

Guardian Line Standard Duty Type: GLS

FEATURES:

PROTECTION UP TO 80 METRES (262 FEET)

The GLS is a General/Standard 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.

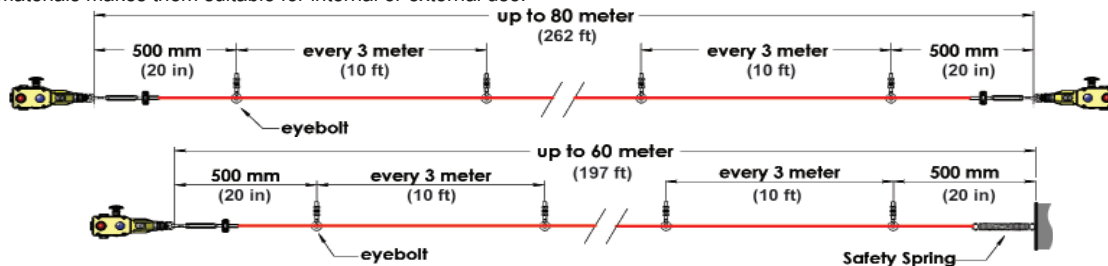
They can be supplied with a mushroom type Emergency Stop button which can be fitted to the side of the switch to offer an extra traditional Emergency Stop function close to the switch, or can be fitted later after installation without any extra wiring.

A bi-colour LED is also 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 internal sealing bellows means the GLS can be high pressure hosed and choice of materials makes them suitable for internal or external use.

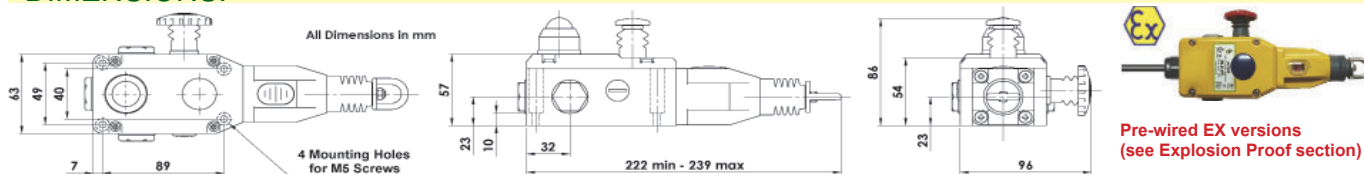


GLS-FZ: Special low temperature version -40C available.



It is important that the first 500mm is not used as part of the active protection coverage. If protection is required in this first 500mm then it is recommended to use switches fitted with a mushroom type E-Stop button. IDEM also recommend when using a Safety Spring that a maximum of one corner pulley is used.

DIMENSIONS:



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

Safety Classification and Reliability Data:

Mechanical Reliability B10d	1.5 x 10 ⁶ operations at 100mA 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
	MTTFd 214 years
Enclosure Material	Die Cast (painted yellow)
IP Rating	IP67 (NEMA 6)
Rope Span	Up to 80m (2 switches) 60m (1 switch)
Rope Tension Device	IDEM Tensioner/Gripper (quick fixing)
Rope Type	4.00mm 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 Sales Number)
Tongue Settings	Mounting M5 4.0Nm Lid T20 Torx M4 1.5Nm Terminals 1.0Nm
Ambient Temperature	-25C +80C
Vibration Resistance	10-500Hz 0.35mm
Shock Resistance	11ms 15g
Tension Force (typical mid setting)	130N
Typical Operating Force (Rope pulled)	<125N <300mm deflection
Weight	735g approx.
Contact Type	EN60947-5-1 double break type Zb Snap Action up to 4NC (positive break) 2NO (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5mm ² conductors
Rating	Utilisation category AC15
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)

Pre-wired EX versions
(see Explosion Proof section)

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/LED	LED
For LED Models add voltage code to Sales Number see below			
Steady Green/Flashing Red			
A - 24Vdc B - 110Vac C - 230Vac			
Steady Green/Steady Red			
AS - 24Vdc BS - 110Vac CS - 230Vac			

For all IDEM 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 Sales Number e.g. 142001-GC

Guardian Line Standard Duty Type: GLS-SS

FEATURES:

PROTECTION UP TO 100 METRES (328 FEET)

The GLS-SS is 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 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-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.

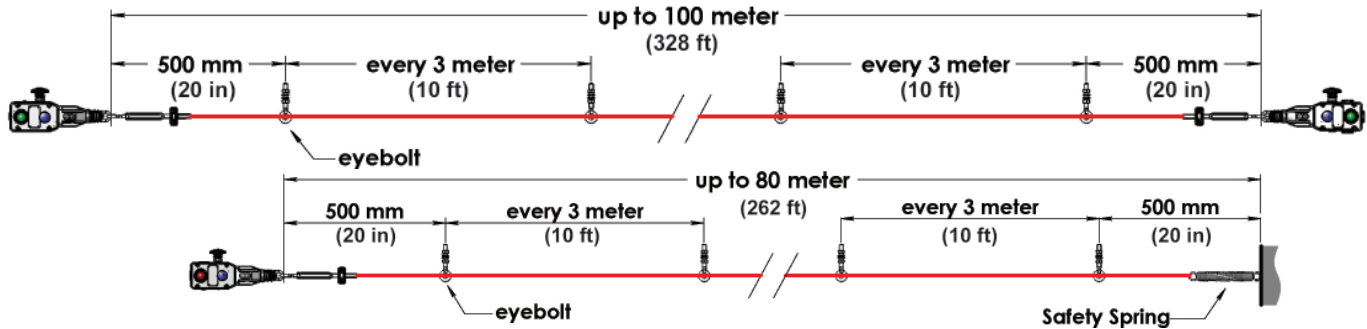


STAINLESS STEEL 316

IP69K

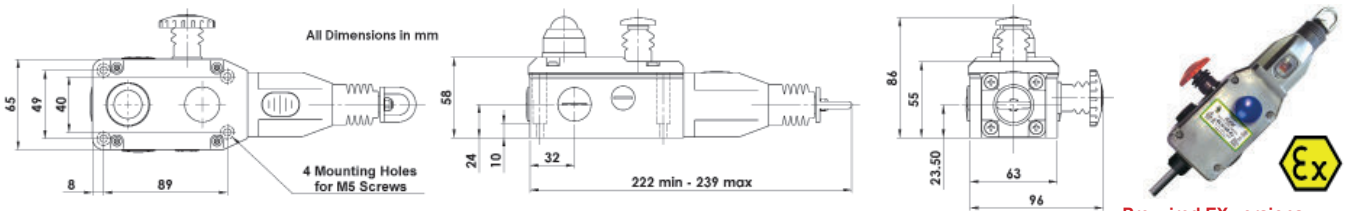


Low temperature version -40C available GLS-SS-FZ



It is important that the first 500mm is not used as part of the active protection coverage. If protection is required in this first 500mm then it is recommended to use switches fitted with a mushroom type E-Stop button. IDEM also recommend when using a Safety Spring that a maximum of one corner pulley is used.

DIMENSIONS:



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

Safety Classification and Reliability Data:

Mechanical Reliability B10d	1.5 x 10 ⁶ operations at 100mA 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
	MTTFd 214 years
Enclosure/Cover Material	Stainless Steel 316
External Parts	Stainless Steel
IP Rating	IP69K (NEMA PW12) IP67 (NEMA 6)
Rope Span	Up to 100m (2 switches) 80m (1 switch)
Rope Tension Device	IDEM Tensioner/Gripper (quick fixing)
Rope Type	4.00mm 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 Sales Number)
Tongue Settings	Mounting M5 4.0Nm Lid T20 Torx M4 1.5Nm Terminals 1.0Nm
Ambient Temperature	-25C +80C (100C cleaning)
Vibration Resistance	10-500Hz 0.35mm
Shock Resistance	11ms 15g
Tension Force (typical mid setting)	130N
Typical Operating Force (Rope pulled)	<125N <300mm deflection
Weight	1810g approx.
Contact Type	EN60947-5-1 double break type Zb Snap Action up to 4NC (positive break) 2NO (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5mm ² conductors
Rating	Utilisation 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)

Pre-wired EX versions
(see Explosion Proof section)

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	LED
For LED Models add voltage code to Sales Number see below			
Steady Green/Flashing Red			
A - 24Vdc B - 110Vac C - 230Vac			
Steady Green/Steady Red			
AS - 24Vdc BS - 110Vac CS - 230Vac			

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

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

STAINLESS STEEL 316 GLAND	SALES NUMBER
M20	140120
1/2" NPT	140121

IDEM recommend using our Stainless Steel 316 Gland with this switch.



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

FEATURES:

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 purposes.**

Rope Pull operated Auto Reset- Stop Switch



GLS-AR

APPLICATION:

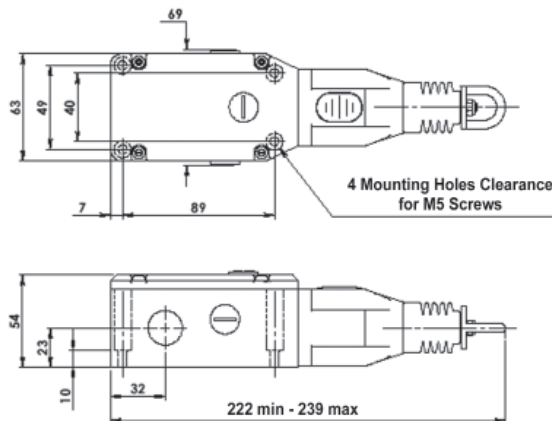
The switches have a positive mechanical linkage between the switch contacts and the wire rope as per EN60947-5-1. The switches are brought into the operational condition by pre-tensioning the rope by use of a tensioner device which clamps the rope and then hooks to the switch eyebolts. Correct tension 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 (loss of tension) 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.

**Explosion Proof version:
Zones 1,2,21,22**



DIMENSIONS:



Mechanical Features:

Enclosure/Cover Material	Die-Cast (painted yellow)
IP Rating	IP67
Rope Span	Up to 80m
Rope Tension Device	IDEM Tensioner/Gripper (quick fixing)
Rope Type	4.00mm 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 Sales Number)
Tongue Settings	Mounting M5 4.0Nm Lid T20 Torx M4 1.5Nm Terminals 1.0Nm
Ambient Temperature	-25C +80C
Vibration Resistance	10-500Hz 0.35mm
Shock Resistance	11ms 15g
Tension Force (typical mid setting)	130N
Typical Operating Force (Rope pulled)	<125N <300mm deflection
Mechanical Life	1,000,000 operations
Approx. Weight	760g

Electrical Features:

Contact Type	EN60947-5-1 double break type Zb Snap Action up to 2NC + 1NO (Auxiliary)
Contact Material	Silver
Termination	Clamp up to 2.5mm ² conductors
Rating	Utilisation category AC15
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)

Standards: EN60947-5-1 EN60947-5-5 EN62061
UL508 ISO13849-1

Safety Classification and Reliability Data:

Mechanical Reliability B10d 1.5 x 10⁶ operations at 100mA load

ATEX Classification (EX Versions)

Exd IIC T6 (-20 ≤ Ta ≤ +60C)	Gb
Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C)	Db
Rated Voltage	250Vac
Rated Current	4Aac
Cable Length	3m pre-wired (EX versions)

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

For all IDEM 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 Sales Number e.g. 142498-GC**

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

FEATURES:

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 purposes.**

Rope Pull operated Auto Reset- Stop Switch



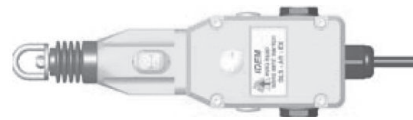
GLS-SS-AR

APPLICATION:

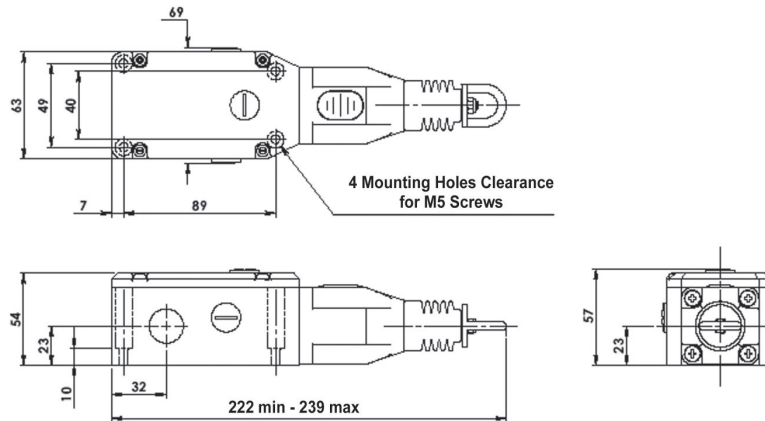
The switches have a positive mechanical linkage between the switch contacts and the wire rope as per EN60947-5-1. The switches are brought into the operational condition by pre-tensioning the rope by use of a tensioner device which clamps the rope and then hooks to the switch eyebolts. Correct tension 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 (loss of tension) 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.

Explosion Proof version:
Zones 1,2,21,22



DIMENSIONS:



- Mechanical Features:**
- Enclosure/Cover Material Die-Cast (painted yellow) or Stainless Steel 316
 - IP Rating IP69K
 - Rope Span Up to 80m
 - Rope Tension Device IDEM Tensioner/Gripper (quick fixing)
 - Rope Type 4.00mm 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 Sales Number)
 - Tongue Settings Mounting M5 4.0Nm
Lid T20 Torx M4 1.5Nm
Terminals 1.0Nm
 - Ambient Temperature -25C +80C
 - Vibration Resistance 10-500Hz 0.35mm
 - Shock Resistance 11ms 15g
 - Tension Force (typical mid setting) 130N
 - Typical Operating Force (Rope pulled) <125N <300mm deflection
 - Mechanical Life 1,000,000 operations
 - Approx. Weight 1780g
- Electrical Features:**
- Contact Type EN60947-5-1 double break type Zb
Snap Action up to 2NC + 1NO (Auxiliary)
 - Contact Material Silver
 - Termination Clamp up to 2.5mm² conductors
 - Rating Utilisation category AC15
 - 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)

Standards: EN60947-5-1 EN60947-5-5 EN62061
UL508 ISO13849-1

Safety Classification and Reliability Data:
Mechanical Reliability B10d 1.5 x 10⁶ operations at 100mA load

ATEX Classification (EX Versions) Exd IIC T6 (-20 ≤ Ta ≤ +60C) Gb
Ex tb IIIC T85C (-20 ≤ Ta ≤ +60C) Db

Rated Voltage 250Vac
Rated Current 4Aac
Cable Length 3m pre-wired (EX versions)

SALES NUMBER	TYPE	CONDUIT	CONTACTS	FITTINGS
144498	GLS-SS-AR	3 x M20	2NC 1NO	
144499	GLS-SS-AR	3 x 1/2" NPT	2NC 1NO	
144496	GLS-SS-AR	EX	1NC 1NO	Pre-Wired 3m
144497	GLS-SS-AR	EX	2NC	Pre-Wired 3m

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

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