
Steady Green / Flashing Red			
A - 24Vdc B - 110Vac C - 230V.ac			
Steady Green / Steady Red			
AS-24Vdc BS-110Vac CS-230V.ac			

Gold Plated Contacts available for low power circuits (5V, 5mA). Add GC to Part Number e.g. 143001-GC

Standards:	IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN62061 UL508 ISO13850 ISO13849-1
Safety Classification and Reliability Data:	
Mechanical Reliability B10d	1.5 x 10 <sup>6</sup> operations at 100mA load up to Category 4 with Safety Relay
EN 954-1	up to PLe depending upon system architecture
ISO 13849-1	up to SIL3 depending upon system architecture
EN 62061	8 cycles per hour / 24 hours per day / 365 days
Safety Data - Annual Usage	PFHd < 1.0 x 10 <sup>-7</sup>
Proof Test Interval (Life)	21 years
MTTFd	214 years
Enclosure Material	Die Cast Painted Yellow
IP Rating	IP67 (NEMA 6)
Rope Span	up to 50m.
Rope Tension device	IDEM Tensioner / Gripper - Quick Fixing
Rope Type:	4.0 mm Outside Dia. Steel inner - PVC sheath
Mounting	4 x M5
Mounting position	Any
Conduit entries	3 x M20 or 3 x 1/2" NPT by part number
Torque settings	Mounting M5 4.0 Nm Lid T20 Torx M4 1.5 Nm Terminals 1.0 Nm
Ambient Temperature	-25C +80C.
Vibration resistance	10-500Hz 0.35mm
Shock resistance	15g 11ms
Tension Force (typical mid setting)	130N.
Typical Operating Force (Rope pulled)	< 125N. < 300mm Deflection
Weight	700g.
Contact type	IEC 947-5-1 Double break Type Zb Snap Action up to 4NC (positive break) 2NO (Auxiliary)
Termination	Clamp up to 2.5 sq. mm conductors
Rating	Utilisation Category : AC15 A300
Operational Rating	240V. 3A.
Thermal Current (Ith)	10A.
Rated Insulation Voltage (Ui)	500V.
Withstand Voltage (Uimp)	2500V.
Short Circuit Overload Protection	Fuse Externally 10A. (FF)

For all IDEM Rope Switches the normally closed (NC) circuits are closed when the system is tensioned correctly and the switch has been reset.

# Guardian Line Standard Duty - Type: GLS

## Protection up to 80 meters



The GLS is a General Duty robust die-cast Safety Rope Pull switch designed to protect conveyor lengths where protection is required up to 80m. using two switches or up to 60m. using a single switch.

They provide a reliable general purpose safety solution for conveyors and offer a choice of fittings depending upon the application.

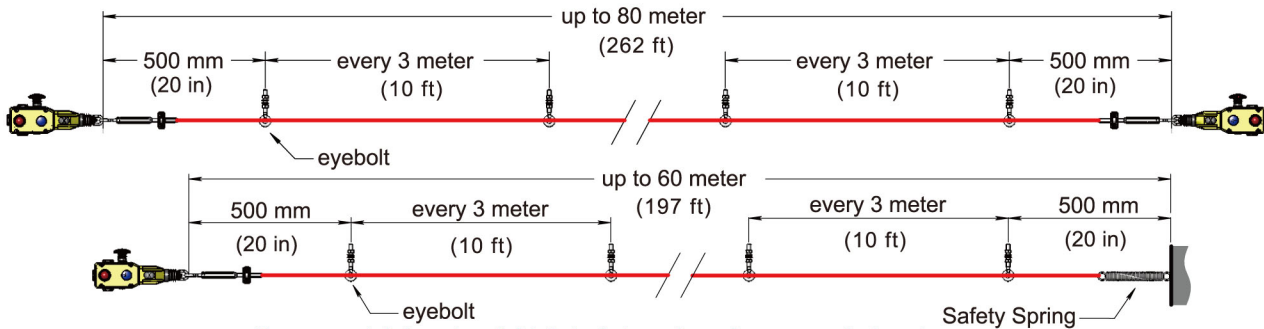
They can be supplied with a mushroom type Emergency Stop button which can be fitted to the side of the switch to offer an extra traditional Emergency Stop function close to the switch, or can be fitted later after installation without any extra wiring.

A bi-colour LED is available to show switch status from a distance and they have a choice of 3 pole, 4 pole or Explosion Proof contact blocks to ensure flexibility with all modern control applications.

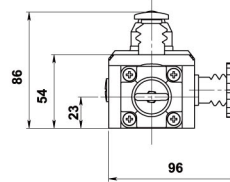
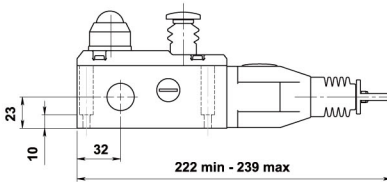
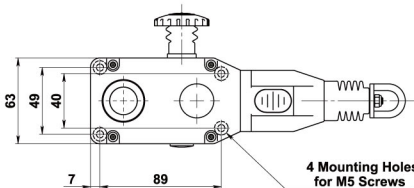
Rugged integral sealing bellows means they can be high pressure hosed and the choice of materials makes them suitable for inside or outside use.



GLS-FZ: special low temperature version - 40C. available.



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.



Pre-wired Ex versions (See Explosion proof section)

Standards:	IEC 60947-5-1	IEC 60947-5-5	EN954-1	EN62061
Safety Classification and Reliability Data:	UL508	ISO13850	ISO13849-1	
Mechanical Reliability B10d	1.5 x 10 <sup>6</sup> operations at 100mA load			
EN 954-1	up to Category 4 with Safety Relay			
ISO 13849-1	up to PLe depending upon system architecture			
EN 62061	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 / Cover	Die-Cast - Painted Yellow			
IP Rating	IP67 (NEMA 6)			
Rope Spans	Up to 80m.			
Rope Tension device	IDEM Tensioner / Gripper - Quick Fixing			
Rope Type:	4.0 mm Outside Dia. Steel inner - PVC sheath			
Mounting	4 x M5			
Mounting position	Any			
Conduit entries	3 x M20 or 3 x 1/2" NPT by part number			
Torque settings	Mounting M5 4.0 Nm			
	Lid T20 Torx M4 1.5 Nm			
	Terminals 1.0 Nm			
Ambient Temperature	-25C +80 C.			
Vibration resistance	10-500Hz 0.35mm			
Shock resistance	15g 11ms			
Tension Force (typical mid setting)	130N.			
Typical Operating Force (Rope pulled)	< 125N. < 300mm Deflection			
Weight	820 g.			
Contact type	IEC 947-5-1 Double break Type Zb			
	Snap Action up to 4NC (positive break)			
	2NO (Auxiliary)			
Contact Material	Silver			
Termination	Clamp up to 2.5 sq. mm conductors			
Rating	Utilisation Category : AC15			
Operational Rating	240V. 3A.			
Thermal Current (Ith)	10A.			
Rated Insulation Voltage (Ui)	500V.			
Withstand Voltage (Uimp)	2500V.			
Short Circuit Overload Protection	Fuse Externally 10A. (FF)			

Sales Number	Conduit	Contacts	Fittings
142001	3 x M20	2NC 1NO	
142002	3 x 1/2" NPT	2NC 1NO	
142005	3 x M20	2NC 1NO	LED
142006	3 x 1/2" NPT	2NC 1NO	LED
142009	3 x M20	2NC 1NO	E-Stop
142010	3 x 1/2" NPT	2NC 1NO	E-Stop
142017	3 x M20	2NC 1NO	E-Stop & LED
142018	3 x 1/2" NPT	2NC 1NO	E-Stop & LED
142050	3 x M20	3NC 1NO	
142051	3 x 1/2" NPT	3NC 1NO	
142052	3 x M20	2NC 2NO	
142053	3 x 1/2" NPT	2NC 2NO	
142054	3 x M20	4NC	
142055	3 x 1/2" NPT	4NC	
142056	3 x M20	3NC 1NO	LED
142057	3 x 1/2" NPT	3NC 1NO	LED
142058	3 x M20	2NC 2NO	LED
142059	3 x 1/2" NPT	2NC 2NO	LED
142060	3 x M20	4NC	LED
142061	3 x 1/2" NPT	4NC	LED
142062	3 x M20	3NC 1NO	E-Stop
142063	3 x 1/2" NPT	3NC 1NO	E-Stop
142064	3 x M20	2NC 2NO	E-Stop
142065	3 x 1/2" NPT	2NC 2NO	E-Stop
142066	3 x M20	4NC	E-Stop
142067	3 x 1/2" NPT	4NC	E-Stop
142074	3 x M20	3NC 1NO	E-Stop & LED
142075	3 x 1/2" NPT	3NC 1NO	E-Stop & LED
142076	3 x M20	2NC 2NO	E-Stop & LED
142077	3 x 1/2" NPT	2NC 2NO	E-Stop & LED
142078	3 x M20	4NC	E-Stop & LED
142079	3 x 1/2" NPT	4NC	E-Stop & LED
142026	Replacement Lid		
142027	Replacement Lid with LED		LED
For LED models add voltage code to Sales Number			
Steady Green / Flashing Red			
A - 24Vdc B - 110Vac C - 230V.ac			
Steady Green / Steady Red			
AS-24Vdc BS-110Vac CS-230V.ac			

Gold Plated Contacts available for low power circuits (5V. 5mA). Add GC to Part Number e.g. 142001-GC

# Guardian Line Standard Duty - Type: GLS - SS

Protection up to 100 meters



The GLS-SS is a General Duty Safety Rope Pull switch designed to protect long conveyor lengths up to 100m. The Stainless Steel 316 housings are designed specifically to withstand the tough environments found in the Food and Pharmaceutical industries. The fixing holes are under the cover of the switch to prevent food trap areas. They are all purpose switches 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.

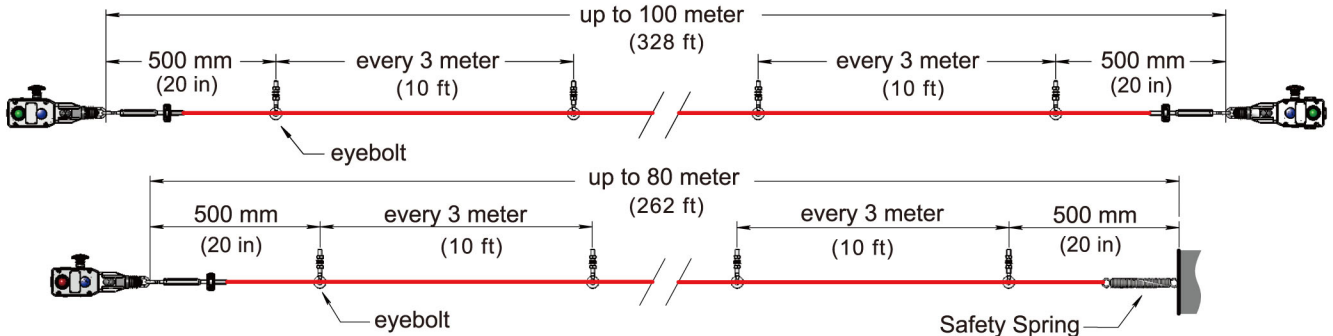
An easily seen bi-colour LED is available to show switch status from a distance and they have a choice of 3 pole, 4 pole or Explosion Proof contact blocks to ensure flexibility with all modern control applications.

Shorter rope spans up to 80m. can be achieved by using just one switch therefore making a cost effective solution and also reducing electrical wiring runs.

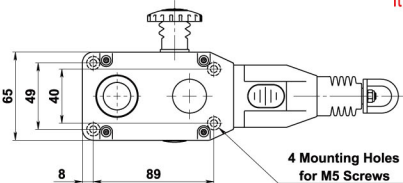
Stainless Steel



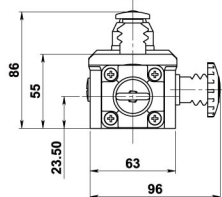
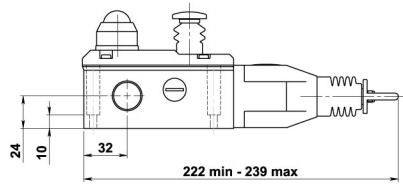
Low Temperature -40C.versions available GLS-SS-FZ



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.



Pre-wired Ex versions (See Explosion proof section)



All Dimensions in mm

Sales Number	Conduit	Contacts	Fittings
144001	3 x M20	3NC 1NO	
144002	3 x 1/2" NPT	3NC 1NO	
144003	3 x M20	2NC 2NO	
144004	3 x 1/2" NPT	2NC 2NO	
144005	3 x M20	4NC	
144006	3 x 1/2" NPT	4NC	
144007	3 x M20	3NC 1NO	LED
144008	3 x 1/2" NPT	3NC 1NO	LED
144009	3 x M20	2NC 2NO	LED
144010	3 x 1/2" NPT	2NC 2NO	LED
144011	3 x M20	4NC	LED
144012	3 x 1/2" NPT	4NC	LED
144013	3 x M20	3NC 1NO	E-Stop
144014	3 x 1/2" NPT	3NC 1NO	E-Stop
144015	3 x M20	2NC 2NO	E-Stop
144016	3 x 1/2" NPT	2NC 2NO	E-Stop
144017	3 x M20	4NC	E-Stop
144018	3 x 1/2" NPT	4NC	E-Stop
144019	3 x M20	3NC 1NO	E-Stop & LED
144020	3 x 1/2" NPT	3NC 1NO	E-Stop & LED
144021	3 x M20	2NC 2NO	E-Stop & LED
144022	3 x 1/2" NPT	2NC 2NO	E-Stop & LED
144023	3 x M20	4NC	E-Stop & LED
144024	3 x 1/2" NPT	4NC	E-Stop & LED
144040	Replacement Lid		
144041	Replacement Lid / LED		
For LED models add voltage code to Sales Number			
Steady Green / Flashing Red			
A - 24Vdc B - 110Vac C - 230V.ac			
Steady Green / Steady Red			
AS-24Vdc BS-110Vac CS-230V.ac			

Gold Plated Contacts available for low power circuits (5V. 5mA). Add GC to Part Number e.g. 144001-GC

Standards:	IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN62061 UL508 ISO13850 ISO13849-1
Safety Classification and Reliability Data:	
Mechanical Reliability B10d	1.5 x 10 <sup>6</sup> operations at 100mA load
EN 954-1	up to Category 4 with Safety Relay
ISO 13849-1	up to PLe depending upon system architecture
EN 62061	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 / Cover	Stainless Steel 316
External Parts	Stainless Steel
IP Rating	IP69K (NEMA PW12) IP67 (NEMA 6)
Rope Spans	100m.
Rope Tension device	IDEM Tensioner / Gripper – Quick Fixing
Rope Type:	4.0 mm Outside Dia. Steel inner – PVC sheath
Mounting	4 x M5
Mounting position	Any
Conduit entries	3 x M20 or 3 x 1/2" NPT by part number
Torque settings	Mounting M5 4.0 Nm Lid T20 Torx M4 1.5 Nm Terminals 1.0 Nm
Ambient Temperature	-25C +80 C. (100C. Cleaning)
Vibration resistance	10-500Hz 0.35mm
Shock resistance	15g 11ms
Tension Force (typical mid setting)	130N.
Typical Operating Force (Rope pulled)	< 125N. < 300mm Deflection
Weight	1750 g.
Contact type	IEC 947-5-1 Double break Type Zb Snap Action up to 4NC (positive break) 2NO (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5 sq. mm conductors
Rating	Utilisation Category : AC15 A300
Operational Rating	240V. 3A.
Thermal Current (Ith)	10A.
Rated Insulation Voltage (Ui)	500V.
Withstand Voltage (Uimp)	2500V.
Short Circuit Overload Protection	Fuse Externally 10A. (FF)

It is recommended to use our stainless steel gland with this switch

Gland	Material
M20	140120
1/2"NPT	140121

For all IDEM Rope Switches the normally closed (NC) circuits are closed when the system is tensioned correctly and the switch has been reset.

# Grab Wire Auto Reset Trip Switch- Type: GLS-AR

Rope Pull operated  
Auto reset – stop switch

Grab Wire Auto-Reset Rope switches are mounted on machines and sections of plant conveyors to initiate a momentary control signal command from any point along the installed rope length.

Pulling the rope causes instant tripping of the control circuit contacts.  
Ideal for normal stop circuits where manual resetting of the switch is not required. This switch cannot be used in safety applications, it is only to be used for indication.



Explosion proof version –  
Zones 1,2,21,22



## Application:

The switches have a positive mechanical linkage between the switch contacts and the wire rope as per IEC 60947-5-1. The switches are brought into the operational condition by pre-tensioning the rope by use of a tensioner device which clamps the rope and then hooks to the switch eyebolts. Correct tension can be observed by viewing the tension indicator on the switch housing. Once tensioned the switch contact blocks are set to the operational condition i.e. Signal contacts Closed – Auxiliary contacts open.

All of the switches have wire-breakage monitoring. On pulling or breakage (tension loss) of the rope, the normally closed Signal contacts are opened and the Auxiliary contacts are closed. The switches will be returned to the operational condition as soon as the rope returns to the set position.

Standards: IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN62061  
UL508 ISO13849-1

### Safety Classification and Reliability Data:

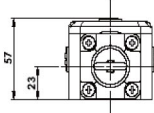
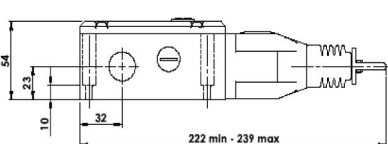
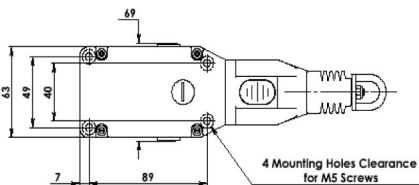
Mechanical Reliability B10d	1.5 x 10 <sup>6</sup> operations at 100mA load
EN 954-1	up to Category 4 with Safety Relay
ISO 13849-1	up to PLe depending upon system architecture
EN 62061	up to SIL3 depending upon system architecture
Safety Data - Annual Usage	8 cycles per hour / 24 hours per day / 365 days
PFHd	<1.0 x 10 <sup>-7</sup>
Proof Test Interval (Life)	21 years
MTTFd	214 years
ATEX Classification	Exd IIC T6 (-20 ≤ Ta ≤ +60C) Gb Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db
Rated Voltage	250V a.c
Rated Current	4A a.c
Cable length	3m.

### Mechanical Features:

Enclosure / Cover	Die-Cast – Painted Yellow
IP Rating	IP67
Rope Span	80m.
Rope Tension device	IDEM Tensioner / Gripper – Quick Fixing
Rope Type:	4.0 mm Outside Dia. Steel inner – PVC sheath
Mounting	4 x M5
Mounting position	Any
Conduit entries	3 x M20 or 3 x 1/2" NPT by part number
Torque settings	Mounting M5 4.0 Nm Lid T20 Torx M4 1.5 Nm Terminals 1.0 Nm
Ambient Temperature	-25C +80 C.
Vibration resistance	10-500Hz 0.35mm
Shock resistance	15g 11ms
Tension Force (typical mid setting)	130N.
Typical Operating Force (Rope pulled)	< 125N. < 300mm Deflection
Mechanical Life	1,000,000 operations
Approx. Weight	820 g.

### Electrical Features:

Contact type	IEC 947-5-1 Double break Type Zb Snap Action up to 2NC + 1NO (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5 sq. mm conductors
Rating	Utilisation Category : AC15
Operational Rating	240V. 3A.
Thermal Current (Ith)	10A.
Rated Insulation Voltage (Ui)	500V.
Withstand Voltage (Uimp)	2500V.
Short Circuit Overload Protection	Fuse Externally 10A. (FF)



Sales Number	Type	Conduit	Contacts	Fittings
142498	GLS-AR	3 x M20	2NC 1NO	
142499	GLS-AR	3 x 1/2" NPT	2NC 1NO	
142496	GLS-AR	EX	1NC 1NO	Pre-wired 3m.
142497	GLS-AR	EX	2NC	Pre-wired 3m.

Gold Plated Contacts available for low power circuits (5V. 5mA).  
Add GC to Part Number e.g. 142498-GC

# Guardian Line Heavy Duty - Type: GLHD

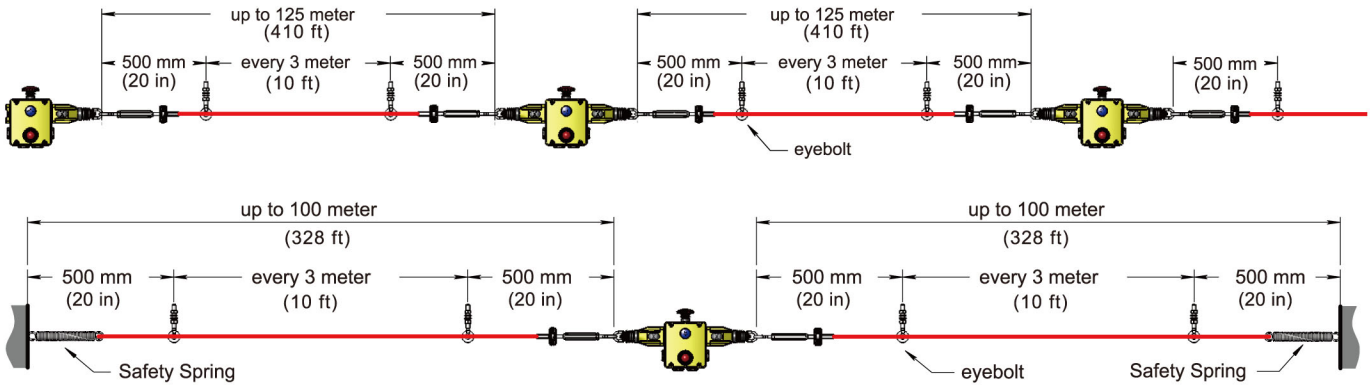
## Protection up to 250 meters



The GLHD is a Heavy Duty Safety Rope Pull switch designed to protect long conveyor lengths. The die-cast housings are robust to survive indoor or outdoor use including washdown (IP67 rating). Lengths over 2 Km can be achieved with less than 20 switches. A bi-colour LED ensures switch status can be seen easily from a distance. They have 4NC 2NO contacts to ensure flexibility with all modern control applications and optional Explosion Proof contact blocks are available. Shorter rope spans up to 200m. can be achieved by using just one switch therefore making a cost effective solution and also reducing electrical wiring runs.

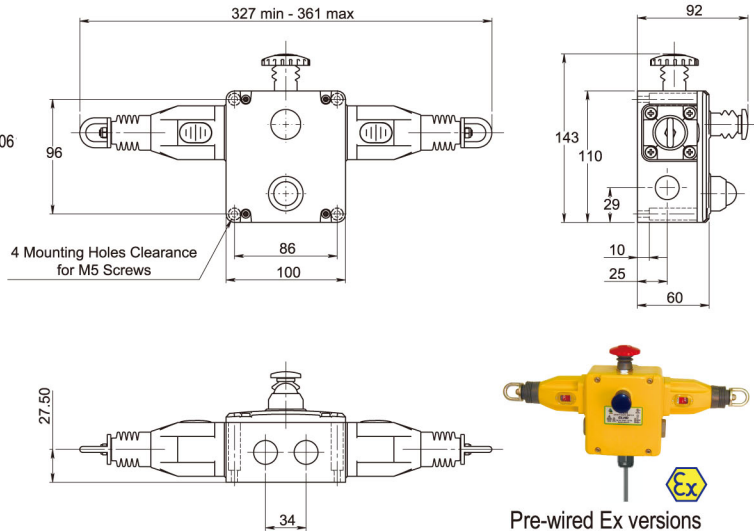


Low Temperature -40C. versions available GLHD-FZ



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.

- Standards: IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN6206  
UL508 ISO13850 ISO13849-1
- Safety Classification and Reliability Data:
- Mechanical Reliability B10d: 1.5 x 10<sup>6</sup> operations at 100mA load
  - EN 954-1: up to Category 4 with Safety Relay
  - ISO 13849-1: up to PLe depending upon system architecture
  - EN 62061: up to SIL3 depending upon system architecture
  - Safety Data - Annual Usage PFHd: 8 cycles per hour / 24 hours per day / 365 days
  - <math>1.0 \times 10^{-7}</math>
  - Proof Test Interval (Life) MTTFd: 21 years
  - 214 years
  - Enclosure / Cover: Die-Cast - Painted Yellow
  - IP Rating: IP67 (NEMA 6)
  - Rope Spans: Dual Head 250m.
  - Rope Tension device: IDEM Tensioner / Gripper - Quick Fixing
  - Rope Type: 4.0 mm Outside Dia. Steel inner - PVC sheath
  - Mounting: 4 x M5
  - Mounting position: Any
  - Conduit entries: 4 x M20 or 4 x 1/2" NPT by part number
  - Mounting M5: 4.0 Nm
  - Torque settings: Lid T20 Torx M4 1.5 Nm
  - Terminals: 1.0 Nm
  - Ambient Temperature: -25C +80 C.
  - Vibration resistance: 10-500Hz 0.35mm
  - Shock resistance: 15g 11ms
  - Tension Force (typical mid setting): 130N.
  - Typical Operating Force (Rope pulled): <math>< 125N.</math> <math>< 300mm</math> Deflection
  - Mechanical Life: 1,000,000 operations
  - Weight: 1320 g.
  - Contact type: IEC 947-5-1 Double break Type Zb
  - Snap Action up to 4NC (positive break)
  - 2NO (Auxiliary)
  - Contact Material: Silver
  - Termination: Clamp up to 2.5 sq. mm conductors
  - Rating: Utilisation Category: AC15 A300
  - Operational Rating: 240V. 3A.
  - Thermal Current (Ith): 10A.
  - Rated Insulation Voltage (Ui): 500V.
  - Withstand Voltage (Uimp): 2500V.
  - Short Circuit Overload Protection: Fuse Externally 10A. (FF)



Pre-wired Ex versions  
(See Explosion proof section)

Sales Number	Type	Conduit	Contacts	Fittings
141001	GLHD	4 x M20	4NC 2NO	LED E Stop
141002	GLHD	4 x 1/2" NPT	4NC 2NO	LED E Stop
141029	GLHD	4 x M20	4NC 2NO	LED
141030	GLHD	4 x 1/2" NPT	4NC 2NO	LED
141039	GLHD	4 x M20	4NC 2NO	E Stop
141040	GLHD	4 x 1/2" NPT	4NC 2NO	E Stop
141041	GLHD	4 x M20	4NC 2NO	
141042	GLHD	4 x 1/2" NPT	4NC 2NO	
141012	GLHD	Replacement Lid		
141013	GLHD	Replacement Lid with LED		
<b>For LED models add voltage code to Sales Number</b>				
Steady Green / Flashing Red				
A - 24Vdc B - 110Vac C - 230V.ac				
Steady Green / Steady Red				
AS-24Vdc BS-110Vac CS-230V.ac				

For all IDEM Rope Switches the normally closed (NC) circuits are closed when the system is tensioned correctly and the switch has been reset.

Gold Plated Contacts available for low power circuits (5V. 5mA).  
Add GC to Part Number e.g. 141001-A-GC

# Guardian Line Heavy Duty - Type: GLHL - GLHR

Protection up to 125 meters



The GLHL/R is a robust die-cast Heavy Duty Safety Rope Pull switch designed to protect long conveyor lengths where protection is required up to 125m. using two switches or up to 100m. using a single switch.

The die-cast housings are robust to survive indoor or outdoor use.

A bi-colour LED ensures switch status can be seen easily from a distance. They have 4NC 2NO contacts to ensure flexibility with all modern control applications and optional Explosion Proof contact blocks are available.

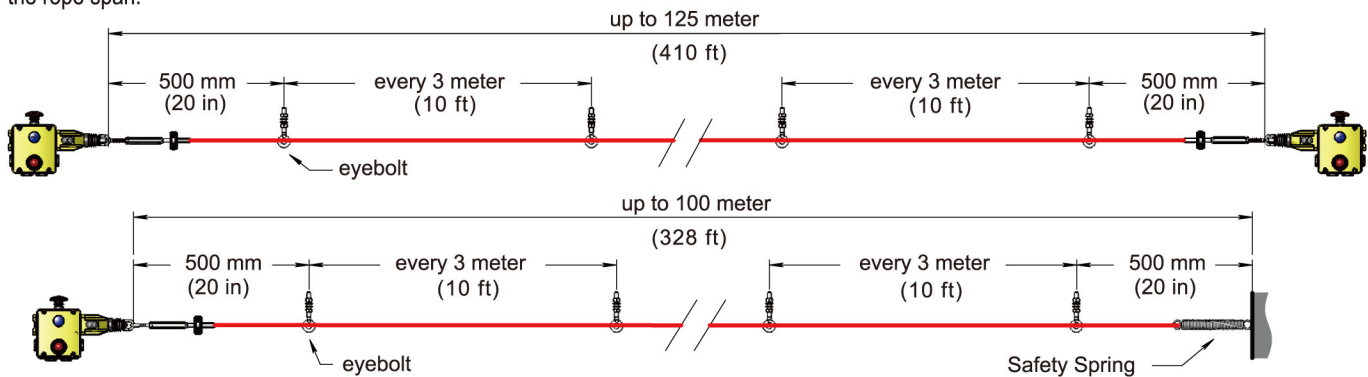
They can be used to complement the GLHD versions at each end of the rope span.



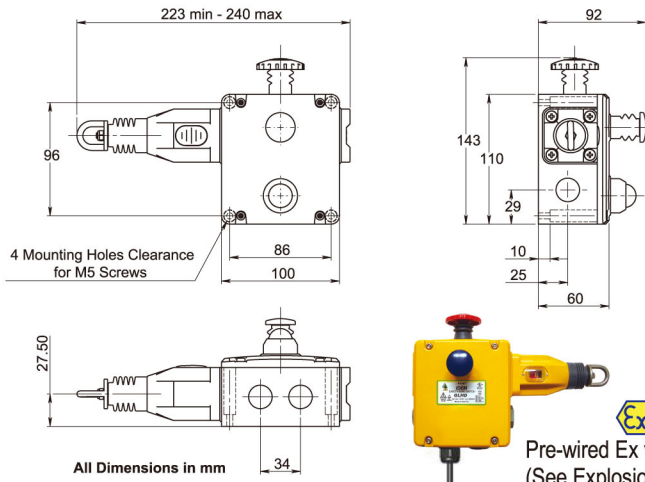
GLHL Left Hand

GLHR Right Hand

Low Temperature -40C.versions available GLHL-FZ & GLHR-FZ



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.



All Dimensions in mm

Pre-wired Ex versions  
(See Explosion proof section)

Sales Number	Type	Conduit	Contacts	Fittings
141005	GLHL	4 x M20	4NC 2NO	LED E Stop
141006	GLHL	4 x 1/2" NPT	4NC 2NO	LED E Stop
141053	GLHL	4 x M20	4NC 2NO	LED
141055	GLHL	4 x 1/2" NPT	4NC 2NO	LED
141051	GLHL	4 x M20	4NC 2NO	E Stop
141035	GLHL	4 x 1/2" NPT	4NC 2NO	E Stop
141037	GLHL	4 x M20	4NC 2NO	
141057	GLHL	4 x 1/2" NPT	4NC 2NO	
141009	GLHR	4 x M20	4NC 2NO	LED E Stop
141010	GLHR	4 x 1/2" NPT	4NC 2NO	LED E Stop
141054	GLHR	4 x M20	4NC 2NO	LED
141056	GLHR	4 x 1/2" NPT	4NC 2NO	LED
141052	GLHR	4 x M20	4NC 2NO	E Stop
141036	GLHR	4 x 1/2" NPT	4NC 2NO	E Stop
141038	GLHR	4 x M20	4NC 2NO	
141058	GLHR	4 x 1/2" NPT	4NC 2NO	
141012	GLH	Replacement Lid		
141013	GLH	Replacement Lid / LED		
<b>For LED models add voltage code to Sales Number</b>				
Steady Green / Flashing Red				
A - 24Vdc B - 110Vac C - 230V.ac				
Steady Green / Steady Red				
AS-24Vdc BS-110Vac CS-230V.ac				

Gold Plated Contacts available for low power circuits (5V. 5mA).  
Add GC to Part Number e.g. 141005-A-GC

- Standards: IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN62061  
UL508 ISO13850 ISO13849-1
- Safety Classification and Reliability Data:
- Mechanical Reliability B10d: 1.5 x 10<sup>6</sup> operations at 100mA load up to Category 4 with Safety Relay
  - EN 954-1: up to PLe depending upon system architecture
  - ISO 13849-1: up to SIL3 depending upon system architecture
  - EN 62061: 8 cycles per hour / 24 hours per day / 365 days
  - Safety Data - Annual Usage: PFHd < 1.0 x 10<sup>-7</sup>
  - Proof Test Interval (Life): 21 years
  - MTTFd: 214 years
  - Enclosure / Cover: Die-Cast - Painted Yellow
  - IP Rating: IP67
  - Rope Spans: 125m.
  - Rope Tension device: IDEM Tensioner / Gripper - Quick Fixing
  - Rope Type: 4.0 mm Outside Dia. Steel inner - PVC sheath
  - Mounting: 4 x M5
  - Mounting position: Any
  - Conduit entries: 4 x M20 or 4 x 1/2" NPT by part number
  - Torque settings: Mounting M5 4.0 Nm  
Lid T20 Torx M4 1.5 Nm  
Terminals 1.0 Nm
  - Ambient Temperature: -25C +80 C.
  - Vibration resistance: 10-500Hz 0.35mm
  - Shock resistance: 15g 11ms
  - Tension Force (typical mid setting): 130N.
  - Typical Operating Force (Rope pulled): < 125N. < 300mm Deflection
  - Weight: 1320 g.
  - Contact type: IEC 947-5-1 Double break Type Zb  
Snap Action up to 4NC (positive break)  
2NO (Auxiliary)
  - Contact Material: Silver
  - Termination: Clamp up to 2.5 sq. mm conductors
  - Rating: Utilisation Category: AC15 A300
  - Operational Rating: 240V. 3A.
  - Thermal Current (Ith): 10A.
  - Rated Insulation Voltage (Ui): 500V.
  - Withstand Voltage (Uimp): 2500V.
  - Short Circuit Overload Protection: Fuse Externally 10A. (FF)

For all IDEM Rope Switches the normally closed (NC) circuits are closed when the system is tensioned correctly and the switch has been reset.

# Guardian Line Heavy Duty - Type: GLHD-SS Stainless Steel

## Protection up to 250 meters



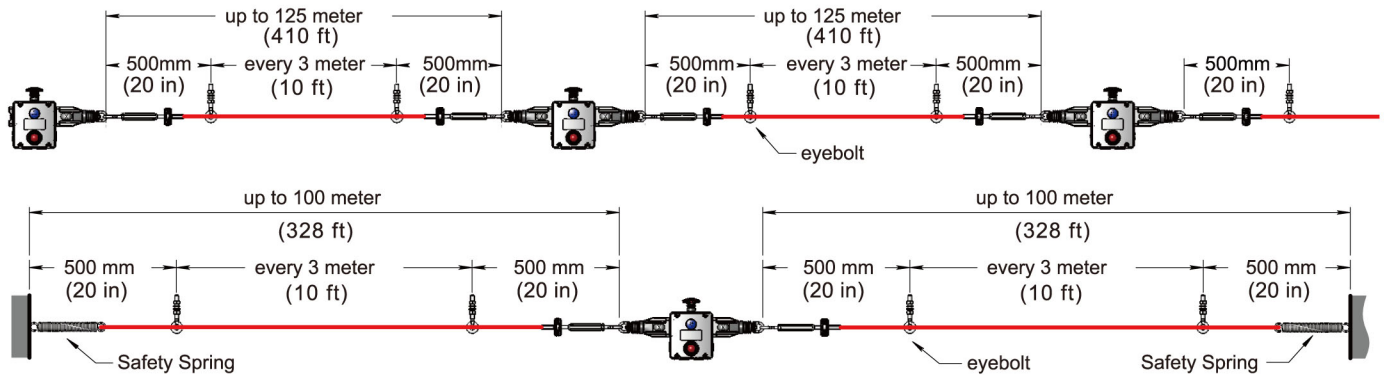
The GLHD-SS is a Heavy Duty Safety Rope Pull switch designed to protect long conveyor lengths up to 250m. The Stainless Steel 316 housings are designed specifically to withstand the tough environments found in the Food and Pharmaceutical industries. They will survive chemical and detergent washdown by providing all stainless steel parts and robust IP67 and IP69K sealing by using integral bellows and gaskets.

A bi-colour LED ensures switch status can be seen easily from a distance. They have 4NC 2NO contacts to ensure flexibility with all modern control applications and optional Explosion Proof contact blocks are available.

Shorter rope spans up to 200m. can be achieved by using just one switch therefore making a cost effective solution and also reducing electrical wiring runs.

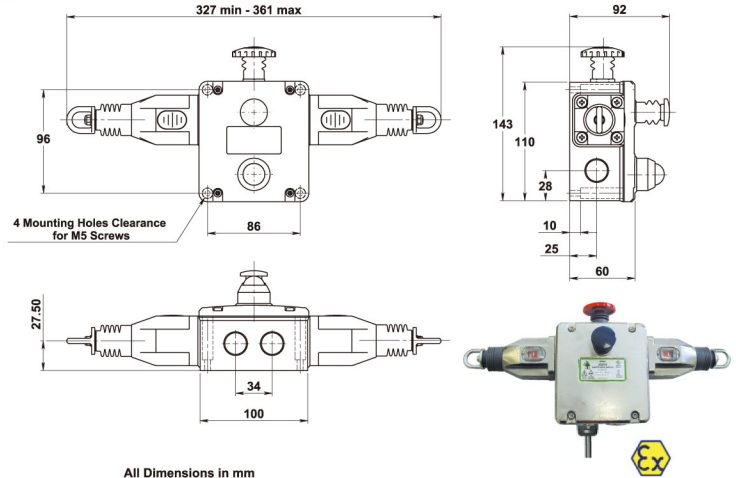


Low Temperature - 40C. versions available GLHD-SS-FZ



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.

Standards:	IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN62061 UL508 ISO13850 ISO13849-1
Safety Classification and Reliability Data:	
Mechanical Reliability B10d	1.5 x 10 <sup>6</sup> operations at 100mA load
EN 954-1	up to Category 4 with Safety Relay
ISO 13849-1	up to PLE depending upon system architecture
EN 62061	up to SIL3 depending upon system architecture
Safety Data - Annual Usage	8 cycles per hour / 24 hours per day / 365 days
PFFhd	< 1.0 x 10 <sup>-7</sup>
Proof Test Interval (Life)	21 years
MTTFd	214 years
Enclosure / Cover	Stainless Steel 316
External Parts	Stainless Steel
IP Rating	IP69K (NEMA PW12) IP67 (NEMA 6)
Rope Spans	Dual Head 250m.
Rope Tension device	IDEM Tensioner / Gripper – Quick Fixing
Rope Type:	4.0 mm Outside Dia. Steel inner – PVC sheath
Mounting	4 x M5
Mounting position	Any
Conduit entries	4 x M20 or 4 x 1/2" NPT by part number
Torque settings	Mounting M5 4.0 Nm Lid T20 Torx M4 1.5 Nm Terminals 1.0 Nm
Ambient Temperature	-25C +80 C. (Cleaning 100C.)
Vibration resistance	10-500Hz 0.35mm
Shock resistance	15g 11ms
Tension Force (typical mid setting)	130N.
Typical Operating Force (Rope pulled)	< 125N. < 300mm Deflection
Weight	2000 g.
Contact type	IEC 947-5-1 Double break Type Zb Snap Action up to 4NC (positive break) 2NO (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5 sq. mm conductors
Rating	Utilisation Category: AC15 A300
Operational Rating	240V. 3A.
Thermal Current (Ith)	10A.
Rated Insulation Voltage (Ui)	500V.
Withstand Voltage (Uimp)	2500V.
Short Circuit Overload Protection	Fuse Externally 10A. (FF)



All Dimensions in mm

Pre-wired Ex versions (See Explosion proof section)

It is recommended to use our stainless steel gland with this switch

Gland		stainless steel 316
M20	140120	
1/2"NPT	140121	

Sales Number	Type	Conduit	Contacts	Fittings
145001	GLHD-SS	4 x M20	4NC 2NO	LED E Stop
145002	GLHD-SS	4 x 1/2" NPT	4NC 2NO	LED E Stop
145029	GLHD-SS	4 x M20	4NC 2NO	LED
145030	GLHD-SS	4 x 1/2" NPT	4NC 2NO	LED
145023	GLHD-SS	4 x M20	4NC 2NO	E Stop
145024	GLHD-SS	4 x 1/2" NPT	4NC 2NO	E Stop
145025	GLHD-SS	4 x M20	4NC 2NO	
145026	GLHD-SS	4 x 1/2" NPT	4NC 2NO	
145012	GLH-SS	Replacement Lid		
145013	GLH-SS	Replacement Lid with LED		
For LED models add voltage code to Sales Number				
Steady Green / Flashing Red				
A - 24Vdc B - 110Vac C - 230V.ac				
Steady Green / Steady Red				
AS-24Vdc BS-110Vac CS-230V.ac				

Gold Plated Contacts available for low power circuits (5V. 5mA). Add GC to Part Number e.g. 145001-A-GC

# Guardian Line Heavy Duty - Type: GLHL-SS & GLHR-SS

Protection up to 125 meters



The GLHL/R-SS is a robust Heavy Duty Safety Rope Pull switch designed to protect long conveyor lengths where protection is required up to 125m. using two switches or up to 100m. using a single switch.

The Stainless Steel 316 housings are designed specifically to withstand the tough environments found in the Food and Pharmaceutical industries. They will survive chemical and detergent washdown by providing all stainless steel parts and robust IP67 and IP69K sealing by using integral bellows and gaskets.

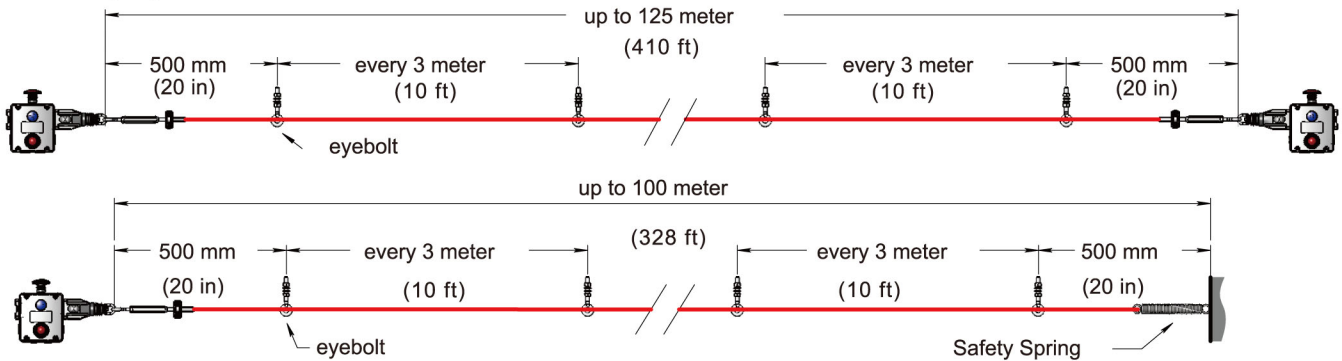
They can be used to complement the GLHD-SS versions at each end of the rope span.



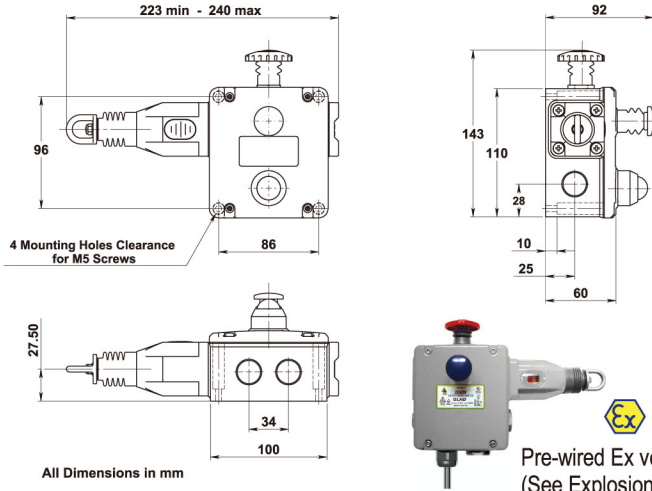
GLHL-SS Left Hand

GLHR-SS Right Hand

Low Temperature -40C.versions available GLHL-SS-FZ & GLHR-SS-FZ



It is recommended when using a Safety Spring that a maximum of one corner pulley is used.



All Dimensions in mm

Pre-wired Ex versions (See Explosion proof section)

Sales Number	Type	Conduit	Contacts	Fittings
145005	GLHL-SS	4 x M20	4NC 2NO	LED E Stop
145006	GLHL-SS	4 x 1/2" NPT	4NC 2NO	LED E Stop
145053	GLHL-SS	4 x M20	4NC 2NO	LED
145055	GLHL-SS	4 x 1/2" NPT	4NC 2NO	LED
145051	GLHL-SS	4 x M20	4NC 2NO	E Stop
145035	GLHL-SS	4 x 1/2" NPT	4NC 2NO	E Stop
145037	GLHL-SS	4 x M20	4NC 2NO	
145057	GLHL-SS	4 x 1/2" NPT	4NC 2NO	
145009	GLHR-SS	4 x M20	4NC 2NO	LED E Stop
145010	GLHR-SS	4 x 1/2" NPT	4NC 2NO	LED E Stop
145054	GLHR-SS	4 x M20	4NC 2NO	LED
145056	GLHR-SS	4 x 1/2" NPT	4NC 2NO	LED
145052	GLHR-SS	4 x M20	4NC 2NO	E Stop
145036	GLHR-SS	4 x 1/2" NPT	4NC 2NO	E Stop
145038	GLHR-SS	4 x M20	4NC 2NO	
145058	GLHR-SS	4 x 1/2" NPT	4NC 2NO	
145012	GLH-SS	Replacement Lid		
145013	GLH-SS	Replacement Lid / LED		

For LED models add voltage code to Sales Number

Steady Green / Flashing Red  
A - 24Vdc B - 110Vac C - 230V.ac

Steady Green / Steady Red  
AS-24Vdc BS-110Vac CS-230V.ac

Gold Plated Contacts available for low power circuits (5V. 5mA). Add GC to Part Number e.g. 145005-A-GC

Standards: IEC 60947-5-1 IEC 60947-5-5 EN954-1 EN62061 UL508 ISO13850 ISO13849-1

Safety Classification and Reliability Data:

Mechanical Reliability B10d 1.5 x 10<sup>6</sup> operations at 100mA load  
EN 954-1 up to Category 4 with Safety Relay  
ISO 13849-1 up to PL<sub>e</sub> depending upon system architecture  
EN 62061 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 / Cover Stainless Steel 316  
External Parts Stainless Steel  
IP Rating IP69K (NEMA PW12) IP67 (NEMA 6)  
Rope Spans 125m.  
Rope Tension device IDEM Tensioner / Gripper - Quick Fixing  
Rope Type: 4.0 mm Outside Dia. Steel inner - PVC sheath  
Mounting 4 x M5  
Mounting position Any  
Conduit entries 4 x M20 or 4 x 1/2" NPT by part number  
Torque settings Mounting M5 4.0 Nm  
Lid T20 Torx M4 1.5 Nm  
Terminals 1.0 Nm

Ambient Temperature -25C +80C. (100C. cleaning)  
Vibration resistance 10-500Hz 0.35mm  
Shock resistance 15g 11ms  
Tension Force (typical mid setting) 130N.  
Typical Operating Force (Rope pulled) < 125N. < 300mm Deflection  
Weight 1320 g.  
Contact type IEC 947-5-1 Double break Type Zb  
Snap Action up to 4NC (positive break)  
2NO (Auxiliary)

Contact Material Silver  
Termination Clamp up to 2.5 sq. mm conductors  
Rating Utilisation Category: AC15 A300  
Operational Rating 240V. 3A.  
Thermal Current (Ith) 10A.  
Rated Insulation Voltage (Ui) 500V.  
Withstand Voltage (Uimp) 2500V.  
Short Circuit Overload Protection Fuse Externally 10A. (FF)

It is recommended to use our stainless steel gland with this switch

Gland		stainless steel 316
M20	140120	
1/2"NPT	140121	

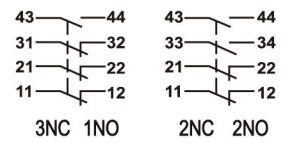
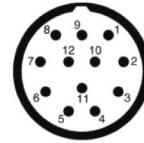
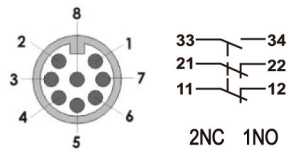
For all IDEM Rope Switches the normally closed (NC) circuits are closed when the system is tensioned correctly and the switch has been reset.

# Safety Rope Pull Switches - Quick Connect Versions



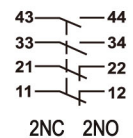
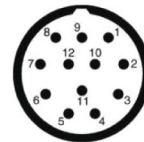
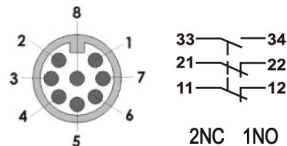
## Quick connect details for switches without LED indication

### GLM / GLS



Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm (10 inches))	GLM / GLS without LED	Quick Connect (QC) M23 12 Way Male (Connector Length 26mm)
Pin view from switch	Switch Circuit	Pin view from switch
8 5	11 / 12 NC	1 3
4 6	21 / 22 NC	4 6
1 7	31 / 32 NC or 33 / 34 NO	7 8
3	43 / 44 NO	9 10
	Earth	12
Sales Numbers:		Sales Numbers:
GLM with E Stop 143005-QCM12		GLM with E Stop 3NC 1NO 143056-QCM23
GLM 143001-QCM12		GLM with E Stop 2NC 2NO 143058-QCM23
GLS with E Stop 142009-QCM12		GLM 3NC 1NO 143050-QCM23
GLS 142001-QCM12		GLM 2NC 2NO 143052-QCM23
		GLS with E Stop 3NC 1NO 142062-QCM23
		GLS with E Stop 2NC 2NO 142064-QCM23
		GLS 3NC 1NO 142050-QCM23
		GLS 2NC 2NO 142052-QCM23

### GLHD / GLHL / GLHR



Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm (10 inches))	GLHD or GLHL/R without LED	Quick Connect (QC) M23 12 Way Male (Connector Length 26mm)
Pin view from switch	Switch Circuit	Pin view from switch
8 5	11 / 12 NC	1 3
4 6	21 / 22 NC	4 6
1 7	33 / 34 NO	7 8
3	43 / 44 NO	9 10
	Earth	12
Sales Numbers:		Sales Numbers:
GLHD with E Stop 141039-QCM12		GLHD with E Stop 141039-QCM23
GLHL with E Stop 141051-QCM12		GLHL with E Stop 141051-QCM23
GLHR with E Stop 141052-QCM12		GLHR with E Stop 141052-QCM23
GLHD 141041-QCM12		GLHD 141041-QCM23
GLHL 141037-QCM12		GLHL 141037-QCM23
GLHR 141038-QCM12		GLHR 141038-QCM23

Female QC Leads	Length	Sales Number
M12 8 Way	5m. (15Ft.)	140101
M12 8 Way	10m. (30Ft.)	140102
M23 12 Way	5m. (15Ft.)	140143
M23 12 Way	10m. (30Ft.)	140144



For all IDEM Rope Switches the normally closed (NC) circuits are closed when the system is tensioned correctly and the switch has been reset.

# Accessories - Guardian Line Rope Switches

Sales Number		Description	Rope	Eyebolts	Tensioner / Gripper	Allen Key
Galvanised	Stainless Steel					
140001	140010	5M Rope Kit	5M. QL	3	1	1
140002	140011	10M Rope Kit	10M. QL	5	1	1
140003	140012	15M Rope Kit	15M. QL	7	1	1
140004	140013	20M Rope Kit	20M. QL	9	1	1
140005	140014	30M Rope Kit	30M. QL	12	1	1
140006	140015	50M Rope Kit	50M. QL	20	1	1
140007	140016	80M Rope Kit	80M.	30	2	1
140008	140017	100M Rope Kit	100M.	37	2	1
140009	140018	126M Rope Kit	126M.	45	2	1
140033		Rope only 5M				
140034		Rope only 10M				
140036		Rope only 20M				
140037		Rope only 30M				
140038		Rope only 50M				
140039		Rope only 80M				
140040		Rope only 100M				
140041		Rope only 126M				
140068		Rope only 500M Drum				
140019		Rope Tensioner / Gripper		Stainless Steel		
140020		Rope Tensioner / Gripper		Galvanised Steel		
140021		77mm Long	40mm High	Fixing Hole centres 20mm		
140064		Universal Pulley (Inside and Outside Corners)		Stainless Steel		
140064		Universal Pulley (Inside and Outside Corners)		Galvanised		
140045		84mm Long	Thread length 51mm	M8 x 1.25		
140046		Eyebolt		Stainless Steel (8 pack)		
140046		Eyebolt		Galvanised (8 pack)		
140042		LED Green / Flashing Red		24V.dc.		
140065		LED Green / Flashing Red		110V.ac.		
140069		LED Green / Flashing Red		230V.ac.		
140043		220mm Long				
140043		Safety Spring		Stainless Steel		
140044		E-Stop Mechanism				
140059		Screwdriver		Anti-Tamper T20		



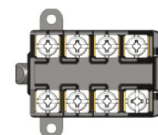
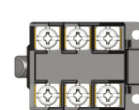
Tensioner / Gripper Assembly  
Allen Key 4mm  
Quick Link (QL)  
For up to 50m. spans, one rope end is terminated with a thimble and permanent clamp.  
For over 50m. spans, 2 Tensioner / Gripper assemblies are supplied (no Quick Link).



Screwdriver Anti-Tamper T20

## Accessories - Contact Blocks and Fittings

Rope switches GLM GLS GLH and Emergency Switches			
140057	3 pole Contact Block	2NC 1NO	(End fixing and tip)
140058	3 pole Contact Block	3NC	(End fixing and tip)
140061	4 pole Contact Block	2NC 2NO	(Side fixing and tip)
140062	4 pole Contact Block	3NC 1NO	(Side fixing and tip)
140063	4 pole Contact Block	4NC	(Side fixing and tip)
Tongue and Hinge switches - IDIS, K-15, KP, K-SS, KM, KM-SS, LSPS			
140112	3 pole Contact Block	2NC 1NO	(End fixing without tip)
140113	3 pole Contact Block	3NC	(End fixing without tip)
140114	4 pole Contact Block	2NC 2NO	(End fixing without tip)
140115	4 pole Contact Block	3NC 1NO	(End fixing without tip)
140116	4 pole Contact Block	4NC	(End fixing without tip)



Plastic		Stainless Steel 316	
Sales Number		Sales Number	
140050	M20 to 1/2" NPT adaptor	M12x1.75 conduit plug	140122
140051	1/2" NPT conduit plug	1/2" NPT conduit plug	140117
140052	M20x1.5 conduit plug	M20x1.5 conduit plug	140118
140053	1/2" NPT Gland	1/2" NPT Gland	140121
140054	M20x1.5 Gland	M20x1.5 Gland	140120
140056	M12x1.5 Gland	M12x1.5 Gland	140119



Plugs