

IDEM GLx Safety Cable-Pull Switches

Features

- Three 1/2 in. NPT female fittings
- Includes one tamper-proof T20 Torx bit
- Rope Pull kits sold separately and recommended for increased reliability
- 50m [164ft], 80m [262ft], 100m [328ft], 125m [410ft] and 250m [820ft] maximum length systems



IDEM Safety Cable-Pull Safety Switches									
Part Number	Price	Maximum Rope Length	Construction Material	Mounting Profile	E-Stop	LED	Contact Configuration	Weight (lb [kg])	Drawings
GLM-143002	\$-004ia:	50m [164ft]*	Die-cast aluminum	57mm [2.24 in]	No	No	1 NO, 2 NC	1.5 [0.68]	PDF
GLM-143051	\$-004ib:				No	No	1 NO, 3 NC	1.5 [0.68]	PDF
GLM-143053	\$-004ic:				No	No	2 NO, 2 NC	1.5 [0.68]	PDF
GLM-143057	\$-004id:				Yes	No	1 NO, 3 NC	1.6 [0.73]	PDF
GLM-143067-AS	\$-004ie:				Yes	24VDC	1 NO, 3 NC	1.7 [0.77]	PDF
GLM-143067-BS	\$,-004if:				Yes	110VAC	1 NO, 3 NC	1.7 [0.77]	PDF
GLS-142002	\$-004ig:	80m [262 ft]*	Die-cast aluminum	63mm [2.48 in]	No	No	1 NO, 2 NC	1.8 [0.79]	PDF
GLS-142051	\$-004ih:				No	No	1 NO, 3 NC	1.8 [0.79]	PDF
GLS-142053	\$-004ii:				No	No	2 NO, 2 NC	1.8 [0.79]	PDF
GLS-142063	\$-004ij:				Yes	No	1 NO, 3 NC	1.9 [0.84]	PDF
GLS-142075-AS	\$-004ik:				Yes	24VDC	1 NO, 3 NC	1.9 [0.86]	PDF
GLS-142075-BS	\$-004il:				Yes	110VAC	1 NO, 3 NC	1.9 [0.86]	PDF
GLS-SS-144002	\$004h.:	100m [328 ft]*	Stainless steel	65mm [2.56 in]	No	No	1 NO, 3 NC	4.2 [1.91]	PDF
GLS-SS-144004	\$004h#:				No	No	2 NC, 2 NO	4.2 [1.91]	PDF
GLS-SS-144014	\$,004h!:				Yes	No	1 NO, 3 NC	4.3 [1.95]	PDF
GLS-SS-144020-AS	\$004h?:				Yes	24VDC	1 NO, 3 NC	4.4 [2.00]	PDF
GLS-SS-144020-BS	\$,004h.:				Yes	110VAC	1 NO, 3 NC	4.4 [2.00]	PDF
GLHL-141006-AS	\$054bg:	125m [410 ft]*	Die-cast aluminum	100mm [3.94 in] Left-hand head	Yes	24 VDC	2 NO, 4 NC	2.4 [1.08]	PDF
GLHL-141006-BS	\$054bh:				Yes	110 VAC	2 NO, 4 NC	2.4 [1.08]	PDF
GLHL-141055-AS	\$-054bi:				No	24 VDC	2 NO, 4 NC	2.3 [1.04]	PDF
GLHL-141055-BS	\$-054bj:				No	110 VAC	2 NO, 4 NC	2.3 [1.04]	PDF
GLHL-141035	\$054bk:				Yes	No	2 NO, 4 NC	2.3 [1.06]	PDF
GLHL-141057	\$-054bl:				No	No	2 NO, 4 NC	2.2 [1.02]	PDF
GLHL-SS-145006-AS	\$054bn:	125m [410 ft]*	Stainless steel	100mm [3.94 in] Left-hand head	Yes	24 VDC	2 NO, 4 NC	5.6 [2.56]	PDF
GLHL-SS-145006-BS	\$054bo:				Yes	110 VAC	2 NO, 4 NC	5.6 [2.54]	PDF
GLHL-SS-145035	\$054bp:				Yes	No	2 NO, 4 NC	5.5 [2.49]	PDF
GLHL-SS-145057	\$054bq:				No	No	2 NO, 4 NC	5.4 [2.47]	PDF
GLHR-141010-AS	\$054bs:	125m [410 ft]*	Die-cast aluminum	100mm [3.94 in] Right-hand head	Yes	24 VDC	2 NO, 4 NC	2.4 [1.08]	PDF
GLHR-141010-BS	\$,054bt:				Yes	110 VAC	2 NO, 4 NC	2.4 [1.08]	PDF
GLHR-141056-AS	\$054bu:				No	24 VDC	2 NO, 4 NC	2.3 [1.04]	PDF
GLHR-141056-BS	\$054bv:				No	110 VAC	2 NO, 4 NC	2.3 [1.04]	PDF
GLHR-141036	\$054bx:				Yes	No	2 NO, 4 NC	2.3 [1.06]	PDF
GLHR-141058	\$054by:				No	No	2 NO, 4 NC	2.2 [1.02]	PDF
GLHR-SS-145010-AS	\$054bz:	125m [410 ft]*	Stainless steel	100mm [3.94 in] Right-hand head	Yes	24 VDC	2 NO, 4 NC	5.5 [2.51]	PDF
GLHR-SS-145010-BS	\$,054b:				Yes	110 VAC	2 NO, 4 NC	5.6 [2.54]	PDF
GLHR-SS-145036	\$,054b:				Yes	No	2 NO, 4 NC	5.5 [2.49]	PDF
GLHR-SS-145058	\$054b.:				No	No	2 NO, 4 NC	5.3 [2.42]	PDF
GLHD-141002-AS	\$054b6:	250m [820ft]*	Die-cast aluminum	100mm [3.94 in] Dual head	Yes	24 VDC	2 NO, 4 NC	2.9 [1.32]	PDF
GLHD-141002-BS	\$054b7:				Yes	110 VAC	2 NO, 4 NC	2.9 [1.32]	PDF
GLHD-141030-AS	\$054b8:				No	24 VDC	2 NO, 4 NC	2.8 [1.27]	PDF
GLHD-141030-BS	\$054b9:				No	110 VAC	2 NO, 4 NC	2.8 [1.27]	PDF
GLHD-141040	\$054ba:				Yes	No	2 NO, 4 NC	2.8 [1.27]	PDF
GLHD-141042	\$054bb:				No	No	2 NO, 4 NC	2.7 [1.22]	PDF
GLHD-SS-145002-AS	\$054bc:	250m [820ft]*	Stainless steel	100mm [3.94 in] Dual head	Yes	24 VDC	2 NO, 4 NC	6.5 [2.93]	PDF
GLHD-SS-145002-BS	\$054bd:				Yes	110 VAC	2 NO, 4 NC	6.5 [2.93]	PDF
GLHD-SS-145024	\$054be:				Yes	No	2 NO, 4 NC	6.3 [2.86]	PDF
GLHD-SS-145026	\$,054bf:				No	No	2 NO, 4 NC	6.2 [2.79]	PDF

*See Recommended Rope Span Options and Fittings for number of switches recommended with specific maximum rope lengths.



GLM-143067-AS



GLS-142053



GLS-SS-144020-AS



**GLHL-SS-145035
Left-hand**



**GLHD-141002-AS
Dual head**

IDEM Cable-Pull Safety Rope Switches



Cable Kits for IDEM Cable-Pull Safety Switches

Part Number	Price	Description	Cable Length (m [ft])	Construction Material	Weight (lb [kg])
140002	\$04g8:	Includes (1) cable, (5) eyebolts, (1) tensioner / gripper and (1) allen key.	10 [32]	Galvanized steel	0.8 [0.36]
140011	\$004gd:			Stainless steel	1.3 [0.59]
140004	\$004g9:	Includes (1) cable, (9) eyebolts, (1) tensioner / gripper and (1) allen key.	20 [65]	Galvanized steel	2.2 [1.0]
140013	\$004ge:			Stainless steel	2.9 [1.32]
140005	\$004ga:	Includes (1) cable, (12) eyebolts, (1) tensioner / gripper and (1) allen key.	30 [98]	Galvanized steel	2.8 [1.27]
140014	\$004gf:			Stainless steel	3.9 [1.77]
140006	\$004gb:	Includes (1) cable, (20) eyebolts, (1) tensioner / gripper and (1) allen key.	50 [164]	Galvanized steel	4.5 [2.04]
140015	\$004gg:			Stainless steel	6.0 [2.72]
140007	\$004gc:	Includes (1) cable, (30) eyebolts, (2) tensioner / grippers and (1) allen key.	80 [262]	Galvanized steel	7.0 [3.18]
140016	\$004gh:			Stainless steel	9.5 [4.31]
140009	\$054b#:	Includes (1) cable, (45) eyebolts, (2) tensioner / grippers and (2) allen keys.	126 [413]	Galvanized steel	13.9 [6.28]
140018	\$054b!:			Stainless steel	14.0 [6.35]

**140002****140033**

Steel Cable for IDEM Cable-Pull Safety Switches

Part Number	Price	Description	Cable Length (m [ft])	Weight (lb [kg])
140033	\$-04gl:	5m length steel cable, 4mm diameter, red	5 [16]	0.35 [0.16]
140034	\$04gn:	10m length steel cable, 4mm diameter, red	10 [32]	0.7 [0.32]
140036	\$04go:	20m length steel cable, 4mm diameter, red	20 [65]	1.4 [0.64]
140037	\$04gp:	30m length steel cable, 4mm diameter, red	30 [98]	2.1 [0.95]
140038	\$04gq:	50m length steel cable, 4mm diameter, red	50 [164]	3.5 [1.59]
140039	\$004gs:	80m length steel cable, 4mm diameter, red	80 [262]	5.4 [2.45]
140040	\$004gt:	100m length steel cable, 4mm diameter, red	100 [328]	6.6 [2.99]
140041	\$004gu:	126m length steel cable, 4mm diameter, red	126 [413]	8.42 [3.82]

IDEM Cable-Pull Safety Switch Accessories

Part Number	Price	Description	Construction Material	Weight (lb [kg])	Drawings
140019	\$-04gi:	Cable tensioner / gripper. Includes 4mm allen wrench	Stainless steel	0.5 [0.27]	PDF
140020	\$-04gj:		Galvanized steel	0.3 [0.14]	PDF
140021	\$04gk:	Pulley assembly	Stainless steel	0.3 [0.14]	PDF
140064	\$04gz:		Galvanized steel	0.2 [0.09]	PDF
140045	\$04gx:	Eye bolt 84mm long, M8 x 1.25 threads. Includes (2) flat washers and (2) nuts per eye bolt. Package of 8.	Stainless steel	0.8 [0.36]	PDF
140046	\$04gy:		Galvanized steel	0.5 [0.27]	PDF
140043	\$04gv:	Spring, 220mm long	Stainless steel	0.4 [0.18]	PDF
140132-AS	\$04h3:	Replacement LED assembly, 24VDC, bi-color steady green and red. Use with GL series cable pull switches.	NA	0.08 [0.04]	PDF
140132-BS	\$04h4:	Replacement LED assembly, 110VAC, bi-color steady green and red. Use with GL series cable pull switches.	NA	0.08 [0.04]	PDF

**140019****140021****140045****140043****140132-AS**

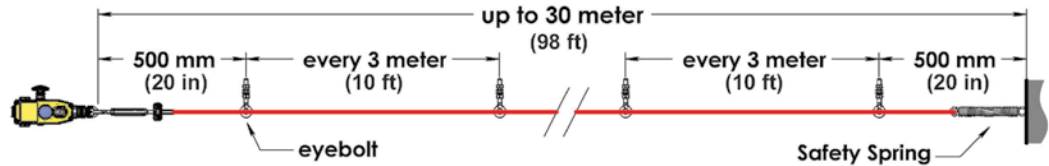
IDEM Cable-Pull Rope Span Options and Fittings

Recommended Rope Span Installations



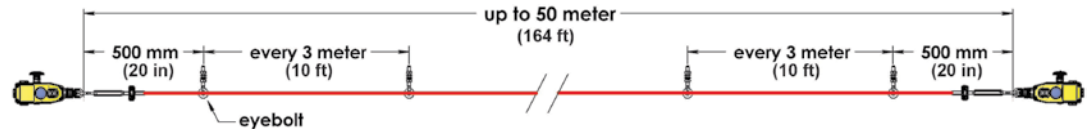
GLM 30m

Up to 30m [98ft]
1 switch / 1 spring



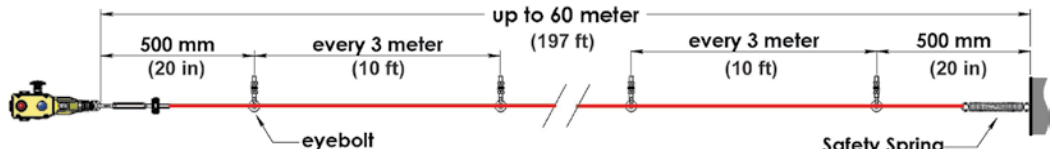
GLM 50m

30 to 60m [98 to 197ft]
2 switches



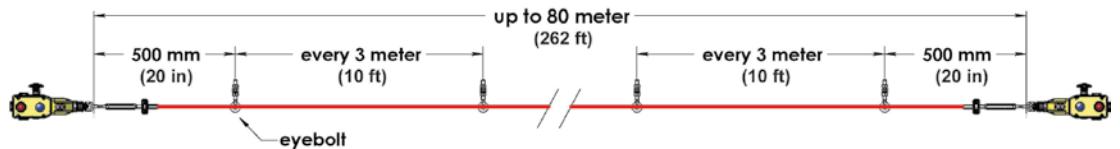
GLS 60m

Up to 60m [197ft]
1 switch / 1 spring



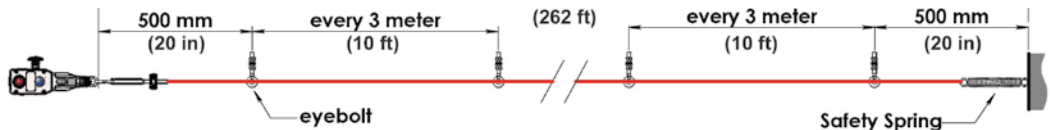
GLS 80m

60 to 80m [197 to 262ft]
2 switches



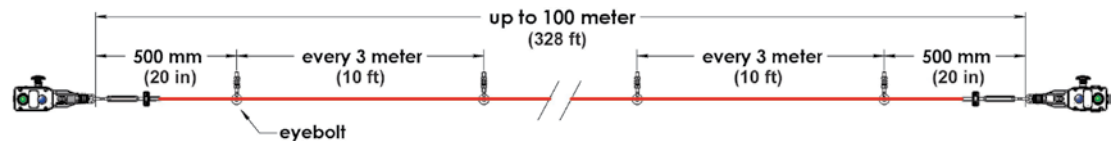
GLS-SS 80m

Up to 80m [262ft]
1 switch / 1 spring



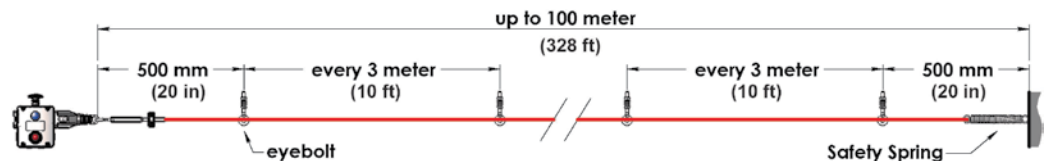
GLS-SS 100m

80 to 100m [262 to 328ft]
2 switches



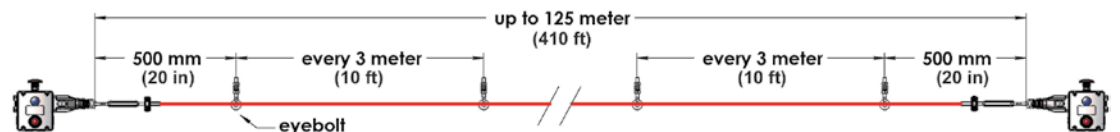
GLHL/R 100m

With Safety Springs
Up to 100m [328ft]
1 switch / 1 spring



GLHL/R 125m

Up to 125m [410ft]
2 switches



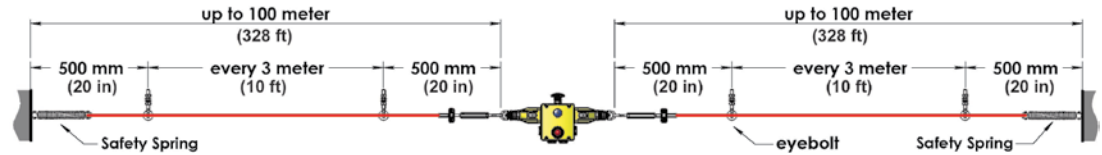
IDEM Cable-Pull Rope Span Options and Fittings



Recommended Rope Span Installations (continued)

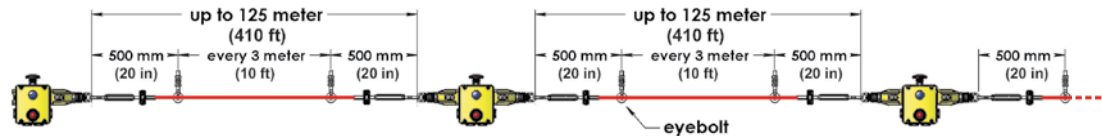
GLHD 200m With Safety Springs

Up to 200m [656ft]
(100m [328ft] on each side)
1 switch / 2 springs



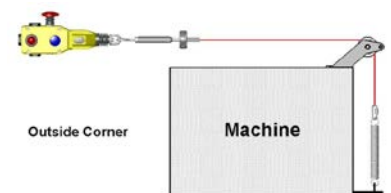
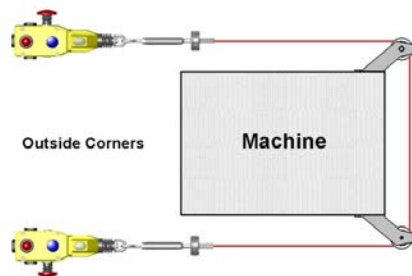
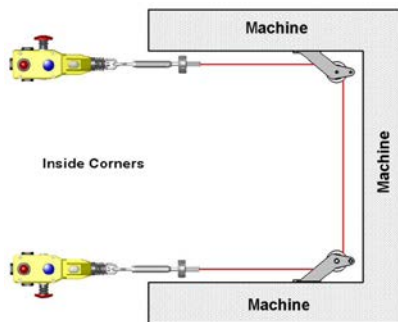
GLHD/L/R 250m

Up to 250m [820ft]
(125m [410ft] on each side)
2 switches



Universal Pulley Examples

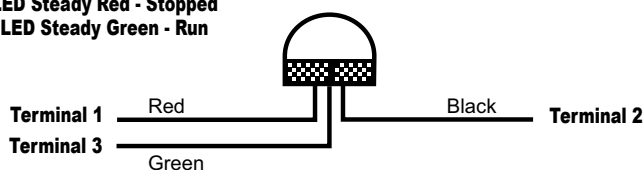
- Use two switches when using two pulleys
- When using a safety spring, use a maximum of one corner pulley



LED

When power is applied to the Red wire (terminal 1), the lamp will illuminate red. When power is applied to the Green Wire (terminal 3), the lamp will illuminate green. Black is 0VDC or neutral for 110 VAC and 230VAC versions.

LED Steady Red - Stopped
LED Steady Green - Run



IDEM Interlock Safety Switches Specifications



Specifications							
	IDIS	INCH/MK1	HC	KM	KP/K-SS	K-15	GLx
Safety Classification and Reliability Data							
Switching Reliability (B10 _d)	2.5 x 10 ⁶ operations at 100mA load						1.5 x 10 ⁶ operations at 100mA load
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						
Agency Approvals	cULus (E258676), CE						cULus (E258676), CE, TUV
Electrical and General Specifications							
Conductor Sizes	16-12 AWG (1.5 to 2.5 mm ²)						
Utilization Category	AC15, A300, 3A						
Thermal Current	10A						
Short Circuit Overload Protection	External 10A Fast Acting recommended						
Rated Insulation Voltage	600VAC				500VAC		
Contact Terminals	Stainless steel (Snap action plated brass); Max conductor 1.5 m ² (IDIS), 2.5 m ² (KM, K/K-15); 1 N•m [0.74 lb•ft] torque						
Maximum Switching Current	2.5A @24 VDC 6A @ 120VAC, 3A @ 240VDC (720VA Break)						
Maximum Approach/Withdrawal Speed	600mm/s [23.6 in/s]						NA
Enclosure Protection	IP67 (IP69K on all models with both stainless steel head and body)						
Operating Temperature	-25°C to 80°C [-13°F to 176°F]						
Vibration	IEC 68-2-6, 10Hz to 55Hz + 1Hz						10Hz to 500Hz 0.35 mm [0.014 in]
Lid Screws/Torque	Plated brass 1 N•m [0.74 lb•ft]	Stainless steel T20 Torx 1 N•m [0.74 lb•ft]	Stainless steel 1 N•m [0.74 lb•ft]				Stainless steel T20 Torx 1.5 N•m [1.11 lb•ft]
Recommended Mounting Screws/ Torque	M4 1.5 N•m [1.11 lb•ft]	M5 4N•m [2.95 lb•ft]	M4 1.5 N•m [1.11 lb•ft]		M5 4N•m [2.95 lb•ft]		
Head Screws/Torque	Stainless steel, except snap (plated brass) 1 N•m [0.74 lb•ft]	Stainless steel T20 Torx 1 N•m [0.74 lb•ft]	Stainless steel; 1 N•m [0.74 lb•ft]				

IDEM Interlock/Hinge Safety Travel Charts



Interlock Safety Switch Types

Slow-make/slow-break contacts:

A contact element in which the contact motion is dependent on the actuator speed.

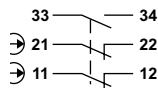
Snap-action contact:

A contact element in which the contact motion is independent of the speed of the actuator. This feature ensures reliable electrical performance even in applications involving very slow moving actuators.

Contacts Configuration

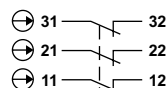
1 NO and 2 NC

Slow-make/slow-break contacts



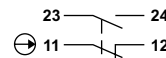
3 NC

Slow-make/slow-break contacts



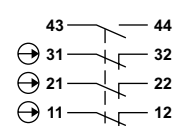
1 NO and 1 NC

Snap action contacts



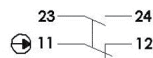
1 NO and 3 NC

Slow-make/slow-break contacts



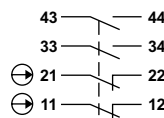
1 NO and 1 NC

Slow-make/slow-break contacts



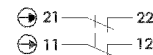
2 NO and 2 NC

Slow-make/slow-break contacts



2 NC

Slow-make/slow-break contacts



Travel Charts



Interlock Switches

2NC 1NO 6.8 6.0 0 mm

11/12	Open	
21/22	Open	
33/34		Open

3NC 6.0 0 mm

11/12	Open	
21/22	Open	
31/32	Open	

3NC 1NO 6.8 6.0 0 mm

11/12	Open	
21/22	Open	
31/32	Open	
43/44		Open

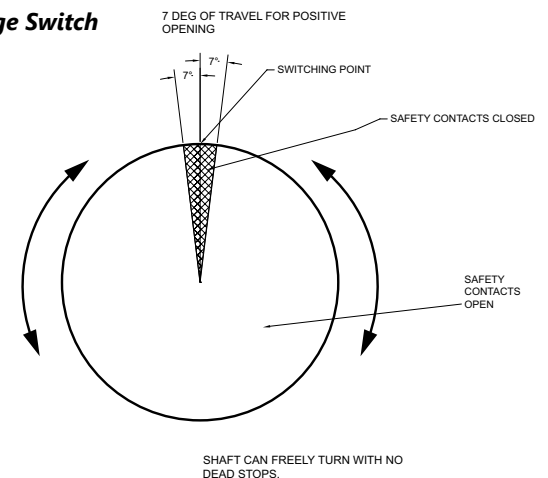
2NC 2NO 6.8 6.0 0 mm

11/12	Open	
21/22	Open	
33/34		Open
43/44		Open

1NC 1NO (SNAP) 6.5 0 mm

11/12	Open	
23/24		Open

Hinge Switch



User to ensure that by correct positioning of the shaft at installation causes the safety contacts to open such that no hazard exists to the operator when the door is opened a few degrees.

Safety Rope Switches

EX	1 NO/2 NC	1 NO/3 N.C.	2 NO/2 N.C.	0 mm	3.5 mm	14.5 mm	17.0 mm
				Latched off - Rope Slack	Tension Range (Switch Reset)	Rope Pulled	
NC	11/12	11/12	11/12	Open		Open	
	21/22	21/22	21/22	Open		Open	
		31/32		Open		Open	
NO	33/34	43/44	33/44		Open		
			43/44		Open		

Safety Products



Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

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