

CP7 SERIES CABLE PULL SAFETY SWITCHES

Features

- Max span 80 meter (262ft)
- Compatible to EN418 required with emergency stop button on the surface cover
- Works in two direction: tripped when the wire is pulled or breaking.
- Available in One-way actuation version
- Optional indicator light to show the state
- Positive Opening of NC contacts

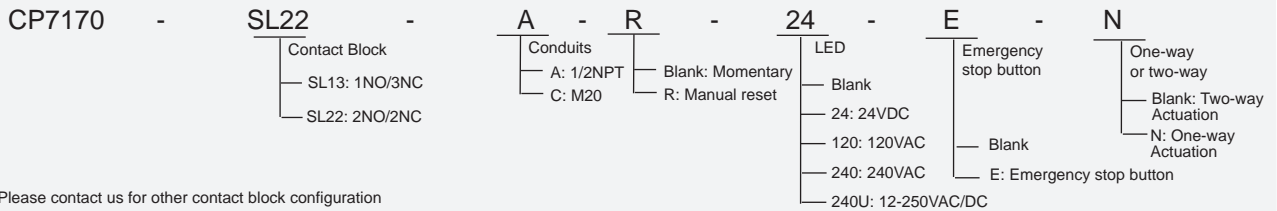
Safety Classification

Standards	IEC947-5-1 IEC947-5-5 EN954-1 EN62061 UL508 ISO13850 ISO13849
B10d	1.5 x 10 ⁶ operations at small load
EN 954-1	15
ISO 13849-1	10
EN 62061	5
Annual Usage	8 ops x 24hr x 365 days for following calculation
PFHd	<1.0 x 10 ⁻⁷
Proof Test Interval	21 years
MTTFd	214 years

Specifications

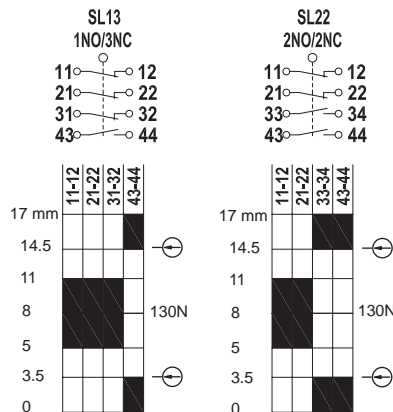
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	Ith:10A 600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanical: 1.0 x 10 ⁶ (operations) Electrical: 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Vibration Resistance	10-500Hz 0.35mm
Shock Resistance	15g 11ms
Humidity	< 95%RH
Degree of Protection	IP67

Selection Guide:

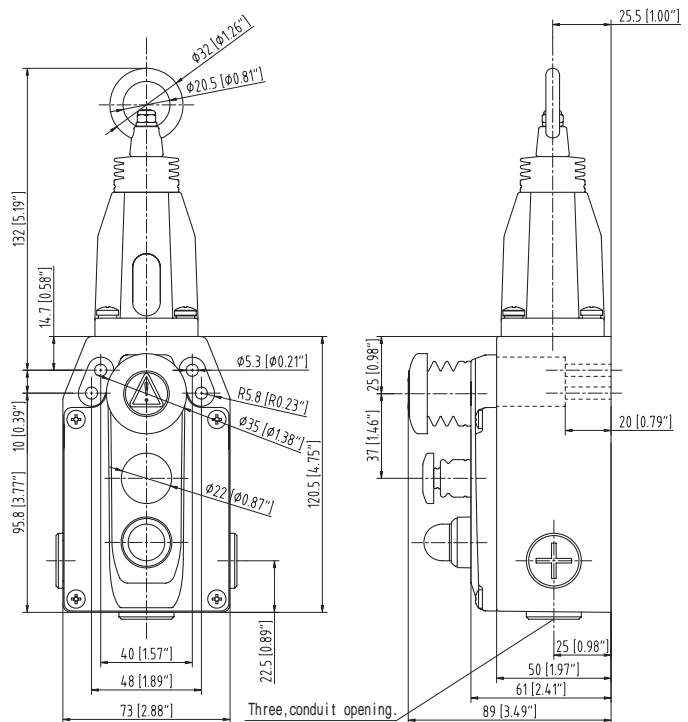
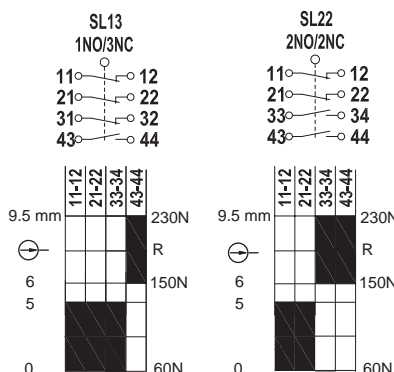


Two-way Actuation

CP7170



One-way Actuation



CP8 SERIES CABLE PULL SAFETY SWITCHES

Features

- Max span 160m (524ft) for CP8171, 80m(262ft) for CP8171R and CP8171L
- Compatible to EN418 required with emergency stop button on the surface cover
- Works in two direction: tripped when the wire is pulled or breaking.
- Optional indicator light to show the state.
- Positive Opening of NC contacts
- Conform to EN60947-5-5, ISO13850, ISOTR 12100, IEC 60947-5-1, EN 418

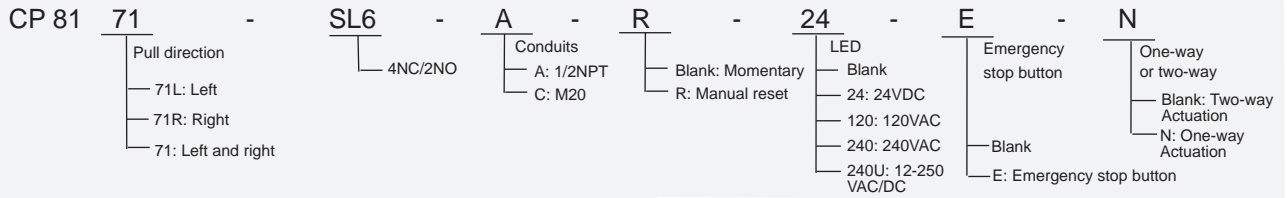
Safety Classification

Standards	IEC947-5-1 IEC947-5-5 EN954-1 EN62061 UL508 ISO13850 ISO13849
B10d	1.5 x 10 ⁶ operations at small load
EN 954-1	15
ISO 13849-1	10
EN 62061	5
Annual Usage	8 ops x 24hr x 365 days for following calculation
PFHd	<1.0 x 10 ⁻⁷
Proof Test Interval	21 years
MTTFd	214 years

Specifications

Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	Ith: 10A 600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanical: 1 x 10 ⁶ (operations) Electrical: 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%
Degree of Protection	IP67

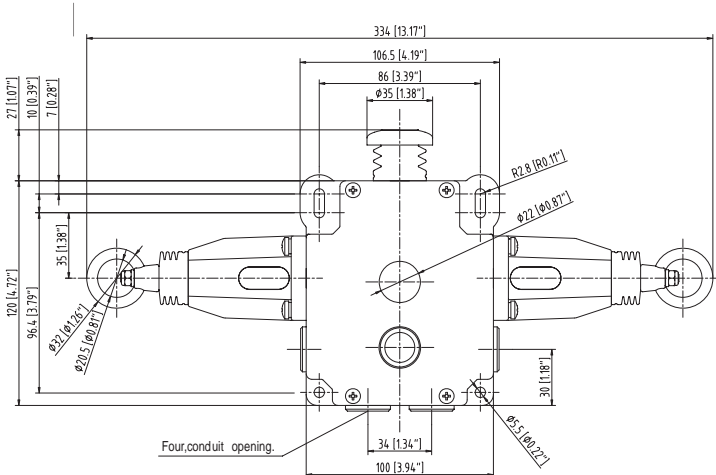
Selection Guide:



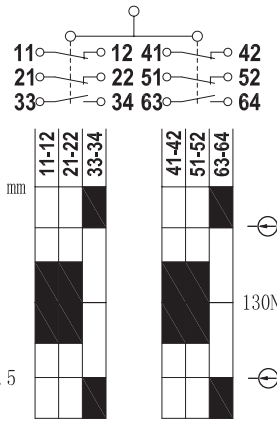
CP8171



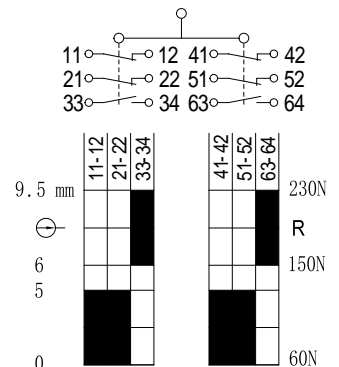
CP8171L



Two-way Actuation
SL6
2NO/4NC



One-way Actuation
SL6
2NO/4NC



CABLE PULL SAFETY SWITCHES (One - Way Actuation)

Features

- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts

Definitions of Operating Characteristics

- OF Operating Force
- RF Releasing Force
- OT Overtravel
- TT Total Travel
- PT Pretravel
- MD Movement Differential
- OP Operating Position
- PO Travel to Positive Opening



Specifications

Operating Speed	0.05mm-0.5m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%
Degree of Protection	IP67

Selection Guide:

SN6170

- Body Style
 - SND4170 Small plastic, 1 conduit
 - SND2170 plastic, 2 conduits
 - SND6170 Large plastic, 1 conduit
 - SN4170 Small metal, 1 conduit
 - SN2170 Metal, 2 conduits
 - SN6170 Large metal, 1 conduit
 - SN6270 Large metal, 1 conduit

SL

- Contact Block
 - SL: 1NO/1NC Slow Action changeover
 - SL1: 1NO/1NC Slow Action Overlapping
 - SL2: 2NC Slow Action
 - SL7: 2NC/1NO Slow Action Overlapping

C

- Conduits
 - A: 1/2"NPT
 - B: PG13.5
 - C: M20
 - D: M16
 - B1: PG11

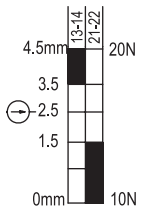
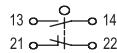
R

- Lock/Reset Function
 - Blank
 - R: with Reset Function

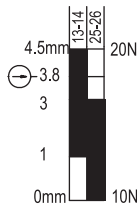
SND4170



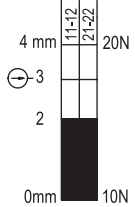
SND4170-SL
Slow Action
(Changeover)



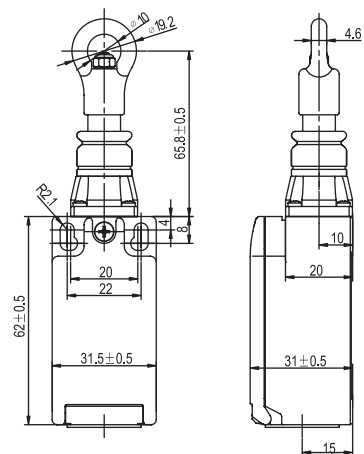
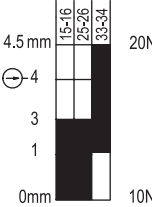
SND4170-SL1
Slow Action
(Overlapping)



SND4170-SL2
Slow Action



SND4170-SL7
Slow Action
(Overlapping)



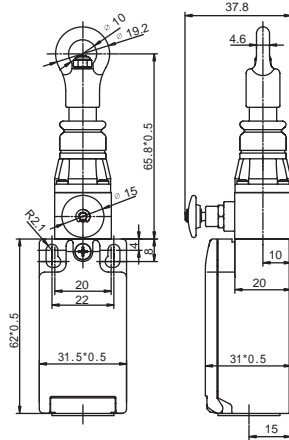
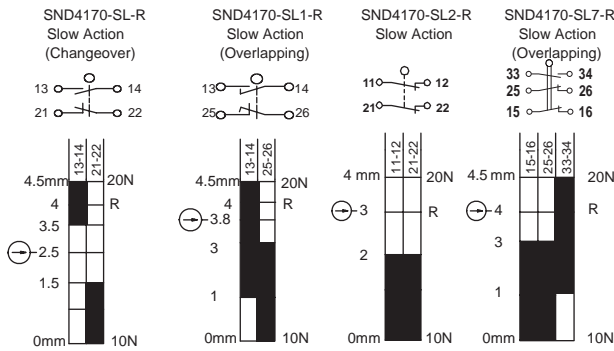
Order Code

Contact block

SND4170-SL- _	SL	⊕	slow action	1NO+1NC	BBM
SND4170-SL1- _	SL1	⊕	slow action	1NO+1NC	MBB
SND4170-SL2- _	SL2	⊕	slow action	2NC	
SND4170-SL7- _	SL7	⊕	slow action	2NC+1NO	

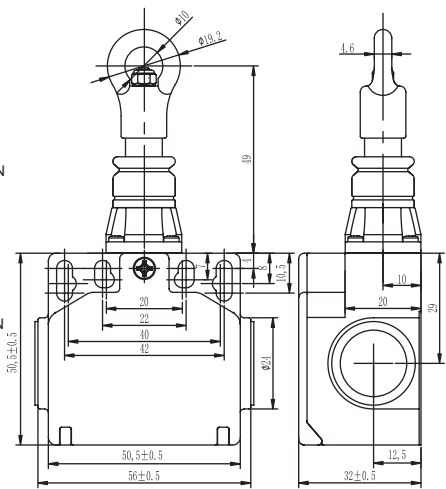
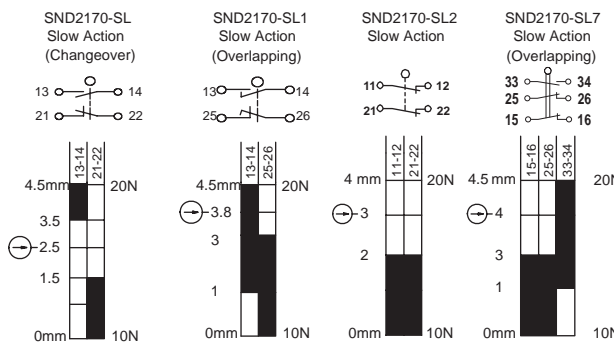
CABLE PULL SAFETY SWITCHES (One - Way Actuation)

SND4170-R



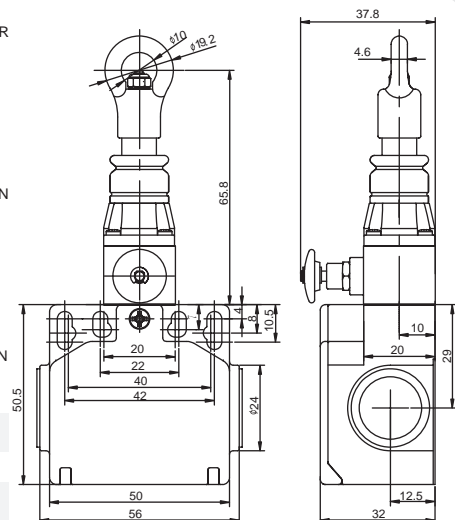
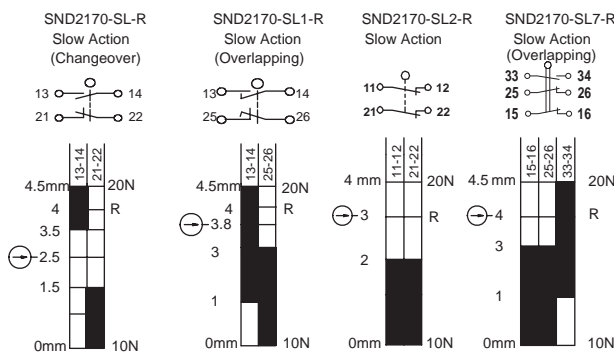
Order Code	Contact block	Symbol	Function	Configuration	Material
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SND4170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SND4170-SL2- _R	SL2		slow action	2NC	
SND4170-SL7- _R	SL7		slow action	2NC+1NO	

SND2170



Order Code	Contact block	Symbol	Function	Configuration	Material
SND2170-SL- _	SL		slow action	1NO+1NC	BBM
SND2170-SL1- _	SL1		slow action	1NO+1NC	MBB
SND2170-SL2- _	SL2		slow action	2NC	
SND2170-SL7- _	SL7		slow action	2NC+1NO	

SND2170-R



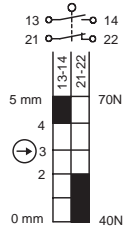
Order Code	Contact block	Symbol	Function	Configuration	Material
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SND2170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SND2170-SL2- _R	SL2		slow action	2NC	
SND2170-SL7- _R	SL7		slow action	2NC+1NO	

CABLE PULL SAFETY SWITCHES (One - Way Actuation)

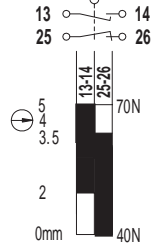
SND6170



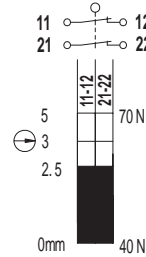
SND6170-SL
Slow Action
(Changeover)



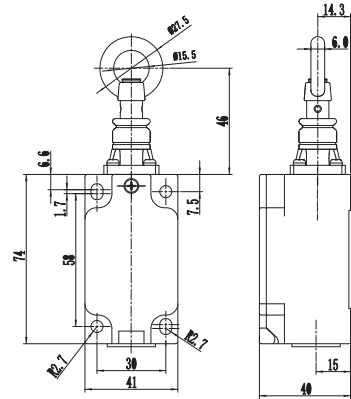
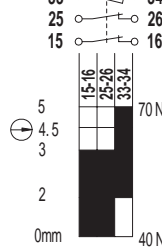
SND6170-SL1
Slow Action
(Overlapping)



SND6170-SL2
Slow Action



SND6170-SL7
Slow Action
(Overlapping)



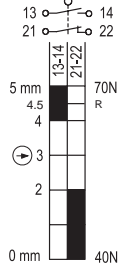
Order Code Contact block

SND6170-SL-	SL		slow action	1NO+1NC	BBM
SND6170-SL1-	SL1		slow action	1NO+1NC	MBB
SND6170-SL2-	SL2		slow action	2NC	
SND6170-SL7-	SL7		slow action	2NC+1NO	

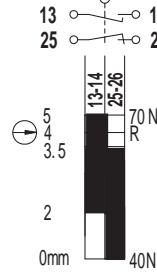
SND6170-R



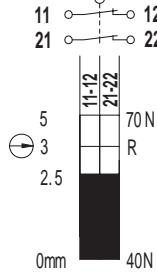
SND6170-SL-R
Slow Action
(Changeover)



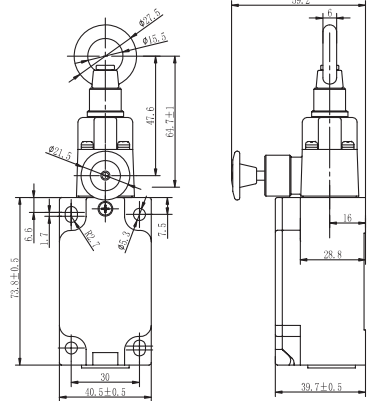
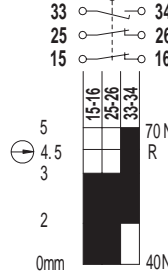
SND6170-SL1-R
Slow Action
(Overlapping)



SND6170-SL2-R
Slow Action



SND6170-SL7-R
Slow Action
(Overlapping)



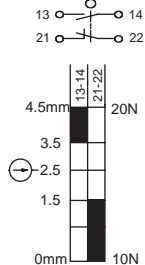
Order Code Contact block

SND6170-SL- _R	SL		slow action	1NO+1NC	BBM
SND6170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SND6170-SL2- _R	SL2		slow action	2NC	
SND6170-SL7- _R	SL7		slow action	2NC+1NO	

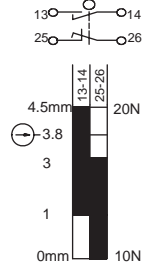
SN4170



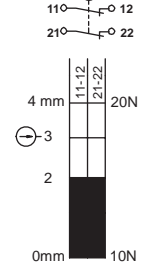
SN4170-SL
Slow Action
(Changeover)



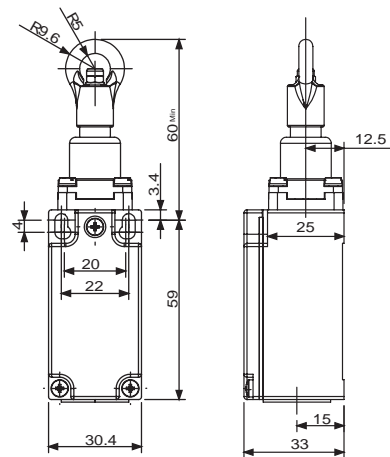
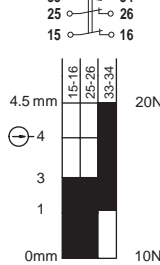
SN4170-SL1
Slow Action
(Overlapping)



SN4170-SL2
Slow Action



SN4170-SL7
Slow Action
(Overlapping)



Order Code Contact block

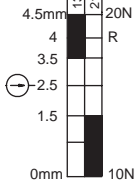
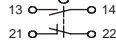
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SN4170-SL1-	SL1		slow action	1NO+1NC	MBB
SN4170-SL2-	SL2		slow action	2NC	
SN4170-SL7-	SL7		slow action	2NC+1NO	

CABLE PULL SAFETY SWITCHES (One - Way Actuation)

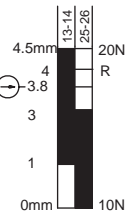
SN4170-R



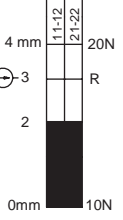
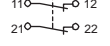
SN4170-SL-R
Slow Action
(Changeover)



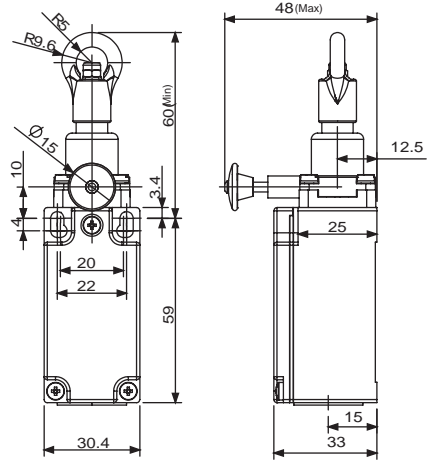
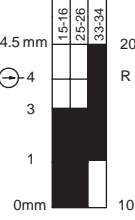
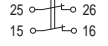
SN4170-SL1-R
Slow Action
(Overlapping)



SN4170-SL2-R
Slow Action



SN4170-SL7-R
Slow Action
(Overlapping)



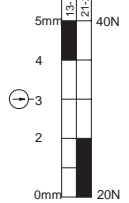
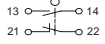
Order Code Contact block

SN4170-SL- _R	SL		slow action	1NO+1NC	BBM
SN4170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SN4170-SL2- _R	SL2		slow action	2NC	
SN4170-SL7- R	SL7		slow action	2NC+1NO	

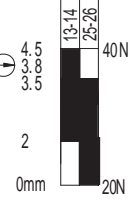
SN2170



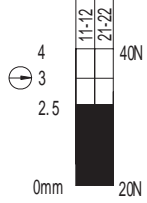
SN2170-SL
Slow Action
(Changeover)



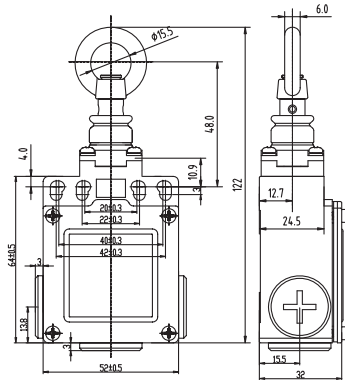
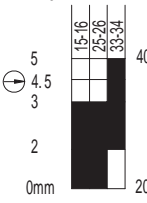
SN2170-SL1
Slow Action
(Overlapping)



SN2170-SL2
Slow Action



SN2170-SL7
Slow Action
(Overlapping)



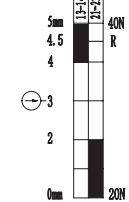
Order Code Contact block

SN2170-SL-	SL		slow action	1NO+1NC	BBM
SN2170-SL1-	SL1		slow action	1NO+1NC	MBB
SN2170-SL2-	SL2		slow action	2NC	
SN2170-SL7-	SL7		slow action	2NC+1NO	

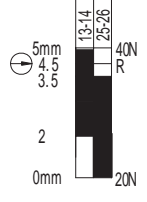
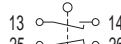
SN2170-R



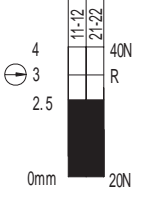
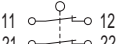
SN2170-SL-R
Slow Action
(Changeover)



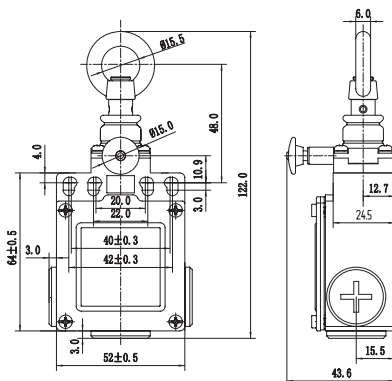
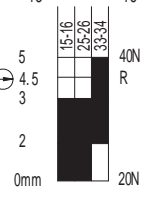
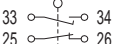
SN2170-SL1-R
Slow Action
(Overlapping)



SN2170-SL2-R
Slow Action



SN2170-SL7-R
Slow Action
(Overlapping)

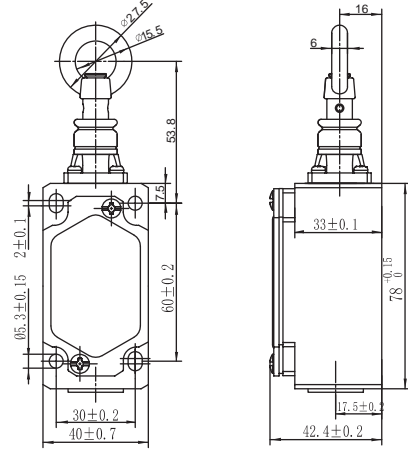
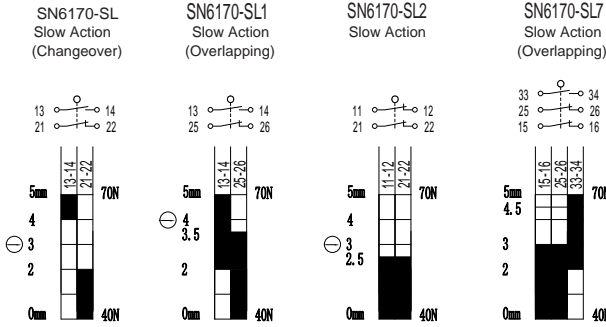


Order Code Contact block

SN2170-SL- _R	SL		slow action	1NO+1NC	BBM
SN2170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SN2170-SL2- _R	SL2		slow action	2NC	
SN2170-SL7- R	SL7		slow action	2NC+1NO	

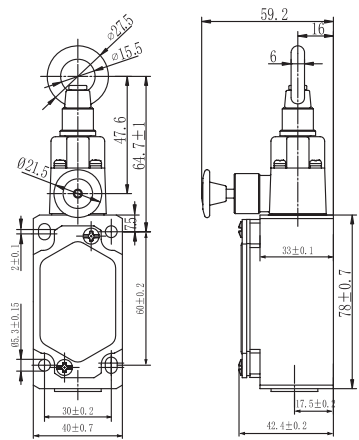
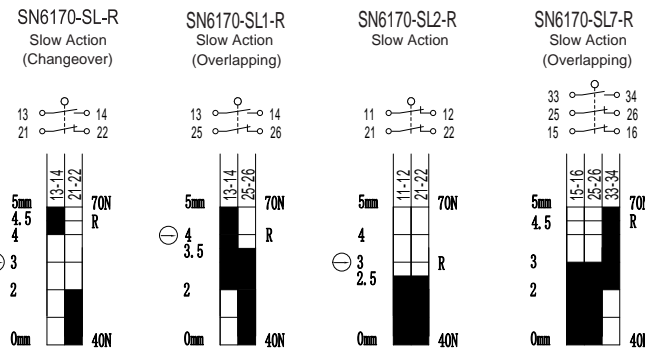
CABLE PULL SAFETY SWITCHES (One - Way Actuation)

SN6170



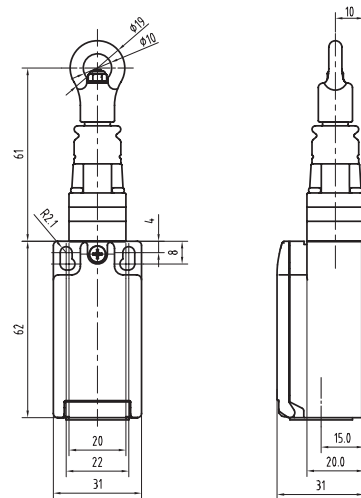
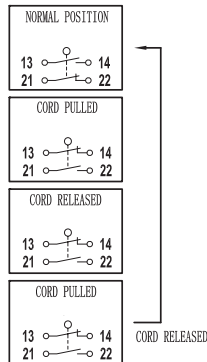
Order Code	Contact block			
SN6170-SL- _	SL		slow action	1NO+1NC BBM
SN6170-SL1- _	SL1		slow action	1NO+1NC MBB
SN6170-SL2- _	SL2		slow action	2NC
SN6170-SL7- _	SL7		slow action	2NC+1NO

SN6170-R



Order Code	Contact block			
SN6170-SL- _R	SL		slow action	1NO+1NC BBM
SN6170-SL1- _R	SL1		slow action	1NO+1NC MBB
SN6170-SL2- _R	SL2		slow action	2NC
SN6170-SL7- _R	SL7		slow action	2NC+1NO

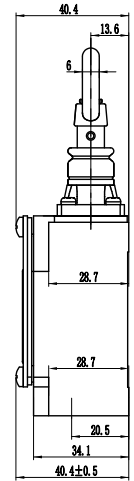
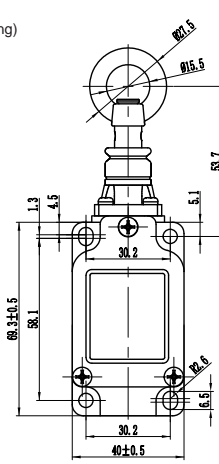
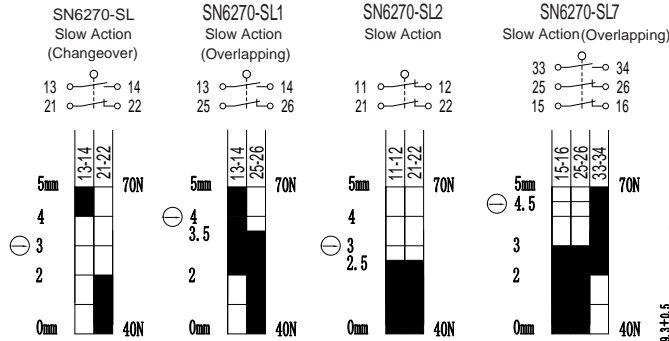
SND4170 M PULL ON/PULL OFF



Order Code	Contact block			
SND4170-SL M	SL		slow action	1NO+1NC BBM
SND4170-SL2 M	SL2		slow action	2NC

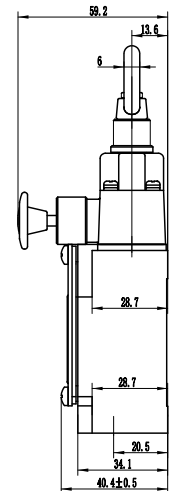
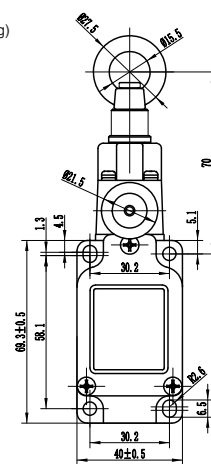
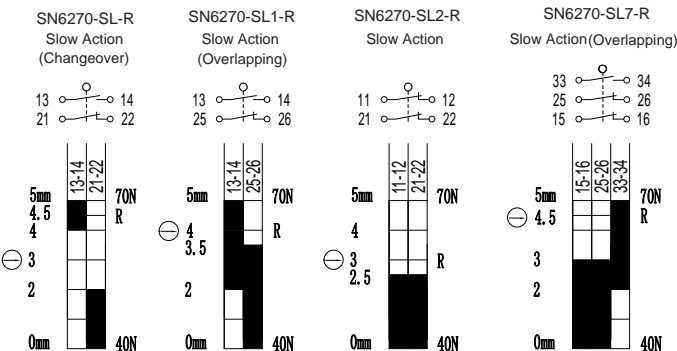
CABLE PULL SAFETY SWITCHES (One - Way Actuation)

SN6270



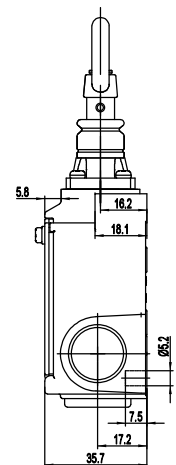
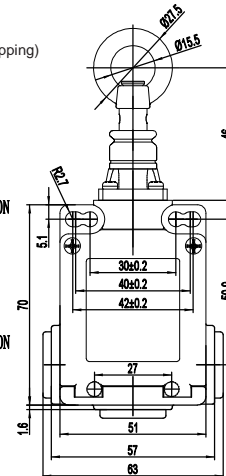
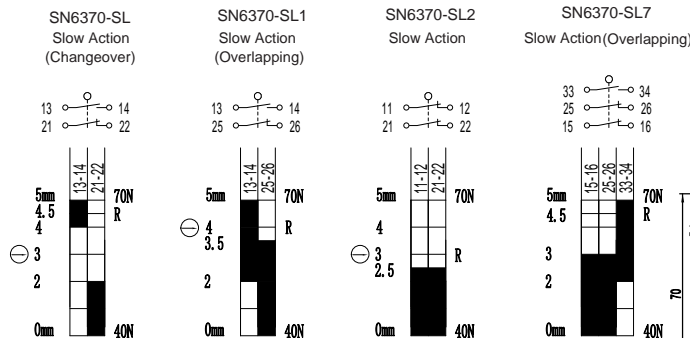
Order Code	Contact block			
SN6270-SL- _	SL		slow action	1NO+1NC BBM
SN6270-SL1- _	SL1		slow action	1NO+1NC MBB
SN6270-SL2- _	SL2		slow action	2NC
SN6270-SL7- _	SL7		slow action	2NC+1NO

SN6270-R



Order Code	Contact block			
SN6270-SL- _R	SL		slow action	1NO+1NC BBM
SN6270-SL1- _R	SL1		slow action	1NO+1NC MBB
SN6270-SL2- _R	SL2		slow action	2NC
SN6270-SL7- _R	SL7		slow action	2NC+1NO

SN6370



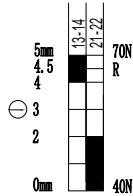
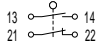
Order Code	Contact block			
SN6370-SL- _	SL		slow action	1NO+1NC BBM
SN6370-SL1- _	SL1		slow action	1NO+1NC MBB
SN6370-SL2- _	SL2		slow action	2NC
SN6370-SL7- _	SL7		slow action	2NC+1NO

CABLE PULL SAFETY SWITCHES (One - Way Actuation)

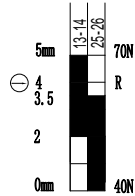
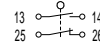
SN6370-R



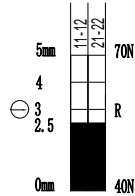
SN6370-SL-R
Slow Action
(Changeover)



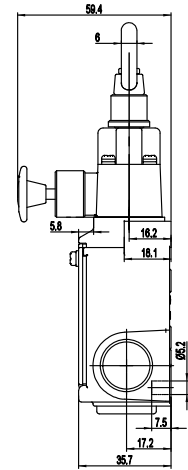
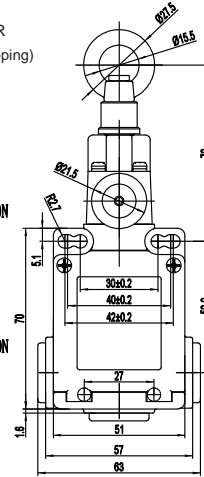
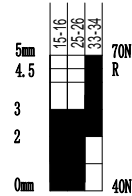
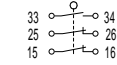
SN6370-SL1-R
Slow Action
(Overlapping)



SN6370-SL2-R
Slow Action



SN6370-SL7-R
Slow Action(Overlapping)



Order Code

Contact block

SN6370-SL- _R	SL	⊕	slow action	1NO+1NC	BBM
SN6370-SL1- _R	SL1	⊕	slow action	1NO+1NC	MBB
SN6370-SL2- _R	SL2	⊕	slow action	2NC	
SN6370-SL7- R	SL7	⊕	slow action	2NC+1NO	

CABLE PULL SAFETY SWITCHES (Two - Way Actuation)

2-way cable pull switches are designed to avert hazards (dangerous situation) at the earliest possible moment, or to reduce existing risks which could cause injury to persons or damage to either machines or to work in progress. The switch works in two directions. 1) tripped in the event of the trip wire breaking; 2) tripped with the trip wire is pulled.

Application examples: woodworking machines, cutting presses, conveyor systems, transfer machines, printing and textile machines, rolling mills etc.

Features

- Positive Opening of NC contacts
- Screw terminals with self-lifting clamps for easy wiring
- Latch/Reset function
- Galvanically separated contacts
- Custom pull force for different applications

Specifications

Operating Speed	0.05mm-0.5m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1.0 x10 ⁷ (operations) Electrically 5 x10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%
Degree of Protection	IP67

Selection Guide:

SN6271

Body Style

- SND4170 Small plastic, 1 conduit
- SND2170 plastic, 2 conduits
- SND6170 Large plastic, 1 conduit
- SN6271 Large metal, 1 conduit

SL

Contact Block

- SL: 1NO/1NC Slow Action changeover
- SL1: 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL7: 2NC/1NO Slow Action Overlapping

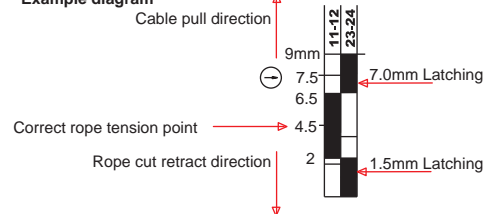
C

Conduits

- A: 1/2"NPT
- B: PG13.5
- C: M20
- D: M16
- B1: PG11

LR

Example diagram

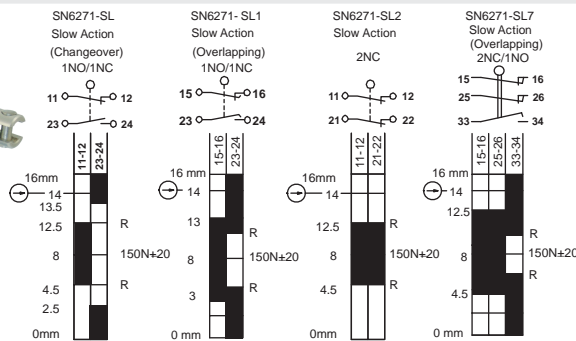
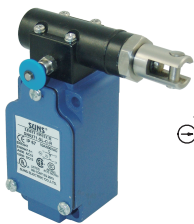


Explanation of Travel Diagram

Definitions of Operating Characteristics

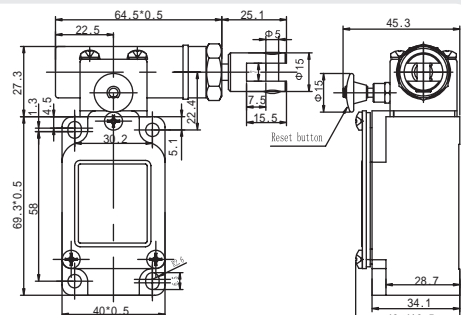
OF Operating Force	PT Pretravel	
RF Releasing Force	MD Movement Differential	
OT Overtravel	OP Operating Position	
TT Total Travel	PO Travel to Positive Opening	

SN6271



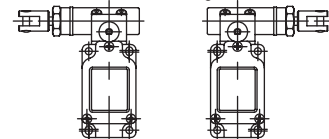
Order Code

Order Code	Contact block	Symbol	Action	Configuration
SN6271-SL-R	SL		slow action	1NO+1NC BBM
SN6271-SL1-R	SL1		slow action	1NO+1NC MBB
SN6271-SL2-R	SL2		slow action	2NC
SN6271-SL7-R	SL7		slow action	2NC+1NO



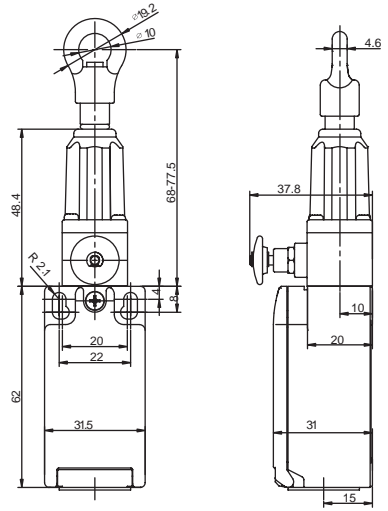
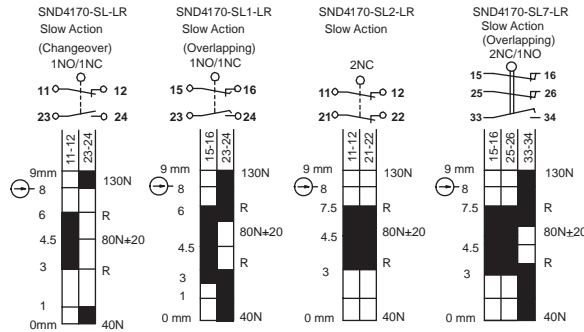
Left suffix models: -LR

Right suffix models: -RR



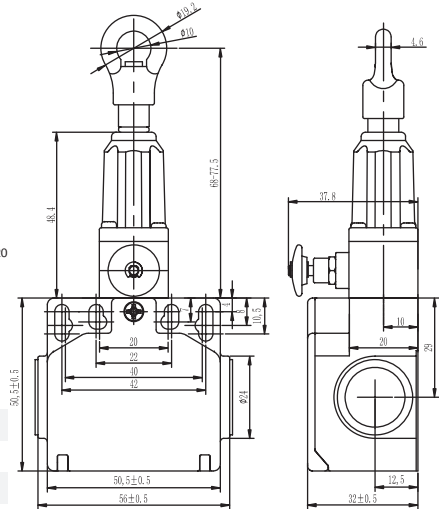
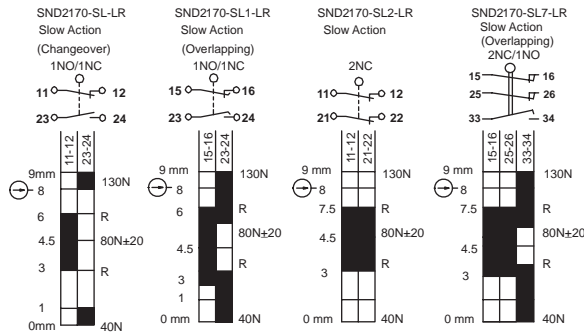
CABLE PULL SAFETY SWITCHES (Two - Way Actuation)

SND4170-LR



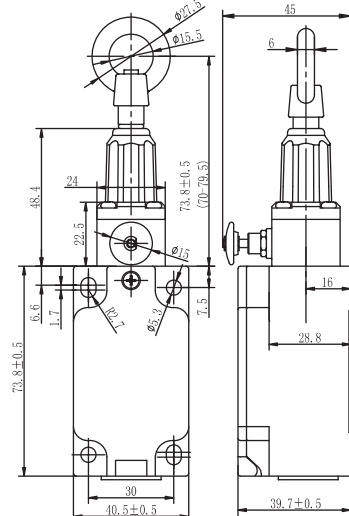
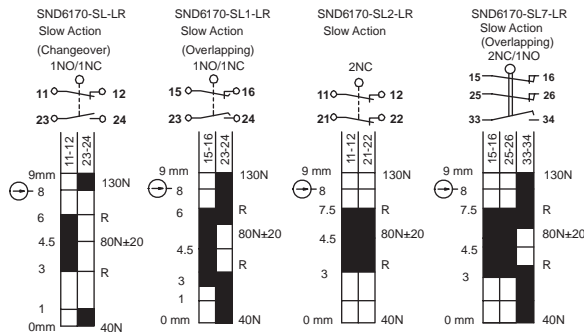
Order Code	Contact block			
SND4170-SL-LR	SL		slow action	1NO+1NC BBM
SND4170-SL1-LR	SL1		slow action	1NO+1NC MBB
SND4170-SL2-LR	SL2		slow action	2NC
SND4170-SL7-LR	SL7		slow action	2NC+1NO

SND2170-LR



Order Code	Contact block			
SND2170-SL-LR	SL		slow action	1NO+1NC BBM
SND2170-SL1-LR	SL1		slow action	1NO+1NC MBB
SND2170-SL2-LR	SL2		slow action	2NC
SND2170-SL7-LR	SL7		slow action	2NC+1NO

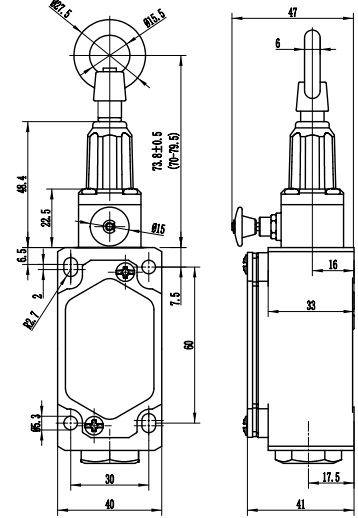
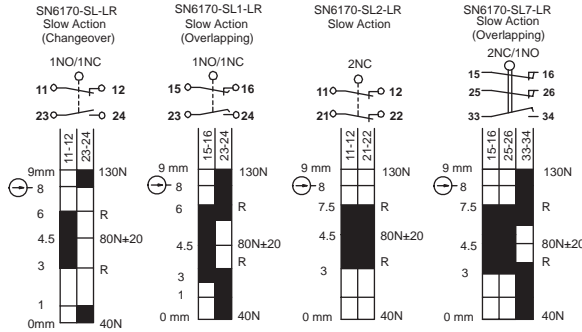
SND6170-LR



Order Code	Contact block			
SND6170-SL-LR	SL		slow action	1NO+1NC BBM
SND6170-SL1-LR	SL1		slow action	1NO+1NC MBB
SND6170-SL2-LR	SL2		slow action	2NC
SND6170-SL7-LR	SL7		slow action	2NC+1NO

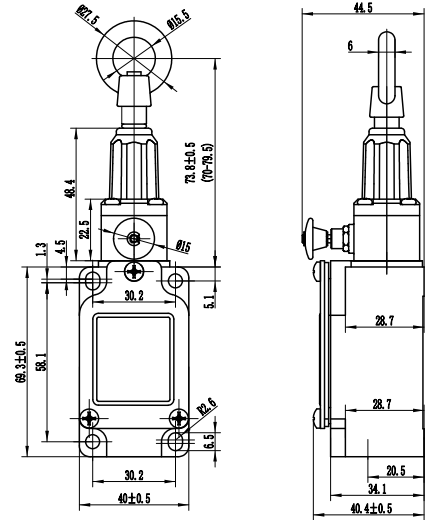
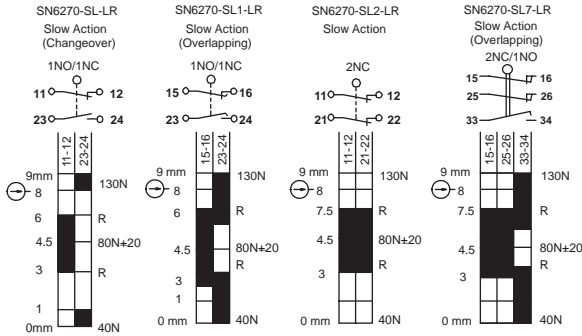
CABLE PULL SAFETY SWITCHES (Two - Way Actuation)

SN6170-LR



Order Code	Contact block			
SN6170-SL-LR	SL		slow action	1NO+1NC BBM
SN6170-SL1-LR	SL1		slow action	1NO+1NC MBB
SN6170-SL2-LR	SL2		slow action	2NC
SN6170-SL7-LR	SL7		slow action	2NC+1NO

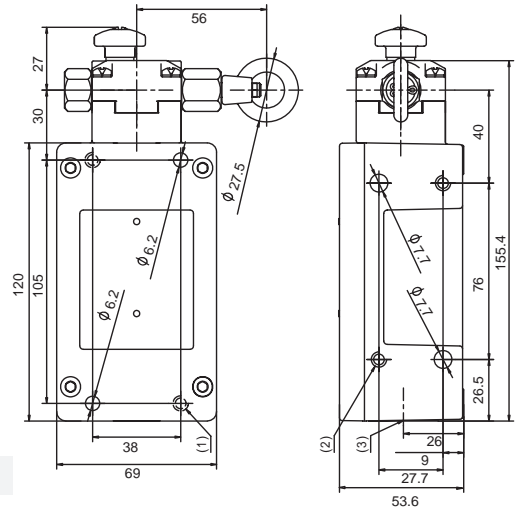
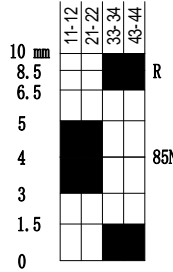
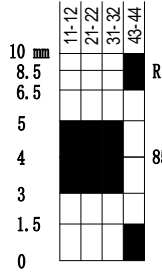
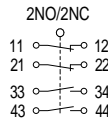
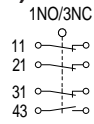
SN6270-LR



Order Code	Contact block			
SN6270-SL-LR	SL		slow action	1NO+1NC BBM
SN6270-SL1-LR	SL1		slow action	1NO+1NC MBB
SN6270-SL2-LR	SL2		slow action	2NC
SN6270-SL7-LR	SL7		slow action	2NC+1NO

CABLE PULL SAFETY SWITCHES (Two - Way Actuation)

HES-7A-70(Explosion - Proof)

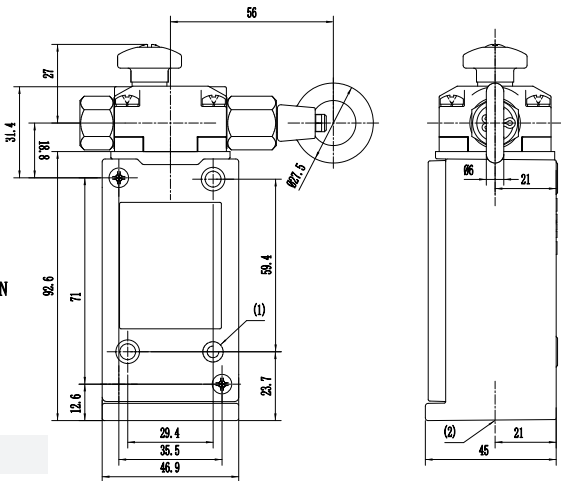
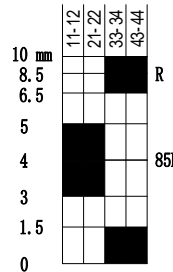
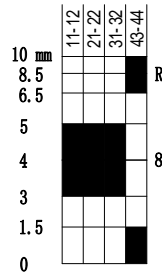
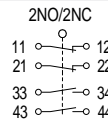
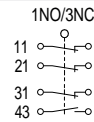


Order Code

HES-7A-70 (2NO/2NC)

HES-8A-70 (1NO/3NC)

HNS-7A-70

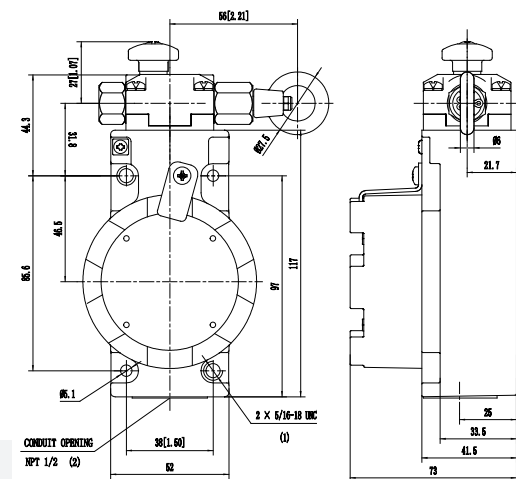
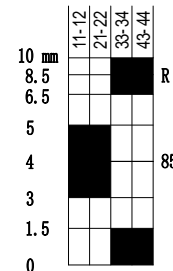
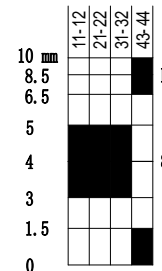
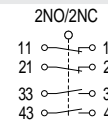
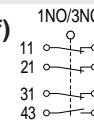


Order Code

HNS-7A-70 (2NO/2NC)

HNS-8A-70 (1NO/3NC)

HEX-7A-70(Explosion - Proof)



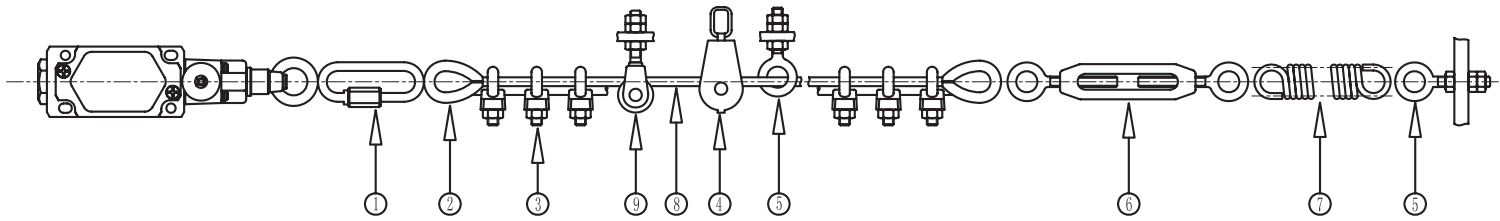
Order Code

HEX-7A-70 (2NO/2NC)

HEX-8A-70 (1NO/3NC)

* With Reset Order Code Suffix: -R

CABLE PULL SAFETY SWITCHES ACCESSORIES



① CPA-01



② CPA-02
Wire rope thimble (rope eye)

③ CPA-03
Cable/rope clamp



④ CPA-04 Pulley

⑤ CPA-05 Stay bolt



⑥ CPA-06
Turnbuckle for adjusting cable tension

⑦ CPA-07 Spring

⑧ CPA-08
*5mm Zinc-plated steel rope coated with PVC

CPA-08-010 (10 m rope)
CPA-08-025 (25 m rope)
CPA-08-050 (50 m rope)
CPA-08-100 (100 m rope)



⑨ CPA-09