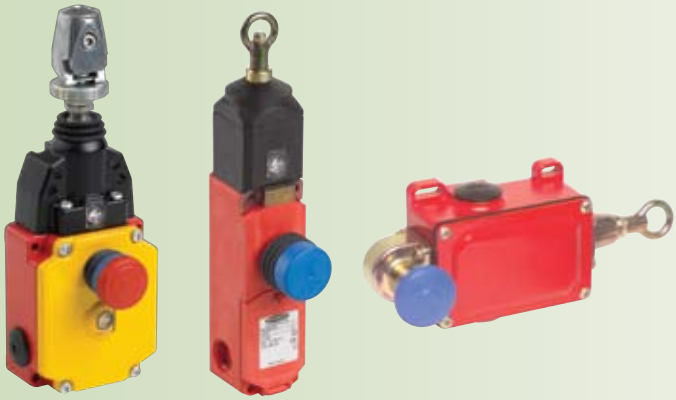
EMERGENCY STOP & STOP CONTROL DEVICES

E-Stop Push Buttons

Rope Pull Switches



Enabling Devices

E-Stop Buttons page 601

- Mechanical and optical palm buttons push to stop and twist to release.
- Modular design makes assembly and installation easy.
- Kits simplify selection and ordering.

Rope Pull Switches page 605

- Models that comply with cable break/slack detection with manual reset for Emergency Stop applications.
- Available spans range from 6 to 100 m.
- Trip and latch switch models are available.
- Minimum switch life is 1 million operations.
- Heavy-duty switch housings withstand harsh environments and outdoor use.

Enabling Devices page 615

- Handheld devices provide the three-position functionally required for manual control of a machine.
- When continuously actuated it permits the machine to run but does not start the cycle.
- Optional momentary push-button switch models can provide hold-to-run, reset or jogging/inching functions.

PICO-GUARD™
Fiber Optic Emergency Stop Push Buttons

- Works in conjunction with the PICO-GUARD™ and other optical elements in personnel safety and equipment protection applications
- Features bright red push-to-stop, twist-to-release button with yellow background that complies with ANSI NFPA 79, IEC 60204-1 and ISO 13850 (EN 418)
- Provides choice of models with fiber connections on same side or opposite sides of enclosure
- Certified to ISO 13849-1 Category 4 requirements
- Delivers easy connection for 2 mm OD (1 mm core) plastic fibers
- Accommodates up to 3 E-Stops in a series on a single channel (all PICO-GUARD controllers have four channels)
- Constructed of impact-resistant polycarbonate resin—rated IP65
- Can be used with SFI interlocking switches in same optical loop
- Offers easy mounting and installation
- See page 508 for controller information

ACCESSORIES page 520

Fiber connection ports

Same side
SFS-EBM-01E1

Opposite sides
SFS-EBM-01E2

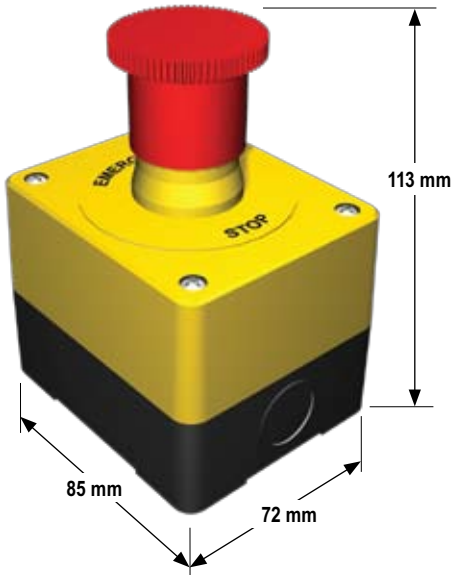
ATEX, FM and CSA certified for use in Class 1 Division 1 and Zone 0 potentially explosive environment

- Paint booths
- Paint and stain manufacturing
- Gaseous fill areas (example, cigarette lighters)
- Cosmetic and perfume manufacturing
- Film and web processing
- Chemical processing
- Battery manufacturing
- Pharmaceutical manufacturing
- Semiconductor processing

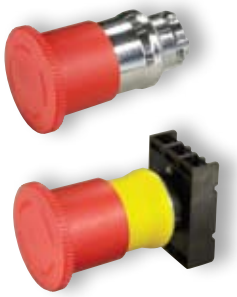
E-Stop Button
Emergency Stop Push Buttons

- Electromechanical palm buttons push to stop and twist to release.
- Modular design makes assembly and installation easy.
- Kits simplify selection and ordering.
- Latching design complies with ANSI NFPA 79, IEC 60204-1 and ISO 13850 (EN 418); direct positive opening operation per EN/IEC 60947-5-1
- Options include station enclosures, contact elements and disc labels.

Optical E-Stop Buttons **page 600**



Emergency Stop Push Button with Enclosure (Plastic button version shown)



Metal (top) and Plastic (bottom) buttons

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E-Stop Push-Button Components

Product	Description	Models
	22.5 mm plastic button (mounting adapter included)	**8-LP2T-B6644***
	22.5 mm metal button (8-LM2T-AU120 mounting adapter sold separately)	**8-LM2T-B6644***

More on next page

* Twist to release, mechanical latching ISO 13850 (EN 418) compliant. Diameter 40 mm (without mounting adapter).

E-Stop Push-Button Components (cont'd)

Product	Description	Models
	Metal mounting adapter (for metal button)	**8-LM2T-AU120**
	Normally closed (NC) positively driven contact element	**8-LM2T-C01****
	Normally open (NO) auxiliary contact element	**8-LM2T-C10**
	One-button enclosure—control stations have wire entry through the top or bottom; IP65 rating	**8-L2PP-1A5**
	60 mm diameter, non-adhesive plastic legend with "Emergency Stop" inscription	**8-LM2T-AU115**†

** Direct (positive) opening operation per IEC/EN 60947-5-1.

† Additional E-Stop background labels are available (see p/n 121976).

E-Stop Push-Button Kits

E-Stop Button		Contacts	Legend	Enclosure	Models
	Metal	2 NC	Yes	No	**SSA-EBM-02L**
		1 NC & 1 NO			**SSA-EBM-11L**
		2 NC & 1 NO			**SSA-EBM-12L**

More on next page

NC= Normally closed contact, NO= Normally open contact

E-Stop Push-Button Kits (cont'd)

E-Stop Button		Contacts	Legend	Enclosure	Models
	Plastic	2 NC	Yes	No	**SSA-EBP- 02L**
		1 NC & 1 NO			**SSA-EBP-11L**
		2 NC & 1 NO			**SSA-EBP-12L**
	Metal	2 NC	Yes	Yes	**SSA-EBM-02E**
		1 NC & 1 NO			**SSA-EBM-11E**
		2 NC & 1 NO			**SSA-EBM-12E**
	Plastic	2 NC	Yes	Yes	**SSA-EBP-02E**
		1 NC & 1 NO			**SSA-EBP-11E**
		2 NC & 1 NO			**SSA-EBP-12E**

NC = Normally Closed Contact, NO = Normally Open Contact

E-Stop Push-Button Specifications

Mechanical Life	300,000 operations
Operating Force	0.8 kg
Mounting Adapter	**Plastic button:** The adapter is fixed to the mounting surface by means of incorporated screws (T_{max} = 0.6 Nm) **Metal button:** The adapter is fixed to the mounting surface by means of incorporated screws (T_{max} = 0.8 Nm)
Construction	**Plastic parts:** Polyamide and polycarbonate **Metal parts:** Aluminum and zinc alloy
Environmental Rating	IP65; NEMA 4, 13
Operating Temperature	-25° to +60° C
Certifications	c UL us LISTED Compliant with EN/IEC 60497-1; -5-1

Contact Specifications

European Rating	**Utilization categories:** AC15 and DC13 U_i = 690V ac I_{th} = 10A UL designation = A 600 Q600
Mechanical Life	1,000,000 operations
Connections	(1 or 2) 12 AWG (2.5 mm^2) maximum wire size
Construction	Polyamide and polycarbonate
Environmental Rating	IP20
Operating Temperature	-25° to +60° C
Certifications	c UL us LISTED Compliant with EN/IEC 60497-1; -5-1

Rope Pull Switches

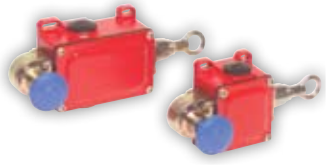
- Models that comply with cable break/slack detection with manual reset for Emergency Stop applications.
- Available spans range from 6 to 100 m.
- Trip and latch switch models are available.
- Minimum switch life is 1-million operations.
- Heavy-duty switch housings withstand harsh environments and outdoor use.
- Switch activates if the rope is pulled, becomes loose or breaks.
- Design meets positive opening requirements for rope pull switches (IEC 60947-5-1) ⊖.
- RP-RM83 and RP-LS42 comply with ANSI NFPA 79, ANSI B11.19, IEC 60204-1, EN 13850 and EN ISO 60947-5-5 for Emergency Stop applications.
- RP-QM72/QMT72, RP-LM40 and RP-QM90 comply with ANSI NFPA 79 and IEC 60204-1 for Stop Control applications.

RP-RM83 page 606

- Cable break/slack detection with manual reset
- Manual reset (Latch) design
- Heavy-duty housing to withstand harsh environments and outdoor use; IP67 rated
- Rope span up to 75 meters
- E-stop button with manual reset
- Tension indicators
- Additional solid-state auxiliary output for remote tension monitoring
- Extra contacts for switch monitoring
- 90 mm wide at base
- Rugged metal housing with protective earth terminal (IEC 60947-1) ⏚

RP-LS42 page 607

- Cable break/slack detection with manual reset
- Manual reset (Latch) design
- Rope span up to 75 meters
- Model with E-stop button for manual reset
- Quick rope fixing and tensioning
- Tension indicator
- Extra contacts for switch monitoring
- 42 mm wide at base
- Insulated device (IEC 60947-5-1) ⧈



RP-QM72/QMT72 page 608

- Manual reset (Latch) design
- Rope span up to 6, 12 or 20 meters
- Tension Indicator
- Models with additional contacts for monitoring or dual channel hookup
- 82 mm wide at base
- Rugged metal housing with protective earth terminal (IEC 60947-1) ⏚
- Cable break/slack detection (note: does not comply with manual reset requirement per EN IEC 60947-5-5 for Emergency Stop applications.)

RP-LM40 page 609

- Manual reset (Latch) and Auto Reset (Trip) models
- Rope span up to 6 meters
- Tension Indicator
- Limit-switch style housing (EN 50041)
- 40 mm wide at base
- Rugged metal housing with protective earth terminal (IEC 60947-1) ⏚
- Cable break/slack detection (note: does not comply with manual reset requirement per EN IEC 60947-5-5 for Emergency Stop applications.)

RP-QM90 page 609

- Manual reset (Latch) design
- Rope span up to 100 meters, with switch in center
- Manual reset
- Extra contacts for switch monitoring
- 90 mm wide at base
- Rugged metal housing with protective earth terminal (IEC 60947-1) ⏚
- Cable break/slack detection (note: does not comply with manual reset requirement per EN IEC 60947-5-5 for Emergency Stop applications.)

ACCESSORIES page 610

RP-RM83 Series

RP-RM83F-75LT.. and
RP-RM83F-38LT.. Models

RP-RM83F-75LR.. and
RP-RM83F-38LR.. Models

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Components for wire rope assembly kits (page 610)

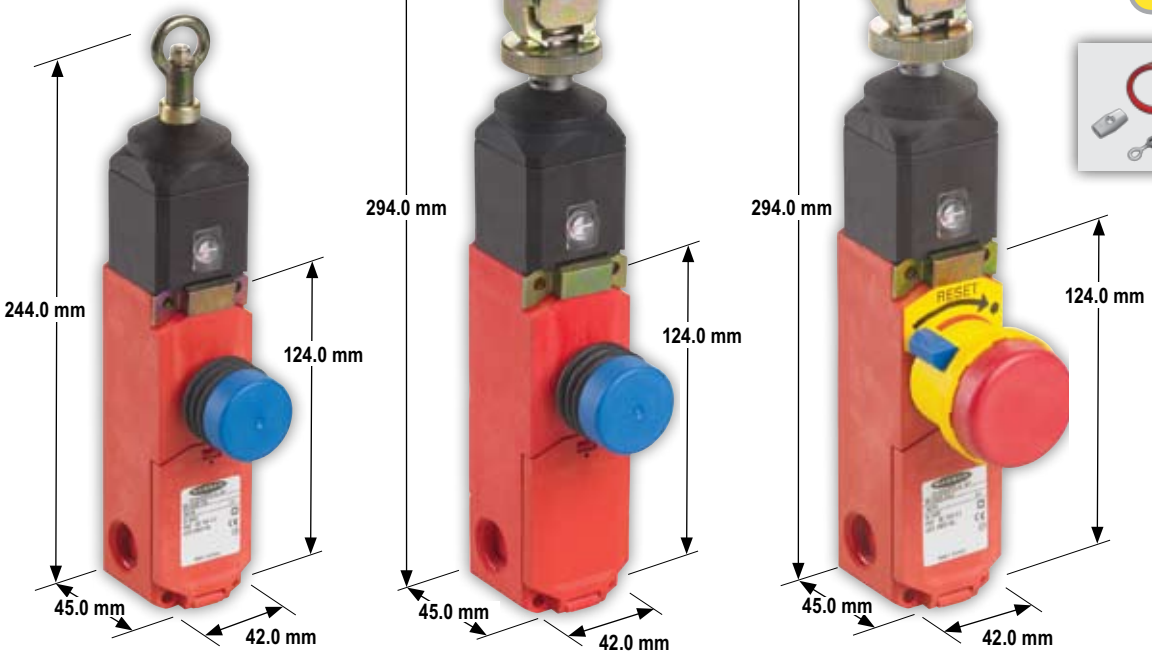
RP-RM83 Series E-Stop and Stop Control Device

Actuation	Safety Contacts*	Auxiliary Contacts	Action/ Contact State*	Aux. Status Output	Model		Contact Config. & Switch Diagram
					Max. Rope Length 75 m	Max. Rope Length 38 m	
Latch (Rope Pulled)	2 NC in →	2 NO in →	Safety: open open / Auxiliary: closed closed Safety: open open / Auxiliary: closed closed	Yes	RP-RM83F-75LTE	RP-RM83F-38LTE	SD01 & SD02 (p. 612)
				Yes	RP-RM83F-75LRE	RP-RM83F-38LRE	
				—	RP-RM83F-75LT	RP-RM83F-38LT	SD03 & SD04 (p. 612)
				—	RP-RM83F-75LR	RP-RM83F-38LR	

→ Run Position Cable Pulled Cable Break NC = Normally Closed Contact, NO = Normally Open Contact

* RP-RM83 rope pulls comply with IEC 60947-5-1 Positive Opening requirements. See data sheet or Contact Configuration and Switching Diagrams for more information/clarification.

RP-LS42 Series



RP-LS42F-..L Model

RP-LS42F-..LF Model

RP-LS42F-..LE Model (with E-Stop Button)

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Components for wire rope assembly kits (page 610)

RP-LS42 Series E-Stop and Stop Control Device

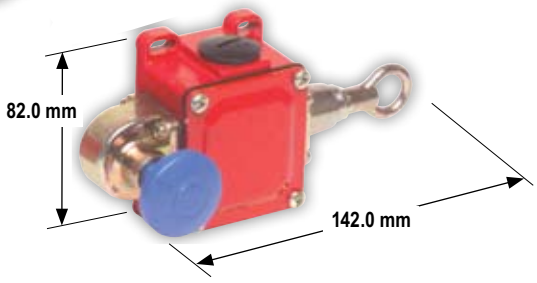
Actuation	Max. Rope Length	Safety Contacts*	Auxiliary Contact	Action/ Contact State*	Model	Contact Config. & Switch Diagram
Latch (Rope Pulled)	25 m	2 NC in →	2 NO in →	Safety: open open / Auxiliary: closed closed (Cable Pulled)	RP-LS42F-25L	SD07 (p. 613)
					RP-LS42F-25LE	
				Safety: open open / Auxiliary: closed closed (Cable Break)	RP-LS42F-25LF	
	37.5 m	2 NC in →	2 NO in →	Safety: open open / Auxiliary: closed closed (Cable Pulled)	RP-LS42F-38L	SD06 (p. 612)
					RP-LS42F-38LE	
				Safety: open open / Auxiliary: closed closed (Cable Break)	RP-LS42F-38LF	
	75 m	2 NC in →	2 NO in →	Safety: open open / Auxiliary: closed closed (Cable Pulled)	RP-LS42F-75L	SD05 (p. 612)
					RP-LS42F-75LE	
				Safety: open open / Auxiliary: closed closed (Cable Break)	RP-LS42F-75LF	

→ Run Position Cable Pulled Cable Break NC = Normally Closed Contact, NO = Normally Open Contact

* RP-LS42 rope pulls comply with IEC 60947-5-1 Positive Opening requirements. See data sheet or Contact Configuration and Switching Diagrams for more information/clarification.

RP-QM72/QMT72 Series

RP-QMT72 Models



RP-QM72 Models

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Components for wire rope assembly kits (page 610)

ACCESSORIES page 610

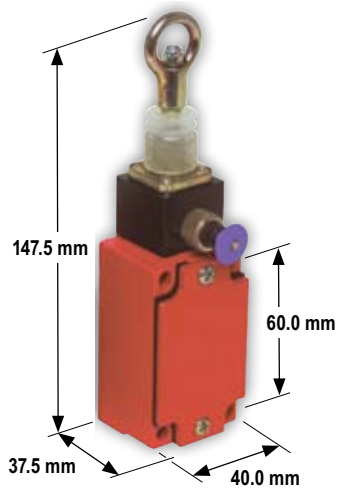
RP-QM72/QMT72 Series Stop Control Device

Actuation	Max. Rope Length	Safety Contacts*	Auxiliary Contact	Action/ Contact State*	Model	Contact Config. & Switch Diagram
Latch (Rope Pulled)	6 m	2 NC in →	—	Safety open closed closed open	RP-QM72D-6L	SD08 (p. 613)
	12 m				RP-QM72D-12L	SD09 (p. 613)
	20 m				RP-QMT72D-20L	SD10 (p. 613)
	12 m	4 NC in →	—	Safety open open closed closed closed closed open open	RP-QMT72F-12L	SD11 (p. 613)
	12 m	2 NC in →	1 NO in →	Safety Auxiliary open closed closed closed open open	RP-QMT72E-12L	SD12 (p. 613)

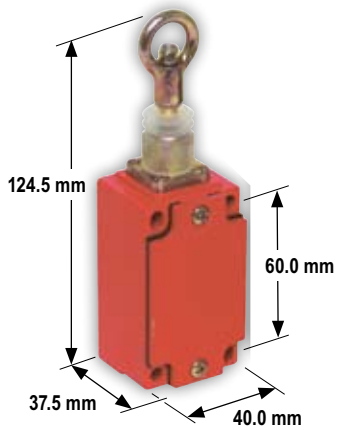
→ Run Position Cable Pulled Cable Break NC = Normally Closed Contact

* RP-QM72/QMT72 rope pulls comply with IEC 60947-5-1 Positive Opening requirements. See data sheet or Contact Configuration and Switching Diagrams for more information/clarification.

RP-LM40 Series



RP-LM40D-6L Model



RP-LM40D-6 Model

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Components for wire rope assembly kits (page 610)

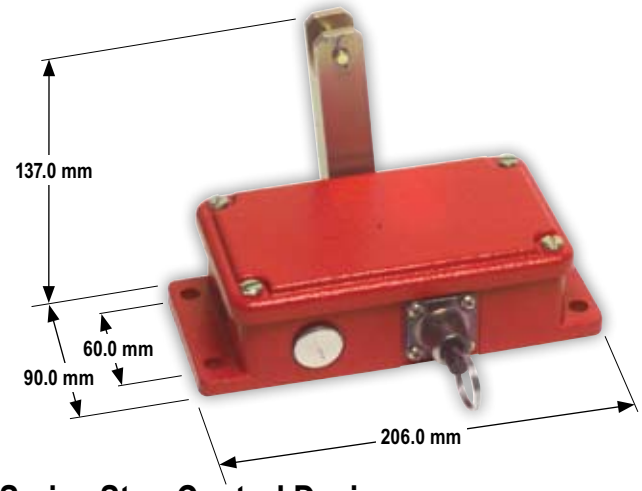
RP-LM40 Series Stop Control Device

Actuation	Max. Rope Length	Safety Contact*	Auxiliary Contact	Action/ Contact State*	Model	Contact Config. & Switch Diagram
Trip	6 m	2 NC in →	—	open closed	RP-LM40D-6	SD13 (p. 614)
Latch				closed open	RP-LM40D-6L	SD14 (p. 614)

→ Run Position Cable Pulled Cable Break NC = Normally Closed Contact

* RP-LM40 rope pulls comply with IEC 60947-5-1 positive Opening requirements. See data sheet or Contact Configuration and Switching Diagrams for more information/clarification.

RP-QM90 Series



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AUTOCAD, STEP, IGES & PDF

Components for wire rope assembly kits (page 610)

RP-QM90 Series Stop Control Device

Actuation	Max. Rope Length	Safety Contacts*	Auxiliary Contacts	Action/ Contact State*	Model	Contact Config. & Switch Diagram
Latch (Rope Pulled)	100 m (50 m each side)	2 NC in →	2 NO in →	Safety / Auxiliary open open closed closed open open closed closed	RP-QM90F-100L	SD15 (p. 614)

→ Run Position Cable Pulled Cable Break NC = Normally Closed Contact, NO = Normally Open Contact

* RP-QM90 rope pulls comply with IEC 60947-5-1 Positive Opening requirements. See data sheet or Contact Configuration and Switching Diagrams for more information/clarification.

Rope Pull Switches Specifications

Contact Rating	10A @ 24V ac, 10A @ 110V ac, 6A @ 230V ac, 6A @ 24V dc 2.5 kV max. transient tolerance NEMA A300 P300
Monitoring Solid-State Output Rating	**Rated operational voltage:** U_e = 10 to 30V dc **Rated operational current:** I_e = 50 mA **Utilization category:** DC13 Protected against reverse polarity and short circuit.
European Rating	**Utilization categories:** AC15 and DC13 U_i = 500V ac, I_{th} = 10A **Rated Surge Capacity:** 2.5 kV (RP-RM83 only) RP-RM83 models (40-60 Hz) U_e V / I_e/AC-15 A / I_e/DC-13 A 120 / 6 / 0.55 240 / 3 / 0.27 All others (40-60 Hz) U_e V / I_e/AC-15 A / I_e/DC-13 A 24 / 10 / 6 110 / 10 / 1 230 / 6 / 0.4
Contact Material	Silver-nickel alloy
Maximum Switching Speed	**RP-RM83 models:** 20 operations per minute **All others:** 50 operations per minute
Recommended Rope Size	**40 mm models:** 2 mm diameter steel rope **42 & 72 mm models:** 3 mm diameter steel rope **83 mm models:** 2-5 mm diameter steel rope (3 mm recommended) **90 mm models:** 4 mm diameter steel rope
Maximum Rope Pull Length	**RP-LM40D-6/6L and RP-QM72D-6L:** 6 m **RP-LS42F-75L/75LE/75LF:** 75 m **RP-LS42F-38L/38LE/38LF:** 37.5 m **RP-LS42F-25L/25LE/25LF:** 25 m **RP-QM72D-12L:** 12 m **RP-QMT72D-20L:** 20 m **RP-QMT72E-12L** and **RP-QMT72F-12L:** 12 m **RP-RM83F-75LTE/LT/LRE/LR:** 75 m **RP-RM83F-38LTE/LT/LR/LRE:** 38 m **RP-QM90F-100L:** 100 mm; equal lengths up to 50 m on either side of switch
Short Circuit Protection	10 amp Slow Blow, 15 amp Fast Blow. Recommended external fusing or overload protection.
Mechanical Life	**RP-RM83:** 100,000 operations **All others:** 1 million operations
Wire Connections	Screw terminals with pressure plates accept the following wire sizes – **Stranded and solid:** 20 AWG (0.5 mm^2) to 16 AWG (1.5 mm^2) for one wire **Stranded:** 20 AWG (0.5 mm^2) to 18 AWG (1.0 mm^2) for two wires
Cable Entry	M20 x 1.5 threaded entrance Adapter supplied to convert M20 x 1.5 to ½" - 14 NPT threaded entrance
Construction	**RP-LS42F-..L/..LE/..LF:** High-impact thermoplastic housing; zinc die-cast actuator **All others:** Aluminum alloy die cast
Environmental Rating	**RP-LS42F and RP-RM83F models:** NEMA 4; IEC IP67 **All other models:** NEMA 4; IP65
Operating Temperature	**RP-LS42F-..L/..LE/..LF:** -25° to +70° C **All other models:** -30° to +80° C
Weight	**RP-LM40D-6:** 0.22 Kg **RP-LM40D-6L:** 0.26 Kg **RP-LS42F-..L:** 0.48 Kg **RP-LS42F-..LE and RP-LS42F-..LF:** 0.65 Kg **RP-QM72D-6L:** 0.49 Kg **RP-QM72D-12L:** 0.52 Kg **RP-QMT72D-20L, RP-QMT72E-12L and RP-QMT72F-12L:** 0.64 Kg **RP-QM90F-100L:** 3.8 Kg **RP-RM83F-75LT and RP-RM83F-75LTE:** 1 Kg **RP-RM83F-75LR and RP-RM83F-75LRE:** 0.77 Kg **RP-RM83F-38LT and RP83FLT8**: 1 Kg **RP-RM83F-38LR and RP-RM83F-38LRE:** 0.77 Kg
Certifications	(RP-RM83 and RP-LS42 only)
Contact Configurations and Switching Diagrams	**RP-LM40 models:** SD13 & SD14 (p. 614) **RP-LS42 models:** SD05, SD06 & SD07 (pp. 612-613) **RP-QM72/QMT72 models:** SD07, SD08, SD09, SD10 & SD11 (p. 613) **RP-RM83 models:** SD01, SD02, SD03 & SD04 (p. 612) **RP-QM90 models:** SD15 (p. 614)

Wire Rope Assembly Kits (Tensioning Springs ordered separately)

Description	Rope Length 10 m	Rope Length 20 m	Rope Length 40 m	Rope Length 50 m	Rope Length 80 m	Used With
3 mm steel rope, eye bolts, clamps and thimbles	RPAK-CH2-10	RPAK-CH2-20	RPAK-CH2-40	RPAK-CH2-50	RPAK-CH2-80	• RP-LS42 models • RP-QM72/QMT72 Models • RP-RM83 models
3 mm steel rope, eye bolts, pulleys, clamps and thimbles	RPAK-CHP2-10	RPAK-CHP2-20	RPAK-CHP2-40	RPAK-CHP2-50	RPAK-CHP2-80	
3 mm steel rope, eye bolts, clamps, thimbles and turnbuckle	RPAK-CH2-10-TA	RPAK-CH2-20-TA	RPAK-CH2-40-TA	RPAK-CH2-50-TA	RPAK-CH2-80-TA	
3 mm steel rope, eye bolts, pulleys, clamps, thimbles and turnbuckle	RPAK-CHP2-10-TA	RPAK-CHP2-20-TA	RPAK-CHP2-40-TA	RPAK-CHP2-50-TA	RPAK-CHP2-80-TA	

Components for Wire Rope Assembly

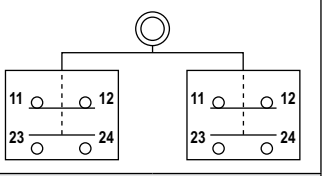
Models			Package Quantity	Description	Used With
Wire Ropes		RPA-C1-10	10 m	2 mm steel wire rope with 0.5 mm red PVC jacket (unterminated)	• RP-LM40 models
		RPA-C1-20	20 m		
		RPA-C1-100	100 m		
		RPA-C2-10	10 m	3 mm steel wire rope with 0.5 mm red PVC jacket (unterminated)	• RP-LS42 models • RP-QM72/QMT72 models • RP-RM83 models
		RPA-C2-20	20 m		
		RPA-C2-40	40 m		
		RPA-C2-50	50 m		
		RPA-C2-80	80 m		
		RPA-C3-20	20 m	4 mm steel wire rope with 0.5 mm red PVC jacket (unterminated)	• RP-QM90 models
		RPA-C3-100	100 m		
Thimbles		RPA-T1-4	4 pcs	Thimble for 2 mm wire rope	• RP-LM40 models
		RPA-T2-4	4 pcs	Thimble for 3 mm wire rope	• RP-LS42 models • RP-QM72/QMT72 models • RP-RM83 models
		RPA-T3-4	4 pcs	Thimble for 4 mm wire rope	• RP-QM90 models
Clamps		RPA-CC1-4	4 pcs	Clamp for 2 mm wire rope	• RP-LM40 models
		RPA-CC2-4	4 pcs	Clamp for 3 mm wire rope	• RP-LS42 models • RP-QM72/QMT72 models • RP-RM83 models
		RPA-CC3-4	4 pcs	Clamp for 4 mm wire rope	• RP-QM90 models
Turnbuckles		RPA-TA1-1	1 pc	#4 Turnbuckle	• RP-LM40 models • RP-LS42 models • RP-QM72/QMT72 models • RP-RM83 models
		RPA-TA2-1	1 pc	#5 Turnbuckle	• RP-QM90 models
Eye Bolts		RPA-EB1-1	1 pc	1/4" - 20 Eye bolt (3" bolt shaft)	• RP-LM40 models • RP-LS42 models • RP-QM72/QMT72 models • RP-RM83 models
		RPA-EB2-1	1 pc	5/16" - 18 Eye bolt (3" bolt shaft)	• RP-QM90 models
Pulleys	 RPA-P1-1	 RPA-DP1-1	1 pc	RPA-P1-1 Pulley for in-line use / RPA-DP1-1 Pulley for corner turns (90-180°)	• RP-LM40 models • RP-LS42 models • RP-QM72/QMT72 models • RP-RM83 models • RP-QM90 models
Tensioning Springs		RPA-S1-1	1 pc	Tensioning Spring #1	• RP-QM90 models
		RPA-S2-1	1 pc	Tensioning Spring #2	• RP-QM90 models
		RPA-S3-1	1 pc	Tensioning Spring #3	• RP-LS42 models • RP-RM83 models
		RPA-S5-1	1 pc	Tensioning Spring #5	• RP-RM83 models
		RPA-S4-1	1 pc	Tensioning spring assembly with built-in eye bolt, cable thimble, clamp, tensioning and overload protection	• RP-LS42 models • RP-RM83 models
		RPA-S6-1	1 pc		• RP-RM83 models
Terminal Cover	SI-LS42-COVER		Replacement terminal cover		• RP-LS42 models
Indicator Lamps		SI-PL3T-R	1 pc	Red with M20 x 1.5 (24V ac/dc)	• RP-LS42 • RP-QM72/QMT72 • RP-RM83 • RP-QM90
		SI-PL3A-R	1 pc	Red with M20 x 1.5 (120V ac)	
		SI-PL3T-G	1 pc	Green with M20 x 1.5 (24V ac/dc)	
		SI-PL3A-G	1 pc	Green with M20 x 1.5 (120V ac)	

Contact/Switching Diagrams

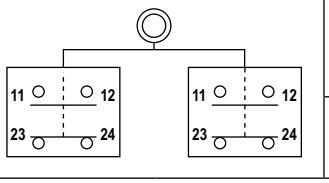
SD01 - RP-RM83F-75LTE/LRE Series

Contact Configuration

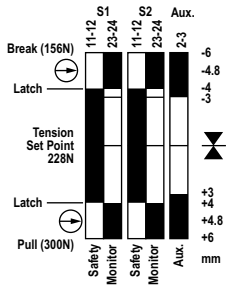
Run Position



Cable Pull or Break



Switching Diagram



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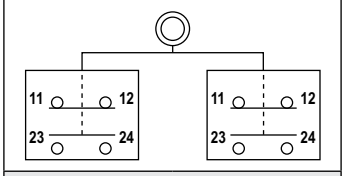
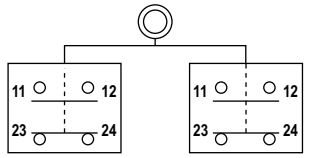
SD02 - RP-RM83F-38LTE/LRE Series

Contact Configuration

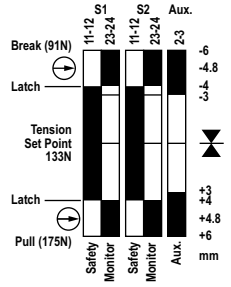
Run Position



Cable Pull or Break



Switching Diagram



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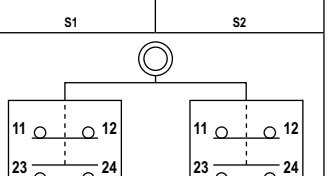
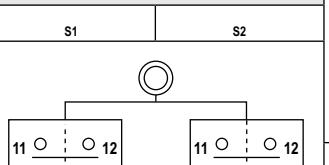
SD03 - RP-RM83-75LT/LR Series

Contact Configuration

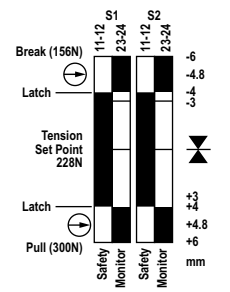
Run Position



Cable Pull or Break



Switching Diagram



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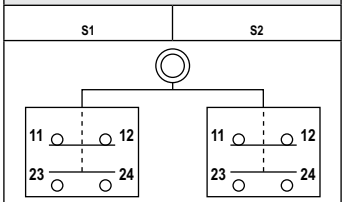
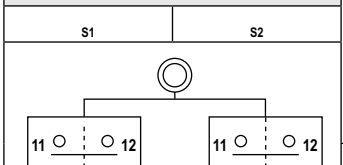
SD04 - RP-RM83-38LT/LR Series

Contact Configuration

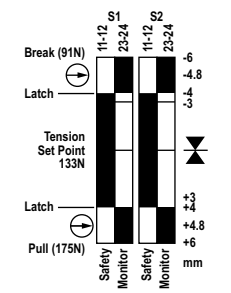
Run Position



Cable Pull or Break



Switching Diagram



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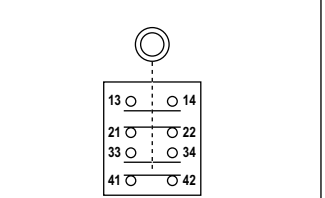
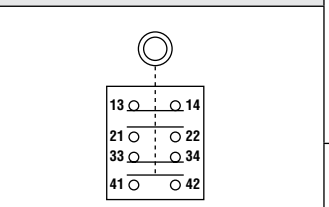
SD05 - RP-LS42F-75L Series

Contact Configuration

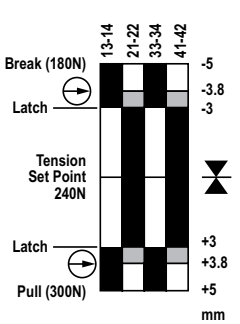
Run Position



Cable Pulled or Cable Break



Switching Diagram



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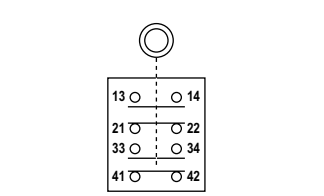
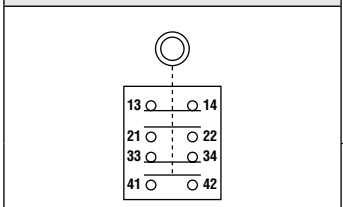
SD06 - RP-LS42F-38L Series

Contact Configuration

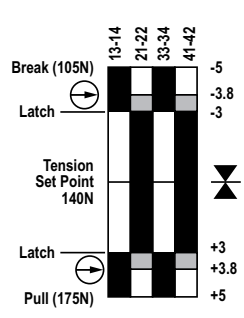
Run Position



Cable Pulled or Cable Break



Switching Diagram



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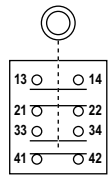
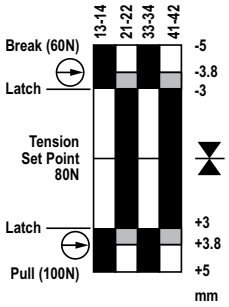
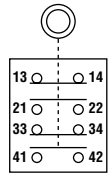
More on next page

Contact/Switching Diagrams

SD07 - RP-LS42F-25L Series

Contact Configuration	Switching Diagram
Run Position 	
Cable Pulled or Cable Break 	
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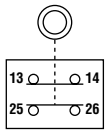
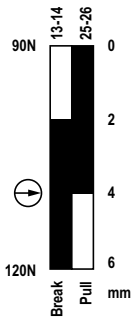
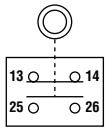
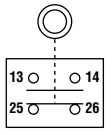
SD08 - RP-QM72D-6L Series

Cable Position	Switching Diagram
Run Position 	
Cable Pulled 	
Cable Break 	
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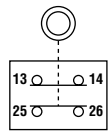
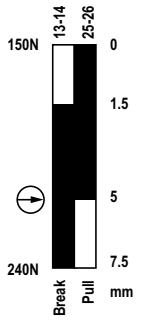
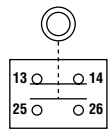
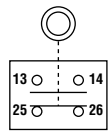
SD09 - RP-QM72D-12L Series

Cable Position	Switching Diagram
Run Position 	
Cable Pulled 	
Cable Break 	
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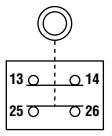
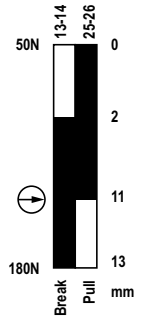
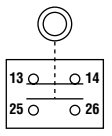
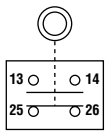
SD10 - RP-QMT72D-20L Series

Cable Position	Switching Diagram
Run Position 	
Cable Pulled 	
Cable Break 	
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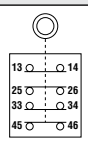
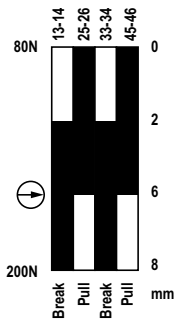
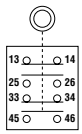
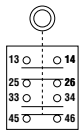
SD11 - RP-QMT72F-12L Series

Cable Position	Switching Diagram
Run Position 	
Cable Pulled 	
Cable Break 	
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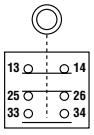
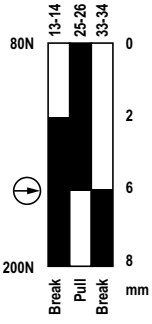
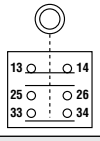
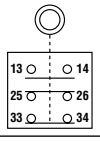
SD12 - RP-QMT72E-12L Series

Cable Position	Switching Diagram
Run Position 	
Cable Pulled 	
Cable Break 	
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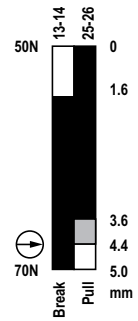
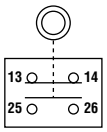
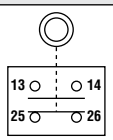
Contact/Switching Diagrams

SD13 - RP-LM40D-6 Series

Cable Position	Switching Diagram
Run Position	
Cable Pulled	
Cable Break	

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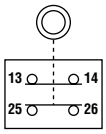
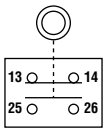
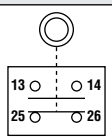
SD14 - RP-LM40D-6L Series

Cable Position	Switching Diagram
Run Position	
Cable Pulled	
Cable Break	

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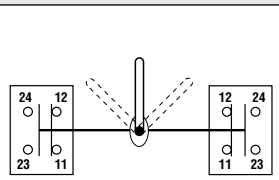
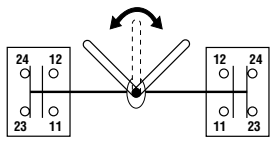
SD15 - RP-QM90F-100L Series

Cable Position	Switching Diagram
Run Position	
Cable Pulled or Break	

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ED1G
Enabling Devices

- Handheld grip-style switch typically used for manual control of machine functions, including visual observations, minor adjustments, troubleshooting, calibration, etc.
- Enabling Switch provides the three-position functionality (OFF-ON-OFF) required for manual control of a machine, including enabling and hold-to-run applications.
- Safety function is provided when the user squeezes or releases the handlegrip enabling switch.
- Ergonomic design has a detented enable position (position 2).
- Terminal 1-2 and 3-4 contacts will not re-close when released from fully squeezed (position 3).
- Suited for use as an enabling device for robotic cells.
- Optional momentary push-button switch (depending on model) can provide hold-to-run, reset or jogging/inching functions.
- All models are Insulated device (IEC 60947-5-1) ⧈.
- Design meets or exceeds: ANSI RIA R15.06 and ISO 10218 Robot safety standard, ANSI B11.19 Performance Criteria for Safeguards, and ANSI NFPA 79 (2007) and IEC 60204-1 (2000) Electrical Requirements for Industrial Machines.

ED1G-L21SM-1N Model

ED1G-L21SMB-1N Model

ONLINE
AUTOCAD, STEP, IGES & PDF

ED1G Series Enabling Devices, Stop Control Devices

Contact Configuration	Additional Push-Button Switch	Environmental Rating	Model	Contact Config. & Switch Diagram
2 NO & 1 NC Aux	—	IP66	**ED1G-L21SM-1N**	SD01 (p. 617)
1 NO & 1 NC Aux & 1 NO Momentary Push Button	Momentary Push Button	IP65	**ED1G-L21SMB-1N**	SD02 (p. 617)
2 NO & 2 NO Momentary Push Button	Momentary Push Button	IP65	**ED1G-L20MB-1N**	SD03 (p. 617)

ED1G Enabling Device Specifications

Supply Voltage and Current	250V ac/dc
Impulse Withstand Voltage	**Three Position Switch:** 2.5 kV **Momentary pushbutton:** 1.5 kV
Output Contact Ratings	**Rated Insulation Voltage (UI):** 3-position switch 250V; momentary push button 125V **Rated Thermal Current (Ith):** 2.5 A* ***40°C ≤ operating temperature < 50° C:** 2 A (4 contacts under load) ***50°C ≤ operating temperature ≤ 60° C:** 1.5 A (3 contacts under load

Rated Current (Ie) 3-Position Switch Terminals 1-2 and 3-4 (all models)

Rated Voltage Ue		30V	125V	250V
AC	Resistive load (AC-12)	—	1 A	0.5 A
	Inductive load (AC-15)	—	0.7 A	0.5 A
DC	Resistive load (DC-12)	1 A	0.2 A	—
	Inductive load (DC-13)	0.7 A	0.1 A	—

Rated Current (Ie) Monitor Switch Terminals 5-6 (models..-L21SM.. and..-L21SMB..)

Rated Voltage Ue		30V	125V	250V
AC	Resistive load (AC-12)	—	2 A	1 A
	Inductive load (AC-15)	—	1 A	0.5 A
DC	Resistive load (DC-12)	2 A	0.4 A	0.2 A
	Inductive load (DC-13)	1 A	0.22 A	0.1 A

Rated Current (Ie) Momentary Push Button Switch Terminals 7-8 (model ..-ED1G-L21SMB-1N..); 5-6 and 7-8 (model ED1G-L20MB-1N)

Rated Voltage Ue		30V	125V	250V
AC	Resistive load (AC-12)	—	0.5 A	—
	Inductive load (DC-15)	—	0.3 A	—
DC	Resistive load (AC-12)	1 A	0.2 A	—
	Inductive load (DC-13)	0.7 A	0.1 A	—

Contact Resistance	100 mohm max.	
Insulation Resistance	**Live to dead metal parts:** 100 Mohm min.	**Positive to negative live parts:** 100 Mohm min.
Recommended Wire/Cable Size	**Wire:** 0.14 to 1.5 mm² (25 AWG to 16 AWG)	**Cable:** ø 7 to 13 mm M20 conduit
Short Circuit Protection	250V / 10A fast blow fuse (IEC 60127-1)	**Conditional short circuit current:** 50 A (250V)
Vibration Resistance	**Operating extremes:** 5 to 55 Hz, half amplitude 0.5 mm minimum **Damage limits:** 16.7 Hz, half amplitude 1.5 mm minimum	
Shock Resistance	**Operating extremes:**150 m/s² (15 G)	**Damage limits:** 1,000 m/s² (100 G)
Mechanical Life	**Positions 1 & 2 only:** 1,000,000 operations minimum **Operating frequency:** 1,200 operations per hour maximum	**Positions 1, 2 & 3:** 100,000 operations minimum
Electrical Life	100,000 minimum at rated load	
Pollution Degree	3	
Terminal Pulling Strength	20 N minimum	
Terminal Screw Torque	0.5 to 0.6 N	
Operating Conditions (indoor use only)	**Temperature:** –10° to +60° C (no freezing) **Storage Temperature:** –40° to +80° C (no freezing)	**Humidity:** 45 to 85% RH max. (no condensation)
Construction	Polyamide housing and cable gland, NBR/PVC polyblend rubber grip switch boot; model **ED1G-L21SM-1N** meets IP66; other models meet IP65	
Design Standards	IEC 60947-5-1, EN 60947-5-1, JIS C8201-5-1, UL 508, CSA C22.2 No. 14, GS-ET-22	
Certifications	Approvals are pending.	
Contact Configurations and Switching Diagrams	SD01, SD02 and SD03 (p. 617)	

Brackets

ED1G

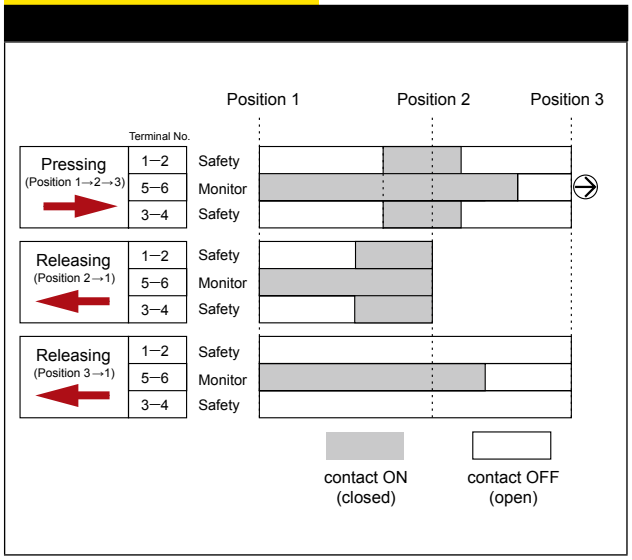
pg. 628

ED9Z-GH1

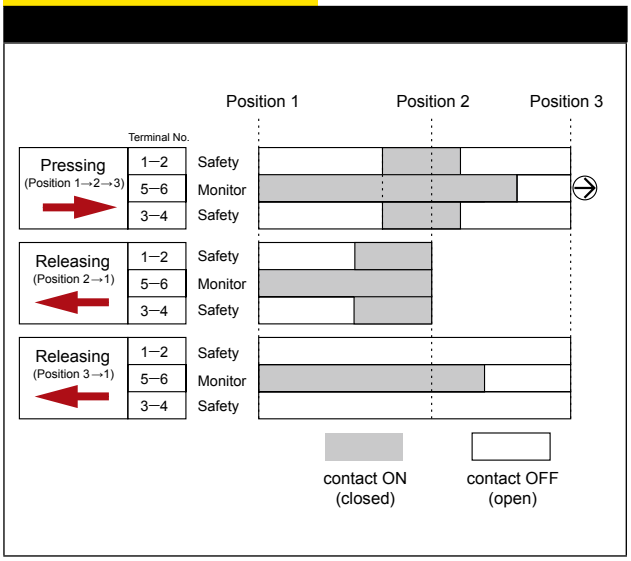
Additional bracket information available. See page 620.

Contact/Switching Diagrams

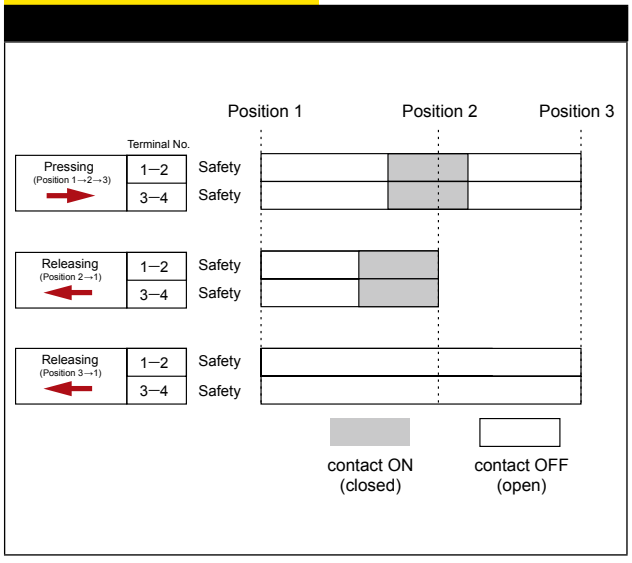
SD01 - ED1G-L21SM-1N Series



SD02 - ED1G-L21SMB-1N Series



SD03 - ED1G-L20MB-1N Series



Web Only

The following standard products are still available from Banner.
Please go online to bannerengineering.com for full descriptions and technical references.

MULTI-SCREEN®

ES-FL-2A Module

10- & 6-Input Modules

DUO-TOUCH® Modules

MINI-SCREEN® Safety Light Screens