

SUNS[®] International, LLC

• Innovation • Quality • Service



LIMIT SWITCHES
CABLE PULL SWITCHES
SAFETY SWITCHES

<https://www.suns-usa.com>

2019

ABOUT SUNS INTERNATIONAL

For over 25 years, SUNS has been delivering world-class electromechanical and electronic components to customers around the globe. We offer an extensive line of products critical to your application. Our focus revolves around our customers receiving precise and reliable components at the most competitive price. Our manufacturing facilities are compliant under ISO9001:2008 and all of our products are certified by UL, CSA, CE and CCC standards

A leading manufacturer of high quality industrial control components

As an established member in the industry, SUNS is relentless in its drive to manufacture products that are more reliable, more efficient, and more cost effective. Our offering ranges from the widest variety in limit and micro switches to industrial control products such as push buttons, foot switches, and pendant stations. Your total satisfaction is our goal. Whether the product is large or small, our team will undertake the customizations needed to produce even the most complex solutions.

Robotics



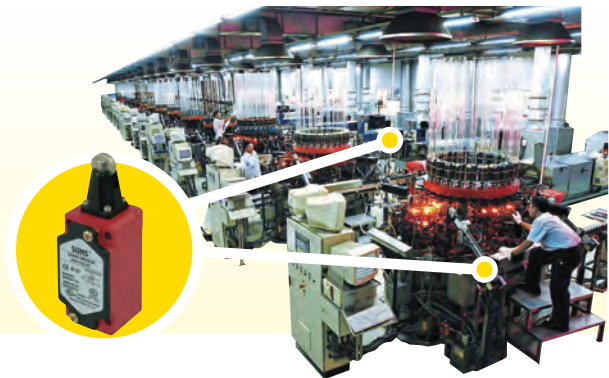
Stereoscopic Warehouses

SUNS is the right choice for your applications.

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY)	1
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50041 COMPATIBLE) SN63 SERIES (3 - CONDUIT ENTRY)	11
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY)	17
GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED EN50047 TYPE) SMN SERIES (SINGLE CONDUIT ENTRY)	25
GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED EN50047 TYPE) SMN4 SERIES (SINGLE CONDUIT ENTRY)	27
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY)	31
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) DT4 CONNECTOR LIMIT SWITCHES SN(D)4 SN(D)6 SERIES	40
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY)	42
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 COMPATIBLE) SND2 SERIES (2 - CONDUIT ENTRIES)	49
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES)	55
COMPACT LIMIT SWITCHES (IP67 WATER-PROOF) SN31 SERIES (20mm) AND SN32 SERIES (25mm)	62
COMPACT SAFETY LIMIT SWITCHES (MODULAR DESIGN, METAL BODY, IP67) SM31 SERIES (20mm) AND SM32 SERIES (25mm)	73
COMPACT SAFETY LIMIT SWITCHES (MODULAR DESIGN, PLASTIC BODY, IP67) SM31N SERIES (20mm) AND SM32N SERIES (25mm)	80
COMPACT LIMIT SWITCHES: AZ-8 SERIES	87
METAL BODIED SAFETY LIMIT SWITCHES SN62 SERIES	89
COMPACT LIMIT SWITCHES SN5 SERIES	94
COMPACT LIMIT SWITCHES SMN5 SERIES	96
SN1 SERIES COMPACT PRECISION LIMIT SWITCHES	100
MINI ENCLOSED LIMIT SWITCHES SN7 SERIES	102
ENCLOSED LIMIT SWITCHES SN9 SERIES	106
ENCLOSED LIMIT SWITCHES SF9 SERIES	112
ENCLOSED LIMIT SWITCHES SP9 SERIES	114
SNH SERIES LIMIT SWITCHES FOR HOISTING AND MECHANICAL HANDLING	116
SNB SERIES LIMIT SWITCHES FOR HOISTING AND MECHANICAL HANDLING	121
CABLE PULL SAFETY SWITCHES	124
INTERLOCKING SAFETY SWITCHES	137
MULTI-ENTRY TRAPPED KEY-OPERATED SAFETY INTERLOCK SWITCH SS6/SSD6 SERIES	143
SAFETY SWITCHES FOR HINGES LIDS/GUARDS	147
MP Series Magnetic Safety Switches (IP68)	149
RDS SERIES RFID NON-CONTACT SAFETY SWITCH	156
LIMIT SWITCHES WITH MANUAL RESET FOR OVER-SPEED DEVICES	157
LATCHING LIMIT SWITCH WITH REMOTE RESET	159
6098 LIMIT SWITCHES FOR ELEVATOR APPLICATIONS	161
DOOR CONTACT EDC SERIES	162
HMS/HLS/HES/HEX/HCX SERIES HEAVY DUTY LIMIT SWITCHES	165

GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY)

For almost two decades SUNS has been delivering stand-alone solutions that offer value and field tested reliability to customers.



Features

- Zinc die cast body
- Increased wiring space
- Earth grounding surface on same level as switching
- Easily interchangeable contact block
- Fine adjustment of switching point via adjusting screw
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50041 standard

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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) with no icing
Humidity	< 95%
Weight	400-480g for metal body
Degree of Protection	IP67

Selection Guide:

SN61
Body
Styles

04
Head Styles

SP

Contact Block

- SP: 1NO/1NC Snap action
- SPT: 2NO/2NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action
- SL4: 3NC Slow Action
- SL5: 3NO Slow Action
- SL6: BBM 2NC/1NO Slow Action changeover
- SL7: MBB 2NC/1NO Slow Action Overlapping
- SL8: BBM 2NO/1NC Slow Action changeover
- SL9: MBB 2NO/1NC Slow Action Overlapping

C

Conduits

- A: 1/2"NPT
- B: PG13.5
- C: M20

R

- Blank
- R: with Reset

(AB)

Aluminum alloy
swing arm

24R

LED Indicator
Light (Optional)

GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY)

Available contact blocks and travel diagrams



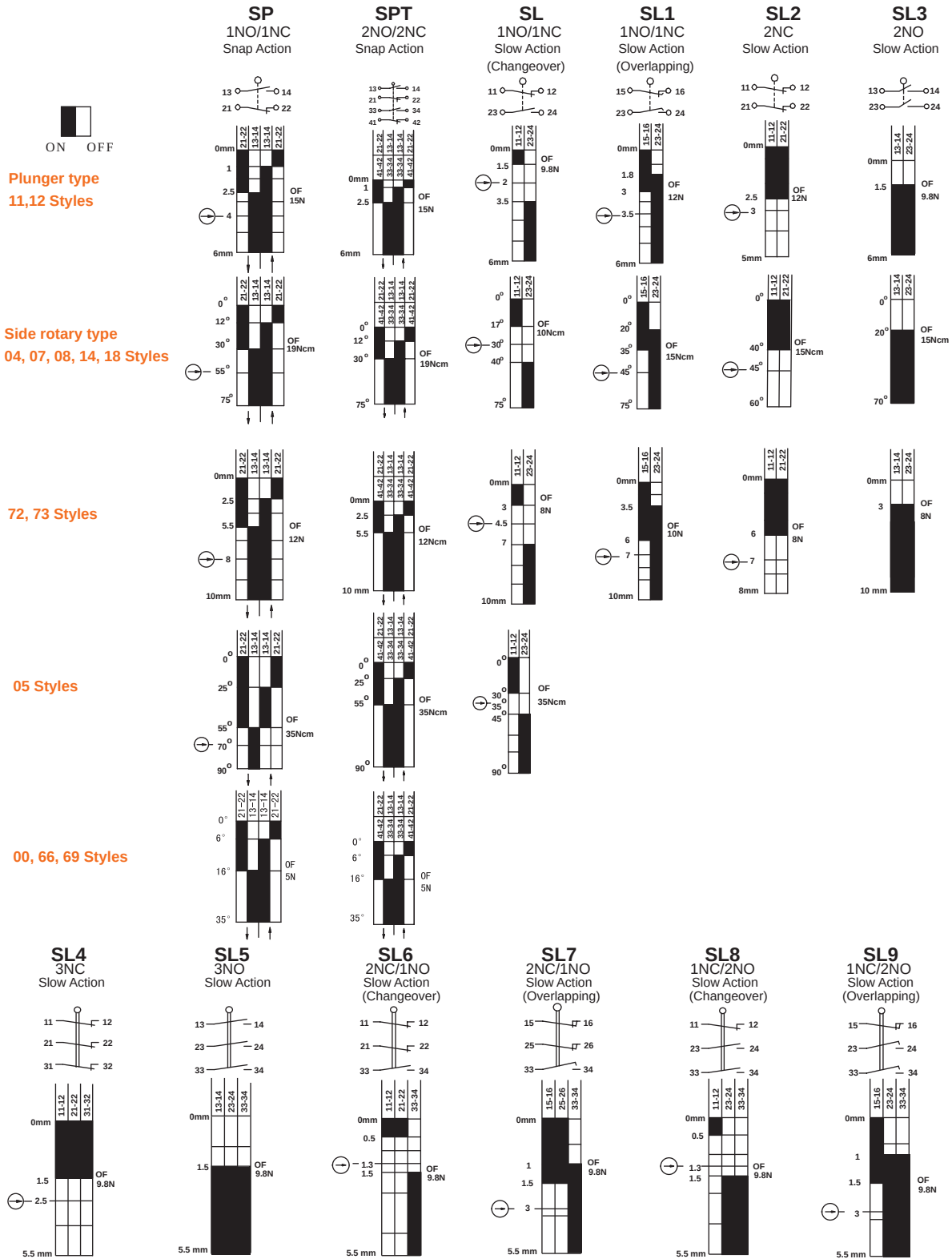
Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18 Styles

72, 73 Styles

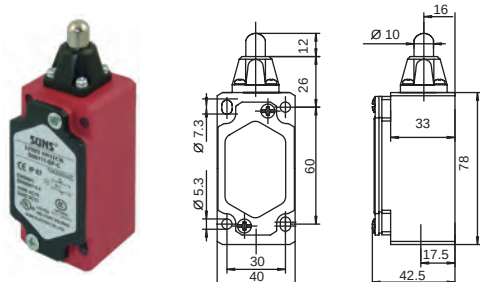
05 Styles

00, 66, 69 Styles



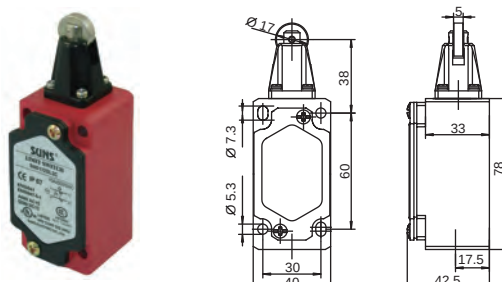
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY)

SN6111



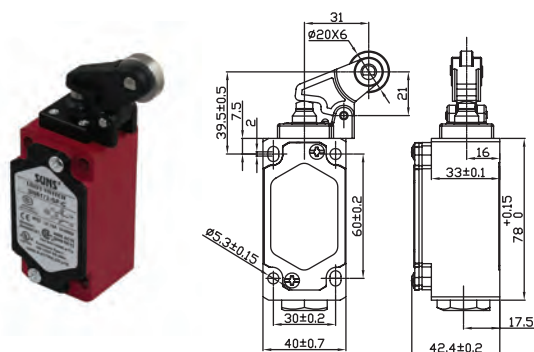
Order Code	Contact block		
SN6111-SP- _	SP 	snap action	1NO+1NC
SN6111-SL- _	SL 	slow action	1NO+1NC BBM
SN6111-SL1- _	SL1 	slow action	1NO+1NC MBB
SN6111-SL2- _	SL2 	slow action	2NC

SN6112



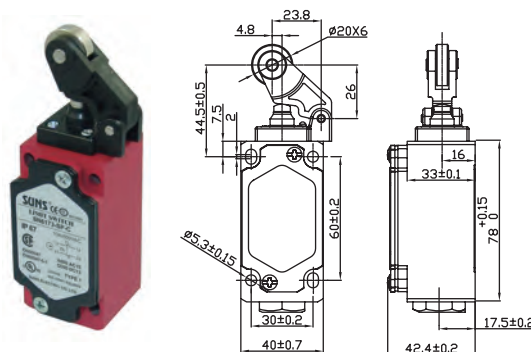
Order Code	Contact block		
SN6112-SP- _	SP 	snap action	1NO+1NC
SN6112-SL- _	SL 	slow action	1NO+1NC BBM
SN6112-SL1- _	SL1 	slow action	1NO+1NC MBB
SN6112-SL2- _	SL2 	slow action	2NC

SN6172



Order Code	Contact block		
SN6172-SP- _	SP 	snap action	1NO+1NC
SN6172-SL- _	SL 	slow action	1NO+1NC BBM
SN6172-SL1- _	SL1 	slow action	1NO+1NC MBB
SN6172-SL2- _	SL2 	slow action	2NC

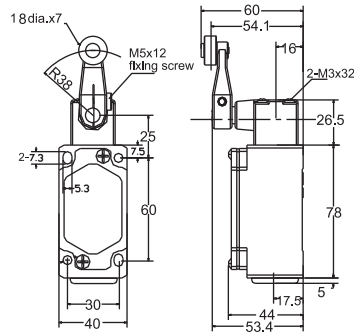
SN6173



Order Code	Contact block		
SN6173-SP- _	SP 	snap action	1NO+1NC
SN6173-SL- _	SL 	slow action	1NO+1NC BBM
SN6173-SL1- _	SL1 	slow action	1NO+1NC MBB
SN6173-SL2- _	SL2 	slow action	2NC

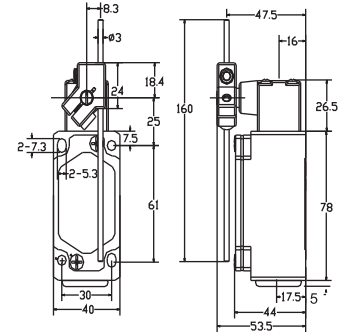
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE)
SN6 SERIES (SINGLE CONDUIT ENTRY)

SN6104



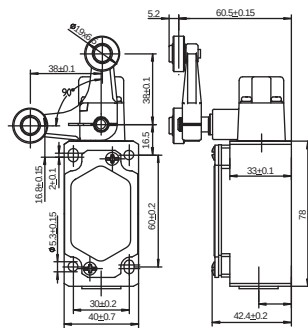
Order Code	Contact block			
SN6104-SP- _	SP		snap action	1NO+1NC
SN6104-SL- _	SL		slow action	1NO+1NC BBM
SN6104-SL1- _	SL1		slow action	1NO+1NC MBB
SN6104-SL2- _	SL2		slow action	2NC

SN6107



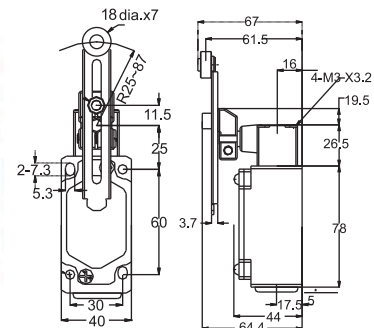
Order Code	Contact block			
SN6107-SP- _	SP		snap action	1NO+1NC
SN6107-SL- _	SL		slow action	1NO+1NC BBM
SN6107-SL1- _	SL1		slow action	1NO+1NC MBB
SN6107-SL2- _	SL2		slow action	2NC

SN6105



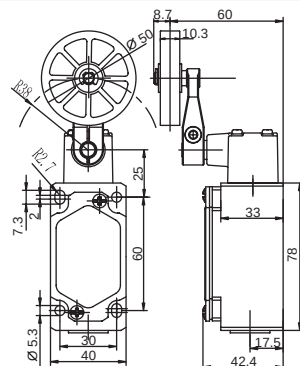
Order Code	Contact block			
SN6105-SP-__	SP		snap action	1NO+1NC
SN6105-SL-	SL		slow action	1NO+1NC BBM

SN6108



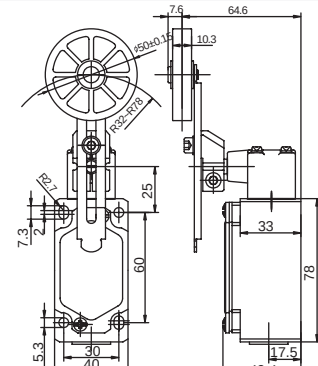
Order Code	Contact block		
SN6108-SP- _	SP 	snap action	1NO+1NC
SN6108-SL- _	SL 	slow action	1NO+1NC BBM
SN6108-SL1- _	SL1 	slow action	1NO+1NC MBB
SN6108-SL2- _	SL2 	slow action	2NC

SN6114



Order Code	Contact block			
SN6114-SP- _	SP		snap action	1NO+1NC
SN6114-SL- _	SL		slow action	1NO+1NC
SN6114-SL1- _	SL1		slow action	1NO+1NC
SN6114-SL2- _	SL2		slow action	2NC

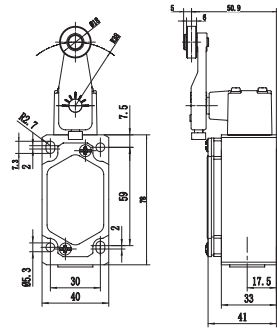
SN6118



Order Code	Contact block			
SN6118-SP- _	SP 	snap action	1NO+1NC	
SN6118-SL- _	SL 	slow action	1NO+1NC	BBM
SN6118-SL1- _	SL1 	slow action	1NO+1NC	MBB
SN6118-SL2-	SL2 	slow action	2NC	

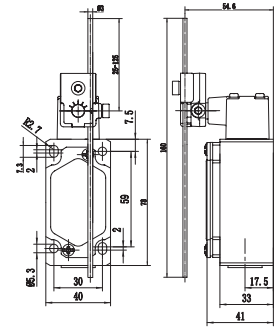
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY)

SN6104(AB)



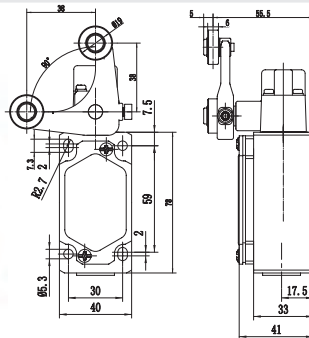
Order Code	Contact block			
SN6104-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6104-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6104-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6104-SL2-_(AB)	SL2	→	slow action	2NC

SN6107(AB)



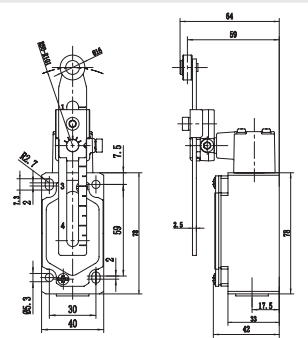
Order Code	Contact block			
SN6107-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6107-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6107-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6107-SL2-_(AB)	SL2	→	slow action	2NC

SN6105(AB)



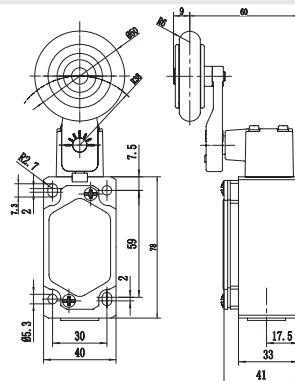
Order Code	Contact block			
SN6105-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6105-SL-_(AB)	SL	→	slow action	1NO+1NC BBM

SN6108(AB)



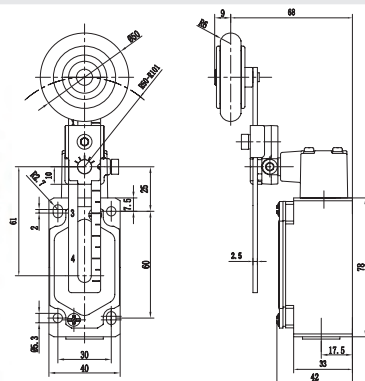
Order Code	Contact block			
SN6108-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6108-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6108-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6108-SL2-_(AB)	SL2	→	slow action	2NC

SN6114(AB)



Order Code	Contact block			
SN6114-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6114-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6114-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6114-SL2-_(AB)	SL2	→	slow action	2NC

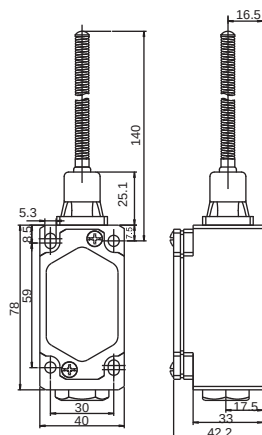
SN6118(AB)



Order Code	Contact block			
SN6118-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6118-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6118-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6118-SL2-_(AB)	SL2	→	slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY)

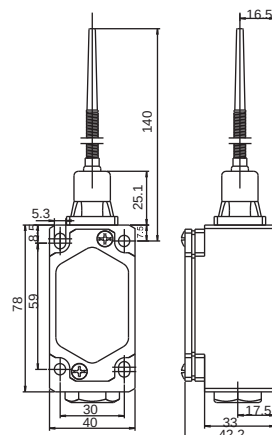
SN6100



Order Code

SN6100-SP- _ SP snap action 1NO+1NC

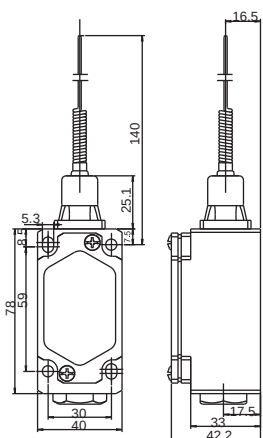
SN6166



Order Code

SN6166-SP- _ SP snap action 1NO+1NC

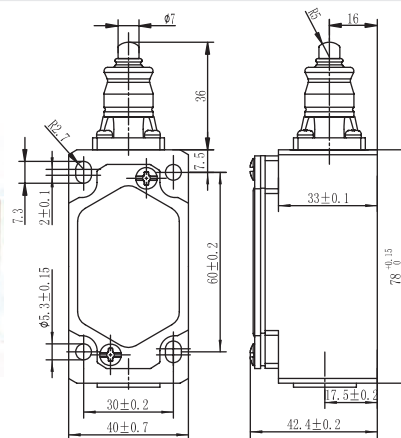
SN6169



Order Code

SN6169-SP- _ SP snap action 1NO+1NC

SN6111-L

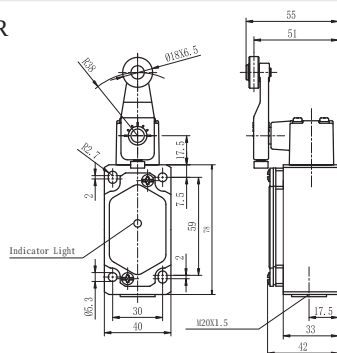


Order Code

Contact block

SN6111-SP- _L	SP	→	snap action	1NO+1NC
SN6111-SL- _L	SL	→	slow action	1NO+1NC BBM
SN6111-SL1- _L	SL1	→	slow action	1NO+1NC MBB
SN6111-SL2- _L	SL2	→	slow action	2NC

SN6104(AB) 24R



Order Code

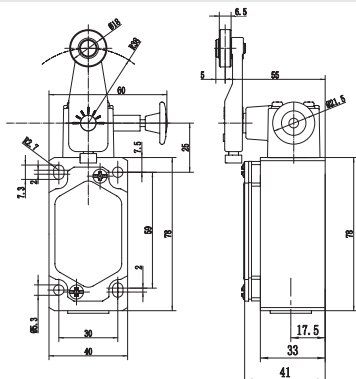
Contact block

SN6104-SP- _ (AB) 24R	SP	→	snap action	1NO+1NC
SN6104-SL- _ (AB) 24R	SL	→	slow action	1NO+1NC BBM
SN6104-SL1- _ (AB) 24R	SL1	→	slow action	1NO+1NC MBB
SN6104-SL2- _ (AB) 24R	SL2	→	slow action	2NC

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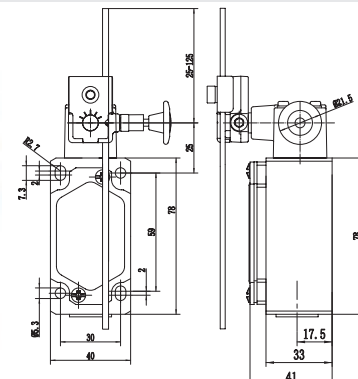
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 TYPE) SN6 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SN6104-R(AB)



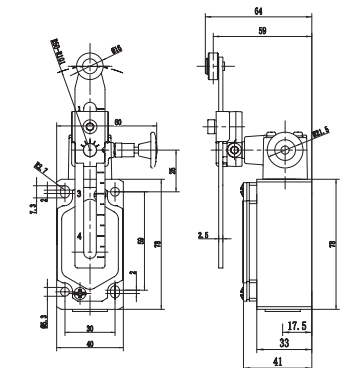
Order Code	Contact block		
SN6104-SP- _R(AB)	SP		snap action 1NO+1NC
SN6104-SL- _R(AB)	SL		slow action 1NO+1NC BBM
SN6104-SL1- _R(AB)	SL1		slow action 1NO+1NC MBB
SN6104-SL2- _R(AB)	SL2		slow action 2NC

SN6107-R(AB)



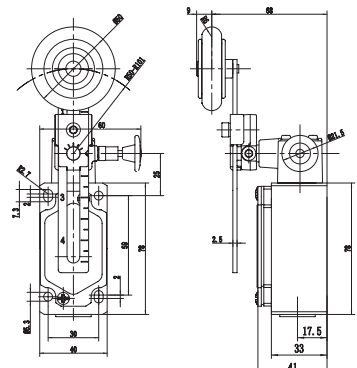
Order Code	Contact block		
SN6107-SP- _R(AB)	SP		snap action 1NO+1NC
SN6107-SL- _R(AB)	SL		slow action 1NO+1NC BBM
SN6107-SL1- _R(AB)	SL1		slow action 1NO+1NC MBB
SN6107-SL2- _R(AB)	SL2		slow action 2NC

SN6108-R(AB)



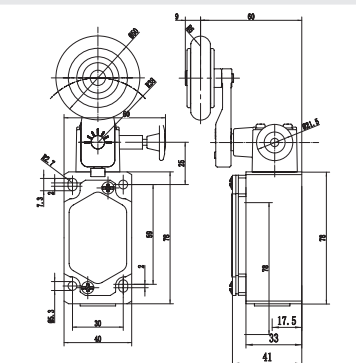
Order Code	Contact block		
SN6108-SP- _R(AB)	SP		snap action 1NO+1NC
SN6108-SL- _R(AB)	SL		slow action 1NO+1NC BBM
SN6108-SL1- _R(AB)	SL1		slow action 1NO+1NC MBB
SN6108-SL2- _R(AB)	SL2		slow action 2NC

SN6118-R(AB)



Order Code	Contact block		
SN6118-SP- _R(AB)	SP		snap action 1NO+1NC
SN6118-SL- _R(AB)	SL		slow action 1NO+1NC BBM
SN6118-SL1- _R(AB)	SL1		slow action 1NO+1NC MBB
SN6118-SL2- _R(AB)	SL2		slow action 2NC

SN6114-R(AB)



Order Code	Contact block		
SN6114-SP- _R(AB)	SP		snap action 1NO+1NC
SN6114-SL- _R(AB)	SL		slow action 1NO+1NC BBM
SN6114-SL1- _R(AB)	SL1		slow action 1NO+1NC MBB
SN6114-SL2- _R(AB)	SL2		slow action 2NC

Additional Lever Heads for SN61,SN62,SND61,SN63



H-04B(AB) H-04C(AB)



H-04D(AB) H-04E(AB) H-04F(AB)



H-05-1(AB)

H-05-1LH(AB)

H-05-1RH(AB)

Cast Aluminum Lever Arms with Roller

Add 'P' suffix for nylon roller (following part numbers are with steel roller)

Arm Length in. (mm)	Roller Diameter in. (mm)	Roller Width in. (mm)	Part Number
1.38 (35)	0.75 (19)	0.25 (6.3)	H-04B1(AB)
		0.63 (16)	H-04B2(AB)
	0.63 (16)	0.25 (6.3)	H-04B3(AB)
		0.63 (16)	H-04B4(AB)
1.5 (38)	0.75 (19)	0.25 (6.3)	H-04B5(AB)
		0.63 (16)	H-04C1(AB)
	0.63 (16)	0.25 (6.3)	H-04C2(AB)
		0.63 (16)	H-04C3(AB)
		0.63 (16)	H-04C4(AB)
		1.97(50)	H-04C5(AB)
2 (51)	0.75 (19)	0.25 (6.3)	H-4C5(AB)
		0.63 (16)	H-04D1(AB)
	0.63 (16)	0.25 (6.3)	H-04D2(AB)
		0.63 (16)	H-04D3(AB)
		0.63 (16)	H-04D4(AB)
		0.25 (6.3)	H-04E1(AB)
2.5 (63.5)	0.75 (19)	0.63 (16)	H-04E2(AB)
		0.25 (6.3)	H-04E3(AB)
	0.63 (16)	0.63 (16)	H-04E4(AB)
		0.25 (6.3)	H-04F1(AB)
3 (76)	0.75 (19)	0.63 (16)	H-04F2(AB)
		0.25 (6.3)	H-04F3(AB)
	0.63 (16)	0.25 (6.3)	H-04F4(AB)
		0.63 (16)	H-04F5(AB)

* Mounting hole center to roller center distance

90° Forked Cast Aluminum Lever Arms with Roller

Add 'P' suffix for nylon roller (following part numbers are with steel roller)

Arm Length in. (mm)	Roller			Part Number
	Roller Position	Diameter in. (mm)	Width in. (mm)	
1.5 (38)	Rollers on same side	0.75 (19)	0.25 (6.3)	H-05-1(AB)
		0.63 (16)	0.25 (6.3)	H-05-3(AB)
	R.H. Rollers on opposite side	0.75 (19)	0.25 (6.3)	H-05-1RH(AB)
		0.63 (16)	0.25 (6.3)	H-05-3RH(AB)
	L.H. Rollers on opposite side	0.75 (19)	0.25 (6.3)	H-05-1LH(AB)
		0.63 (16)	0.25 (6.3)	H-05-3LH(AB)

* Mounting hole center to roller center distance

Adjustable Length Lever Arm with Steel Roller

Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08-3(AB)
	0.63 (16)	0.63 (16)	H-08-4(AB)
	0.75(19)	0.25(6.3)	H-08-5(AB)
	0.63 (16)	0.25 (6.3)	H-08B-3(AB)
Bendable, adjustable from 22-101mm	0.63 (16)	0.63 (16)	H-08B-4(AB)
	0.75(19)	0.25(6.3)	H-08B-5(AB)

Adjustable Length Lever Arm with Nylon Roller

Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08-3P(AB)
	1 (25.4)	0.63 (16)	H-08-5P(AB)
	0.75(19)	0.25(6.3)	H-08-7P(AB)
	0.63 (16)	0.25 (6.3)	H-08B-3P(AB)
Bendable, adjustable from 22-101mm	1.0 (25.4)	0.63 (16)	H-08B-5P(AB)
	2 (51)	0.25 (6.3)	H-08B-6P(AB)

* Mounting hole center to roller center distance



H-08-3(AB)

H-08-4(AB)

H-08-5P(AB)

H-08-6P(AB)

Additional Lever Heads for SN61,SN62,SND61,SN63



Rod Type Lever Arms

Description	Length in. (mm)	Part Number
Stainless Steel Rod	10 (254)	H-07-10(AB)
Spring Rod, Steel	12 (304)	H-07S-12(AB)
Spring Rod, Delrin	12 (304)	H-07P-12(AB)
Looped Delrin Rod Arm	160MM(6.3IN.)	H-06(AB)
Looped Delrin Rod Arm	228MM(9IN.)	H-09(AB)

GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 COMPATIBLE) SN63 SERIES (3 - CONDUIT ENTRY)

SUNS products help to make factories run more efficiently, product manufacturing smarter, and automation environments more productive.



Features

- Zinc die cast body
- Earth grounding surface on same level as switching
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50041 standard

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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) with no icing
Humidity	< 95%RH
Weight	450-530g
Degree of Protection	IP67

Selection Guide:

SN63

Body
Styles

04

Head Styles

SP

Contact Block

- SP: 1NO/1NC Snap action
- SPT: 2NO/2NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action
- SL4: 3NC Slow Action
- SL5: 3NO Slow Action
- SL6: BBM 2NC/1NO Slow Action changeover
- SL7: MBB 2NC/1NO Slow Action Overlapping
- SL8: BBM 2NO/1NC Slow Action changeover
- SL9: MBB 2NO/1NC Slow Action Overlapping

C

Conduits

- A: 1/2"NPT
- B: PG13.5
- C: M20

R

- Blank
- R: with Reset

(AB)

Aluminum alloy
swing arm

GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 COMPATIBLE)

SN63 SERIES (3 - CONDUIT ENTRY)

Available contact blocks and travel diagrams

SP
1NO/1NC
Snap Action



Plunger type
11,12 Styles

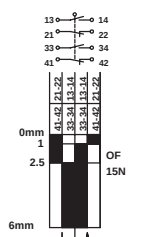
Side rotary type
04, 07, 08, 14, 18, 09 Styles

72, 73 Styles

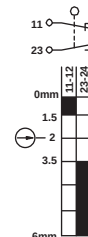
05 Styles

00, 66, 69 Styles

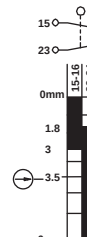
SPT
2NO/2NC
Snap Action



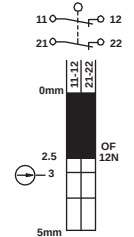
SL
1NO/1NC
Slow Action
(Changeover)



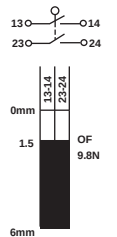
SL1
1NO/1NC
Slow Action
(Overlapping)



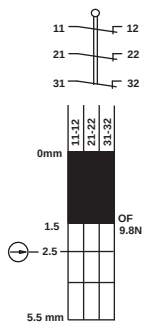
SL2
2NC
Slow Action



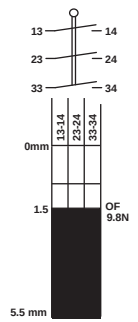
SL3
2NO
Slow Action



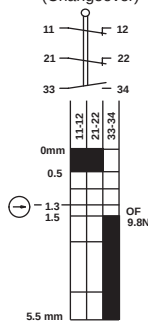
SL4
3NC
Slow Action



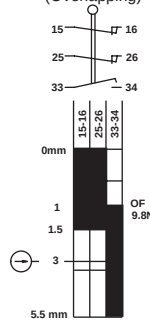
SL5
3NO
Slow Action



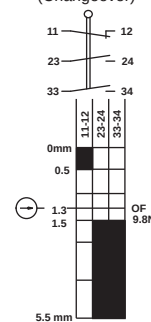
SL6
2NC/1NO
Slow Action
(Changeover)



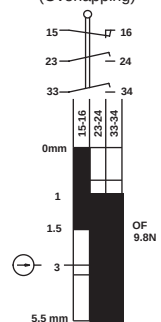
SL7
2NC/1NO
Slow Action
(Overlapping)



SL8
1NC/2NO
Slow Action
(Changeover)

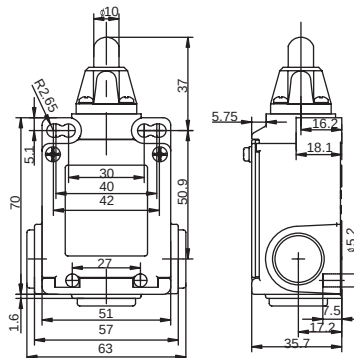


SL9
1NC/2NO
Slow Action
(Overlapping)



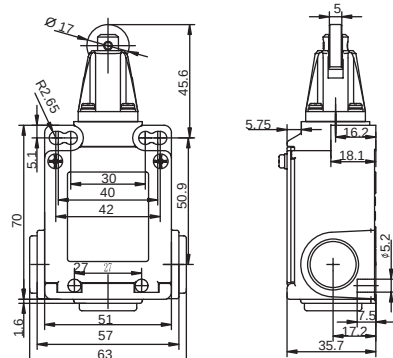
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 COMPATIBLE) SN63 SERIES (3 - CONDUIT ENTRY)

SN6311



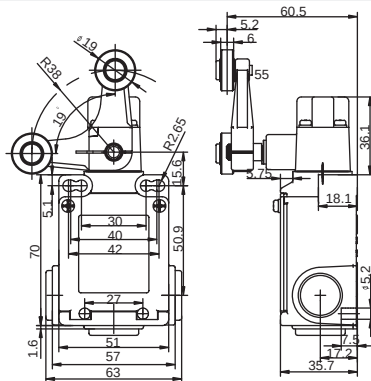
Order Code	Contact block		
SN6311-SP- _	SP	⤴	snap action 1NO+1NC
SN6311-SL- _	SL	⤴	slow action 1NO+1NC BBM
SN6311-SL1- _	SL1	⤴	slow action 1NO+1NC MBB
SN6311-SL2- _	SL2	⤴	slow action 2NC

SN6312



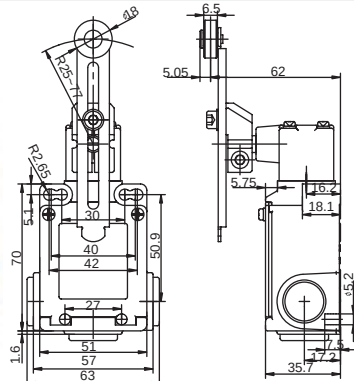
Order Code	Contact block		
SN6312-SP- _	SP	⤴	snap action 1NO+1NC
SN6312-SL- _	SL	⤴	slow action 1NO+1NC BBM
SN6312-SL1- _	SL1	⤴	slow action 1NO+1NC MBB
SN6312-SL2- _	SL2	⤴	slow action 2NC

SN6305



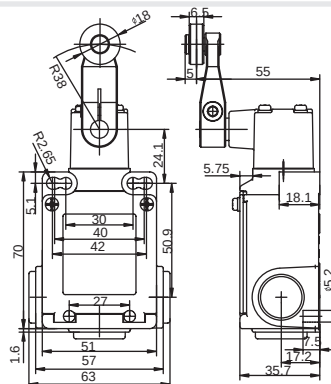
Order Code	Contact block		
SN6305-SP- _	SP	⤴	snap action 1NO+1NC
SN6305-SL- _	SL	⤴	slow action 1NO+1NC BBM

SN6308



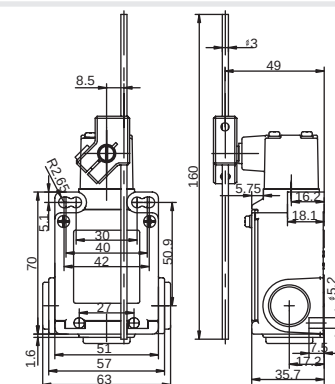
Order Code	Contact block		
SN6308-SP- _	SP	⤴	snap action 1NO+1NC
SN6308-SL- _	SL	⤴	slow action 1NO+1NC BBM
SN6308-SL1- _	SL1	⤴	slow action 1NO+1NC MBB
SN6308-SL2- _	SL2	⤴	slow action 2NC

SN6304



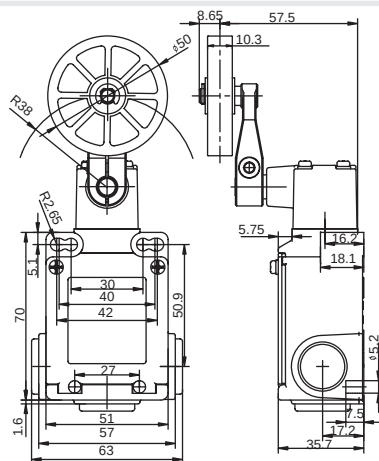
Order Code	Contact block		
SN6304-SP- _	SP	⤴	snap action 1NO+1NC
SN6304-SL- _	SL	⤴	slow action 1NO+1NC BBM
SN6304-SL1- _	SL1	⤴	slow action 1NO+1NC MBB
SN6304-SL2- _	SL2	⤴	slow action 2NC

SN6307

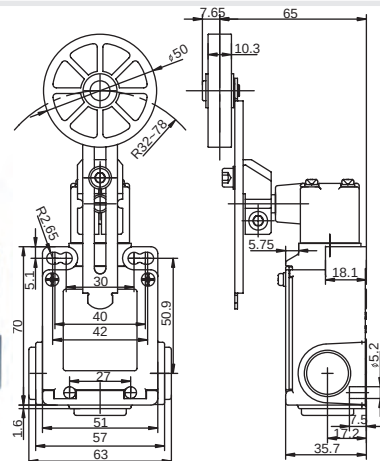


Order Code	Contact block		
SN6307-SP- _	SP	⤴	snap action 1NO+1NC
SN6307-SL- _	SL	⤴	slow action 1NO+1NC BBM
SN6307-SL1- _	SL1	⤴	slow action 1NO+1NC MBB
SN6307-SL2- _	SL2	⤴	slow action 2NC

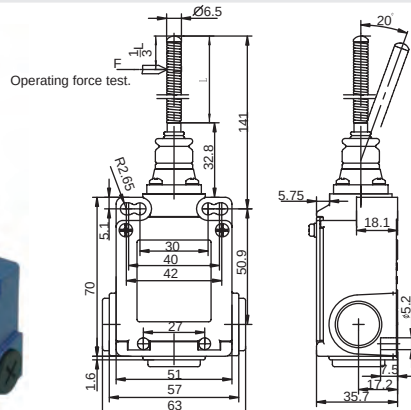
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 COMPATIBLE)
SN63 SERIES (3 - CONDUIT ENTRY)



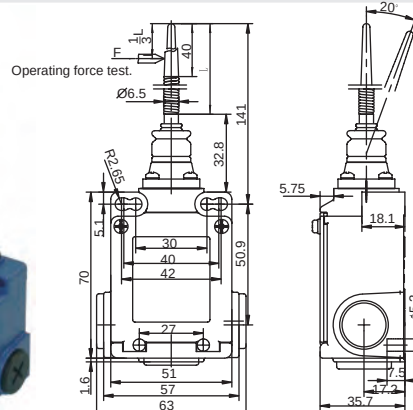
Order Code	Contact block			
SN6314-SP- _	SP		snap action	1NO+1NC
SN6314-SL- _	SL		slow action	1NO+1NC
SN6314-SL1- _	SL1		slow action	1NO+1NC
SN6314-SL2- _	SL2		slow action	2NC



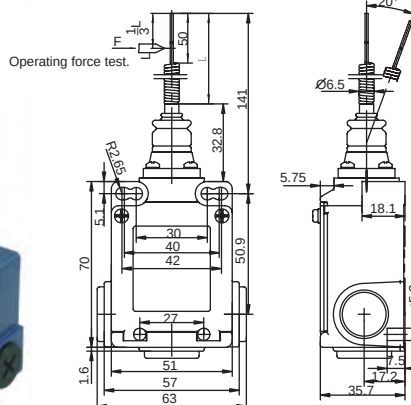
Order Code	Contact block			
SN6318-SP- _	SP		snap action	1NO+1NC
SN6318-SL- _	SL		slow action	1NO+1NC BBM
SN6318-SL1- _	SL1		slow action	1NO+1NC MBB
SN6318-SL2- _	SL2		slow action	2NC



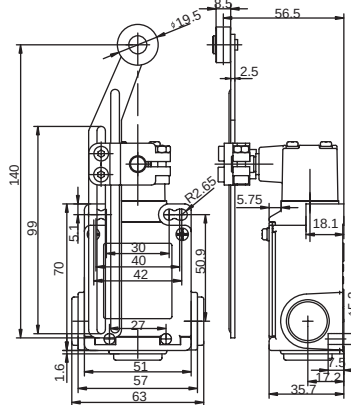
Order Code			
SN6300-SP-	SP	snap action	1NO+1NC



Order Code			
SN6366-SP-	SP	snap action	1NO+1NC

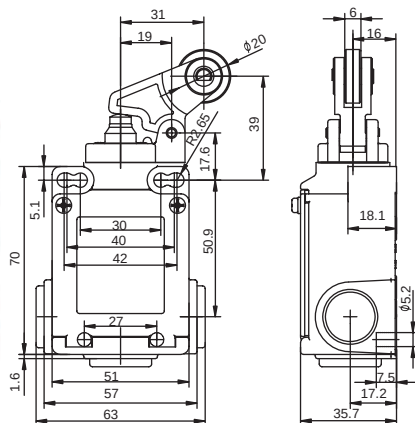


Order Code			
SN6369-SP-	SP	snap action	1NO+1NC

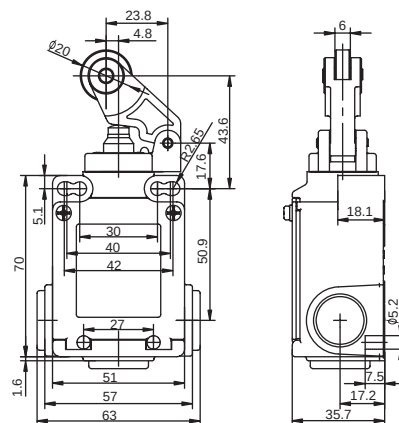


Order Code	Contact block			
SN6309-SP- _	SP		snap action	1NO+1NC
SN6309-SL- _	SL		slow action	1NO+1NC
SN6309-SL1- _	SL1		slow action	1NO+1NC
SN6309-SL2-	SL2		slow action	2NC

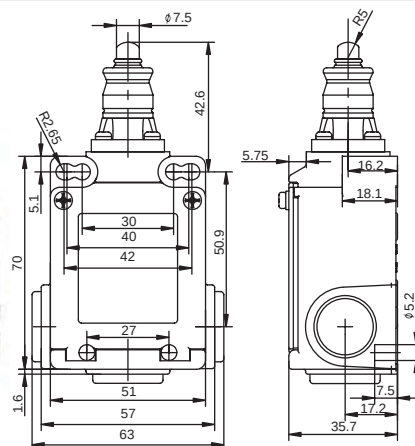
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 COMPATIBLE)
SN63 SERIES (3 - CONDUIT ENTRY)



Order Code	Contact block			
SN6372-SP- _	SP		snap action	1NO+1NC
SN6372-SL- _	SL		slow action	1NO+1NC BBM
SN6372-SL1- _	SL1		slow action	1NO+1NC MBB
SN6372-SL2- _	SL2		slow action	2NC



Order Code	Contact block			
SN6373-SP- _	SP		snap action	1NO+1NC
SN6373-SL- _	SL		slow action	1NO+1NC BBM
SN6373-SL1- _	SL1		slow action	1NO+1NC MBB
SN6373-SL2-	SL2		slow action	2NC

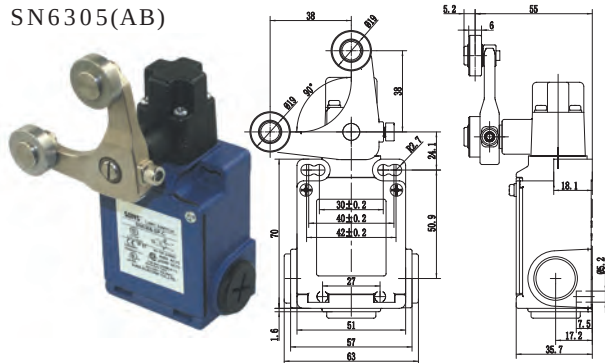


Order Code	Contact block			
SN6311-SP- _L	SP		snap action	1NO+1NC
SN6311-SL- _L	SL		slow action	1NO+1NC BBM
SN6311-SL1- _L	SL1		slow action	1NO+1NC MBB
SN6311-SL2- _L	SL2		slow action	2NC

See page 9 and page 10 for additional heads

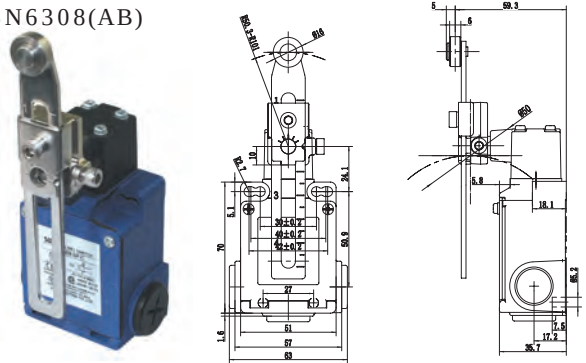
GLOBAL STYLE SAFETY LIMIT SWITCHES (Metal Bodied EN50041 COMPATIBLE) SN63 SERIES (3 - CONDUIT ENTRY)

SN6305(AB)



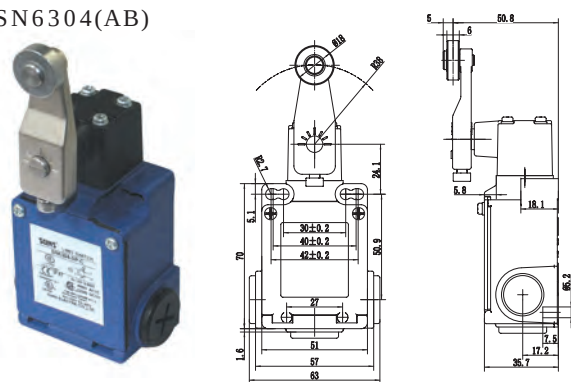
Order Code	Contact block			
SN6305-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6305-SL-_(AB)	SL	→	slow action	1NO+1NC BBM

SN6308(AB)



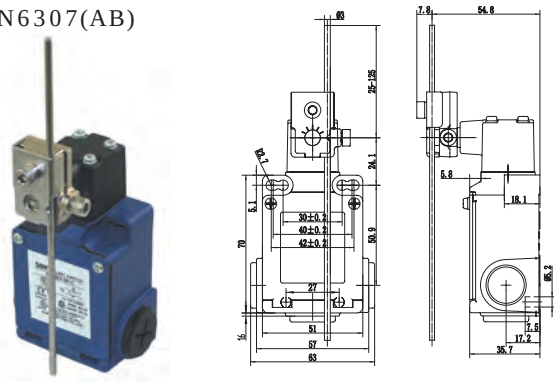
Order Code	Contact block			
SN6308-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6308-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6308-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6308-SL2-_(AB)	SL2	→	slow action	2NC

SN6304(AB)



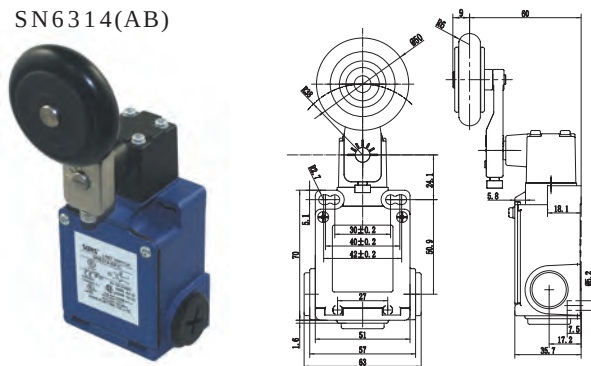
Order Code	Contact block			
SN6304-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6304-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6304-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6304-SL2-_(AB)	SL2	→	slow action	2NC

SN6307(AB)



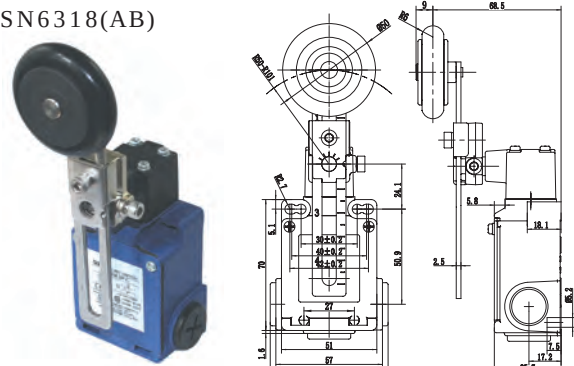
Order Code	Contact block			
SN6307-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6307-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6307-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6307-SL2-_(AB)	SL2	→	slow action	2NC

SN6314(AB)



Order Code	Contact block			
SN6314-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6314-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6314-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6314-SL2-_(AB)	SL2	→	slow action	2NC

SN6318(AB)



Order Code	Contact block			
SN6318-SP-_(AB)	SP	→	snap action	1NO+1NC
SN6318-SL-_(AB)	SL	→	slow action	1NO+1NC BBM
SN6318-SL1-_(AB)	SL1	→	slow action	1NO+1NC MBB
SN6318-SL2-_(AB)	SL2	→	slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY)



Long standing relationships with the biggest names in Industrial Automation enable our team to deliver competitive products that are innovative and designed for years of reliable performance.

Features

- Glass fiber reinforced plastic body
- Increased wiring space
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50041 standard

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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) with no icing
Humidity	< 95%
Weight	150-230g for plastic body
Degree of Protection	IP67

Selection Guide:

SND6

Body
Styles

04

Head Styles

SP

Contact Block

- SP: 1NO/1NC Snap action
- SPT: 2NO/2NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action
- SL4: 3NC Slow Action
- SL5: 3NO Slow Action
- SL6: BBM 2NC/1NO Slow Action changeover
- SL7: MBB 2NC/1NO Slow Action Overlapping
- SL8: BBM 2NO/1NC Slow Action changeover
- SL9: MBB 2NO/1NC Slow Action Overlapping

C

Conduits

R

- A: 1/2"NPT
- B: PG13.5
- C: M20

- Blank
- R: with Reset

(AB)

Aluminum alloy
swing arm

GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE)

SND6 SERIES (SINGLE CONDUIT ENTRY)

Available contact blocks and travel diagrams



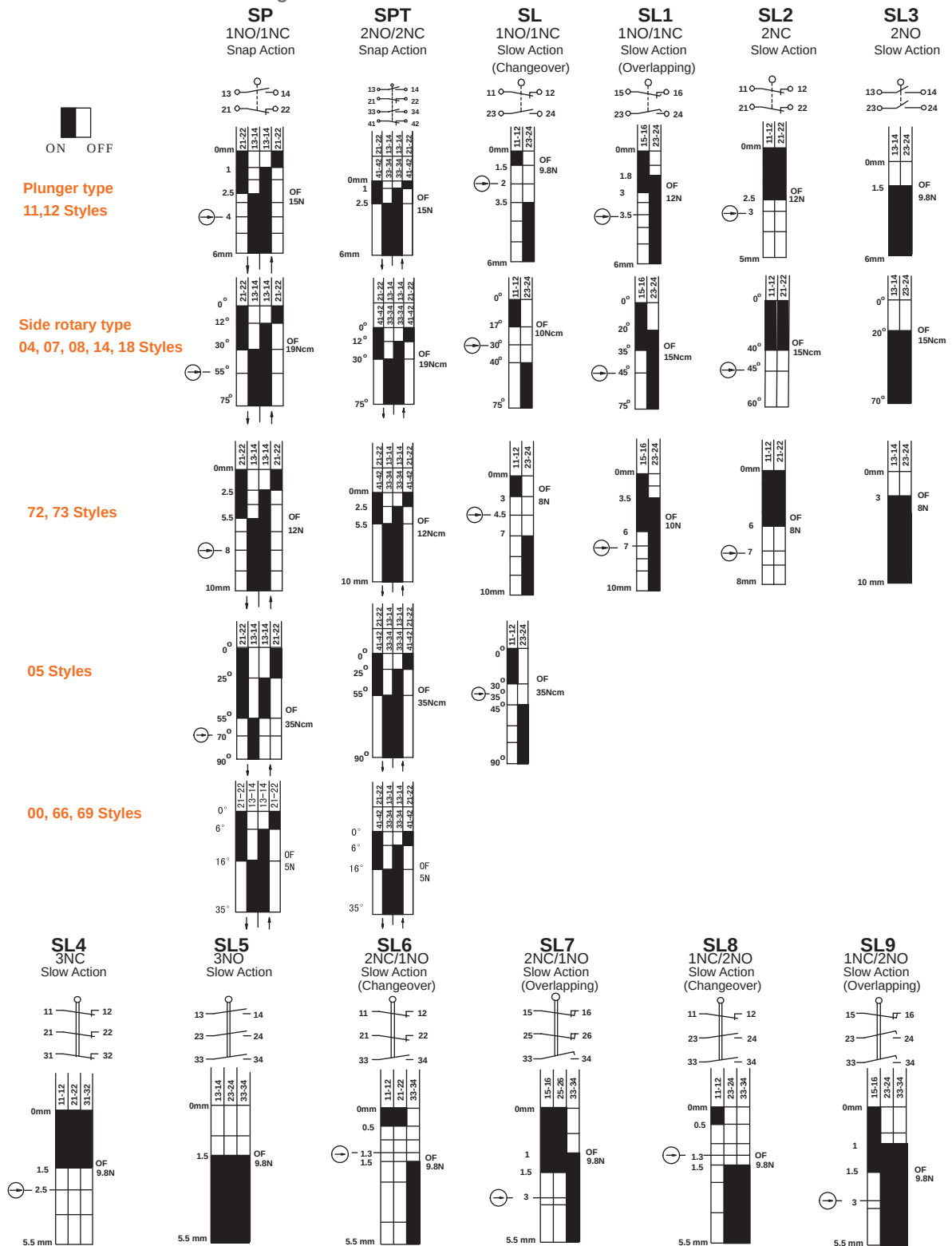
Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18 Styles

72, 73 Styles

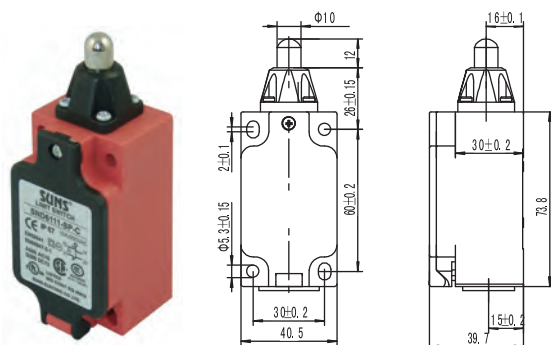
05 Styles

00, 66, 69 Styles



GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY)

SND6111

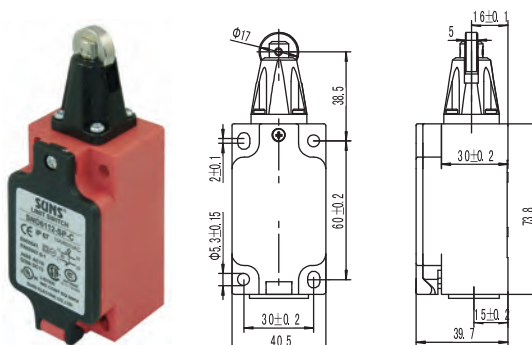


Order Code

Contact block

SND6111-SP- _	SP	→	snap action	1NO+1NC
SND6111-SL- _	SL	→	slow action	1NO+1NC BBM
SND6111-SL1- _	SL1	→	slow action	1NO+1NC MBB
SND6111-SL2- _	SL2	→	slow action	2NC

SND6112

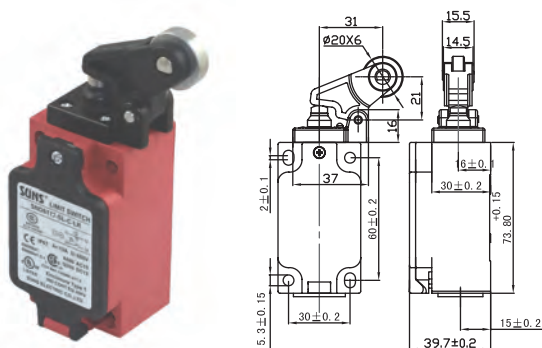


Order Code

Contact block

SND6112-SP- _	SP	→	snap action	1NO+1NC
SND6112-SL- _	SL	→	slow action	1NO+1NC BBM
SND6112-SL1- _	SL1	→	slow action	1NO+1NC MBB
SND6112-SL2- _	SL2	→	slow action	2NC

SND6172

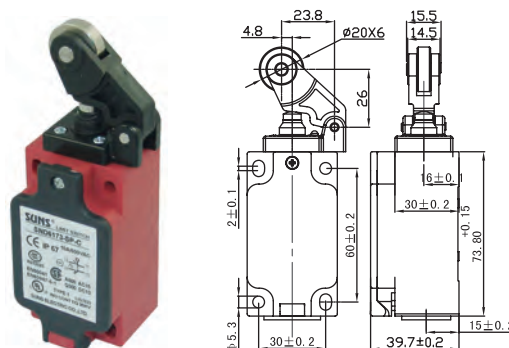


Order Code

Contact block

SND6172-SP- _	SP	→	snap action	1NO+1NC
SND6172-SL- _	SL	→	slow action	1NO+1NC BBM
SND6172-SL1- _	SL1	→	slow action	1NO+1NC MBB
SND6172-SL2- _	SL2	→	slow action	2NC

SND6173



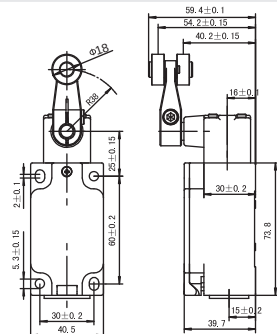
Order Code

Contact block

SND6173-SP- _	SP	→	snap action	1NO+1NC
SND6173-SL- _	SL	→	slow action	1NO+1NC BBM
SND6173-SL1- _	SL1	→	slow action	1NO+1NC MBB
SND6173-SL2- _	SL2	→	slow action	2NC

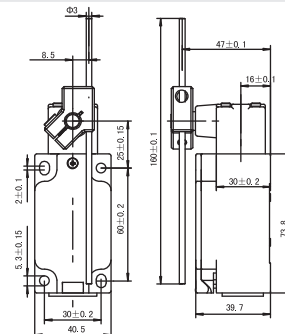
GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY)

SND6104



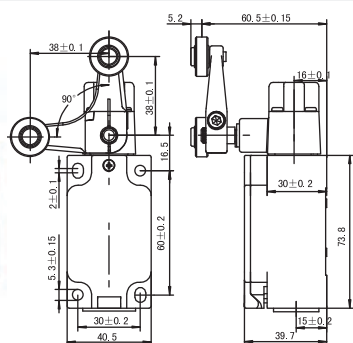
Order Code	Contact block		
SND6104-SP- _	SP	→ snap action	1NO+1NC
SND6104-SL- _	SL	→ slow action	1NO+1NC BBM
SND6104-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND6104-SL2- _	SL2	→ slow action	2NC

SND6107



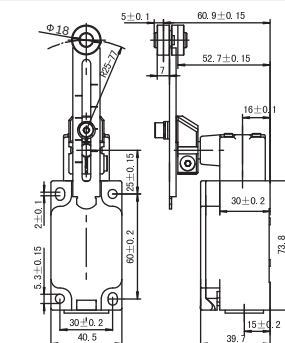
Order Code	Contact block		
SND6107-SP- _	SP	→ snap action	1NO+1NC
SND6107-SL- _	SL	→ slow action	1NO+1NC BBM
SND6107-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND6107-SL2- _	SL2	→ slow action	2NC

SND6105



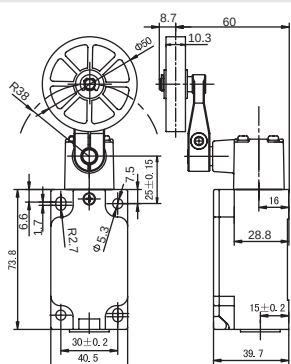
Order Code	Contact block		
SND6105-SP- _	SP	→ snap action	1NO+1NC
SND6105-SL- _	SL	→ slow action	1NO+1NC BBM

SND6108



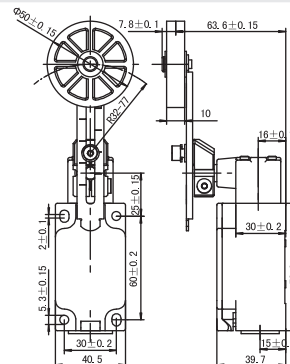
Order Code	Contact block		
SND6108-SP- _	SP	→ snap action	1NO+1NC
SND6108-SL- _	SL	→ slow action	1NO+1NC BBM
SND6108-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND6108-SL2- _	SL2	→ slow action	2NC

SND6114



Order Code	Contact block		
SND6114-SP- _	SP	→ snap action	1NO+1NC
SND6114-SL- _	SL	→ slow action	1NO+1NC BBM
SND6114-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND6114-SL2- _	SL2	→ slow action	2NC

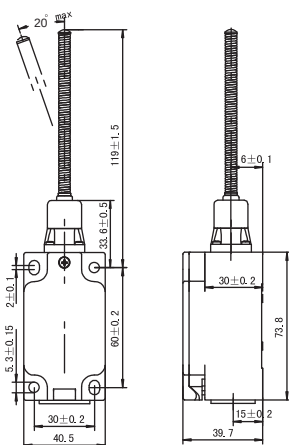
SND6118



Order Code	Contact block		
SND6118-SP- _	SP	→ snap action	1NO+1NC
SND6118-SL- _	SL	→ slow action	1NO+1NC BBM
SND6118-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND6118-SL2- _	SL2	→ slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY)

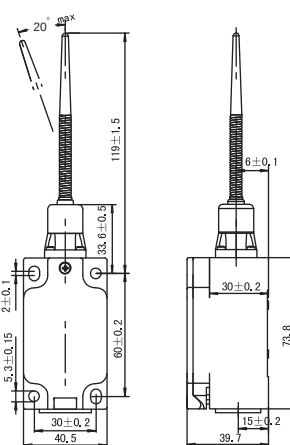
SND6100



Order Code

SND6100-SP- _ SP snap action 1NO+1NC

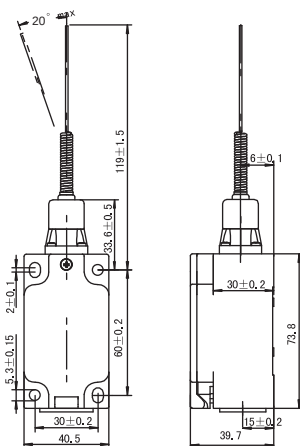
SND6166



Order Code

SND6166-SP- _ SP snap action 1NO+1NC

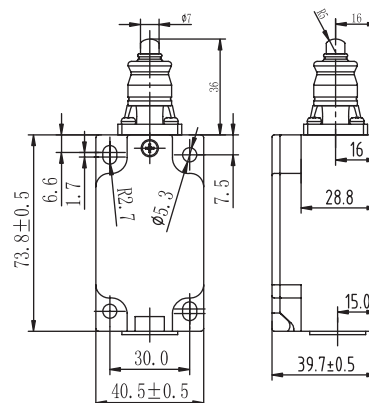
SND6169



Order Code

SND6169-SP- _ SP snap action 1NO+1NC

SND6111-L



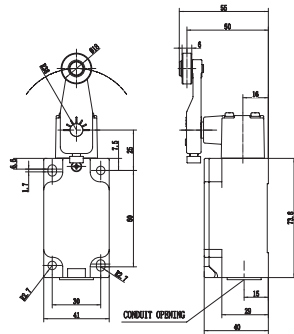
Order Code

Contact block

SND6111-SP- _L	SP		snap action	1NO+1NC
SND6111-SL- _L	SL		slow action	1NO+1NC BBM
SND6111-SL1- _L	SL1		slow action	1NO+1NC MBB
SND6111-SL2- _L	SL2		slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY)

SND6104(AB)

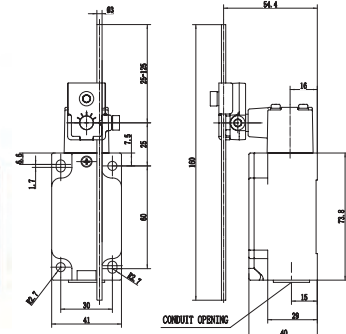


Order Code

Contact block

SND6104-SP-_(AB)	SP	⊕	snap action	1NO+1NC
SND6104-SL-_(AB)	SL	⊕	slow action	1NO+1NC BBM
SND6104-SL1-_(AB)	SL1	⊕	slow action	1NO+1NC MBB
SND6104-SL2-_(AB)	SL2	⊕	slow action	2NC

SND6107(AB)

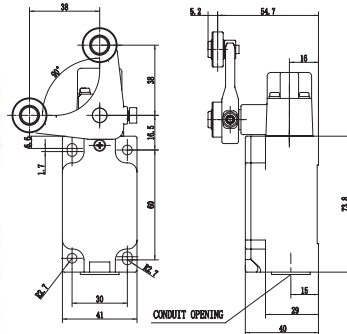


Order Code

Contact block

SND6107-SP-_(AB)	SP	⊕	snap action	1NO+1NC
SND6107-SL-_(AB)	SL	⊕	slow action	1NO+1NC BBM
SND6107-SL1-_(AB)	SL1	⊕	slow action	1NO+1NC MBB
SND6107-SL2-_(AB)	SL2	⊕	slow action	2NC

SND6105(AB)

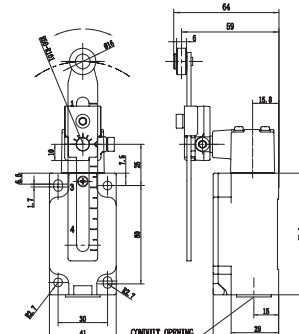


Order Code

Contact block

SND6105-SP-_(AB)	SP	⊕	snap action	1NO+1NC
SND6105-SL-_(AB)	SL	⊕	slow action	1NO+1NC BBM

SND6108(AB)

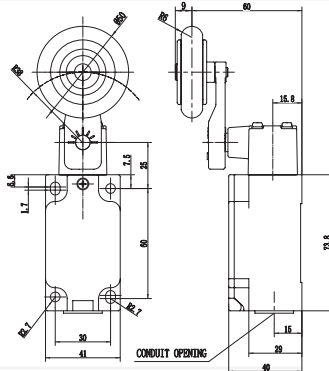


Order Code

Contact block

SND6108-SP-_(AB)	SP	⊕	snap action	1NO+1NC
SND6108-SL-_(AB)	SL	⊕	slow action	1NO+1NC BBM
SND6108-SL1-_(AB)	SL1	⊕	slow action	1NO+1NC MBB
SND6108-SL2-_(AB)	SL2	⊕	slow action	2NC

SND6114(AB)

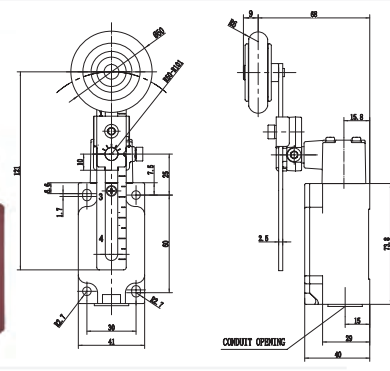


Order Code

Contact block

SND6114-SP-_(AB)	SP	⊕	snap action	1NO+1NC
SND6114-SL-_(AB)	SL	⊕	slow action	1NO+1NC BBM
SND6114-SL1-_(AB)	SL1	⊕	slow action	1NO+1NC MBB
SND6114-SL2-_(AB)	SL2	⊕	slow action	2NC

SND6118(AB)

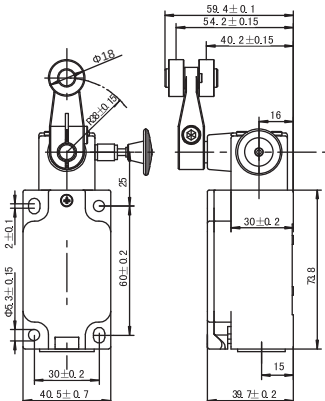


Order Code

Contact block

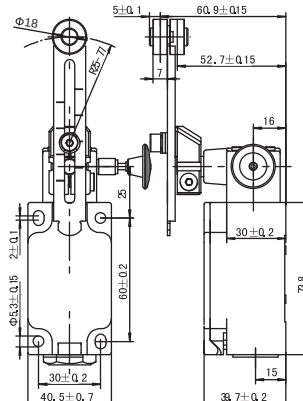
SND6118-SP-_(AB)	SP	⊕	snap action	1NO+1NC
SND6118-SL-_(AB)	SL	⊕	slow action	1NO+1NC BBM
SND6118-SL1-_(AB)	SL1	⊕	slow action	1NO+1NC MBB
SND6118-SL2-_(AB)	SL2	⊕	slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE)
SND6 SERIES (SINGLE CONDUIT ENTRY WITH RESET)



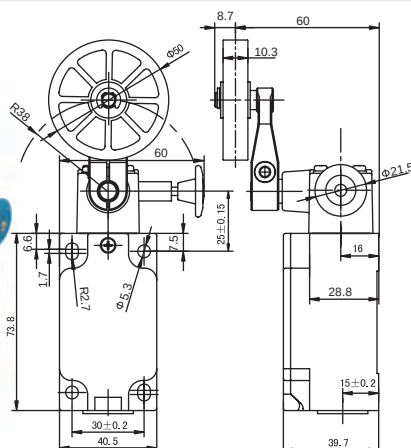
Contact block

SND6104-SP-_R	SP		snap action	1NO+1NC	
SND6104-SL-_R	SL		slow action	1NO+1NC	BBM
SND6104-SL1-_R	SL1		slow action	1NO+1NC	MBB
SND6104-SL2-_R	SL2		slow action	2NC	



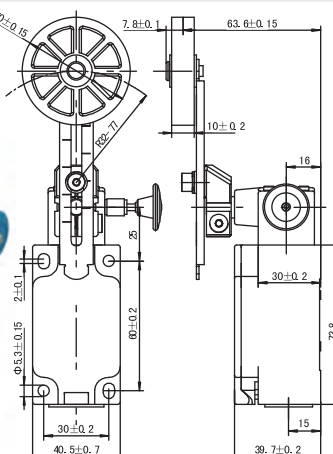
Contact block

SND6108-SP-_R	SP		snap action	1NO+1NC	
SND6108-SL-_R	SL		slow action	1NO+1NC	BBM
SND6108-SL1-_R	SL1		slow action	1NO+1NC	MBB
SND6108-SL2-_R	SL2		slow action	2NC	



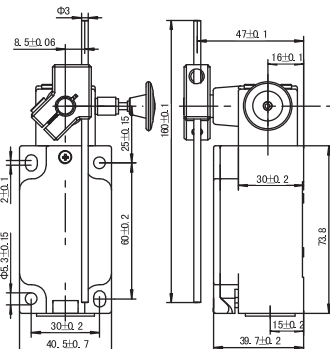
Contact block

SND6114-SP-_R	SP		snap action	1NO+1NC	
SND6114-SL-_R	SL		slow action	1NO+1NC	BBM
SND6114-SL1-_R	SL1		slow action	1NO+1NC	MBB
SND6114-SL2-_R	SL2		slow action	2NC	



Contact block

SND6118-SP-_R	SP		snap action	1NO+1NC	
SND6118-SL-_R	SL		slow action	1NO+1NC	BBM
SND6118-SL1-_R	SL1		slow action	1NO+1NC	MBB
SND6118-SL2-_R	SL2		slow action	2NC	

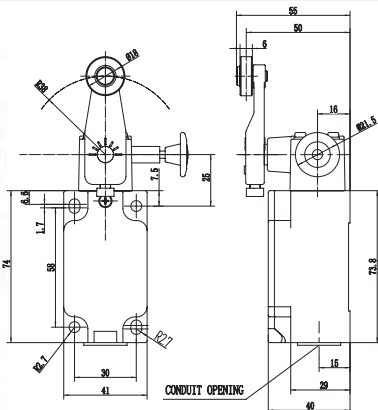


Contact block

SND6107-SP- <u> </u>	SP		snap action	1NO+1NC	
SND6107-SL- <u> </u>	SL		slow action	1NO+1NC	BBM
SND6107-SL1- <u> </u>	SL1		slow action	1NO+1NC	MBB
SND6107-SL2- <u> </u>	SL2		slow action	2NC	

GLOBAL STYLE SAFETY LIMIT SWITCHES (Plastic Bodied EN50041 TYPE) SND6 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SND6104-R(AB)

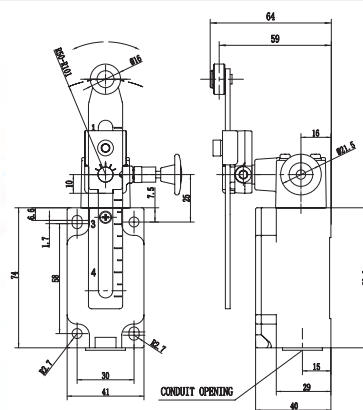


Order Code

Contact block

SND6104-SP- _R(AB)	SP		snap action	1NO+1NC
SND6104-SL- _R(AB)	SL		slow action	1NO+1NC BBM
SND6104-SL1- _R(AB)	SL1		slow action	1NO+1NC MBB
SND6104-SL2- _R(AB)	SL2		slow action	2NC

SND6108-R(AB)

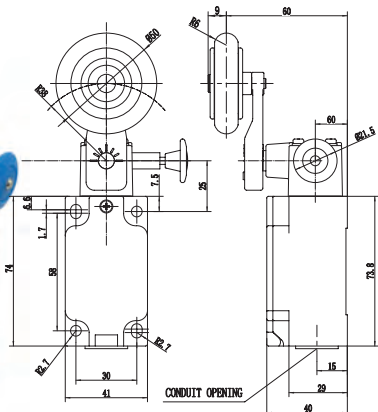


Order Code

Contact block

SND6108-SP- _R(AB)	SP		snap action	1NO+1NC
SND6108-SL- _R(AB)	SL		slow action	1NO+1NC BBM
SND6108-SL1- _R(AB)	SL1		slow action	1NO+1NC MBB
SND6108-SL2- _R(AB)	SL2		slow action	2NC

SND6114-R(AB)

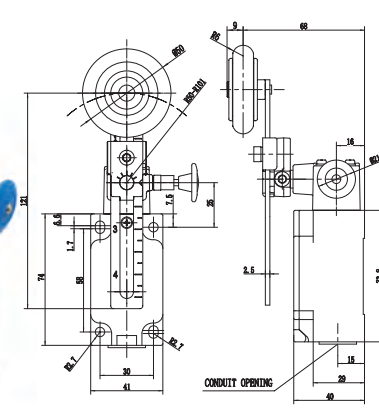


Order Code

Contact block

SND6114-SP- _R(AB)	SP		snap action	1NO+1NC
SND6114-SL- _R(AB)	SL		slow action	1NO+1NC BBM
SND6114-SL1- _R(AB)	SL1		slow action	1NO+1NC MBB
SND6114-SL2- _R(AB)	SL2		slow action	2NC

SND6118-R(AB)

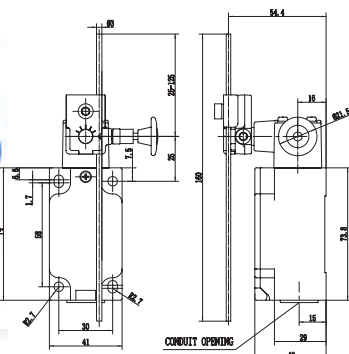


Order Code

Contact block

SND6118-SP- _R(AB)	SP		snap action	1NO+1NC
SND6118-SL- _R(AB)	SL		slow action	1NO+1NC BBM
SND6118-SL1- _R(AB)	SL1		slow action	1NO+1NC MBB
SND6118-SL2- _R(AB)	SL2		slow action	2NC

SND6107-R(AB)



Order Code

Contact block

SND6107-SP- _R(AB)	SP		snap action	1NO+1NC
SND6107-SL- _R(AB)	SL		slow action	1NO+1NC BBM
SND6107-SL1- _R(AB)	SL1		slow action	1NO+1NC MBB
SND6107-SL2- _R(AB)	SL2		slow action	2NC

See page 9 and page 10 for additional heads

GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED) SMN SERIES (SINGLE CONDUIT ENTRY)

SUNS products are safe and reliable products which are widely used in various mechanical devices.



Features

- Glass fiber reinforced plastic body
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- Suitable for front mounting
- Cable entry: Rectangle 8.5 x 3.5 mm

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	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) with no icing
Humidity	< 95%RH
Weight	35-80g
Degree of Protection	IP30

Selection Guide:

SMN
Body
Styles

-

SP

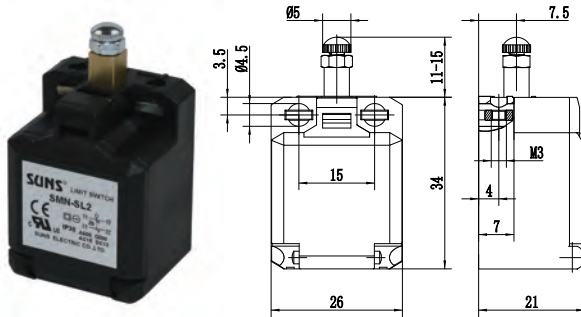
- SP: 1NO/1NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action

(11A)

Head Styles

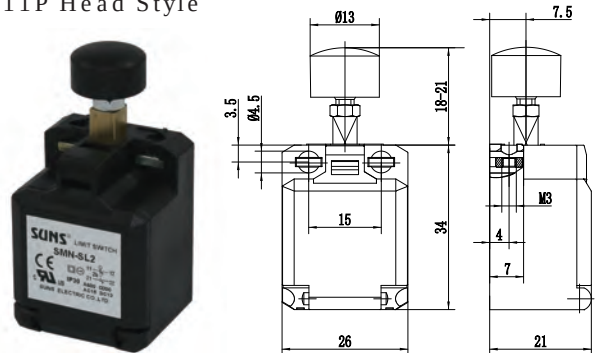
GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED) SMN SERIES (SINGLE CONDUIT ENTRY)

11A Head Style



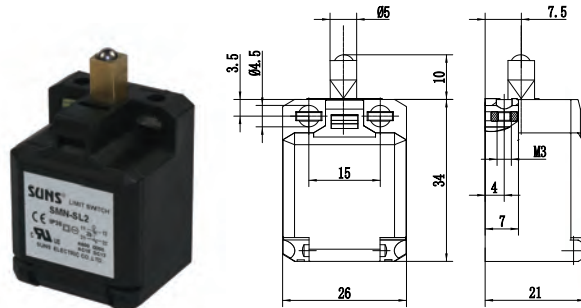
Order Code	Contact block			
SMN-SP(11A)	SP	→	snap action	1NO+1NC
SMN-SL(11A)	SL	→	slow action	1NO+1NC BBM
SMN-SL2(11A)	SL2	→	slow action	2NC
SMN-SL3(11A)	SL3		slow action	2NO

11P Head Style



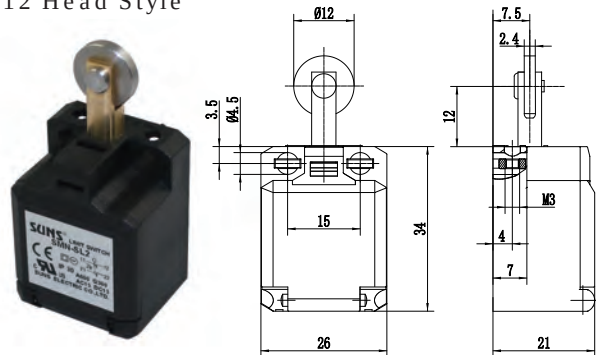
Order Code	Contact block			
SMN-SP(11P)	SP	→	snap action	1NO+1NC
SMN-SL(11P)	SL	→	slow action	1NO+1NC BBM
SMN-SL2(11P)	SL2	→	slow action	2NC
SMN-SL3(11P)	SL3		slow action	2NO

11B Head Style



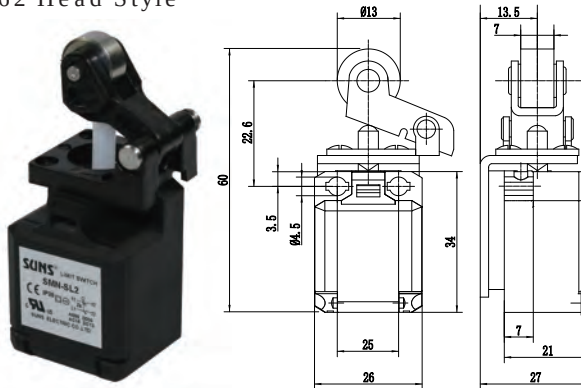
Order Code	Contact block			
SMN-SP(11B)	SP	→	snap action	1NO+1NC
SMN-SL(11B)	SL	→	slow action	1NO+1NC BBM
SMN-SL2(11B)	SL2	→	slow action	2NC
SMN-SL3(11B)	SL3		slow action	2NO

12 Head Style



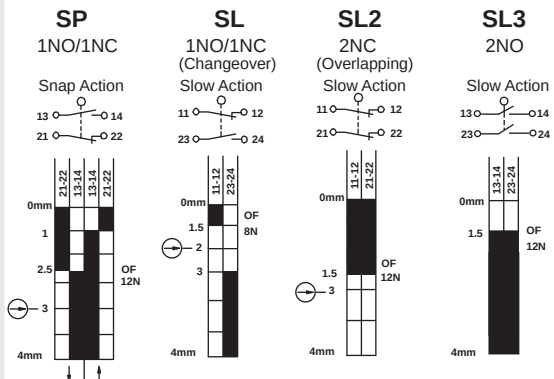
Order Code	Contact block			
SMN-SP(12)	SP	→	snap action	1NO+1NC
SMN-SL(12)	SL	→	slow action	1NO+1NC BBM
SMN-SL2(12)	SL2	→	slow action	2NC
SMN-SL3(12)	SL3		slow action	2NO

62 Head Style



Order Code	Contact block			
SMN-SP(62)	SP	→	snap action	1NO+1NC
SMN-SL(62)	SL	→	slow action	1NO+1NC BBM
SMN-SL2(62)	SL2	→	slow action	2NC
SMN-SL3(62)	SL3		slow action	2NO

Travel diagrams



GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED EN50047 TYPE) SMN4 SERIES (SINGLE CONDUIT ENTRY)

SUNS products are safe and reliable products which are widely used in various mechanical devices.



Features

- Glass fiber reinforced plastic body
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50047 standard

Definitions of Operating Characteristics

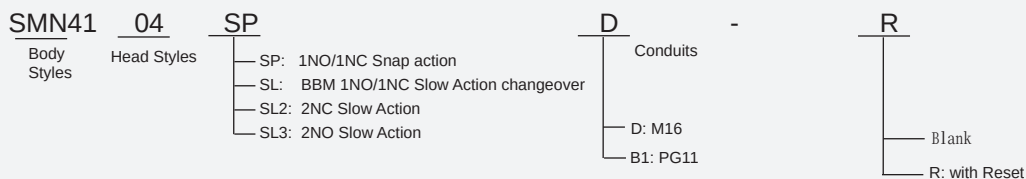
OF Operating Force
RF Releasing Force
OT Overtravel
TT Total Travel
PT Pretravel
MD Movement Differential
OP Operating Position
PO Travel to Positive Opening



Specifications

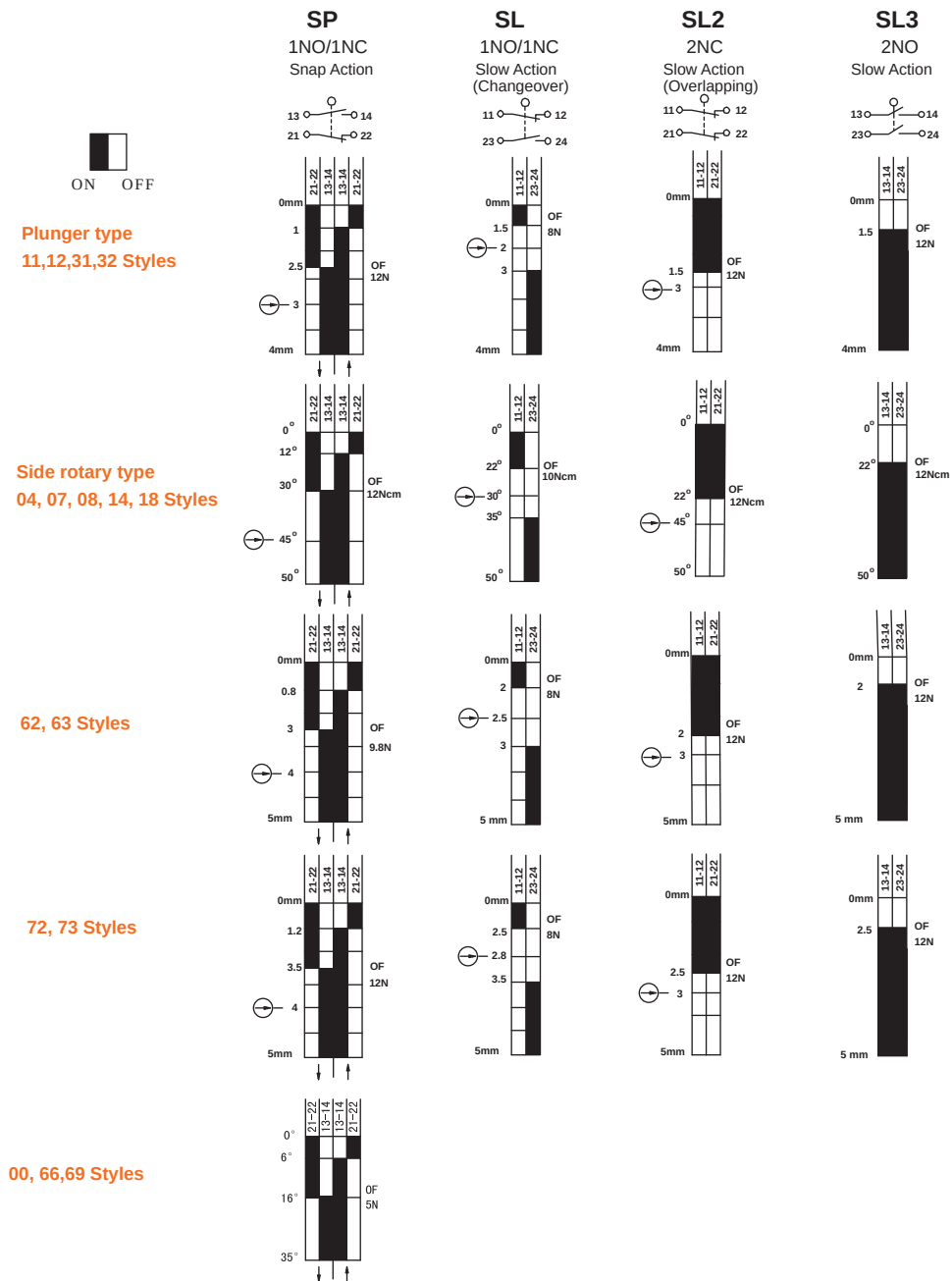
Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Dielectric Strength	1000VAC for 1 min between current carrying 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) with no icing
Humidity	< 95%RH
Weight	40-90g
Degree of Protection	IP66

Selection Guide:



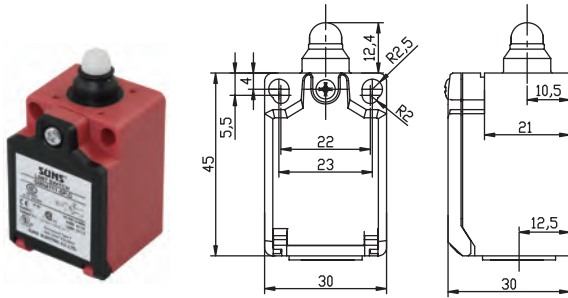
GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED EN50047 TYPE) SMN4 SERIES (SINGLE CONDUIT ENTRY)

Available contact blocks and travel diagrams



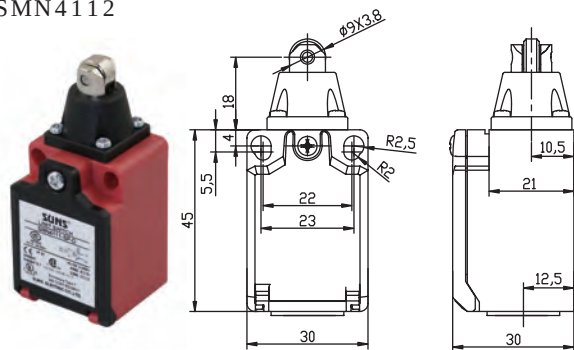
GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED EN50047 TYPE) SMN4 SERIES (SINGLE CONDUIT ENTRY)

SMN4111



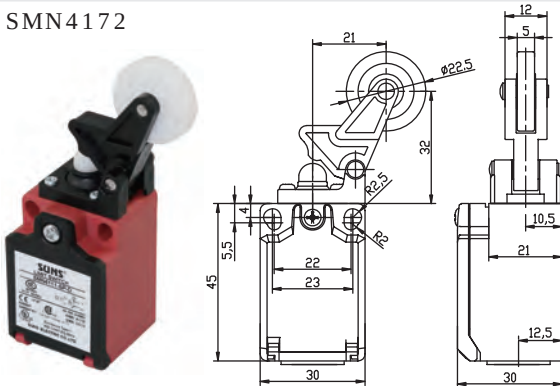
Order Code	Contact block		
SMN4111-SP- _	SP	→ snap action	1NO+1NC
SMN4111-SL- _	SL	→ slow action	1NO+1NC BBM
SMN4111-SL2- _	SL2	→ slow action	2NC
SMN4111-SL3- _	SL3	slow action	2NO

SMN4112



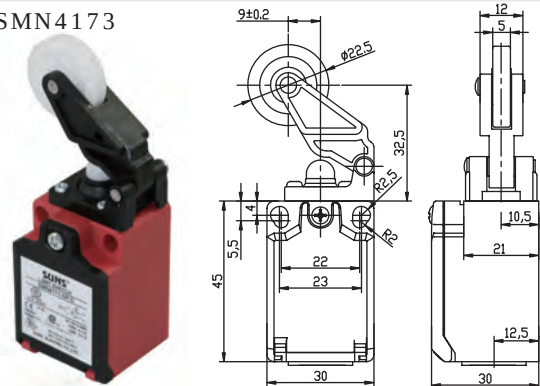
Order Code	Contact block		
SMN4112-SP- _	SP	→ snap action	1NO+1NC
SMN4112-SL- _	SL	→ slow action	1NO+1NC BBM
SMN4112-SL2- _	SL2	→ slow action	2NC
SMN4112-SL3- _	SL3	slow action	2NO

SMN4172



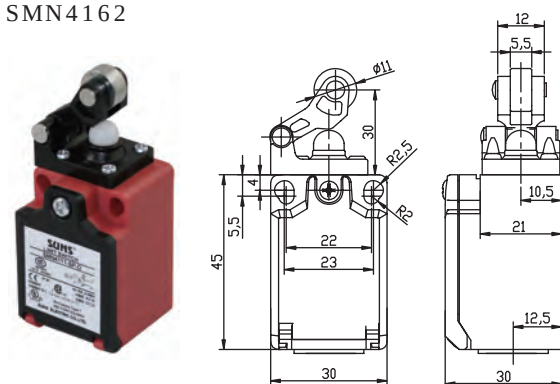
Order Code	Contact block		
SMN4172-SP- _	SP	→ snap action	1NO+1NC
SMN4172-SL- _	SL	→ slow action	1NO+1NC BBM
SMN4172-SL2- _	SL2	→ slow action	2NC
SMN4172-SL3- _	SL3	slow action	2NO

SMN4173



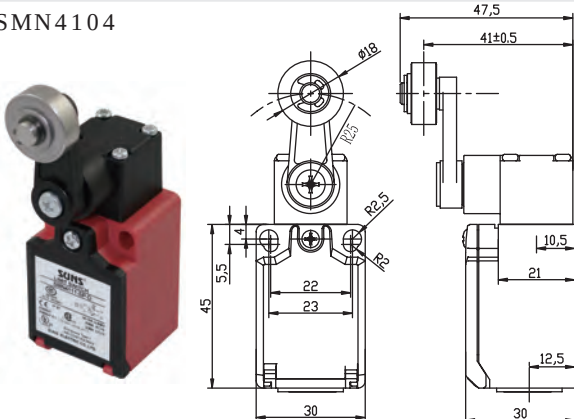
Order Code	Contact block		
SMN4173-SP- _	SP	→ snap action	1NO+1NC
SMN4173-SL- _	SL	→ slow action	1NO+1NC BBM
SMN4173-SL2- _	SL2	→ slow action	2NC
SMN4173-SL3- _	SL3	slow action	2NO

SMN4162



Order Code	Contact block		
SMN4162-SP- _	SP	→ snap action	1NO+1NC
SMN4162-SL- _	SL	→ slow action	1NO+1NC BBM
SMN4162-SL2- _	SL2	→ slow action	2NC
SMN4162-SL3- _	SL3	slow action	2NO

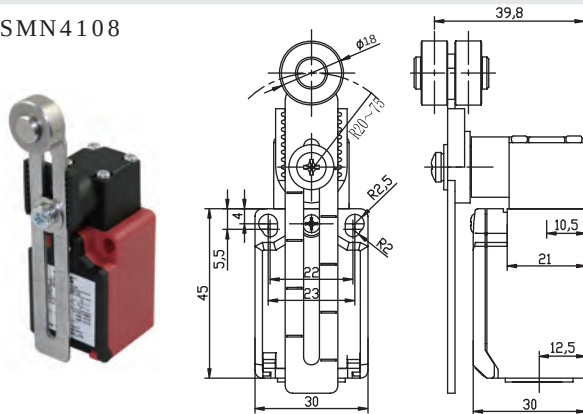
SMN4104



Order Code	Contact block		
SMN4104-SP- _	SP	→ snap action	1NO+1NC
SMN4104-SL- _	SL	→ slow action	1NO+1NC BBM
SMN4104-SL2- _	SL2	→ slow action	2NC
SMN4104-SL3- _	SL3	slow action	2NO

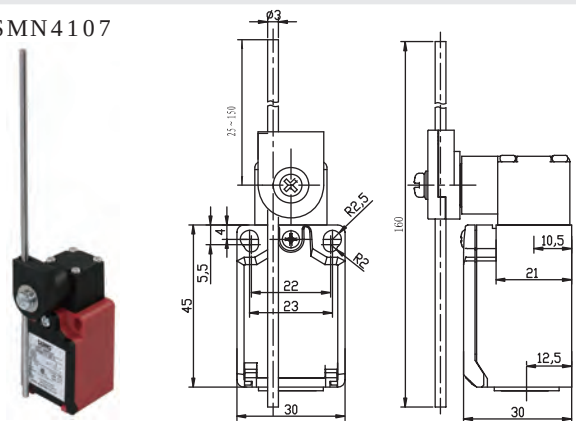
GLOBAL STYLE SAFETY LIMIT SWITCHES (MINI PLASTIC BODIED EN50047 TYPE) SMN4 SERIES (SINGLE CONDUIT ENTRY)

SMN4108



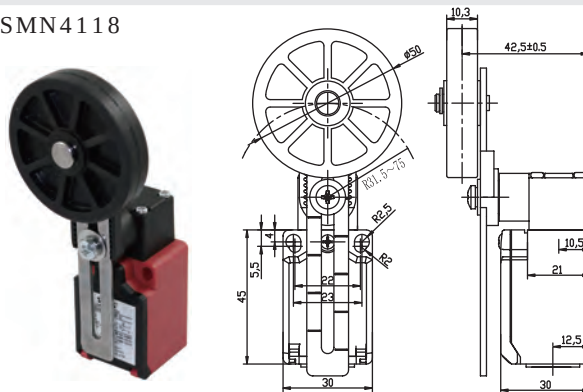
Order Code	Contact block			
SMN4108-SP- _	SP	→	snap action	1NO+1NC
SMN4108-SL- _	SL	→	slow action	1NO+1NC BBM
SMN4108-SL2- _	SL2	→	slow action	2NC
SMN4108-SL3- _	SL3		slow action	2NO

SMN4107



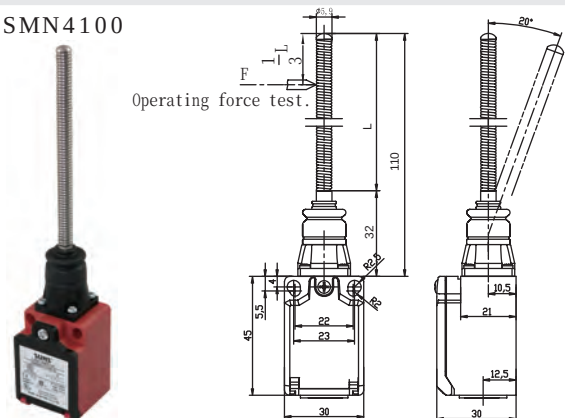
Order Code	Contact block			
SMN4107-SP- _	SP	→	snap action	1NO+1NC
SMN4107-SL- _	SL	→	slow action	1NO+1NC BBM
SMN4107-SL2- _	SL2	→	slow action	2NC
SMN4107-SL3- _	SL3		slow action	2NO

SMN4118



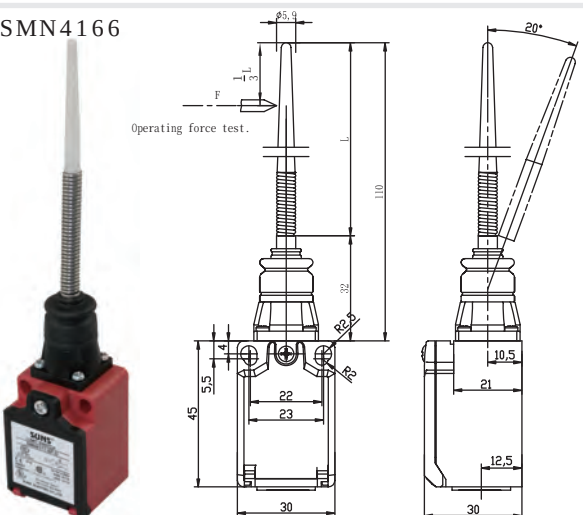
Order Code	Contact block			
SMN4118-SP- _	SP	→	snap action	1NO+1NC
SMN4118-SL- _	SL	→	slow action	1NO+1NC BBM
SMN4118-SL2- _	SL2	→	slow action	2NC
SMN4118-SL3- _	SL3		slow action	2NO

SMN4100



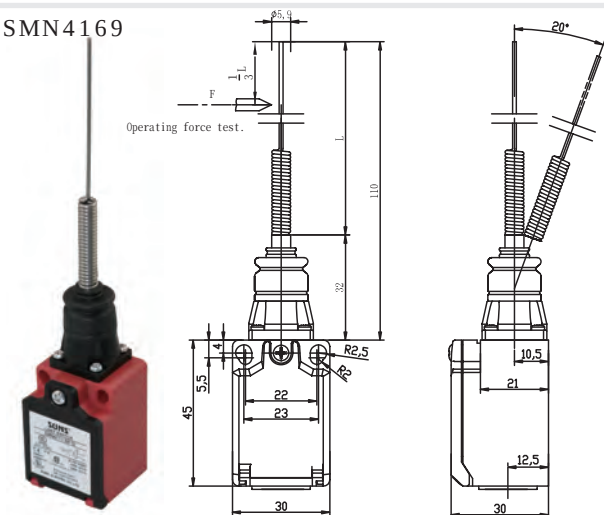
Order Code	Contact block			
SMN4100-SP- _	SP		snap action	1NO+1NC

SMN4166



Order Code	Contact block			
SMN4166-SP- _	SP		snap action	1NO+1NC

SMN4169



Order Code	Contact block			
SMN4169-SP- _	SP		snap action	1NO+1NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY)

SUNS products are safe and reliable products which are widely used in various mechanical devices.



Features

- Glass fiber reinforced plastic body
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50047 standard

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

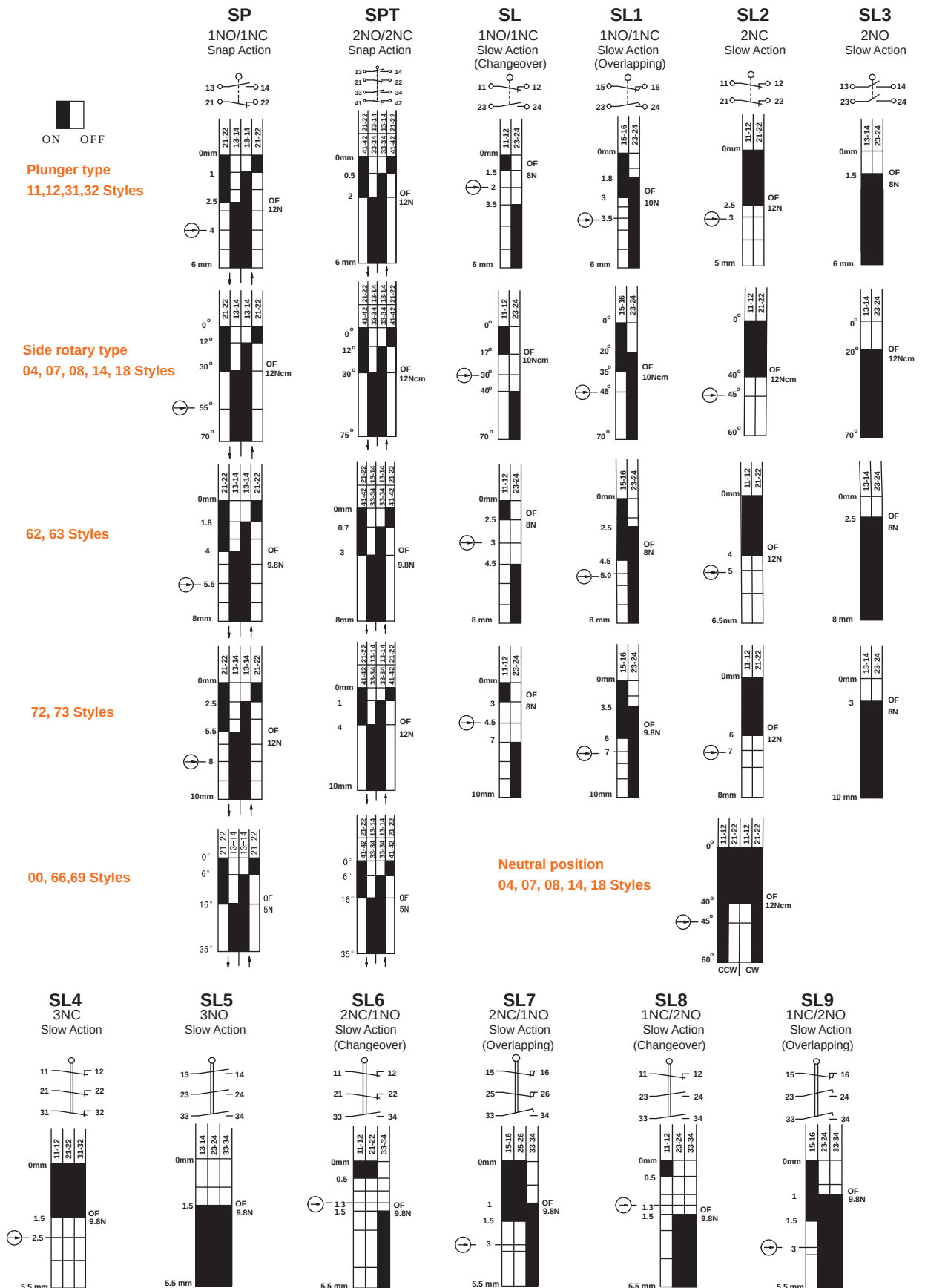
Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1.0 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F) with no icing
Humidity	< 95%RH
Weight	50-100g
Degree of Protection	IP67

Selection Guide:

SND41	04	SP	C	-	R
Body Styles	Head Styles		Conduits		
		SP: 1NO/1NC Snap action			
		SPT: 2NO/2NC Snap action			
		SL: BBM 1NO/1NC Slow Action changeover			
		SL1: MBB 1NO/1NC Slow Action Overlapping	A: 1/2"NPT		
		SL2: 2NC Slow Action	B: PG13.5		
		SL3: 2NO Slow Action	C: M20		
		SL4: 3NC Slow Action	D: M16		
		SL5: 3NO Slow Action	B1: PG11		
		SL6: BBM 2NC/1NO Slow Action changeover			
		SL7: MBB 2NC/1NO Slow Action Overlapping			
		SL8: BBM 2NO/1NC Slow Action changeover			
		SL9: MBB 2NO/1NC Slow Action Overlapping			
					Blank
					R: with Reset
					N: Neutral position (for rotary SL2 only)

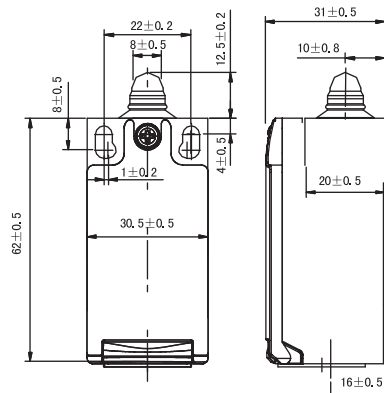
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY)

Available contact blocks and travel diagrams



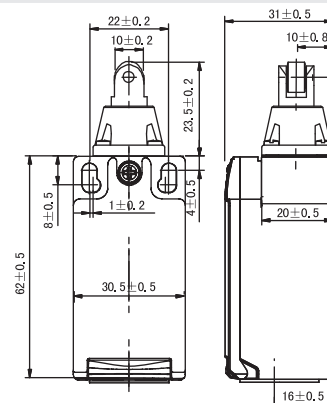
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY)

SND4111



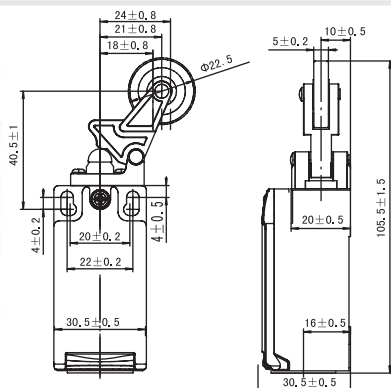
Order Code	Contact block		
SND4111-SP- _	SP	→ snap action	1NO+1NC
SND4111-SL- _	SL	→ slow action	1NO+1NC BBM
SND4111-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND4111-SL2- _	SL2	→ slow action	2NC

SND4112



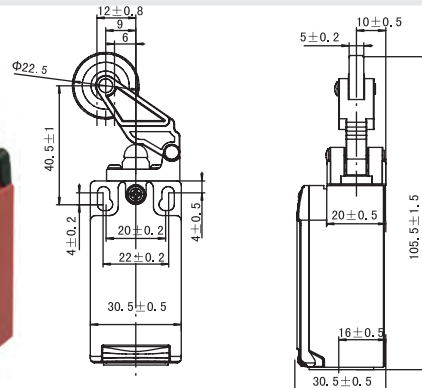
Order Code	Contact block		
SND4112-SP- _	SP	→ snap action	1NO+1NC
SND4112-SL- _	SL	→ slow action	1NO+1NC BBM
SND4112-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND4112-SL2- _	SL2	→ slow action	2NC

SND4172



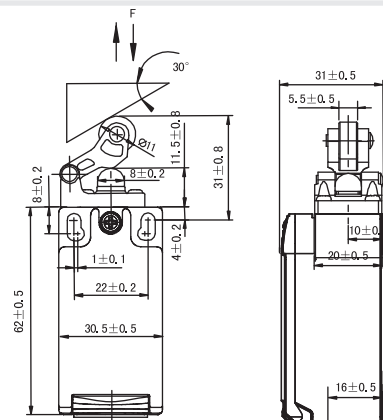
Order Code	Contact block		
SND4172-SP- _	SP	→ snap action	1NO+1NC
SND4172-SL- _	SL	→ slow action	1NO+1NC BBM
SND4172-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND4172-SL2- _	SL2	→ slow action	2NC

SND4173



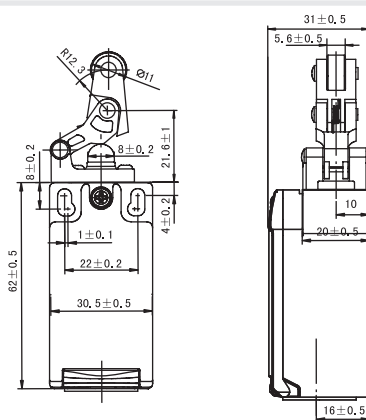
Order Code	Contact block		
SND4173-SP- _	SP	→ snap action	1NO+1NC
SND4173-SL- _	SL	→ slow action	1NO+1NC BBM
SND4173-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND4173-SL2- _	SL2	→ slow action	2NC

SND4162



Order Code	Contact block		
SND4162-SP- _	SP	→ snap action	1NO+1NC
SND4162-SL- _	SL	→ slow action	1NO+1NC BBM
SND4162-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND4162-SL2- _	SL2	→ slow action	2NC

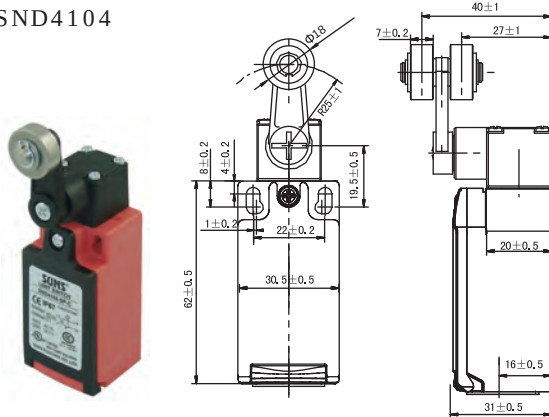
SND4163



Order Code	Contact block		
SND4163-SP- _	SP	→ snap action	1NO+1NC
SND4163-SL- _	SL	→ slow action	1NO+1NC BBM
SND4163-SL1- _	SL1	→ slow action	1NO+1NC MBB
SND4163-SL2- _	SL2	→ slow action	2NC

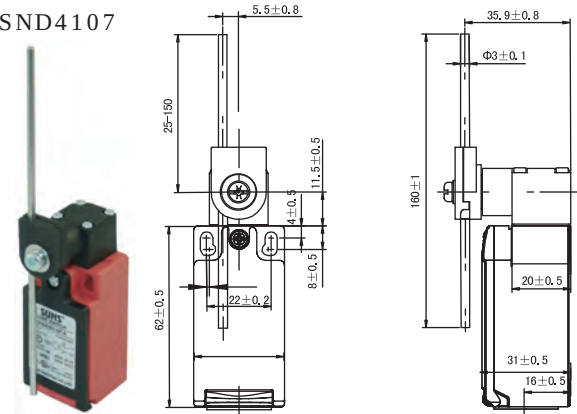
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY)

SND4104



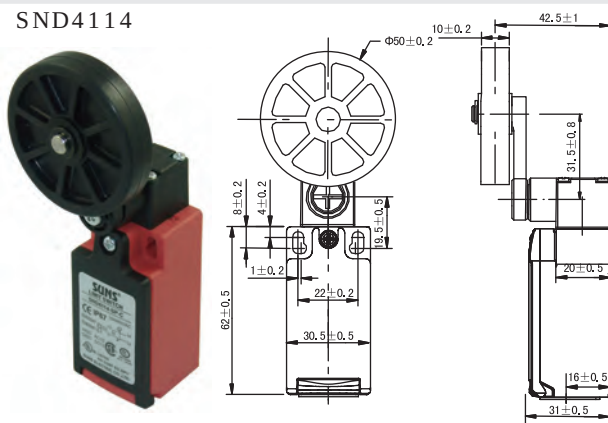
Order Code	Contact block			
SND4104-SP- _	SP		snap action	1NO+1NC
SND4104-SL- _	SL		slow action	1NO+1NC BBM
SND4104-SL1- _	SL1		slow action	1NO+1NC MBB
SND4104-SL2- _N	SL2		slow action	2NC Neutral position

SND4107



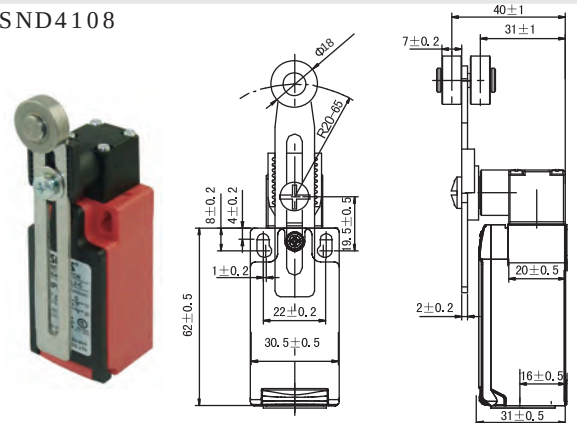
Order Code	Contact block			
SND4107-SP- _	SP		snap action	1NO+1NC
SND4107-SL- _	SL		slow action	1NO+1NC BBM
SND4107-SL1- _	SL1		slow action	1NO+1NC MBB
SND4107-SL2- _N	SL2		slow action	2NC Neutral position

SND4114



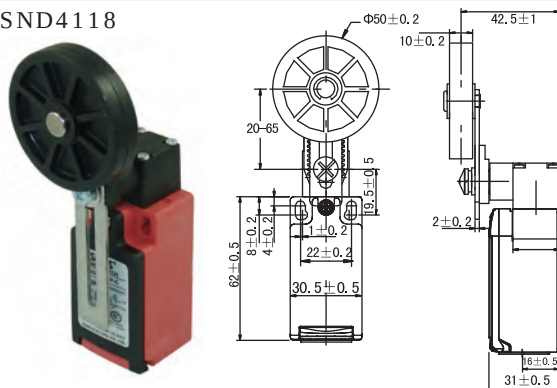
Order Code	Contact block			
SND4114-SP- _	SP		snap action	1NO+1NC
SND4114-SL- _	SL		slow action	1NO+1NC BBM
SND4114-SL1- _	SL1		slow action	1NO+1NC MBB
SND4114-SL2- _N	SL2		slow action	2NC Neutral position

SND4108



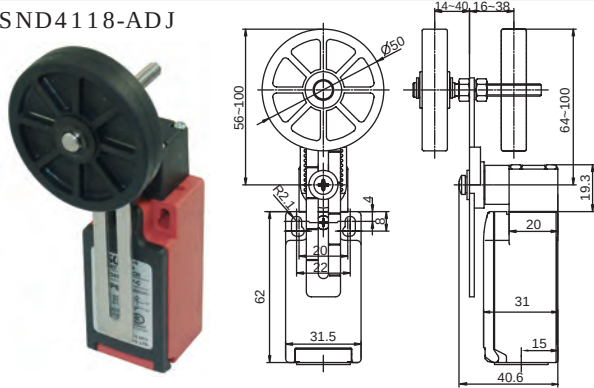
Order Code	Contact block			
SND4108-SP- _	SP		snap action	1NO+1NC
SND4108-SL- _	SL		slow action	1NO+1NC BBM
SND4108-SL1- _	SL1		slow action	1NO+1NC MBB
SND4108-SL2- _N	SL2		slow action	2NC Neutral position

SND4118



Order Code	Contact block			
SND4118-SP- _	SP		snap action	1NO+1NC
SND4118-SL- _	SL		slow action	1NO+1NC BBM
SND4118-SL1- _	SL1		slow action	1NO+1NC MBB
SND4118-SL2- _N	SL2		slow action	2NC Neutral position

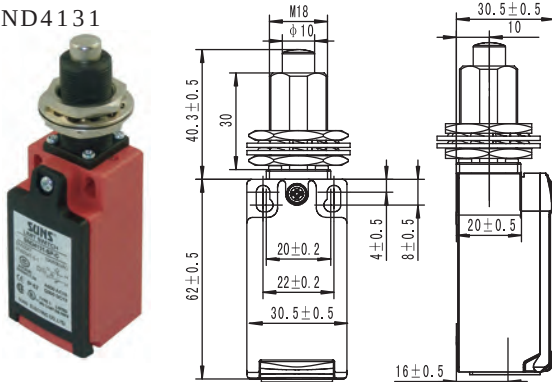
SND4118-ADJ



Order Code	Contact block			
SND4118-SP- _ADJ	SP		snap action	1NO+1NC
SND4118-SL- _ADJ	SL		slow action	1NO+1NC BBM
SND4118-SL1- _ADJ	SL1		slow action	1NO+1NC MBB
SND4118-SL2- _ADJ_N	SL2		slow action	2NC Neutral position

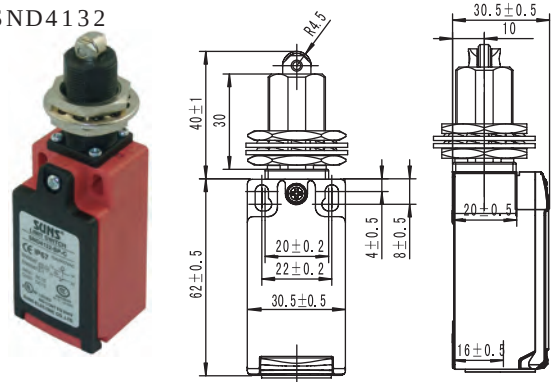
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY)

SND4131



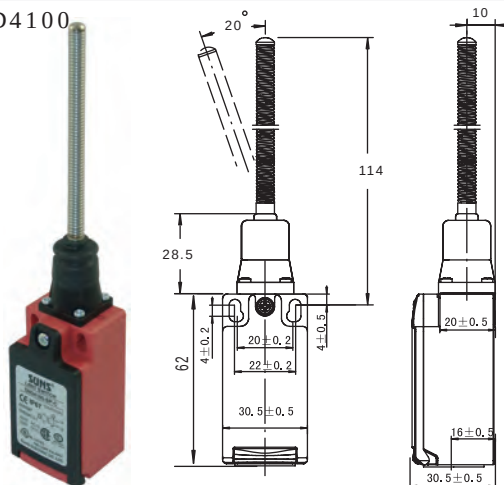
Order Code	Contact block		
SND4131-SP- _	SP		snap action 1NO+1NC
SND4131-SL- _	SL		slow action 1NO+1NC BBM
SND4131-SL1- _	SL1		slow action 1NO+1NC MBB
SND4131-SL2- _	SL2		slow action 2NC

SND4132



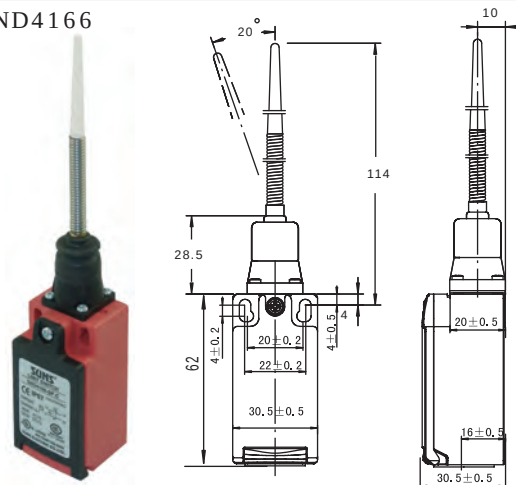
Order Code	Contact block		
SND4132-SP- _	SP		snap action 1NO+1NC
SND4132-SL- _	SL		slow action 1NO+1NC BBM
SND4132-SL1- _	SL1		slow action 1NO+1NC MBB
SND4132-SL2- _	SL2		slow action 2NC

SND4100



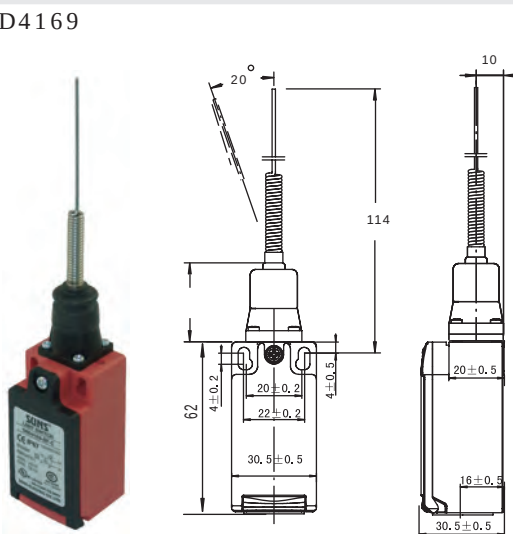
Order Code			
SND4100-SP- _	SP	snap action	1NO+1NC

SND4166



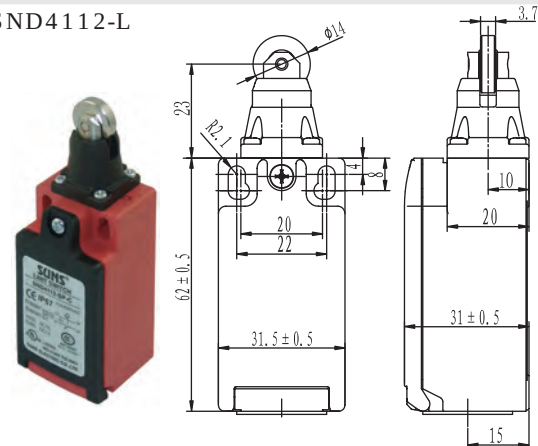
Order Code			
SND4166-SP- _	SP	snap action	1NO+1NC

SND4169



Order Code			
SND4169-SP- _	SP	snap action	1NO+1NC

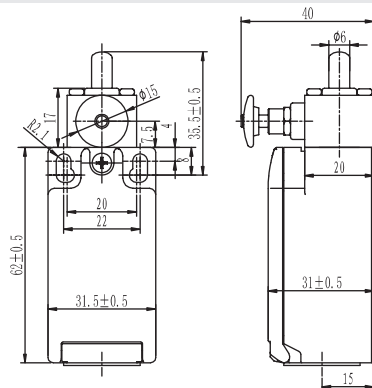
SND4112-L



Order Code	Contact block		
SND4112-SP- _L	SP		snap action 1NO+1NC
SND4112-SL- _L	SL		slow action 1NO+1NC BBM
SND4112-SL1- _L	SL1		slow action 1NO+1NC MBB
SND4112-SL2- _L	SL2		slow action 2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SND4111-R

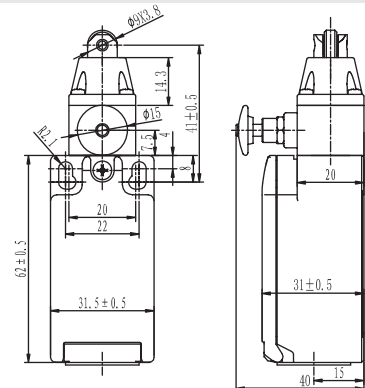


Order Code

Contact block

SND4111-SP- _R	SP	→	snap action	1NO+1NC
SND4111-SL- _R	SL	→	slow action	1NO+1NC BBM
SND4111-SL1- _R	SL1	→	slow action	1NO+1NC MBB
SND4111-SL2- _R	SL2	→	slow action	2NC

SND4112-R

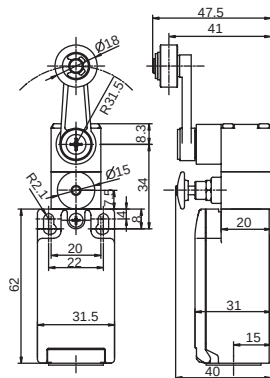


Order Code

Contact block

SND4112-SP- _R	SP	→	snap action	1NO+1NC
SND4112-SL- _R	SL	→	slow action	1NO+1NC BBM
SND4112-SL1- _R	SL1	→	slow action	1NO+1NC MBB
SND4112-SL2- _R	SL2	→	slow action	2NC

SND4104-R

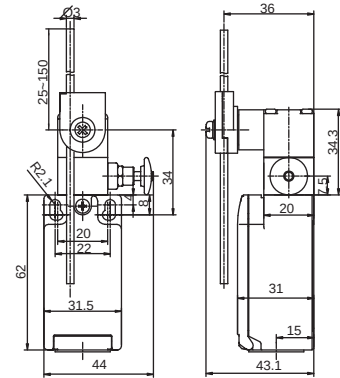


Order Code

Contact block

SND4104-SP- _R	SP	→	snap action	1NO+1NC
SND4104-SL- _R	SL	→	slow action	1NO+1NC BBM
SND4104-SL1- _R	SL1	→	slow action	1NO+1NC MBB
SND4104-SL2- _R	SL2	→	slow action	2NC

SND4107-R

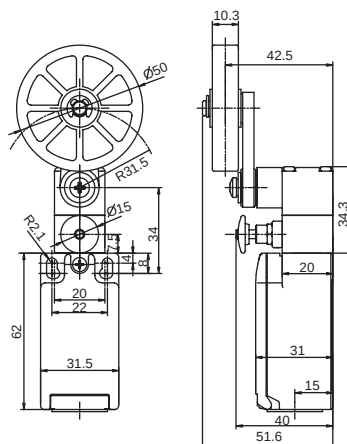


Order Code

Contact block

SND4107-SP- _R	SP	→	snap action	1NO+1NC
SND4107-SL- _R	SL	→	slow action	1NO+1NC BBM
SND4107-SL1- _R	SL1	→	slow action	1NO+1NC MBB
SND4107-SL2- _R	SL2	→	slow action	2NC

SND4114-R

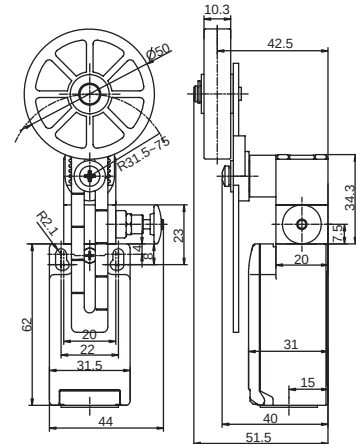


Order Code

Contact block

SND4114-SP- _R	SP	→	snap action	1NO+1NC
SND4114-SL- _R	SL	→	slow action	1NO+1NC BBM
SND4114-SL1- _R	SL1	→	slow action	1NO+1NC MBB
SND4114-SL2- _R	SL2	→	slow action	2NC

SND4118-R



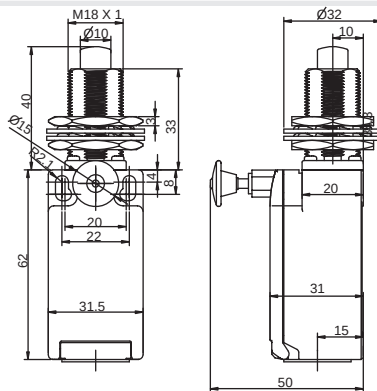
Order Code

Contact block

SND4118-SP- _R	SP	→	snap action	1NO+1NC
SND4118-SL- _R	SL	→	slow action	1NO+1NC BBM
SND4118-SL1- _R	SL1	→	slow action	1NO+1NC MBB
SND4118-SL2- _R	SL2	→	slow action	2NC

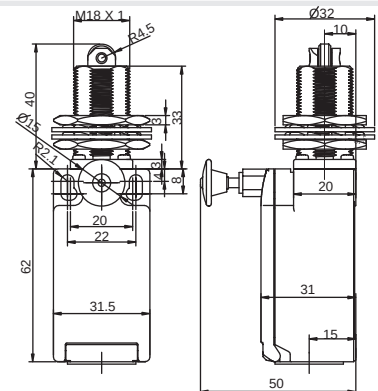
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SND4131-R



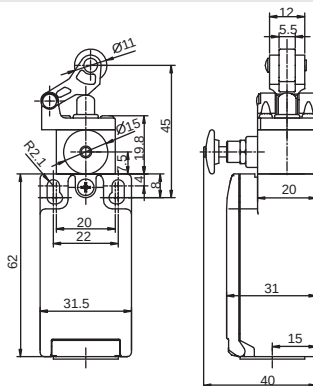
Order Code	Contact block		
SND4131-SP-_R	SP	→ snap action	1NO+1NC
SND4131-SL-_R	SL	→ slow action	1NO+1NC BBM
SND4131-SL1-_R	SL1	→ slow action	1NO+1NC MBB
SND4131-SL2-_R	SL2	→ slow action	2NC

SND4132-R



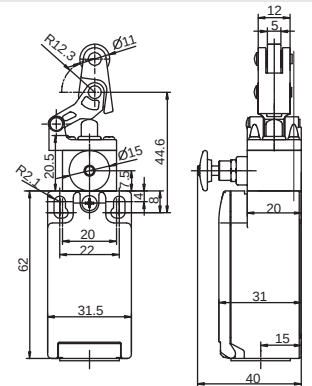
Order Code	Contact block		
SND4132-SP-_R	SP	→ snap action	1NO+1NC
SND4132-SL-_R	SL	→ slow action	1NO+1NC BBM
SND4132-SL1-_R	SL1	→ slow action	1NO+1NC MBB
SND4132-SL2-_R	SL2	→ slow action	2NC

SND4162-R



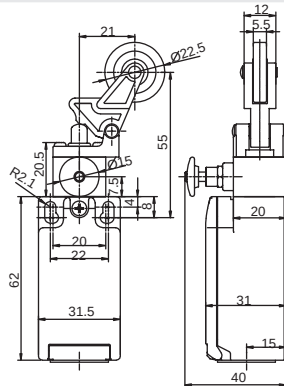
Order Code	Contact block		
SND4162-SP-_R	SP	→ snap action	1NO+1NC
SND4162-SL-_R	SL	→ slow action	1NO+1NC BBM
SND4162-SL1-_R	SL1	→ slow action	1NO+1NC MBB
SND4162-SL2-_R	SL2	→ slow action	2NC

SND4163-R



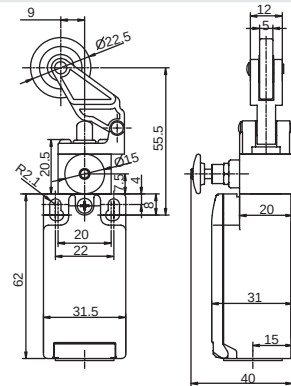
Order Code	Contact block		
SND4163-SP-_R	SP	→ snap action	1NO+1NC
SND4163-SL-_R	SL	→ slow action	1NO+1NC BBM
SND4163-SL1-_R	SL1	→ slow action	1NO+1NC MBB
SND4163-SL2-_R	SL2	→ slow action	2NC

SND4172-R



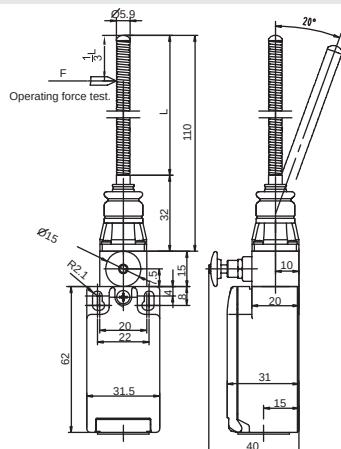
Order Code	Contact block		
SND4172-SP-_R	SP	→ snap action	1NO+1NC
SND4172-SL-_R	SL	→ slow action	1NO+1NC BBM
SND4172-SL1-_R	SL1	→ slow action	1NO+1NC MBB
SND4172-SL2-_R	SL2	→ slow action	2NC

SND4173-R

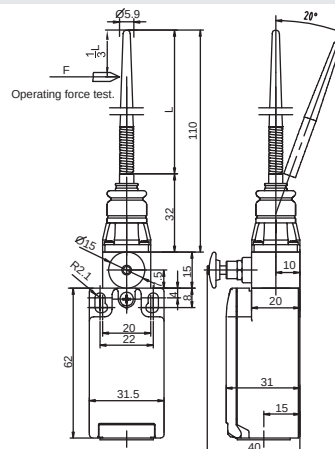


Order Code	Contact block		
SND4173-SP-_R	SP	→ snap action	1NO+1NC
SND4173-SL-_R	SL	→ slow action	1NO+1NC BBM
SND4173-SL1-_R	SL1	→ slow action	1NO+1NC MBB
SND4173-SL2-_R	SL2	→ slow action	2NC

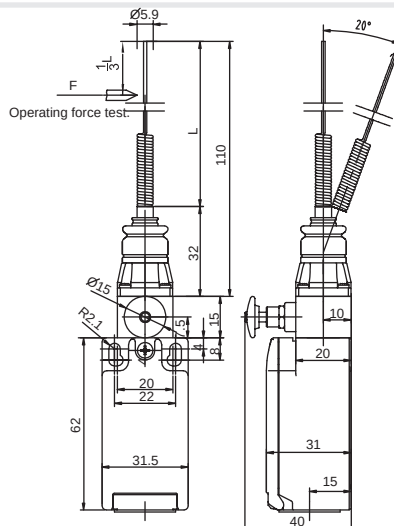
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE)
SND4 SERIES (SINGLE CONDUIT ENTRY WITH RESET)



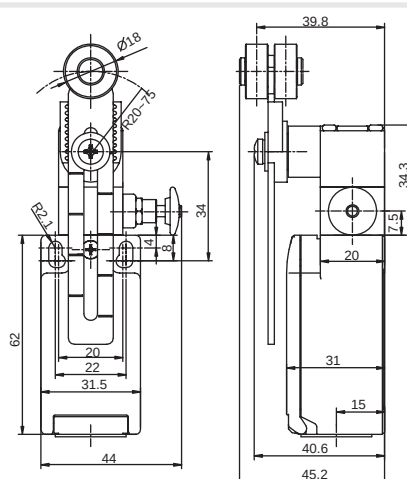
SND4100-SP-	-R	SP	snap action	1NO+1NC
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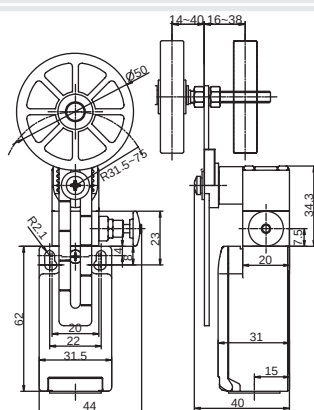
SND4166-SP-	-R	SP	snap action	1NO+1NC
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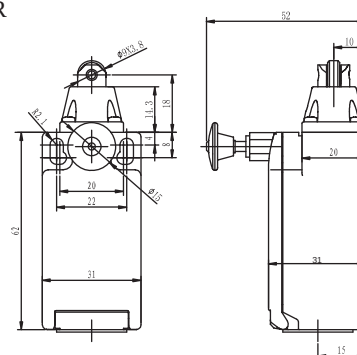
SND4169-SP-	-R	SP	snap action	1NO+1NC
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SND4108-SP- _R	SP		snap action	1NO+1NC	
SND4108-SL- _R	SL		slow action	1NO+1NC	BBM
SND4108-SL1- _R	SL1		slow action	1NO+1NC	MBB
SND4108-SL2- R	SL2		slow action	2NC	



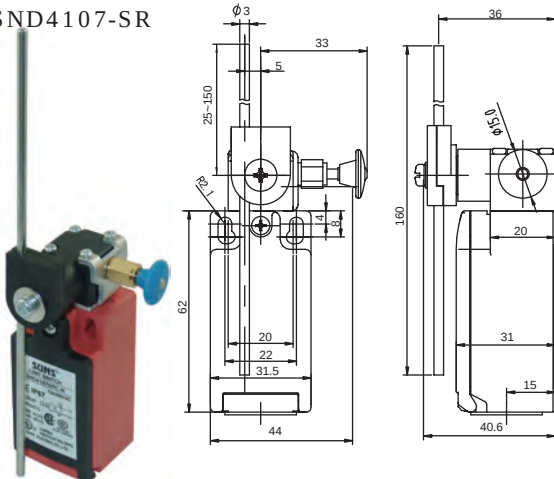
Order Code	Contact block			
SND4118-SP- R-ADJ	SP		snap action	1NO+1NC
SND4118-SL-R-ADJ	SL		slow action	1NO+1NC BBM
SND4118-SL1-R-ADJ	SL1		slow action	1NO+1NC MBB
SND4118-SL2-R-ADJ	SL2		slow action	2NC



Order Code	Contact block			
SND4112-SP-SR	SP		snap action	1NO+1NC
SND4112-SL-SR	SL		slow action	1NO+1NC
SND4112-SL1-SR	SL1		slow action	1NO+1NC
SND4112-SL2-SR	SL2		slow action	2NC

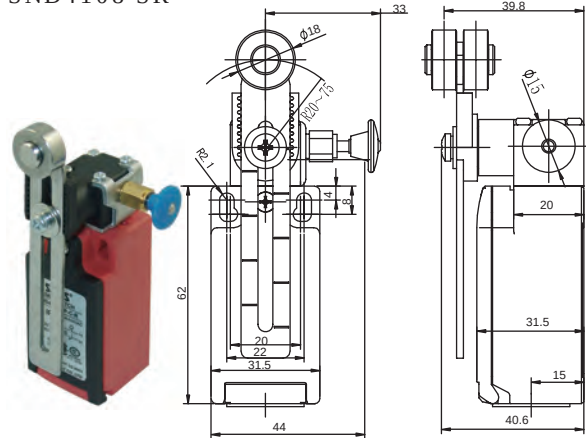
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 TYPE) SND4 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SND4107-SR



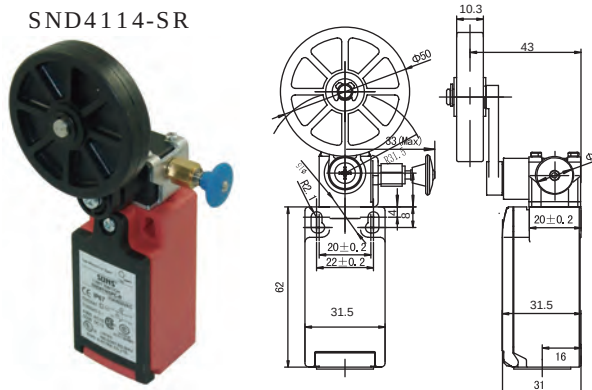
Order Code	Contact block		
SND4107-SP- _SR	SP	→ snap action	1NO+1NC
SND4107-SL- _SR	SL	→ slow action	1NO+1NC BBM
SND4107-SL1- _SR	SL1	→ slow action	1NO+1NC MBB
SND4107-SL2- _SR	SL2	→ slow action	2NC

SND4108-SR



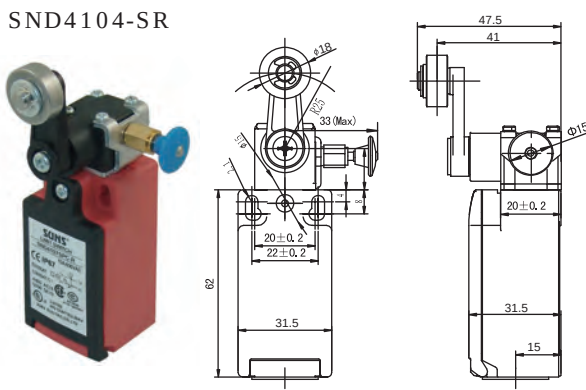
Order Code	Contact block		
SND4108-SP- _SR	SP	→ snap action	1NO+1NC
SND4108-SL- _SR	SL	→ slow action	1NO+1NC BBM
SND4108-SL1- _SR	SL1	→ slow action	1NO+1NC MBB
SND4108-SL2- _SR	SL2	→ slow action	2NC

SND4114-SR



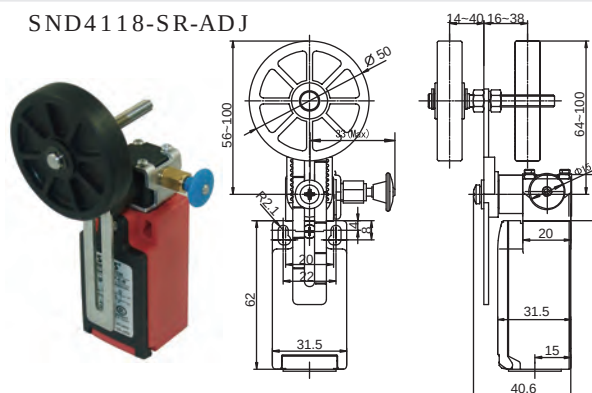
Order Code	Contact block		
SND4114-SP- _SR	SP	→ snap action	1NO+1NC
SND4114-SL- _SR	SL	→ slow action	1NO+1NC BBM
SND4114-SL1- _SR	SL1	→ slow action	1NO+1NC MBB
SND4114-SL2- _SR	SL2	→ slow action	2NC

SND4104-SR



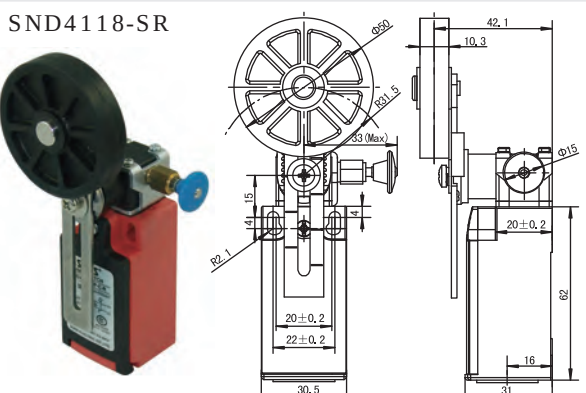
Order Code	Contact block		
SND4104-SP- _SR	SP	→ snap action	1NO+1NC
SND4104-SL- _SR	SL	→ slow action	1NO+1NC BBM
SND4104-SL1- _SR	SL1	→ slow action	1NO+1NC MBB
SND4104-SL2- _SR	SL2	→ slow action	2NC

SND4118-SR-ADJ



Order Code	Contact block		
SND4118-SP- SR-ADJ	SP	→ snap action	1NO+1NC
SND4118-SL-SR-ADJ	SL	→ slow action	1NO+1NC BBM
SND4118-SL1-SR-ADJ	SL1	→ slow action	1NO+1NC MBB
SND4118-SL2-SR-ADJ	SL2	→ slow action	2NC

SND4118-SR



Order Code	Contact block		
SND4118-SP- _SR	SP	→ snap action	1NO+1NC
SND4118-SL- _SR	SL	→ slow action	1NO+1NC BBM
SND4118-SL1- _SR	SL1	→ slow action	1NO+1NC MBB
SND4118-SL2- _SR	SL2	→ slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES DT4 CONNECTOR LIMIT SWITCHES SN(D)4 SN(D)6 SERIES

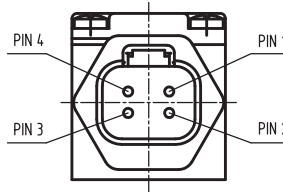
Features

- DT4 Connector reducing installation time
- Eliminating parts normally associated with the assembly of a pigtail connector
- O-ring Seal for IP67 protection
- Earth grounding surface on same level as switching
- Easily interchangeable contact block
- Fine adjustment of switching point via adjusting screw
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions

Specifications

Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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) with no icing
Humidity	< 95%RH
Degree of Protection	IP67

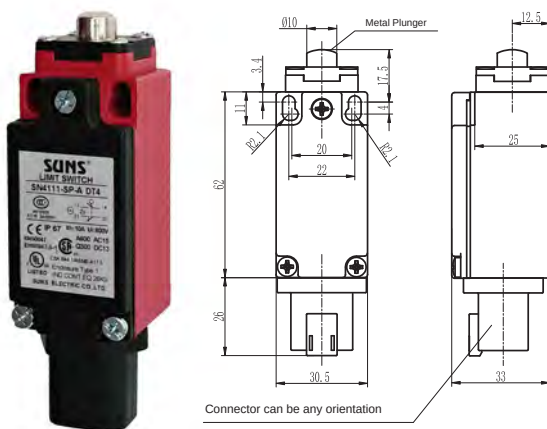
Connector* Picture and Wiring:



PIN #		TERMINAL BLOCK
1	WIRED TO	14
2		22
3		21
4		13

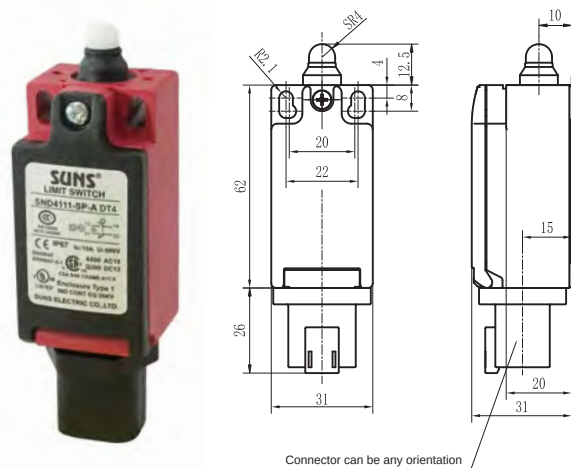
*Compatible with all SUNS SN(D)4 SN(D)6 Limit Switches
To order, just add DT4 as the suffix to the desired model

SN4111 DT4



Order Code	Contact block			
SN4111-SP-A DT4	SP		snap action	1NO+1NC
SN4111-SL-A DT4	SL		slow action	1NO+1NC BBM
SN4111-SL1-A DT4	SL1		slow action	1NO+1NC MBB
SN4111-SL2-A DT4	SL2		slow action	2NC

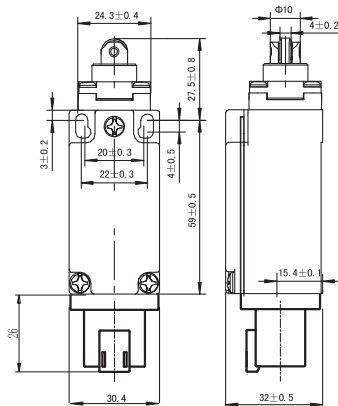
SND4111 DT4



Order Code	Contact block			
SND4111-SP-A DT4	SP		snap action	1NO+1NC
SND4111-SL-A DT4	SL		slow action	1NO+1NC BBM
SND4111-SL1-A DT4	SL1		slow action	1NO+1NC MBB
SND4111-SL2-A DT4	SL2		slow action	2NC

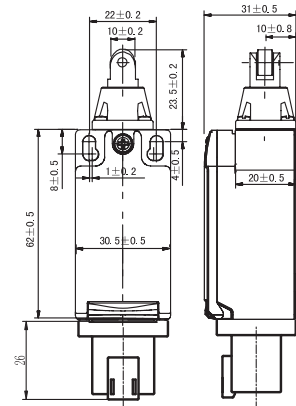
GLOBAL STYLE SAFETY LIMIT SWITCHES DT4 CONNECTOR LIMIT SWITCHES SN(D)4 SN(D)6 SERIES

SN4112 DT4



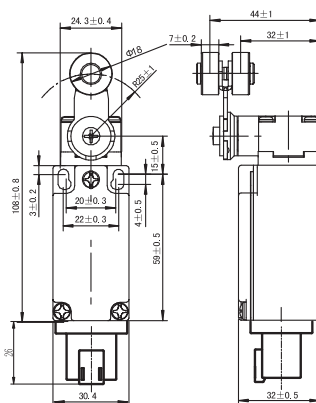
Order Code	Contact block			
SN4112-SP-A DT4	SP	⊕	snap action	1NO+1NC
SN4112-SL-A DT4	SL	⊕	slow action	1NO+1NC BBM
SN4112-SL1-A DT4	SL1	⊕	slow action	1NO+1NC MBB
SN4112-SL2-A DT4	SL2	⊕	slow action	2NC

SND4112 DT4



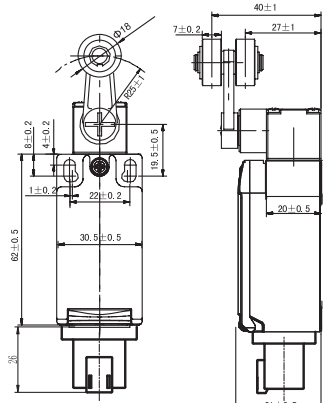
Order Code	Contact block			
SND4112-SP-A DT4	SP	⊕	snap action	1NO+1NC
SND4112-SL-A DT4	SL	⊕	slow action	1NO+1NC BBM
SND4112-SL1-A DT4	SL1	⊕	slow action	1NO+1NC MBB
SND4112-SL2-A DT4	SL2	⊕	slow action	2NC

SN4104 DT4



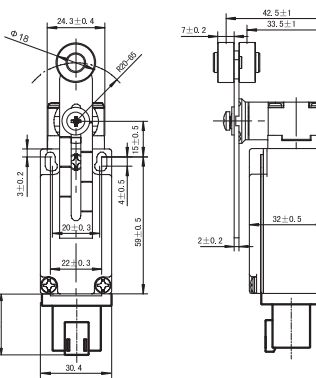
Order Code	Contact block			
SN4104-SP-A DT4	SP	⊕	snap action	1NO+1NC
SN4104-SL-A DT4	SL	⊕	slow action	1NO+1NC BBM
SN4104-SL1-A DT4	SL1	⊕	slow action	1NO+1NC MBB
SN4104-SL2-A DT4	SL2	⊕	slow action	2NC

SND4104 DT4



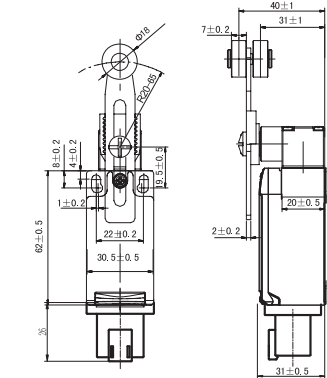
Order Code	Contact block			
SND4104-SP-A DT4	SP	⊕	snap action	1NO+1NC
SND4104-SL-A DT4	SL	⊕	slow action	1NO+1NC BBM
SND4104-SL1-A DT4	SL1	⊕	slow action	1NO+1NC MBB
SND4104-SL2-A DT4	SL2	⊕	slow action	2NC

SN4108 DT4



Order Code	Contact block			
SN4108-SP-A DT4	SP	⊕	snap action	1NO+1NC
SN4108-SL-A DT4	SL	⊕	slow action	1NO+1NC BBM
SN4108-SL1-A DT4	SL1	⊕	slow action	1NO+1NC MBB
SN4108-SL2-A DT4	SL2	⊕	slow action	2NC

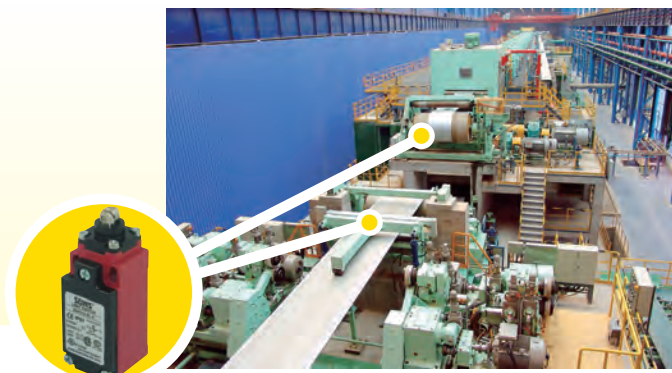
SND4108 DT4



Order Code	Contact block			
SND4108-SP-A DT4	SP	⊕	snap action	1NO+1NC
SND4108-SL-A DT4	SL	⊕	slow action	1NO+1NC BBM
SND4108-SL1-A DT4	SL1	⊕	slow action	1NO+1NC MBB
SND4108-SL2-A DT4	SL2	⊕	slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY)

Our Applications Engineers evaluate systems' compatibility, installation, maintenance, and reliability when reviewing control solutions.



Features

- Zinc die cast body
- Earth grounding surface on same level as switching
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50047 standard

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F) with no icing
Humidity	< 95%RH
Weight	200-250g
Degree of Protection	IP67

Selection Guide:

SN41

Body
Styles

04

Head Styles

SP

- SP: 1NO/1NC Snap action
- SPT: 2NO/2NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action
- SL4: 3NC Slow Action
- SL5: 3NO Slow Action
- SL6: BBM 2NC/1NO Slow Action changeover
- SL7: MBB 2NC/1NO Slow Action Overlapping
- SL8: BBM 2NO/1NC Slow Action changeover
- SL9: MBB 2NO/1NC Slow Action Overlapping

C

Conduits

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

R

- Blank
- R: with Reset

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE)

SN4 SERIES (SINGLE CONDUIT ENTRY)

Available contact blocks and travel diagrams

ON OFF

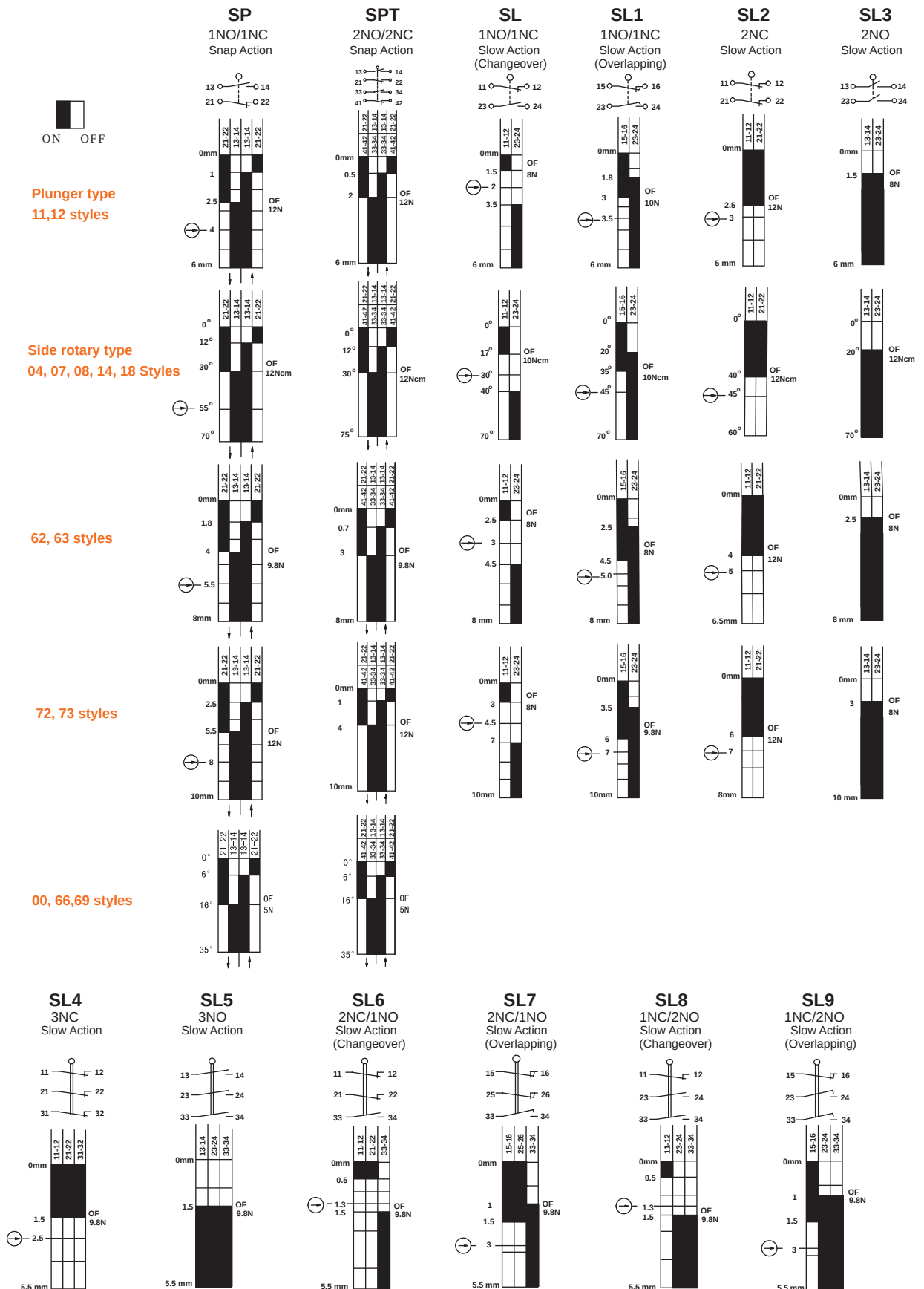
Plunger type
11,12 styles

Side rotary type
04, 07, 08, 14, 18 Styles

62, 63 styles

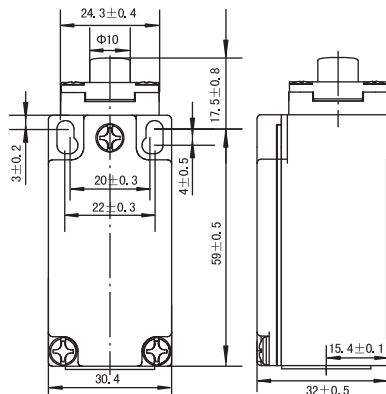
72, 73 styles

00, 66,69 styles



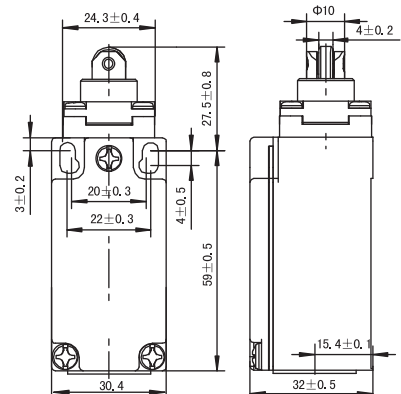
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY)

SN4111



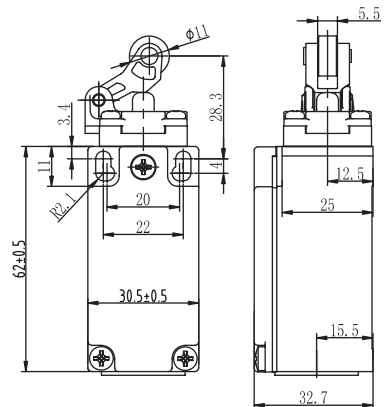
Order Code	Contact block			
SN4111-SP- _	SP	→	snap action	1NO+1NC
SN4111-SL- _	SL	→	slow action	1NO+1NC BBM
SN4111-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4111-SL2- _	SL2	→	slow action	2NC

SN4112



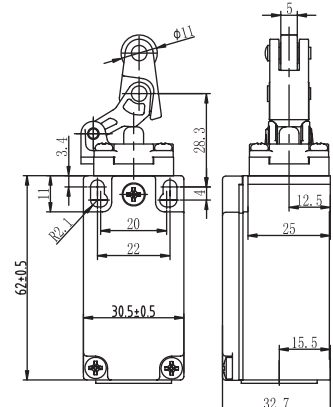
Order Code	Contact block			
SN4112-SP- _	SP	→	snap action	1NO+1NC
SN4112-SL- _	SL	→	slow action	1NO+1NC BBM
SN4112-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4112-SL2- _	SL2	→	slow action	2NC

SN4162



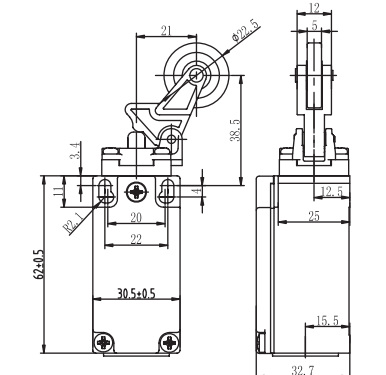
Order Code	Contact block			
SN4162-SP- _	SP	→	snap action	1NO+1NC
SN4162-SL- _	SL	→	slow action	1NO+1NC BBM
SN4162-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4162-SL2- _	SL2	→	slow action	2NC

SN4163



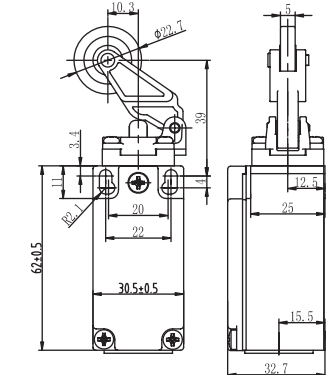
Order Code	Contact block			
SN4163-SP- _	SP	→	snap action	1NO+1NC
SN4163-SL- _	SL	→	slow action	1NO+1NC BBM
SN4163-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4163-SL2- _	SL2	→	slow action	2NC

SN4172



Order Code	Contact block			
SN4172-SP- _	SP	→	snap action	1NO+1NC
SN4172-SL- _	SL	→	slow action	1NO+1NC BBM
SN4172-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4172-SL2- _	SL2	→	slow action	2NC

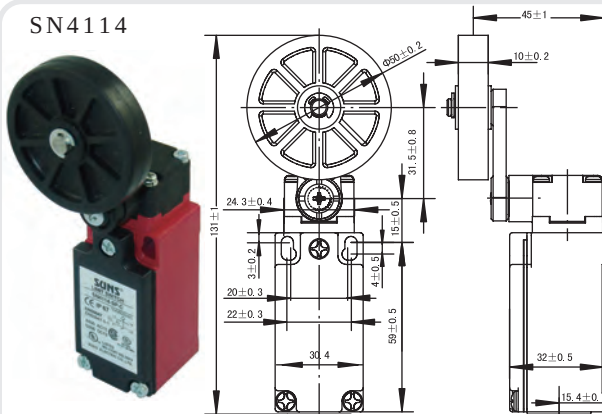
SN4173



Order Code	Contact block			
SN4173-SP- _	SP	→	snap action	1NO+1NC
SN4173-SL- _	SL	→	slow action	1NO+1NC BBM
SN4173-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4173-SL2- _	SL2	→	slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY)

SN4114

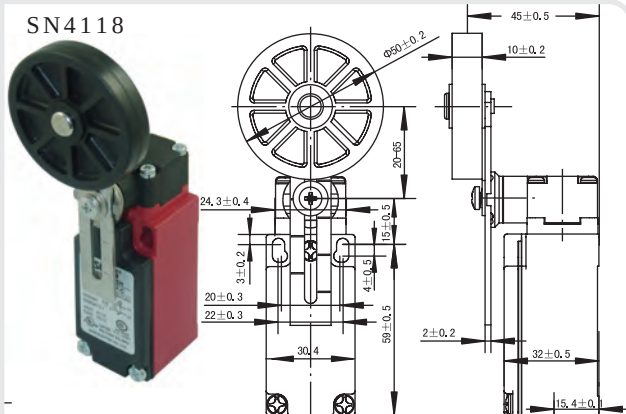


Order Code

Contact block

SN4114-SP- _	SP	→	snap action	1NO+1NC
SN4114-SL- _	SL	→	slow action	1NO+1NC BBM
SN4114-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4114-SL2- _	SL2	→	slow action	2NC

SN4118

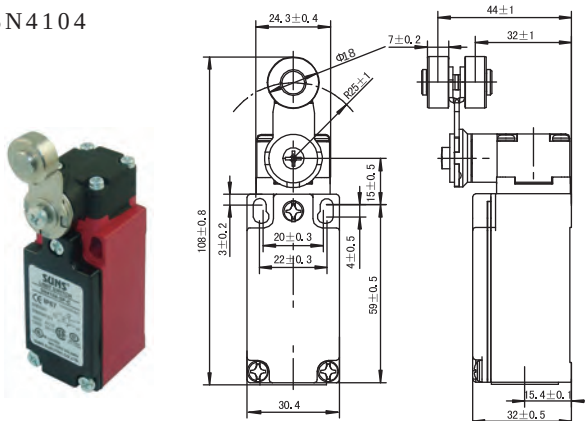


Order Code

Contact block

SN4118-SP- _	SP	→	snap action	1NO+1NC
SN4118-SL- _	SL	→	slow action	1NO+1NC BBM
SN4118-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4118-SL2- -N	SL2	→	slow action	2NC

SN4104

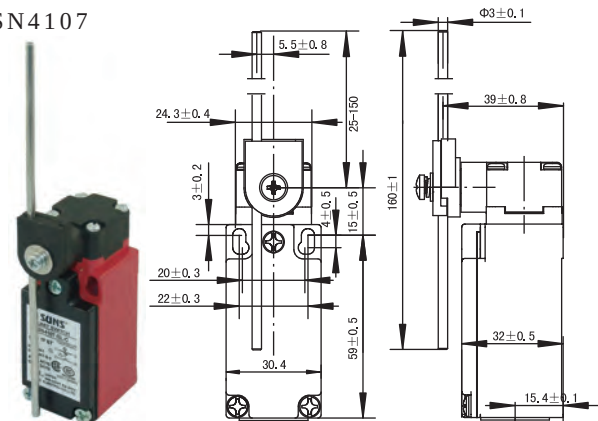


Order Code

Contact block

SN4104-SP- _	SP	→	snap action	1NO+1NC
SN4104-SL- _	SL	→	slow action	1NO+1NC BBM
SN4104-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4104-SL2- _	SL2	→	slow action	2NC

SN4107

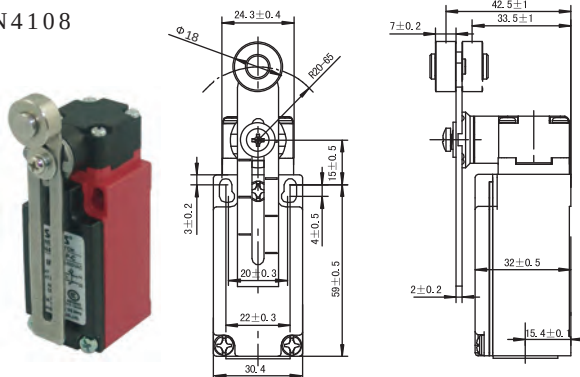


Order Code

Contact block

SN4107-SP- _	SP	→	snap action	1NO+1NC
SN4107-SL- _	SL	→	slow action	1NO+1NC BBM
SN4107-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4107-SL2- _	SL2	→	slow action	2NC

SN4108



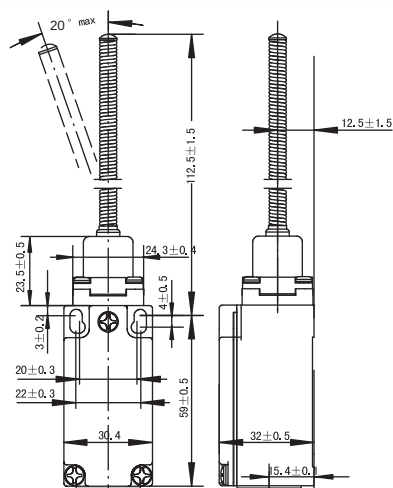
Order Code

Contact block

SN4108-SP- _	SP	→	snap action	1NO+1NC
SN4108-SL- _	SL	→	slow action	1NO+1NC BBM
SN4108-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN4108-SL2- _	SL2	→	slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY)

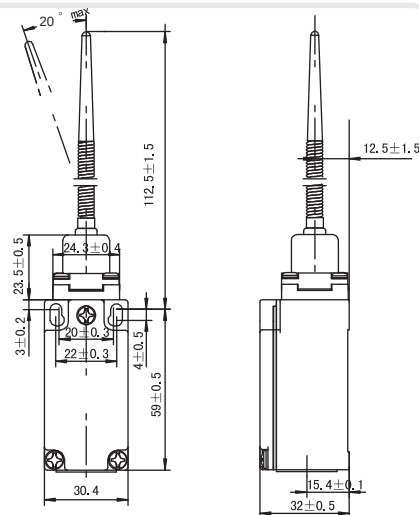
SN4100



Order Code

SN4100-SP- _ SP snap action 1NO+1NC

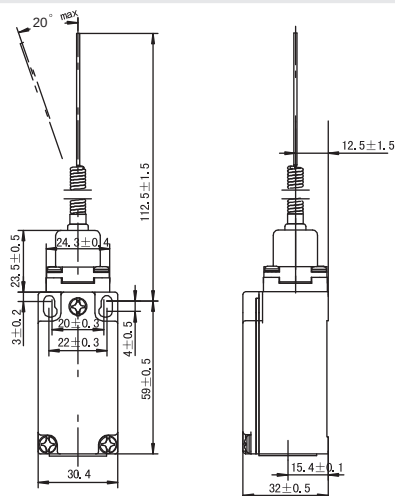
SN4166



Order Code

SN4166-SP- _ SP snap action 1NO+1NC

SN4169

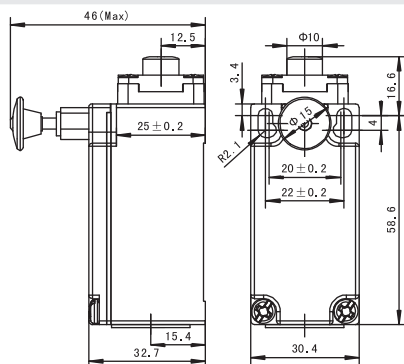


Order Code

SN4169-SP- _ SP snap action 1NO+1NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SN4111-R

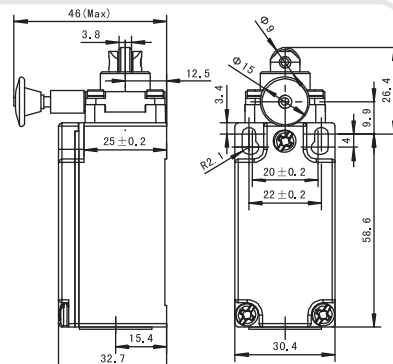


Order Code

Contact block

SN4111-SP-_R	SP	→	snap action	1NO+1NC
SN4111-SL-_R	SL	→	slow action	1NO+1NC BBM
SN4111-SL1-_R	SL1	→	slow action	1NO+1NC MBB
SN4111-SL2-_R	SL2	→	slow action	2NC

SN4112-R

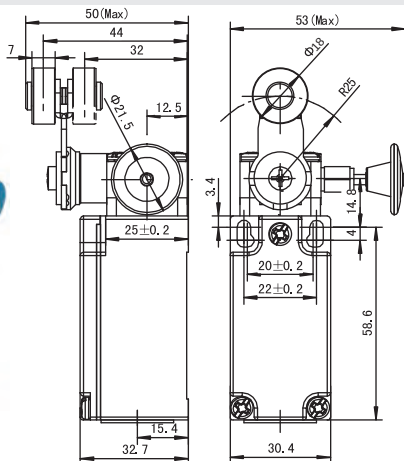


Order Code

Contact block

SN4112-SP-_R	SP	→	snap action	1NO+1NC
SN4112-SL-_R	SL	→	slow action	1NO+1NC BBM
SN4112-SL1-_R	SL1	→	slow action	1NO+1NC MBB
SN4112-SL2-_R	SL2	→	slow action	2NC

SN4104-R

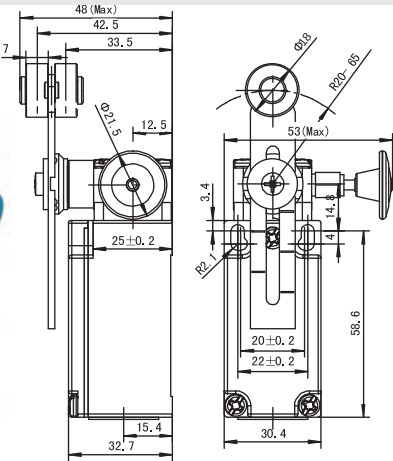


Order Code

Contact block

SN4104-SP-_R	SP	→	snap action	1NO+1NC
SN4104-SL-_R	SL	→	slow action	1NO+1NC BBM
SN4104-SL1-_R	SL1	→	slow action	1NO+1NC MBB
SN4104-SL2-_R	SL2	→	slow action	2NC

SN4108-R

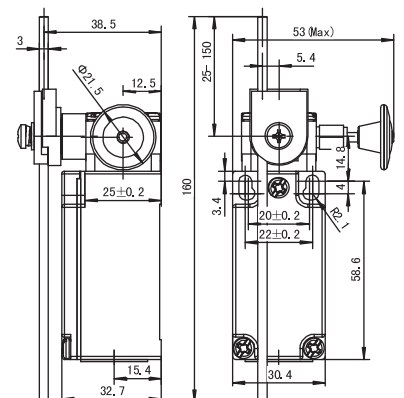


Order Code

Contact block

SN4108-SP-_R	SP	→	snap action	1NO+1NC
SN4108-SL-_R	SL	→	slow action	1NO+1NC BBM
SN4108-SL1-_R	SL1	→	slow action	1NO+1NC MBB
SN4108-SL2-_R	SL2	→	slow action	2NC

SN4107-R



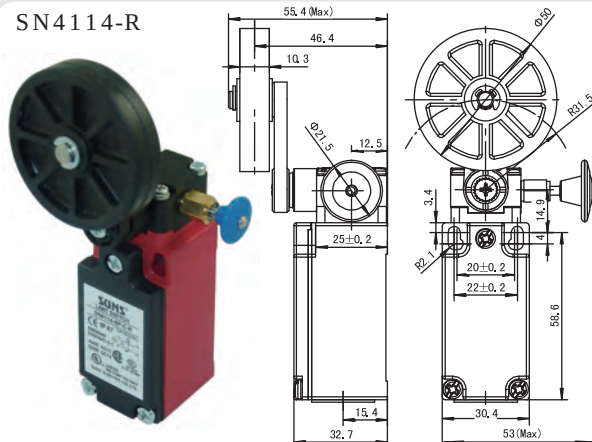
Order Code

Contact block

SN4107-SP-_R	SP	→	snap action	1NO+1NC
SN4107-SL-_R	SL	→	slow action	1NO+1NC BBM
SN4107-SL1-_R	SL1	→	slow action	1NO+1NC MBB
SN4107-SL2-_R	SL2	→	slow action	2NC

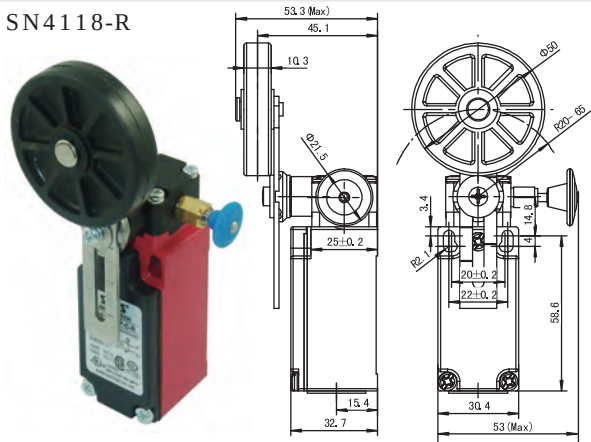
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 TYPE) SN4 SERIES (SINGLE CONDUIT ENTRY WITH RESET)

SN4114-R



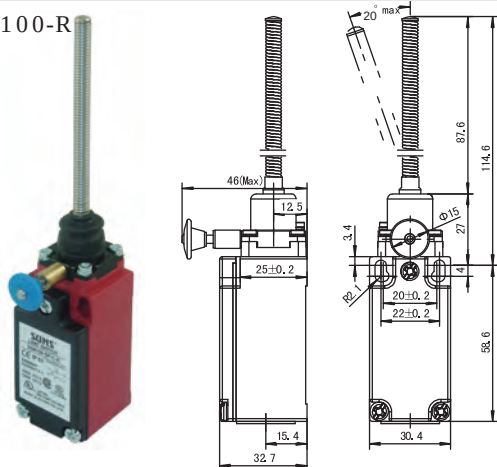
Order Code	Contact block			
SN4114-SP-_R	SP		snap action	1NO+1NC
SN4114-SL-_R	SL		slow action	1NO+1NC BBM
SN4114-SL1-_R	SL1		slow action	1NO+1NC MBB
SN4114-SL2-_R	SL2		slow action	2NC

SN4118-R



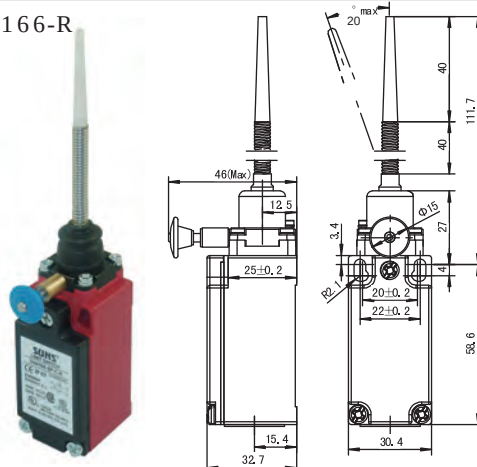
Order Code	Contact block			
SN4118-SP-_R	SP		snap action	1NO+1NC
SN4118-SL-_R	SL		slow action	1NO+1NC BBM
SN4118-SL1-_R	SL1		slow action	1NO+1NC MBB
SN4118-SL2-_R	SL2		slow action	2NC

SN4100-R



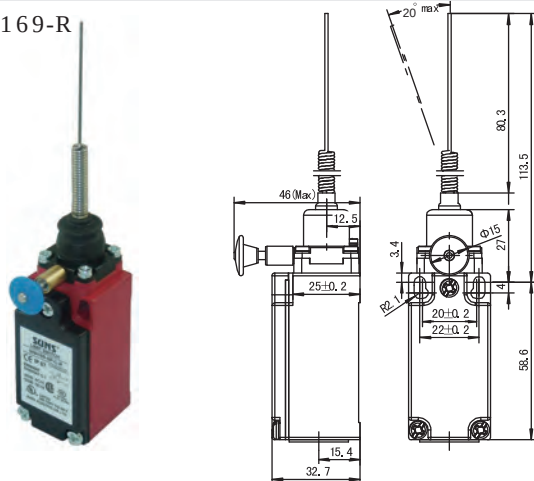
Order Code				
SN4100-SP-_R	SP	snap action	1NO+1NC	

SN4166-R



Order Code				
SN4166-SP-_R	SP	snap action	1NO+1NC	

SN4169-R



Order Code				
SN4169-SP-_R	SP	snap action	1NO+1NC	

GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 COMPATIBLE) SND2 SERIES (2 - CONDUIT ENTRIES)

*Such a reasonable cost, more
and more enterprises choose SUNS
for their products*



Features

- Glass fiber reinforced plastic body
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50047 standard

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	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 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F) with no icing
Humidity	< 95%RH
Weight	59-109g
Degree of Protection	IP67

Selection Guide:

SND21	04	SP	C	-	R
Body Styles	Head Styles		Conduits		
		SP: 1NO/1NC Snap action			
		SPT: 2NO/2NC Snap action			
		SL: BBM 1NO/1NC Slow Action changeover			
		SL1: MBB 1NO/1NC Slow Action Overlapping	A: 1/2"NPT		
		SL2: 2NC Slow Action	B: PG13.5		
		SL3: 2NO Slow Action	C: M20		
		SL4: 3NC Slow Action	D: M16		
		SL5: 3NO Slow Action	B1: PG11		
		SL6: BBM 2NC/1NO Slow Action changeover			
		SL7: MBB 2NC/1NO Slow Action Overlapping			
		SL8: BBM 2NO/1NC Slow Action changeover			
		SL9: MBB 2NO/1NC Slow Action Overlapping			
					Blank
					R: with Reset

GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 COMPATIBLE)

SND2 SERIES (2 - CONDUIT ENTRIES)

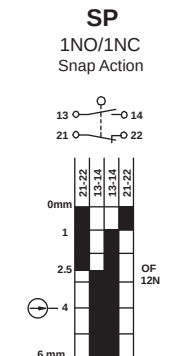
Available contact blocks and travel diagrams

SP
1NO/1NC
Snap Action

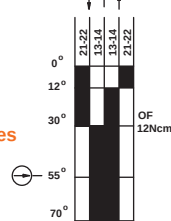


ON OFF

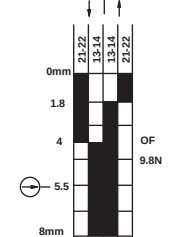
Plunger type
11,12,31,32 styles



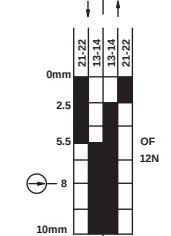
Side rotary type
04, 07, 08, 14, 18 Styles



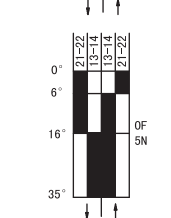
62, 63 styles



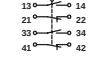
72, 73 styles



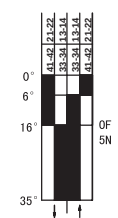
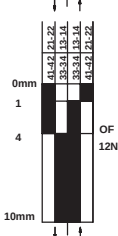
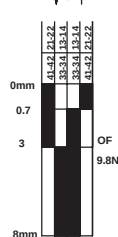
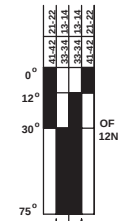
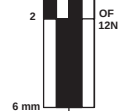
00, 66, 69 styles



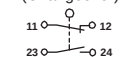
SPT
2NO/2NC
Snap Action



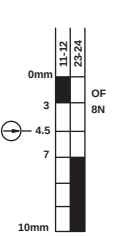
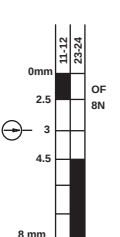
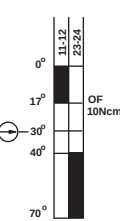
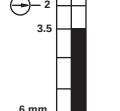
OF 12N



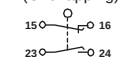
SL
1NO/1NC
Slow Action
(Changeover)



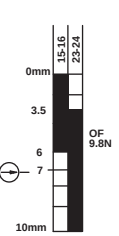
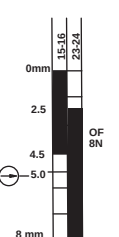
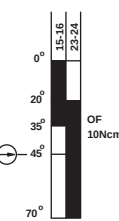
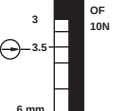
OF 8N



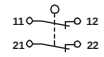
SL1
1NO/1NC
Slow Action
(Overlapping)



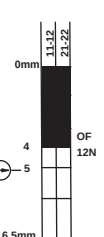
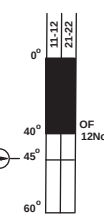
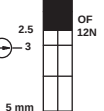
OF 10N



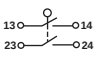
SL2
2NC
Slow Action



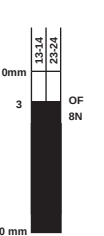
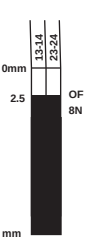
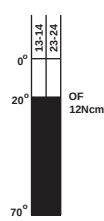
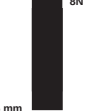
OF 12N



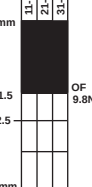
SL3
2NO
Slow Action



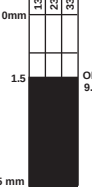
OF 8N



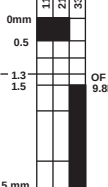
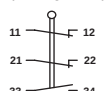
SL4
3NC
Slow Action



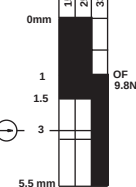
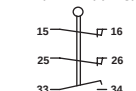
SL5
3NO
Slow Action



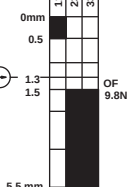
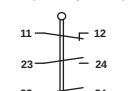
SL6
2NC/1NO
Slow Action
(Changeover)



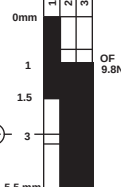
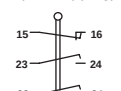
SL7
2NC/1NO
Slow Action
(Overlapping)



SL8
1NC/2NO
Slow Action
(Changeover)

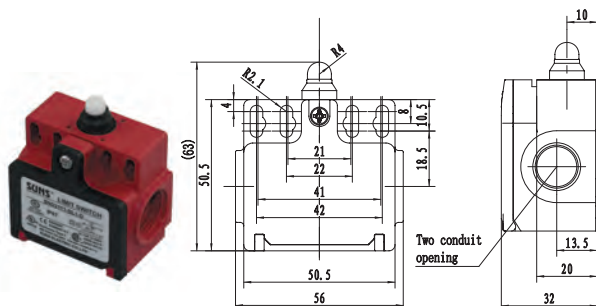


SL9
1NC/2NO
Slow Action
(Overlapping)



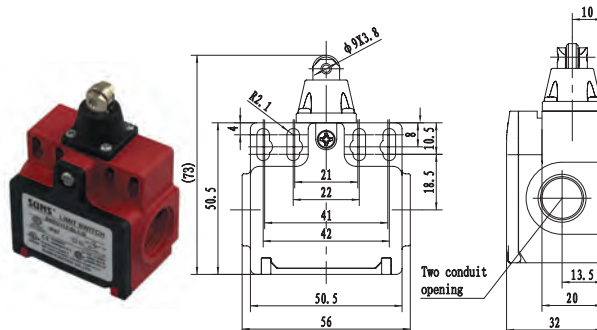
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 COMPATIBLE) SND2 SERIES (2 - CONDUIT ENTRIES)

SND2111



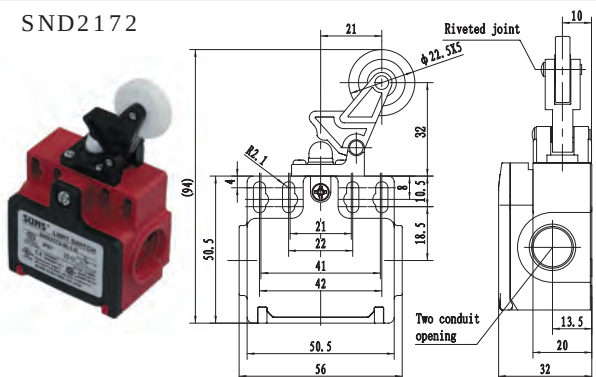
Order Code	Contact block
SND2111-SP- _	SP  snap action 1NO+1NC
SND2111-SL- _	SL  slow action 1NO+1NC BBM
SND2111-SL1- _	SL1  slow action 1NO+1NC MBB
SND2111-SL2- _	SL2  slow action 2NC

SND2112



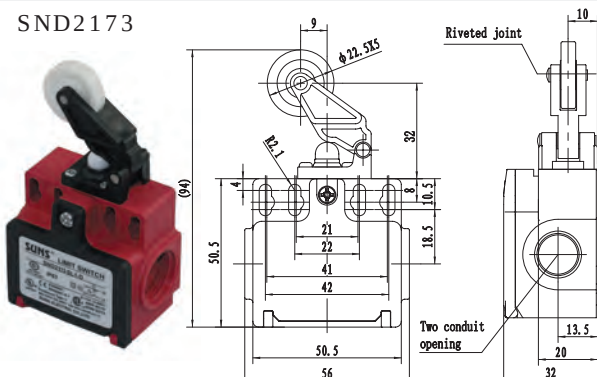
Order Code	Contact block
SND2112-SP- _	SP  snap action 1NO+1NC
SND2112-SL- _	SL  slow action 1NO+1NC BBM
SND2112-SL1- _	SL1  slow action 1NO+1NC MBB
SND2112-SL2- _	SL2  slow action 2NC

SND2172



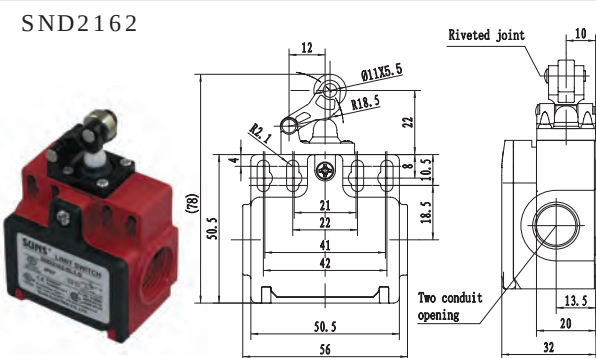
Order Code	Contact block
SND2172-SP- _	SP  snap action 1NO+1NC
SND2172-SL- _	SL  slow action 1NO+1NC BBM
SND2172-SL1- _	SL1  slow action 1NO+1NC MBB
SND2172-SL2- _	SL2  slow action 2NC

SND2173



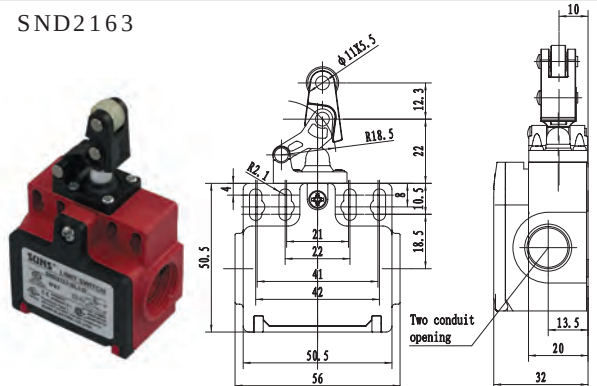
Order Code	Contact block
SND2173-SP- _	SP  snap action 1NO+1NC
SND2173-SL- _	SL  slow action 1NO+1NC BBM
SND2173-SL1- _	SL1  slow action 1NO+1NC MBB
SND2173-SL2- _	SL2  slow action 2NC

SND2162



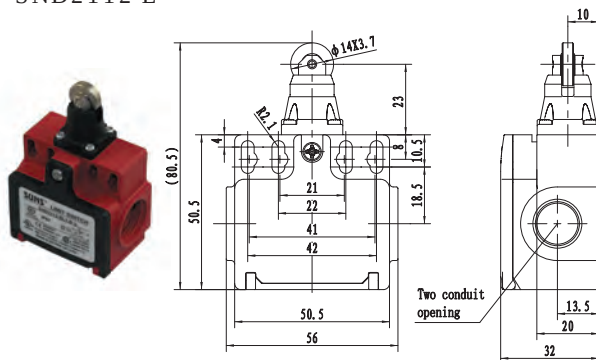
Order Code	Contact block
SND2162-SP- _	SP  snap action 1NO+1NC
SND2162-SL- _	SL  slow action 1NO+1NC BBM
SND2162-SL1- _	SL1  slow action 1NO+1NC MBB
SND2162-SL2- _	SL2  slow action 2NC

SND2163



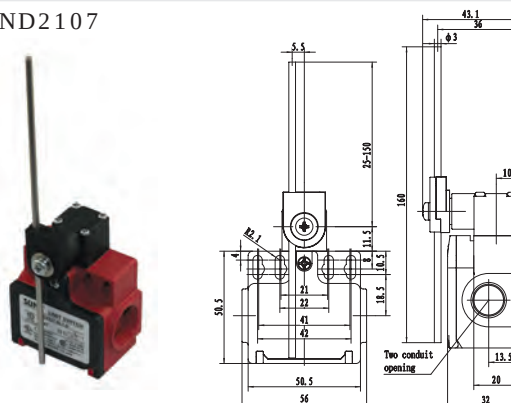
Order Code	Contact block
SND2163-SP- _	SP  snap action 1NO+1NC
SND2163-SL- _	SL  slow action 1NO+1NC BBM
SND2163-SL1- _	SL1  slow action 1NO+1NC MBB
SND2163-SL2- _	SL2  slow action 2NC

SND2112-L



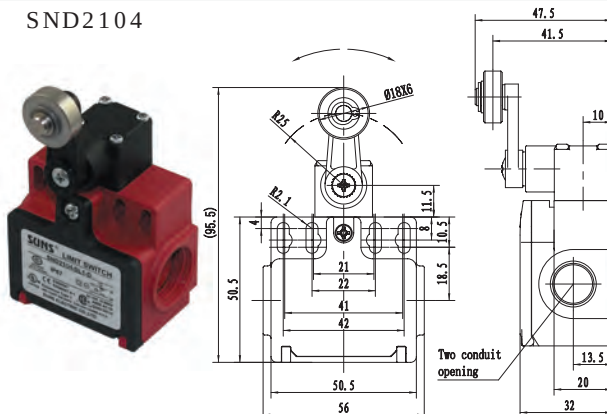
Order Code	Contact block			
SND2112-SP- _L	SP		snap action	1NO+1NC
SND2112-SL- _L	SL		slow action	1NO+1NC BBM
SND2112-SL1- _L	SL1		slow action	1NO+1NC MBB
SND2112-SL2- _L	SL2		slow action	2NC

SND2107



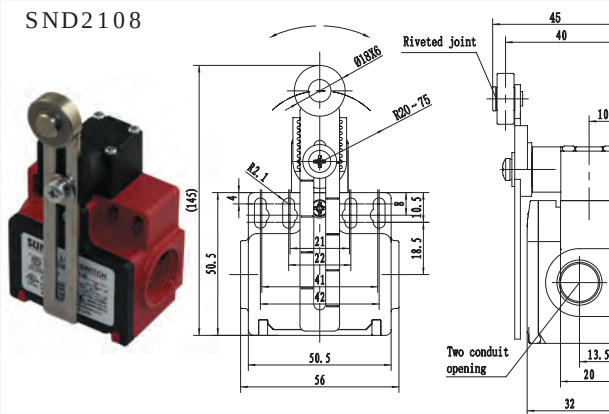
Order Code	Contact block			
SND2107-SP- _	SP		snap action	1NO+1NC
SND2107-SL- _	SL		slow action	1NO+1NC BBM
SND2107-SL1- _	SL1		slow action	1NO+1NC MBB
SND2107-SL2- _	SL2		slow action	2NC

SND2104



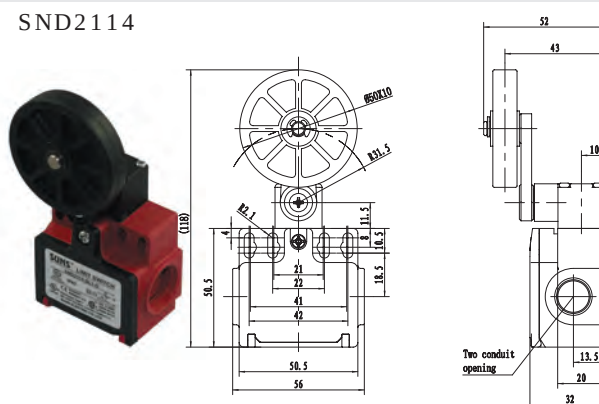
Order Code	Contact block			
SND2104-SP- _	SP		snap action	1NO+1NC
SND2104-SL- _	SL		slow action	1NO+1NC BBM
SND2104-SL1- _	SL1		slow action	1NO+1NC MBB
SND2104-SL2- _	SL2		slow action	2NC

SND2108



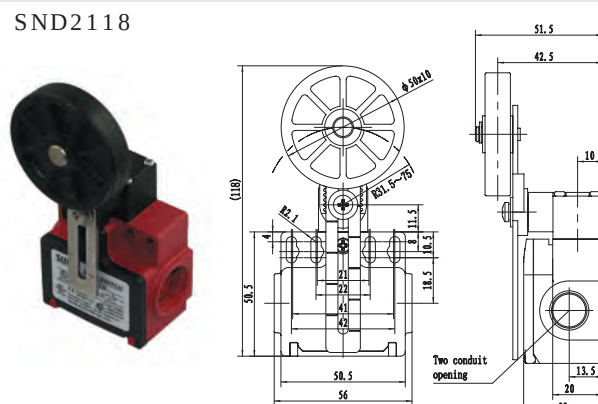
Order Code	Contact block			
SND2108-SP- _	SP		snap action	1NO+1NC
SND2108-SL- _	SL		slow action	1NO+1NC BBM
SND2108-SL1- _	SL1		slow action	1NO+1NC MBB
SND2108-SL2- _	SL2		slow action	2NC

SND2114



Order Code	Contact block			
SND2114-SP- _	SP		snap action	1NO+1NC
SND2114-SL- _	SL		slow action	1NO+1NC BBM
SND2114-SL1- _	SL1		slow action	1NO+1NC MBB
SND2114-SL2- _	SL2		slow action	2NC

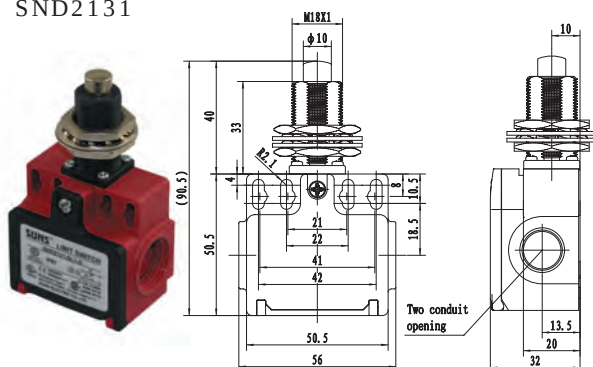
SND2118



Order Code	Contact block			
SND2118-SP- _	SP		snap action	1NO+1NC
SND2118-SL- _	SL		slow action	1NO+1NC BBM
SND2118-SL1- _	SL1		slow action	1NO+1NC MBB
SND2118-SL2- _	SL2		slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 COMPATIBLE) SND2 SERIES (2 - CONDUIT ENTRIES)

SND2131

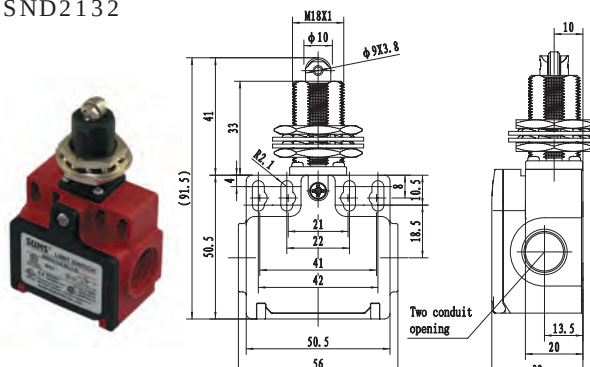


Order Code

Contact block

SND2131-SP-__	SP		snap action	1NO+1NC
SND2131-SL-__	SL		slow action	1NO+1NC BBM
SND2131-SL1-__	SL1		slow action	1NO+1NC MBB
SND2131-SL2-__	SL2		slow action	2NC

SND2132

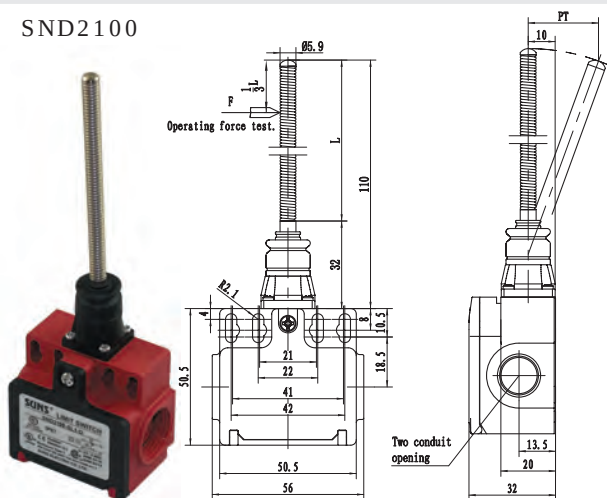


Order Code

Contact block

SND2132-SP-__	SP		snap action	1NO+1NC
SND2132-SL-__	SL		slow action	1NO+1NC BBM
SND2132-SL1-__	SL1		slow action	1NO+1NC MBB
SND2132-SL2-__	SL2		slow action	2NC

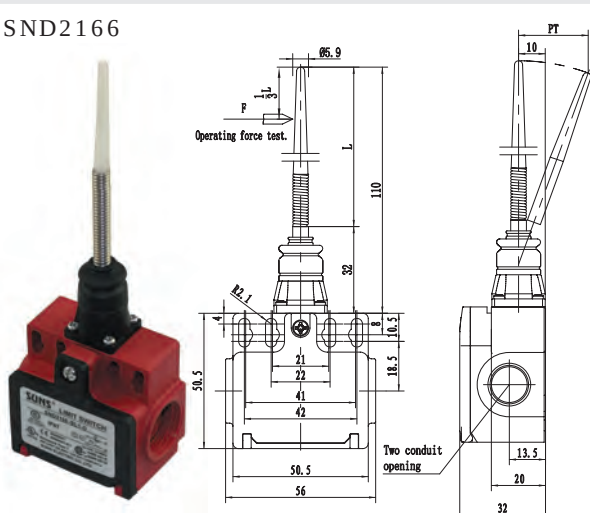
SND2100



Order Code

SND2100-SP-__	SP	snap action	1NO+1NC
---------------	----	-------------	---------

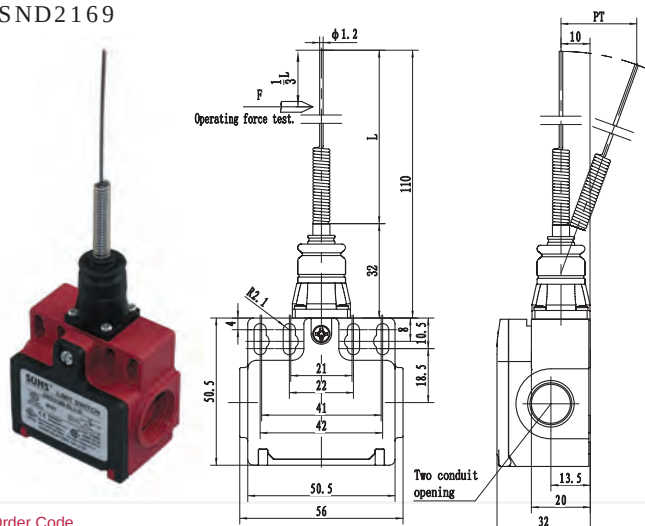
SND2166



Order Code

SND2166-SP-__	SP	snap action	1NO+1NC
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SND2169

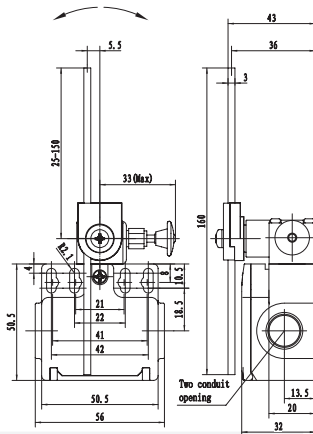


Order Code

SND2169-SP-__	SP	snap action	1NO+1NC
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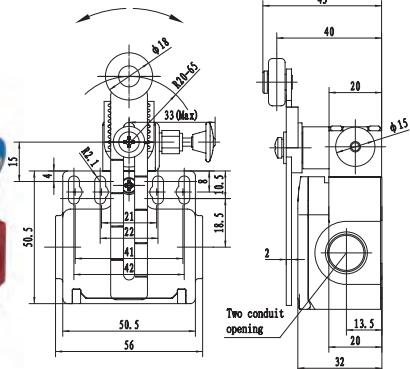
GLOBAL STYLE SAFETY LIMIT SWITCHES (PLASTIC BODIED EN50047 COMPATIBLE) SND2 SERIES (2 - CONDUIT ENTRIES WITH RESET)

SND2107-SR



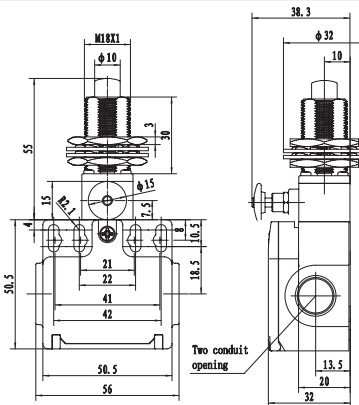
Order Code	Contact block		
SND2107-SP- _SR	SP	→	snap action 1NO+1NC
SND2107-SL- _SR	SL	→	slow action 1NO+1NC BBM
SND2107-SL1- _SR	SL1	→	slow action 1NO+1NC MBB
SND2107-SL2- _SR	SL2	→	slow action 2NC

SND2108-SR



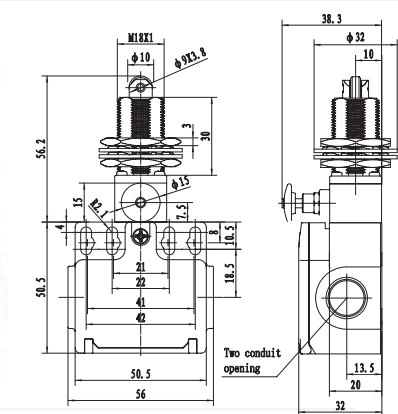
Order Code	Contact block		
SND2108-SP- _SR	SP	→	snap action 1NO+1NC
SND2108-SL- _SR	SL	→	slow action 1NO+1NC BBM
SND2108-SL1- _SR	SL1	→	slow action 1NO+1NC MBB
SND2108-SL2- _SR	SL2	→	slow action 2NC

SND2131-R



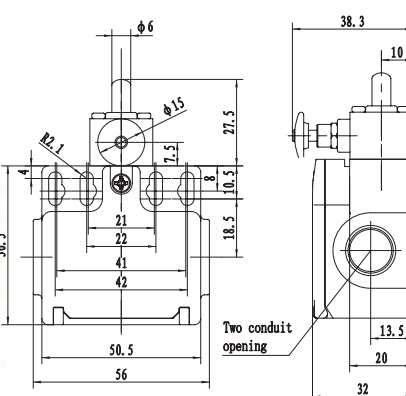
Order Code	Contact block		
SND2131-SP- _L - R	SP	→	snap action 1NO+1NC
SND2131-SL- _L - R	SL	→	slow action 1NO+1NC BBM
SND2131-SL1- _L - R	SL1	→	slow action 1NO+1NC MBB
SND2131-SL2- _L - R	SL2	→	slow action 2NC

SND2132-R



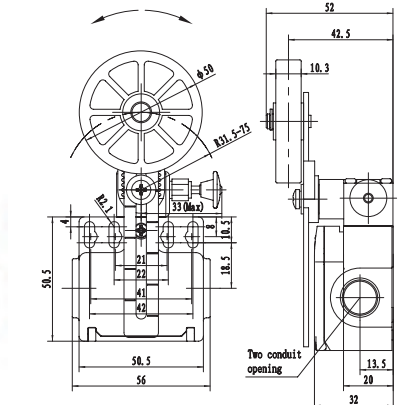
Order Code	Contact block		
SND2132-SP- _L - R	SP	→	snap action 1NO+1NC
SND2132-SL- _L - R	SL	→	slow action 1NO+1NC BBM
SND2132-SL1- _L - R	SL1	→	slow action 1NO+1NC MBB
SND2132-SL2- _L - R	SL2	→	slow action 2NC

SND2111-R



Order Code	Contact block		
SND2111-SP- _L - R	SP	→	snap action 1NO+1NC
SND2111-SL- _L - R	SL	→	slow action 1NO+1NC BBM
SND2111-SL1- _L - R	SL1	→	slow action 1NO+1NC MBB
SND2111-SL2- _L - R	SL2	→	slow action 2NC

SND2118-SR



Order Code	Contact block		
SND2118-SP- _SR	SP	→	snap action 1NO+1NC
SND2118-SL- _SR	SL	→	slow action 1NO+1NC BBM
SND2118-SL1- _SR	SL1	→	slow action 1NO+1NC MBB
SND2118-SL2- _SR	SL2	→	slow action 2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES)

We are committed to delivering world class products and services efficiently and effectively to our customers. Your total satisfaction is our goal.



Features

- Zinc die cast body
- Earth grounding surface on same level as switching
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50047 standard

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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) with no icing
Humidity	< 95%RH
Weight	270-320g
Degree of Protection	IP67

Selection Guide:

SN21

Body
Styles

04

Head Styles

SP

- SP: 1NO/1NC Snap action
- SPT: 2NO/2NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action
- SL4: 3NC Slow Action
- SL5: 3NO Slow Action
- SL6: BBM 2NC/1NO Slow Action changeover
- SL7: MBB 2NC/1NO Slow Action Overlapping
- SL8: BBM 2NO/1NC Slow Action changeover
- SL9: MBB 2NO/1NC Slow Action Overlapping

C

Conduits

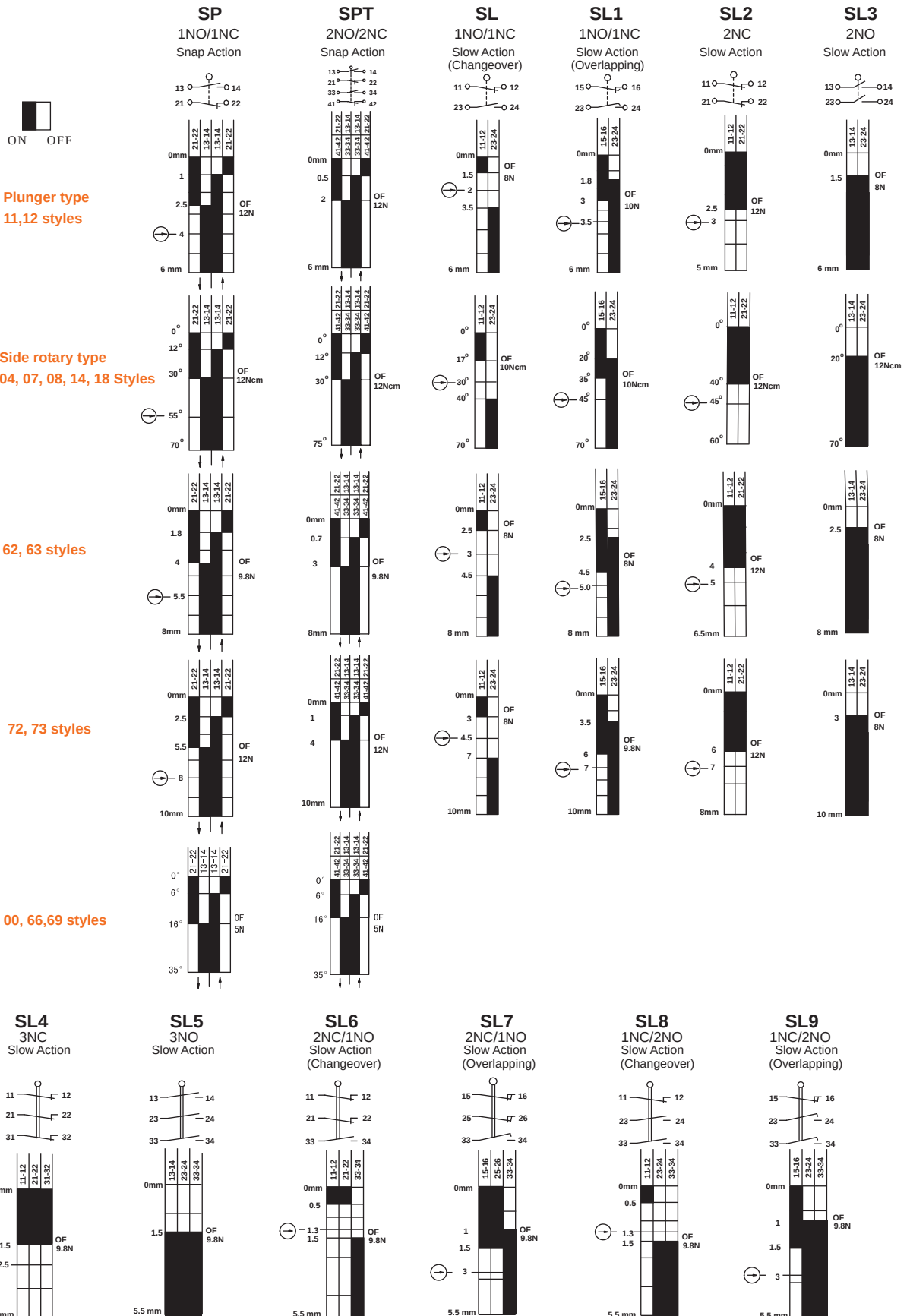
- A: 1/2"NPT
- B: PG13.5
- C: M20 Conduits
- D: M16
- B1: PG11

R

- Blank
- R: with Reset

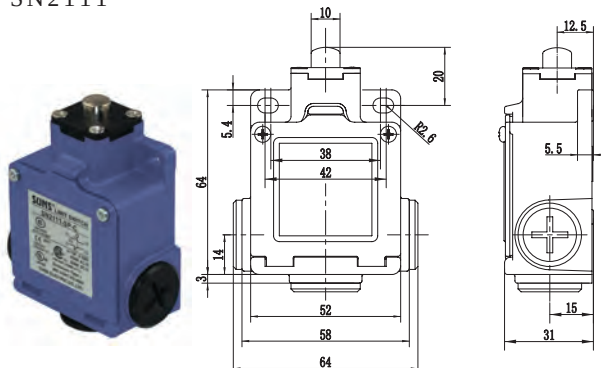
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES)

Available contact blocks and travel diagrams



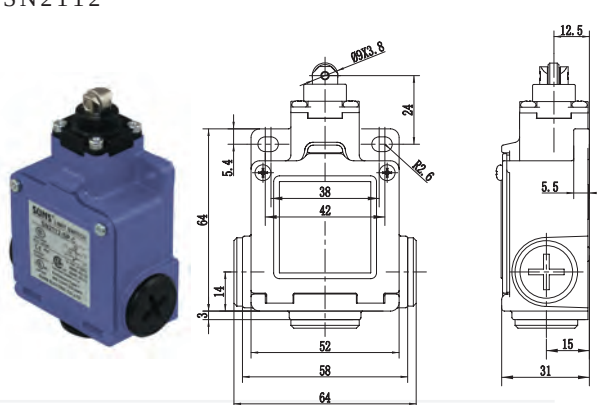
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES)

SN2111



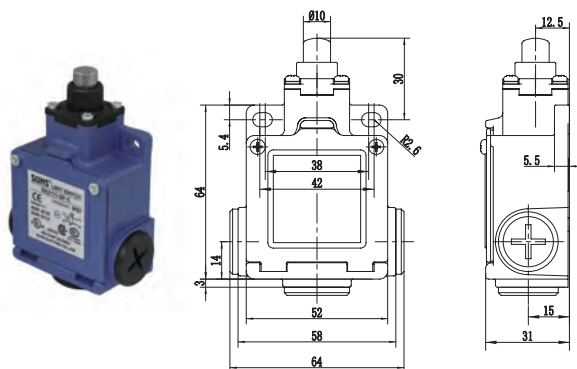
Order Code	Contact block			
SN2111-SP- _	SP	→	snap action	1NO+1NC
SN2111-SL- _	SL	→	slow action	1NO+1NC BBM
SN2111-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN2111-SL2- _	SL2	→	slow action	2NC

SN2112



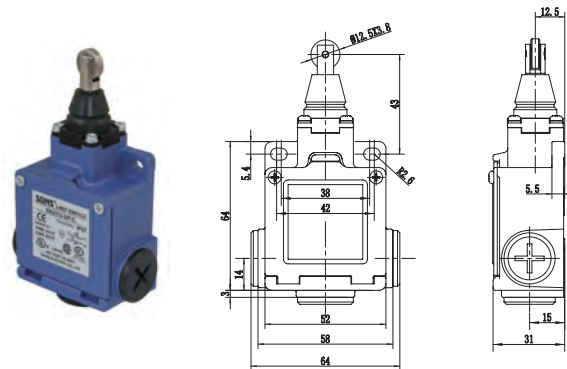
Order Code	Contact block			
SN2112-SP- _	SP	→	snap action	1NO+1NC
SN2112-SL- _	SL	→	slow action	1NO+1NC BBM
SN2112-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN2112-SL2- _	SL2	→	slow action	2NC

SN2111-L



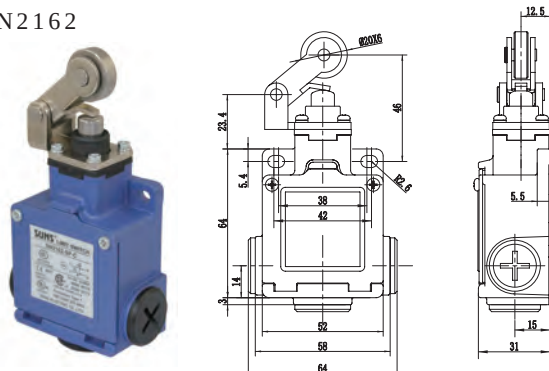
Order Code	Contact block			
SN2111-SP- _L	SP	→	snap action	1NO+1NC
SN2111-SL- _L	SL	→	slow action	1NO+1NC BBM
SN2111-SL1- _L	SL1	→	slow action	1NO+1NC MBB
SN2111-SL2- _L	SL2	→	slow action	2NC

SN2112-L



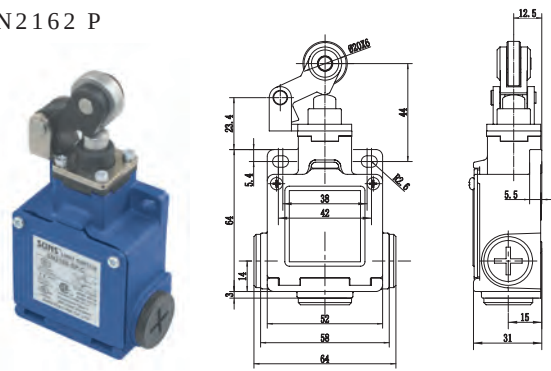
Order Code	Contact block			
SN2112-SP- _L	SP	→	snap action	1NO+1NC
SN2112-SL- _L	SL	→	slow action	1NO+1NC BBM
SN2112-SL1- _L	SL1	→	slow action	1NO+1NC MBB
SN2112-SL2- _L	SL2	→	slow action	2NC

SN2162



Order Code	Contact block			
SN2162-SP- _	SP	→	snap action	1NO+1NC
SN2162-SL- _	SL	→	slow action	1NO+1NC BBM
SN2162-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN2162-SL2- _	SL2	→	slow action	2NC

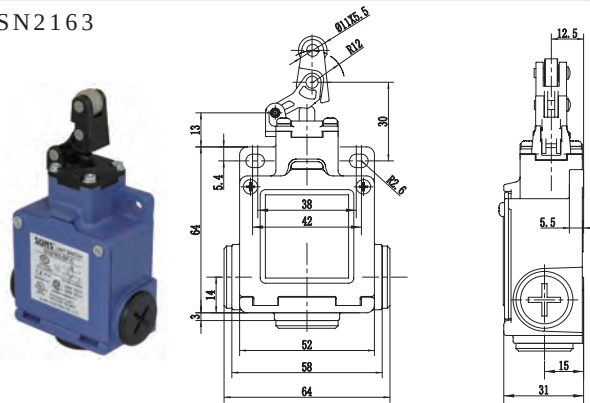
SN2162 P



Order Code	Contact block			
SN2162-SP- _P	SP	→	snap action	1NO+1NC
SN2162-SL- _P	SL	→	slow action	1NO+1NC BBM
SN2162-SL1- _P	SL1	→	slow action	1NO+1NC MBB
SN2162-SL2- _P	SL2	→	slow action	2NC

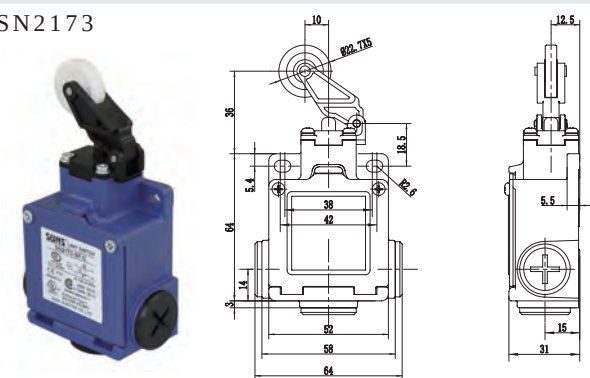
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE)
SN2 SERIES (3 - CONDUIT ENTRIES)

SN2163



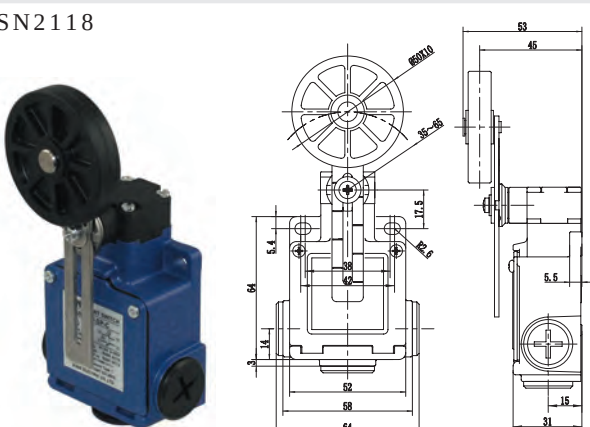
Order Code	Contact block			
SN2163-SP- _	SP		snap action	1NO+1NC
SN2163-SL- _	SL		slow action	1NO+1NC BBM
SN2163-SL1- _	SL1		slow action	1NO+1NC MBB
SN2163-SL2- _	SL2		slow action	2NC

SN2173



Order Code	Contact block			
SN2173-SP- _	SP		snap action	1NO+1NC
SN2173-SL- _	SL		slow action	1NO+1NC BBM
SN2173-SL1- _	SL1		slow action	1NO+1NC MBB
SN2173-SL2-	SL2		slow action	2NC

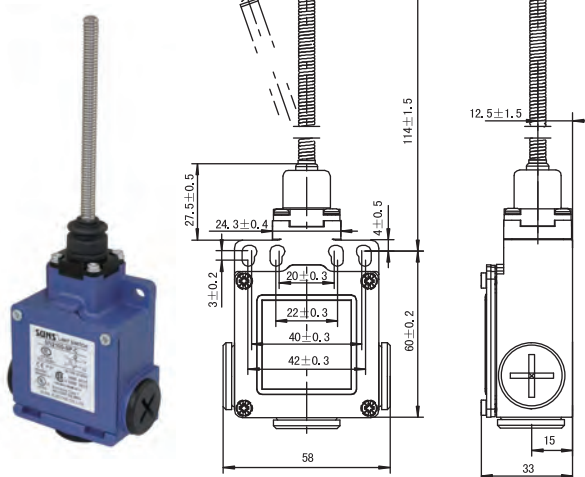
SN2118



Order Code	Contact block			
SN2118-SP- _	SP		snap action	1NO+1NC
SN2118-SL- _	SL		slow action	1NO+1NC BBM
SN2118-SL1- _	SL1		slow action	1NO+1NC MBB
SN2118-SL2-	SL2		slow action	2NC

GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES)

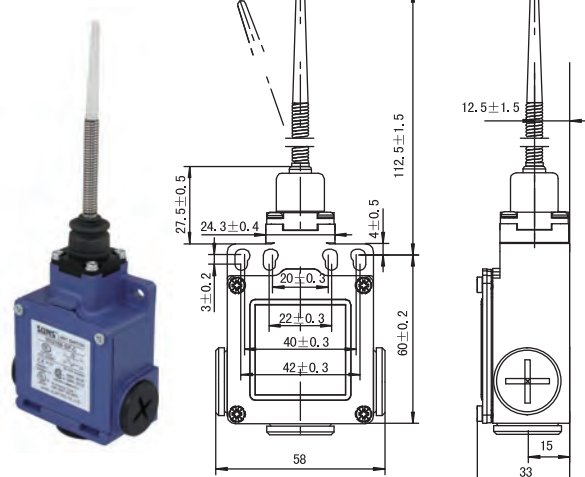
SN2100



Order Code

SN2100-SP- _ SP snap action 1NO+1NC

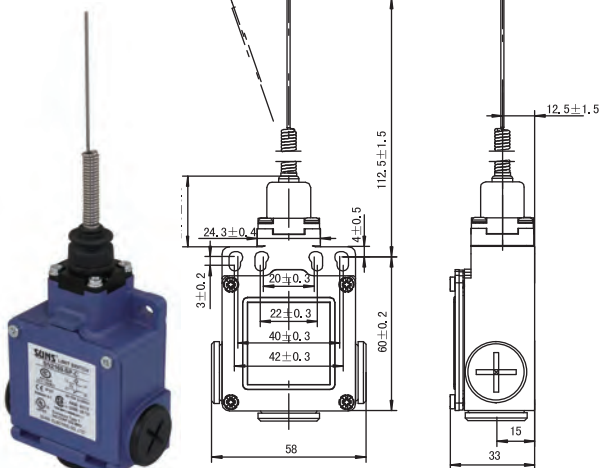
SN2166



Order Code

SN2166-SP- _ SP snap action 1NO+1NC

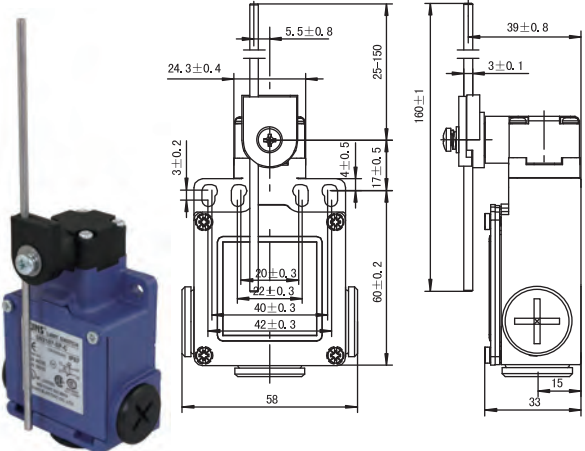
SN2169



Order Code

SN2169-SP- _ SP snap action 1NO+1NC

SN2107

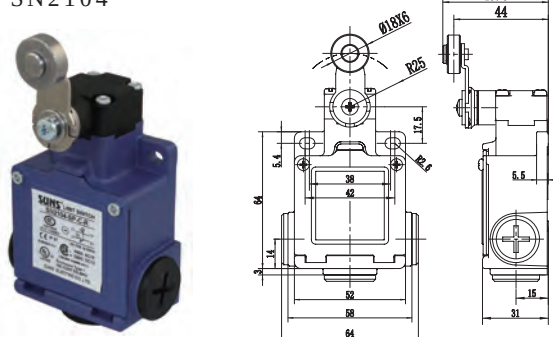


Order Code

Contact block

SN2107-SP- _	SP	→	snap action	1NO+1NC
SN2107-SL- _	SL	→	slow action	1NO+1NC BBM
SN2107-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN2107-SL2- _	SL2	→	slow action	2NC

SN2104

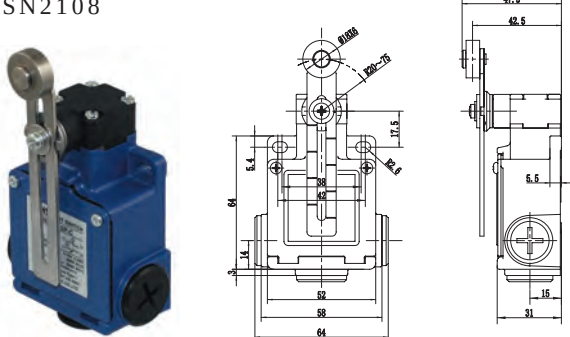


Order Code

Contact block

SN2104-SP- _	SP	→	snap action	1NO+1NC
SN2104-SL- _	SL	→	slow action	1NO+1NC BBM
SN2104-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN2104-SL2- _	SL2	→	slow action	2NC

SN2108



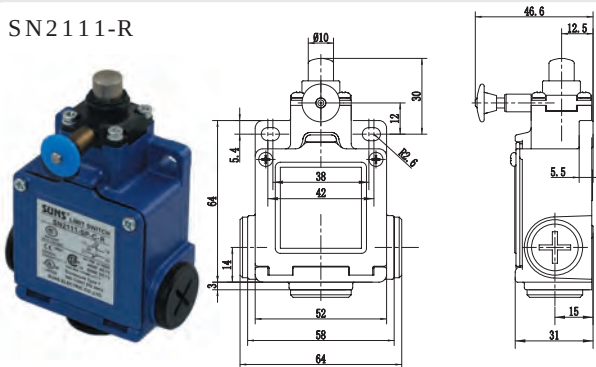
Order Code

Contact block

SN2108-SP- _	SP	→	snap action	1NO+1NC
SN2108-SL- _	SL	→	slow action	1NO+1NC BBM
SN2108-SL1- _	SL1	→	slow action	1NO+1NC MBB
SN2108-SL2- _	SL2	→	slow action	2NC

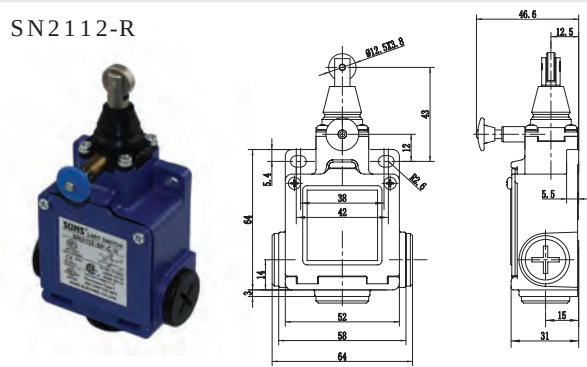
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES WITH RESET)

SN2111-R



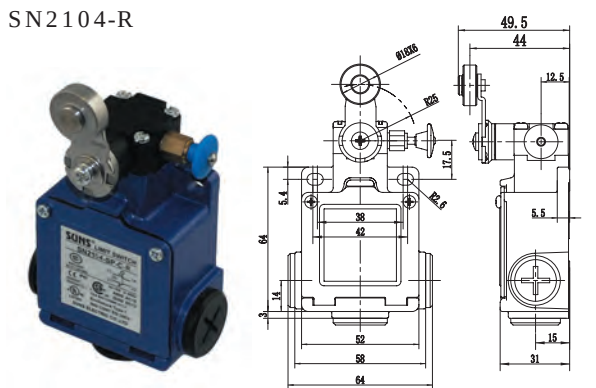
Order Code	Contact block
SN2111-SP- _R	SP snap action 1NO+1NC
SN2111-SL- _R	SL slow action 1NO+1NC BBM
SN2111-SL1- _R	SL1 slow action 1NO+1NC MBB
SN2111-SL2- _R	SL2 slow action 2NC

SN2112-R



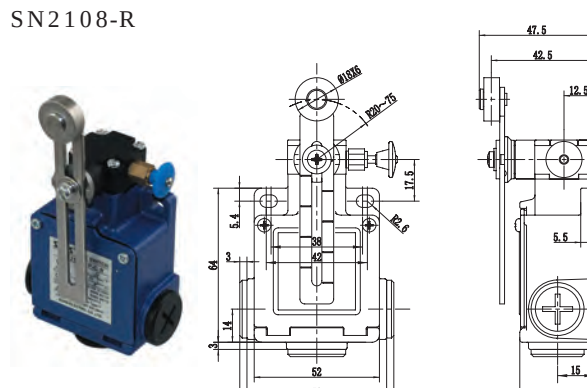
Order Code	Contact block
SN2112-SP- _R	SP snap action 1NO+1NC
SN2112-SL- _R	SL slow action 1NO+1NC BBM
SN2112-SL1- _R	SL1 slow action 1NO+1NC MBB
SN2112-SL2- _R	SL2 slow action 2NC

SN2104-R



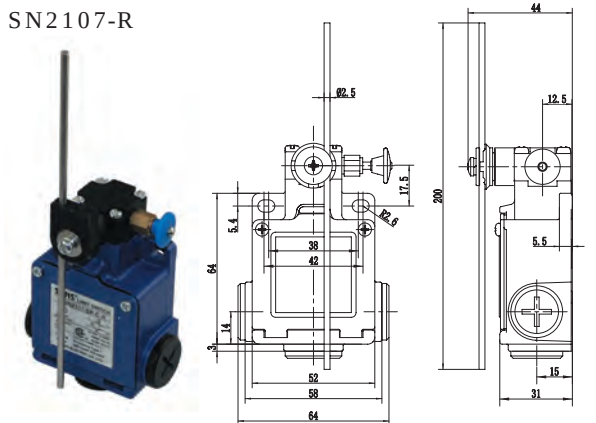
Order Code	Contact block
SN2104-SP- _R	SP snap action 1NO+1NC
SN2104-SL- _R	SL slow action 1NO+1NC BBM
SN2104-SL1- _R	SL1 slow action 1NO+1NC MBB
SN2104-SL2- _R	SL2 slow action 2NC

SN2108-R



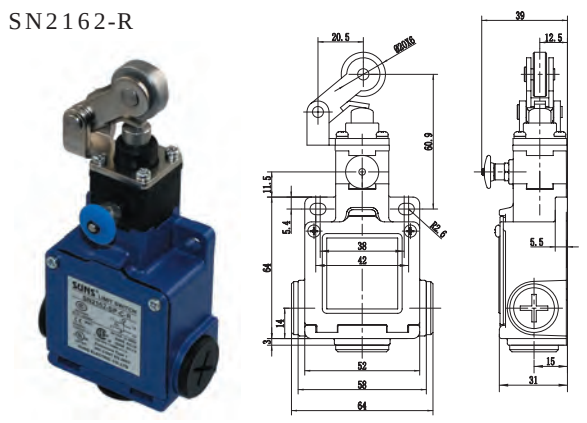
Order Code	Contact block
SN2108-SP- _R	SP snap action 1NO+1NC
SN2108-SL- _R	SL slow action 1NO+1NC BBM
SN2108-SL1- _R	SL1 slow action 1NO+1NC MBB
SN2108-SL2- _R	SL2 slow action 2NC

SN2107-R



Order Code	Contact block
SN2107-SP- _R	SP snap action 1NO+1NC
SN2107-SL- _R	SL slow action 1NO+1NC BBM
SN2107-SL1- _R	SL1 slow action 1NO+1NC MBB
SN2107-SL2- _R	SL2 slow action 2NC

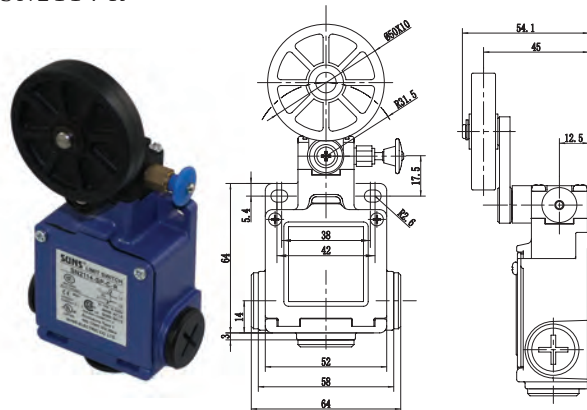
SN2162-R



Order Code	Contact block
SN2162-SP- _R	SP snap action 1NO+1NC
SN2162-SL- _R	SL slow action 1NO+1NC BBM
SN2162-SL1- _R	SL1 slow action 1NO+1NC MBB
SN2162-SL2- _R	SL2 slow action 2NC

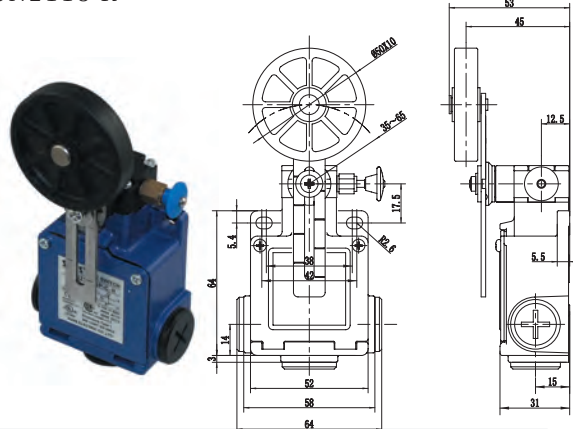
GLOBAL STYLE SAFETY LIMIT SWITCHES (METAL BODIED EN50047 COMPATIBLE) SN2 SERIES (3 - CONDUIT ENTRIES WITH RESET)

SN2114-R



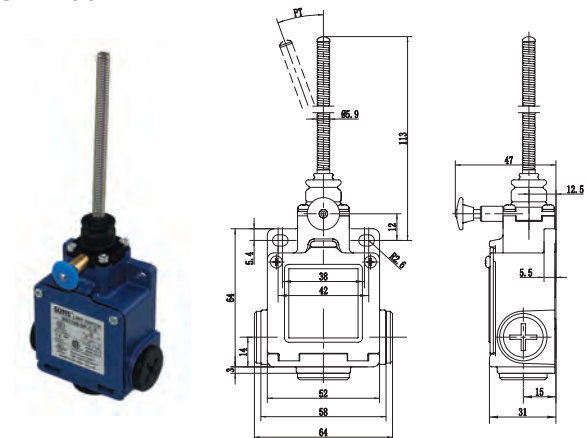
Order Code	Contact block			
SN2114-SP- _R	SP		snap action	1NO+1NC
SN2114-SL- _R	SL		slow action	1NO+1NC BBM
SN2114-SL1- _R	SL1		slow action	1NO+1NC MBB
SN2114-SL2- _R	SL2		slow action	2NC

SN2118-R



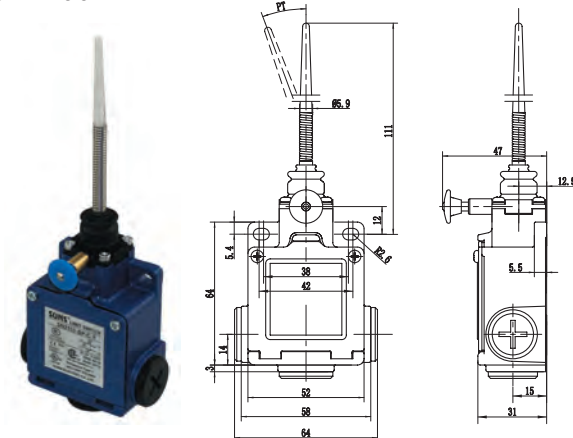
Order Code	Contact block			
SN2118-SP- _R	SP		snap action	1NO+1NC
SN2118-SL- _R	SL		slow action	1NO+1NC BBM
SN2118-SL1- _R	SL1		slow action	1NO+1NC MBB
SN2118-SL2- _R	SL2		slow action	2NC

SN2100-R



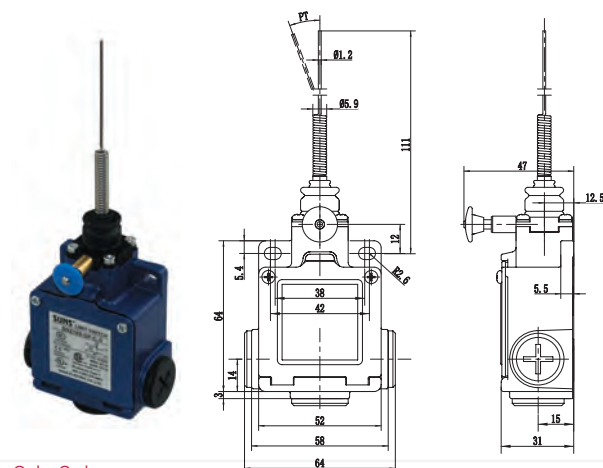
Order Code				
SN2100-SP- _R	SP		snap action	1NO+1NC

SN2166-R



Order Code				
SN2166-SP- _R	SP		snap action	1NO+1NC

SN2169-R



Order Code				
SN2169-SP- _R	SP		snap action	1NO+1NC

COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof) SN31 SERIES (20mm) and SN32 SERIES (25mm)

Selection Guide:

SN3	1	-	12	-	SP	-	A	-	2
	Housing				Head Style				
	20mm mounting	1			SP Snap Action		A Cable side exit		
	25mm mounting	2			SL Slow Action		B Cable bottom exit		2 meter cable
							C M12 connector side exit 4 pin		
							D M12 connector bottom exit 4 pin		
							E M12 connector side exit 5 pin		
							F M12 connector bottom exit 5 pin		

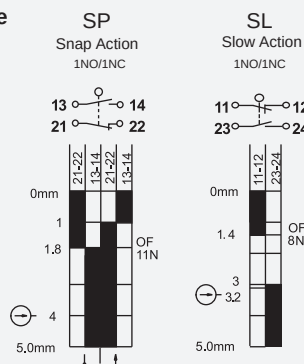
Specification

Operating Speed	0.05mm-2m/s
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Voltage	300V AC (EN60947-5-1)
Rated Thermal Current	10A
Electrical Rating	AC15 A300 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~+85°C without formation of ice
Humidity	< 95%
Cable	5 core, 0.75mm ²
Degree of Protection	IP67

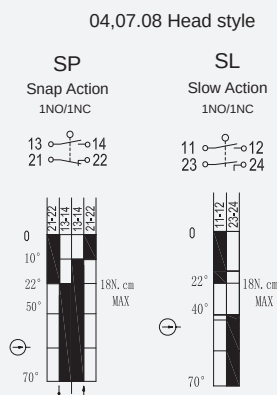
Electrical Ratings

IEC 60947-5-1 / EN 90947-5-1						
Designation & Utilization Category	Rated operational current Ie (A) at rated operational voltage Ue					VA rating Make Break
AC15 A600	120V	240V	380V	480V	600V	7200 720
	6A	3A	-	-	-	
DC13 Q300	125VDC	250VDC				69 69
	0.55	0.27				

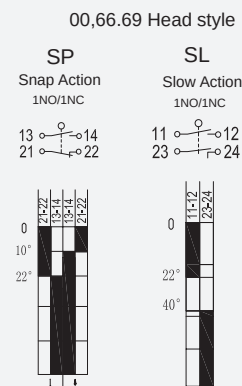
Plunger Style



Rotary Style



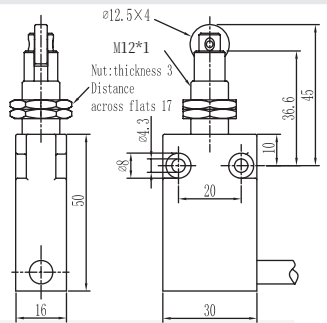
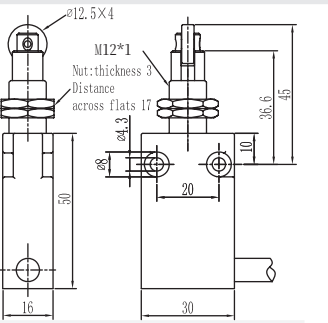
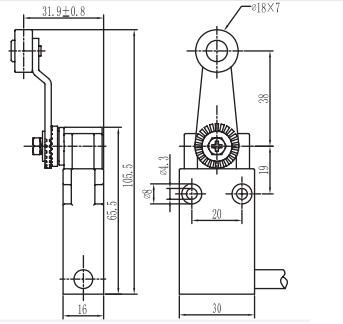
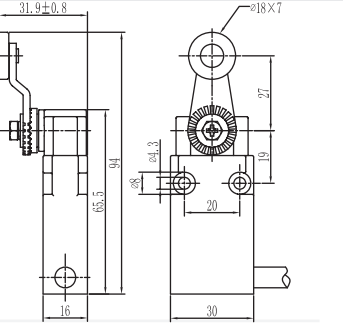
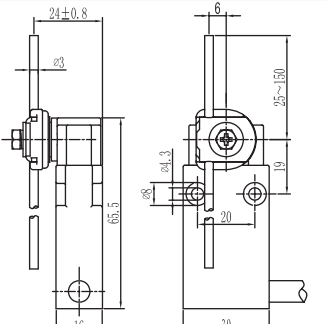
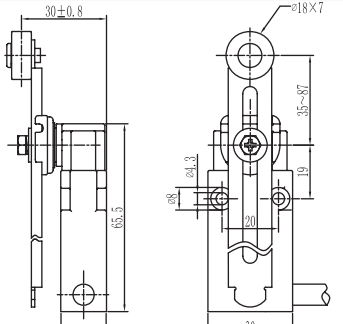
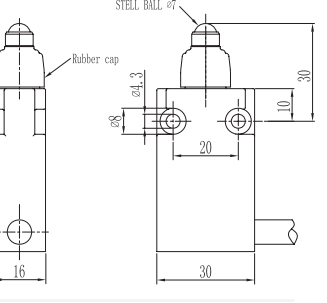
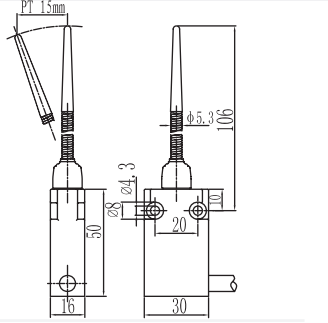
Spring Coil Style



COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof) SN31 SERIES (20mm)

Order Code Contact block SN3101-SP SP snap action 1NO+1NC SN3101-SL SL slow action 1NO+1NC BBM	Order Code Contact block SN3112-SP SP snap action 1NO+1NC SN3112-SL SL slow action 1NO+1NC BBM
Order Code Contact block SN3111-SP SP snap action 1NO+1NC SN3111-SL SL slow action 1NO+1NC BBM	Order Code Contact block SN3122-SP SP snap action 1NO+1NC SN3122-SL SL slow action 1NO+1NC BBM
Order Code Contact block SN3121-SP SP snap action 1NO+1NC SN3121-SL SL slow action 1NO+1NC BBM	Order Code Contact block SN3102-SP SP snap action 1NO+1NC SN3102-SL SL slow action 1NO+1NC BBM
Order Code Contact block SN3131-SP SP snap action 1NO+1NC SN3131-SL SL slow action 1NO+1NC BBM	Order Code Contact block SN3103-SP SP snap action 1NO+1NC SN3103-SL SL slow action 1NO+1NC BBM

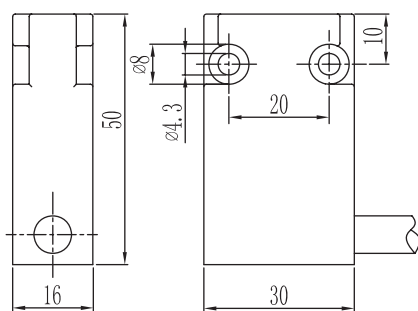
COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof) SN31 SERIES (20mm)

 	 
Order Code SN3132-SP SP  snap action 1NO+1NC SN3132-SL SL  slow action 1NO+1NC BBM	Order Code SN3142-SP SP  snap action 1NO+1NC SN3142-SL SL  slow action 1NO+1NC BBM
 	 
Order Code SN3104-SP SP  snap action 1NO+1NC SN3104-SL SL  slow action 1NO+1NC BBM	Order Code SN3104-SP-S SP  snap action 1NO+1NC SN3104-SL-S SL  slow action 1NO+1NC BBM
 	 
Order Code SN3107-SP SP  snap action 1NO+1NC SN3107-SL SL  slow action 1NO+1NC BBM	Order Code SN3108-SP SP  snap action 1NO+1NC SN3108-SL SL  slow action 1NO+1NC BBM
 	 
Order Code SN3111-SP G SP  snap action 1NO+1NC SN3111-SL G SL  slow action 1NO+1NC BBM	Order Code SN3166-SP SP snap action 1NO+1NC SN3166-SL SL slow action 1NO+1NC BBM

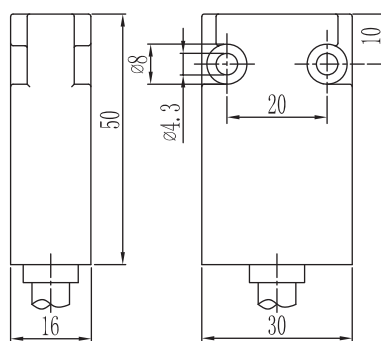
COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof) SN31 SERIES (20mm)

Basic Body dimension:

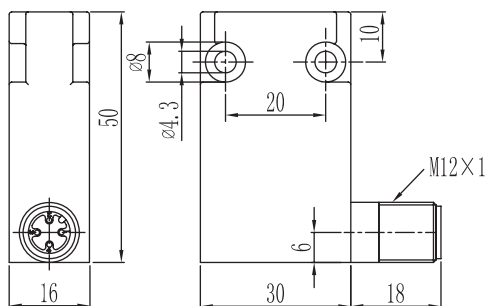
Suffix: -A (cable side exit)



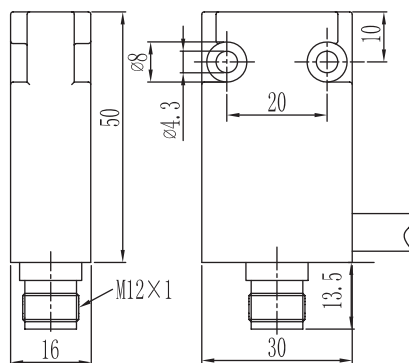
Suffix: -B (cable bottom exit)



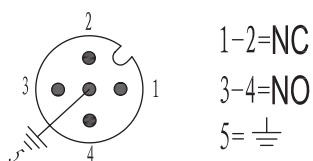
Suffix: -C or -C1 (M12 quick connector side exit 4 pin)
Suffix: -E (M12 quick connector side exit 5 pin)



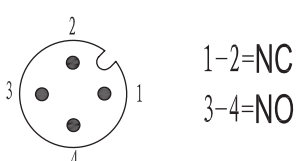
Suffix: -D or -D1 (M12 Quick Connector bottom exit 4 pin)
Suffix: -F (M12 Quick Connector bottom exit 5 pin)



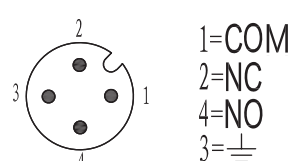
-E -F: 5 pin M12



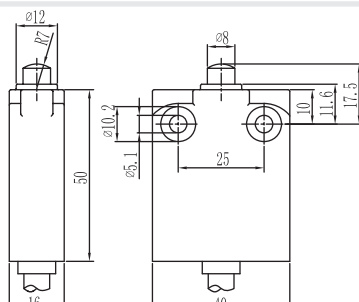
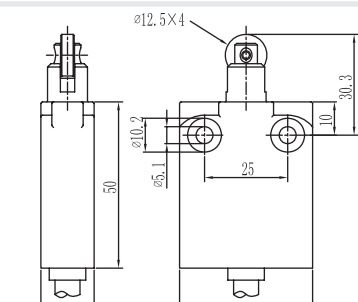
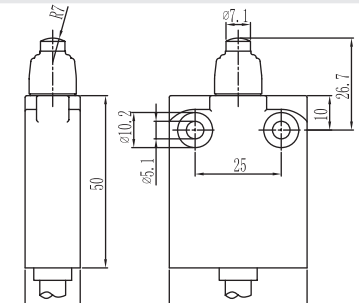
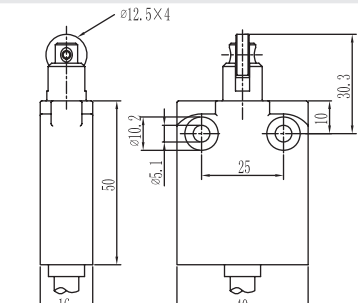
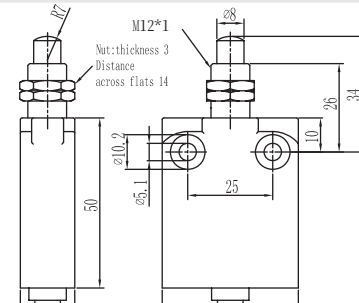
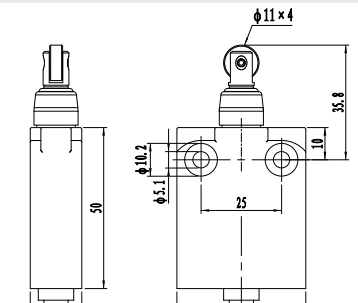
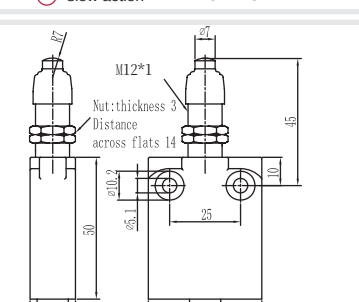
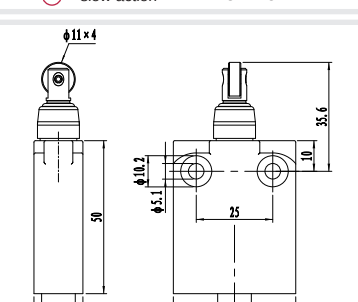
-C -D: 4 pin M12



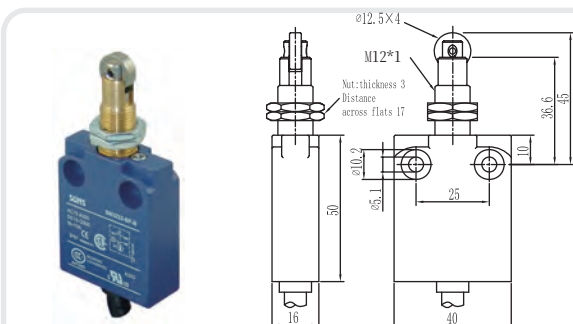
-C1 -D1: 4 pin M12



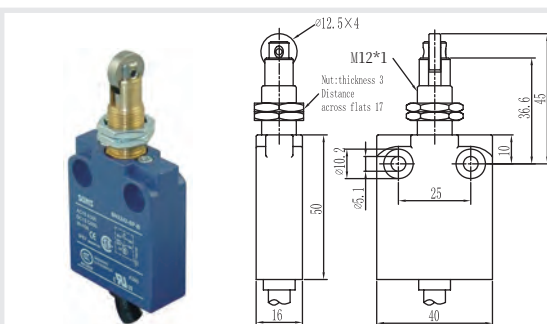
COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof) SN32 SERIES (25mm) 5-CORE

 	 
Order Code SN3201-SP SP snap action 1NO+1NC SN3201-SL SL slow action 1NO+1NC BBM	Order Code SN3212-SP SP snap action 1NO+1NC SN3212-SL SL slow action 1NO+1NC BBM
 	 
Order Code SN3211-SP SP snap action 1NO+1NC SN3211-SL SL slow action 1NO+1NC BBM	Order Code SN3222-SP SP snap action 1NO+1NC SN3222-SL SL slow action 1NO+1NC BBM
 	 
Order Code SN3221-SP SP snap action 1NO+1NC SN3221-SL SL slow action 1NO+1NC BBM	Order Code SN3202-SP SP snap action 1NO+1NC SN3202-SL SL slow action 1NO+1NC BBM
 	 
Order Code SN3231-SP SP snap action 1NO+1NC SN3231-SL SL slow action 1NO+1NC BBM	Order Code SN3203-SP SP snap action 1NO+1NC SN3203-SL SL slow action 1NO+1NC BBM

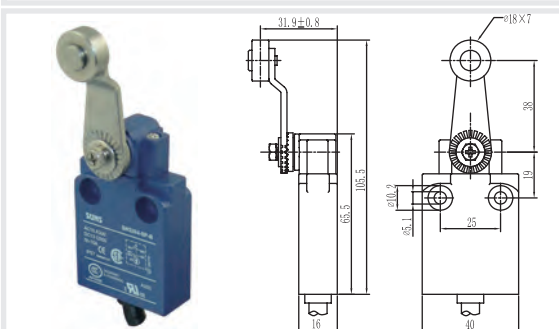
COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof) SN32 SERIES (25mm) 5-CORE



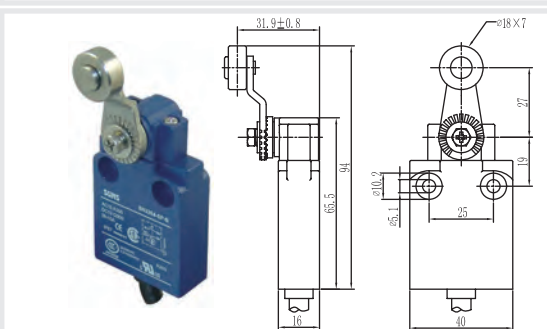
Order Code	Contact block			
SN3232-SP	SP	→ snap action	1NO+1NC	
SN3232-SL	SL	→ slow action	1NO+1NC	BBM



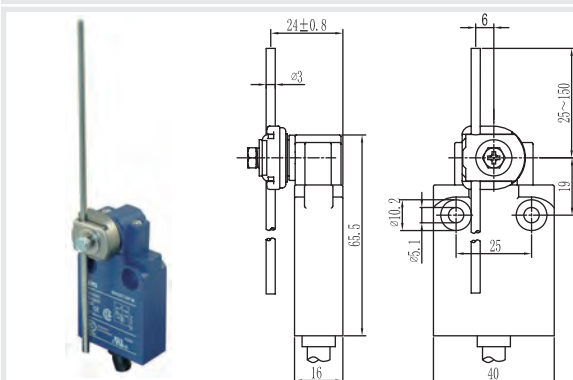
Order Code	Contact block			
SN3242-SP	SP	→ snap action	1NO+1NC	
SN3242-SL	SL	→ slow action	1NO+1NC	BBM



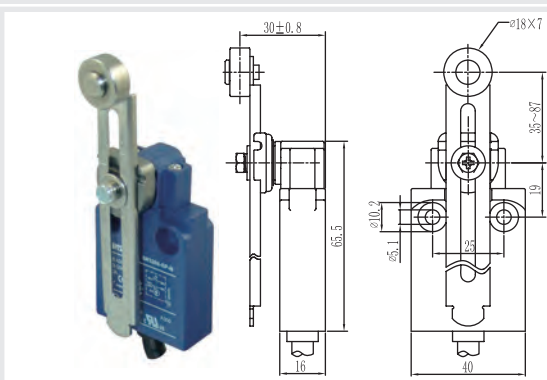
Order Code	Contact block			
SN3204-SP	SP	→ snap action	1NO+1NC	
SN3204-SL	SL	→ slow action	1NO+1NC	BBM



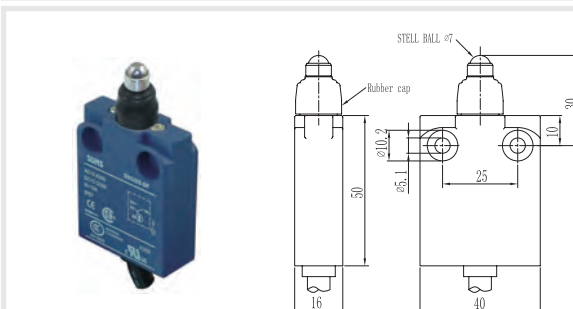
Order Code	Contact block			
SN3204-SP-S	SP	→ snap action	1NO+1NC	
SN3204-SL-S	SL	→ slow action	1NO+1NC	BBM



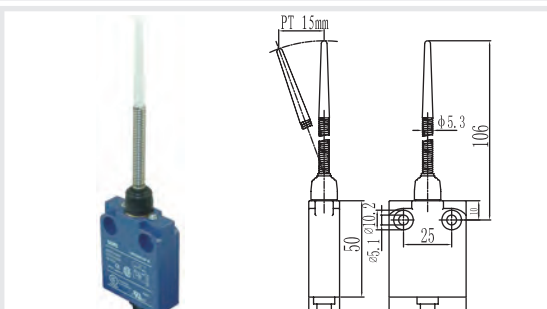
Order Code	Contact block			
SN3207-SP	SP	→ snap action	1NO+1NC	
SN3207-SL	SL	→ slow action	1NO+1NC	BBM



Order Code	Contact block			
SN3208-SP	SP	→ snap action	1NO+1NC	
SN3208-SL	SL	→ slow action	1NO+1NC	BBM



Order Code	Contact block			
SN3211-SP G	SP	→ snap action	1NO+1NC	
SN3211-SL G	SL	→ slow action	1NO+1NC	BBM



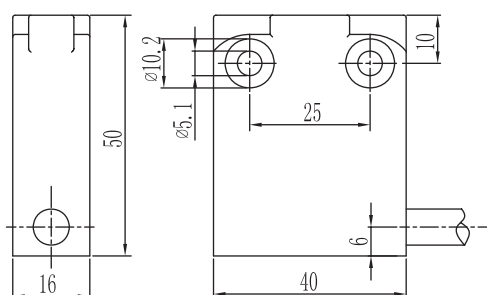
Order Code	Contact block			
SN3266-SP	SP	→ snap action	1NO+1NC	
SN3266-SL	SL	→ slow action	1NO+1NC	BBM

COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof)

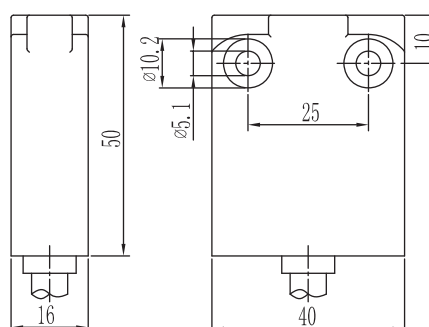
SN32 SERIES (25mm) 5-CORE

Basic Body dimension:

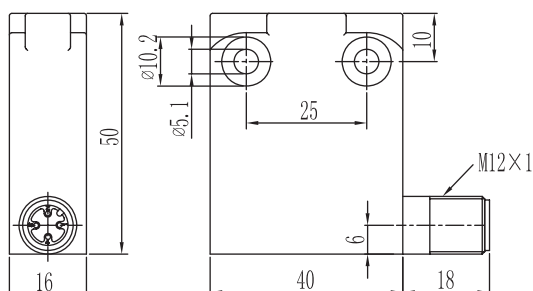
Suffix: -A (cable side exit)



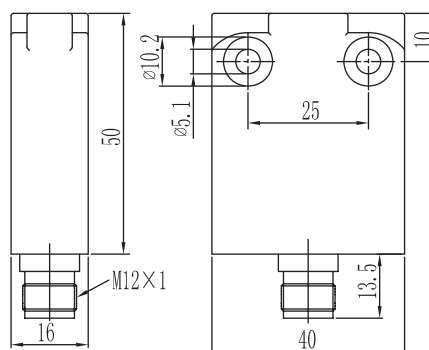
Suffix: -B (cable bottom exit)



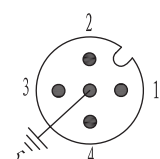
Suffix: -C or -C1 (M12 quick connector side exit 4 pin)
Suffix: -E (M12 quick connector side exit 5 pin)



Suffix: -D or -D1 (M12 Quick Connector bottom exit 4 pin)
Suffix: -F (M12 Quick Connector bottom exit 5 pin)

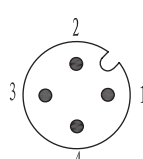


-E -F: 5 pin M12



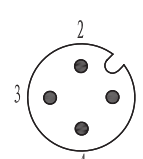
1-2=NC
3-4=NO
5=

-C -D: 4 pin M12



1-2=NC
3-4=NO

-C1 -D1: 4 pin M12



1=COM
2=NC
4=NO
3=

SN32(H) High Precision Compact Limit Switches (IP67 Water-Proof) SN32(H) SERIES (25mm) 4-CORE

Selection Guide:

SN32 - **12** - **SP** - **A** - **2** - **(H)**

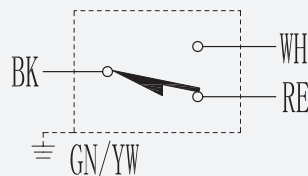
Head Style

A	Cable side exit
B	Cable bottom exit
C	M12 connector side exit 4 pin
C1	M12 connector side exit 4 pin
C2	M12 connector side exit 4 pin
D	M12 connector bottom exit 4 pin
D1	M12 connector bottom exit 4 pin
D2	M12 connector bottom exit 4 pin

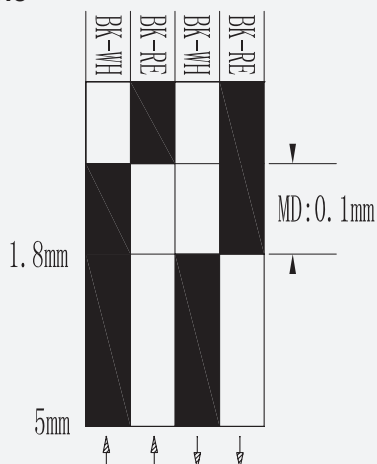
2 meter cable

Specification

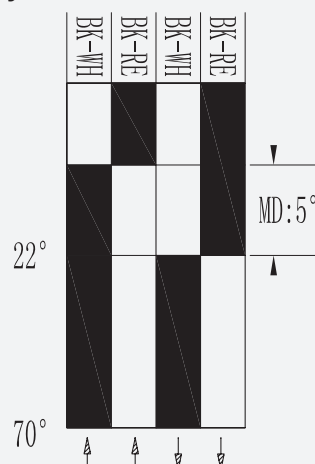
Operating Speed	0.05mm-2m/s
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Voltage	300V AC (EN60947-5-1)
Rated Thermal Current	10A
Electrical Rating	AC15 A300 DC13 Q300
Dielectric Strength	1000VAC for 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~+85°C without formation of ice
Humidity	< 95%
Cable	4 core, SJT
Degree of Protection	IP67



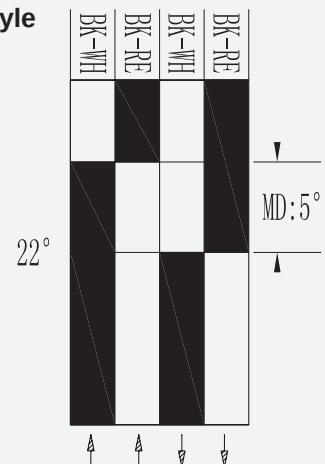
Plunger Style



Rotary Style

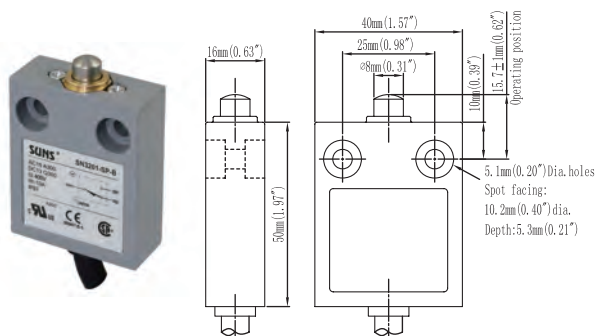


Spring Coil Style

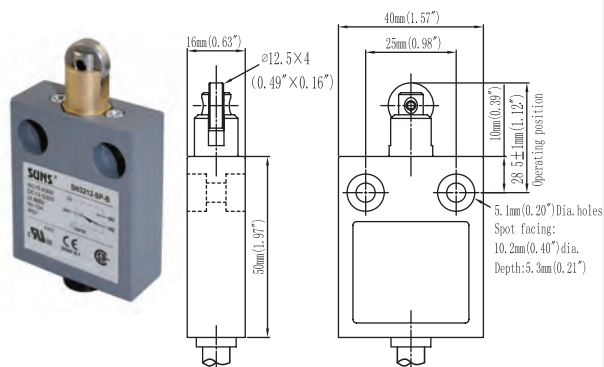


SN32(H) High Precision Compact Limit Switches (IP67 Water-Proof) SN32(H) SERIES (25mm) 4-CORE

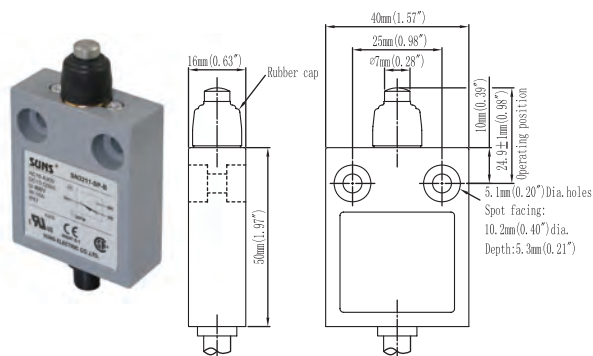
SN3201-SP(H)



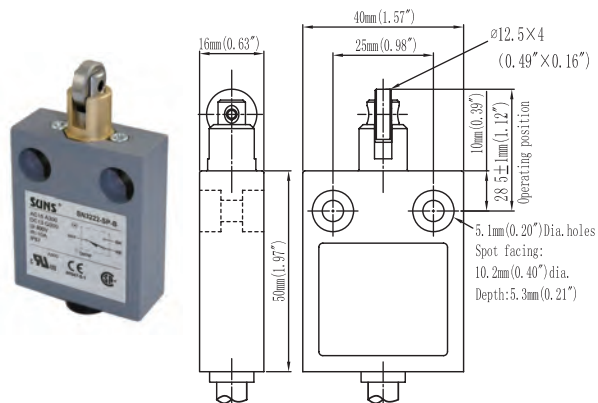
SN3212-SP(H)



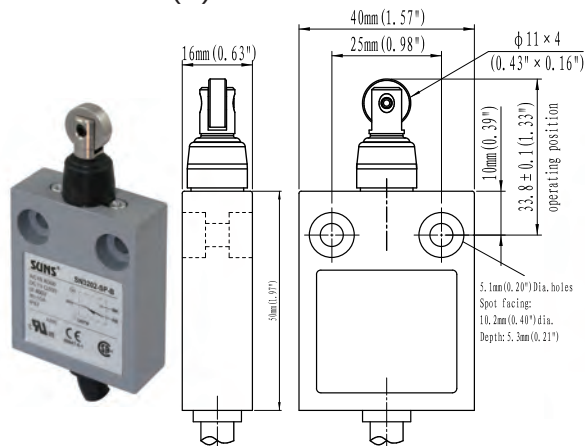
SN3211-SP(H)



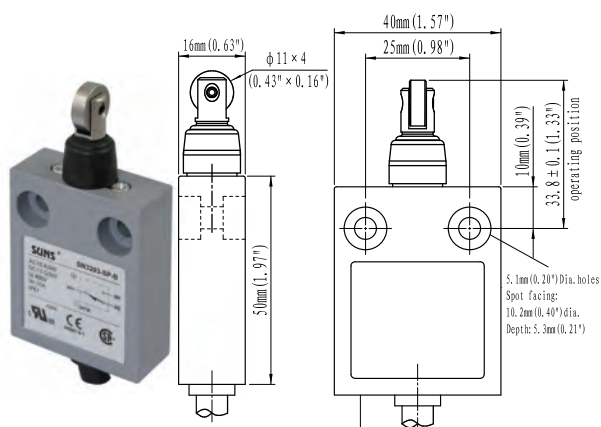
SN3222-SP(H)



SN3202-SP(H)

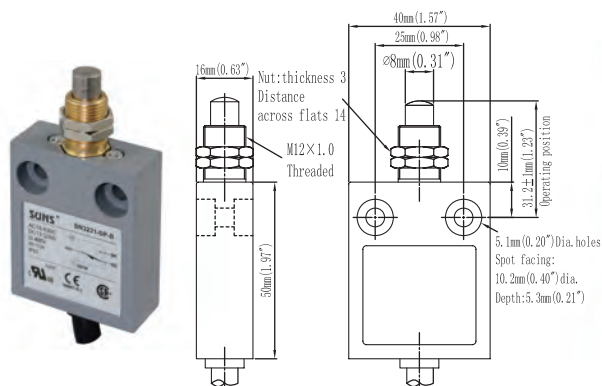


SN3203-SP(H)

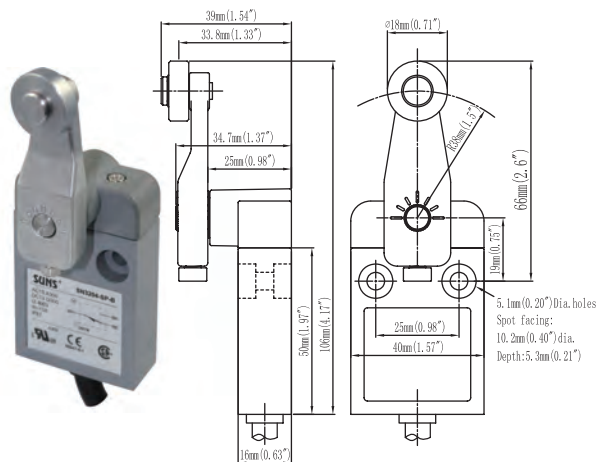


SN32(H) High Precision Compact Limit Switches (IP67 Water-Proof) SN32(H) SERIES (25mm) 4-CORE

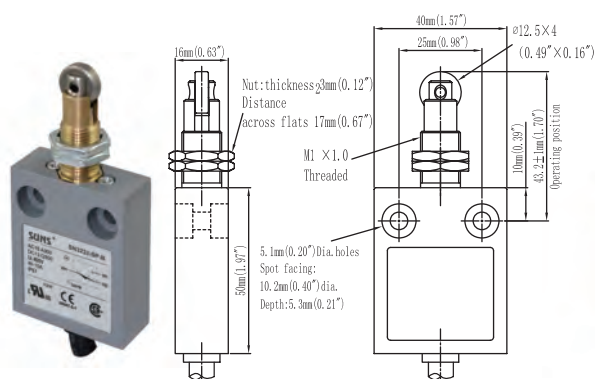
SN3221-SP(H)



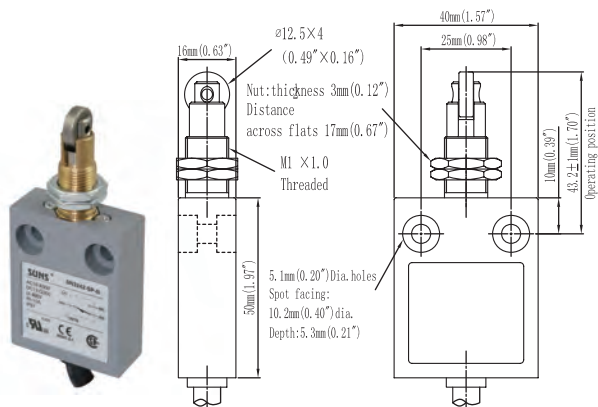
SN3204-SP(H)



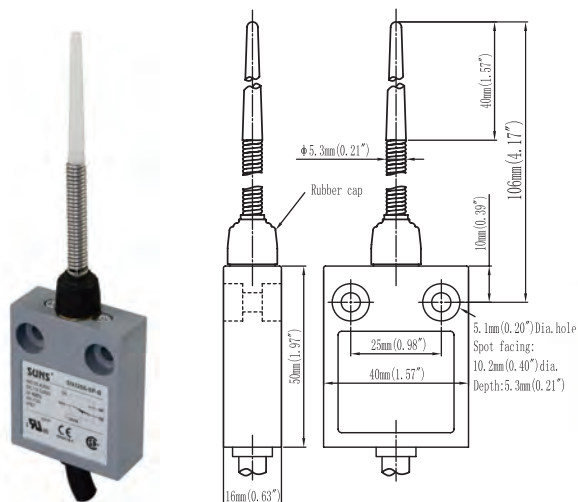
SN3232-SP(H)



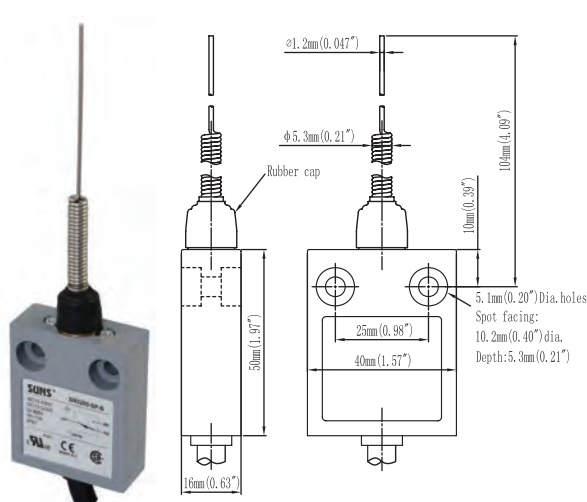
SN3242-SP(H)



SN3266-SP(H)



SN3269-SP(H)

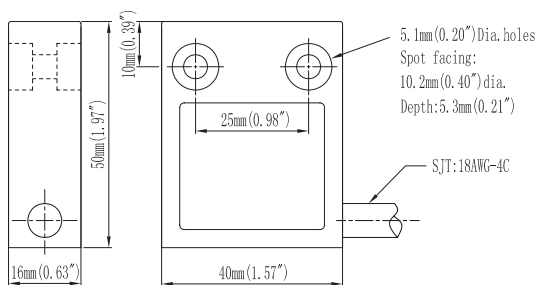


SN32(H) High Precision Compact Limit Switches (IP67 Water-Proof)

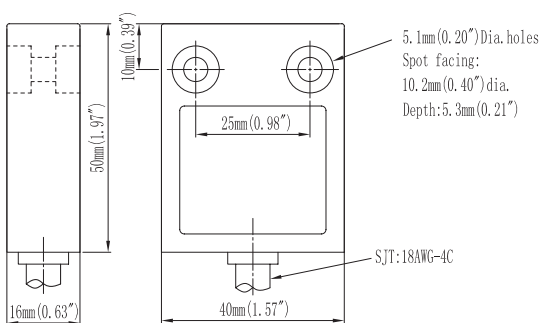
SN32(H) SERIES (25mm) 4-CORE

Basic Body dimension:

Suffix: -A (cable side exit)



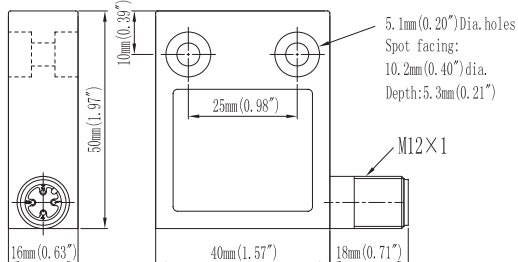
Suffix: -B (cable bottom exit)



Suffix: -C (M12 quick connector side exit 4 pin)

Suffix: -C1 (M12 quick connector side exit 4 pin)

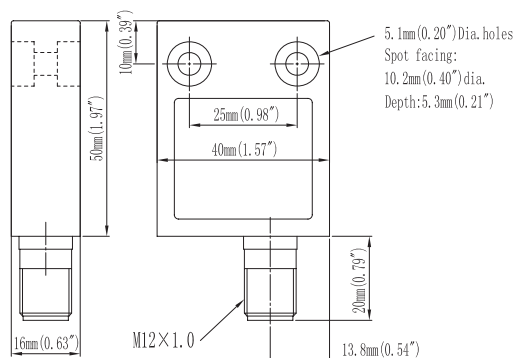
Suffix: -C2 (M12 quick connector side exit 4 pin)



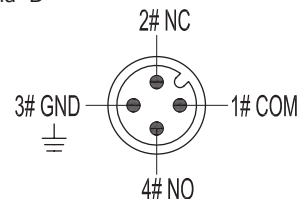
Suffix: -D (M12 Quick Connector bottom exit 4 pin)

Suffix: -D1 (M12 Quick Connector bottom exit 4 pin)

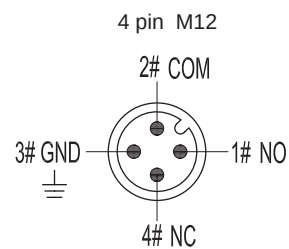
Suffix: -D2 (M12 Quick Connector bottom exit 4 pin)



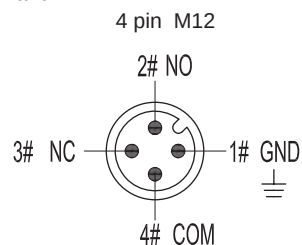
-C and -D



-C1 and -D1



-C2 and -D2



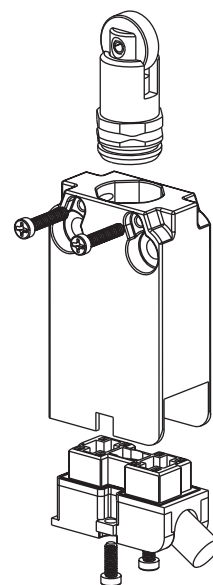
Compact Safety Limit Switches (Modular Design, Metal body, IP67) SM31 SERIES (20mm) and SM32 SERIES (25mm)

Selection Guide:

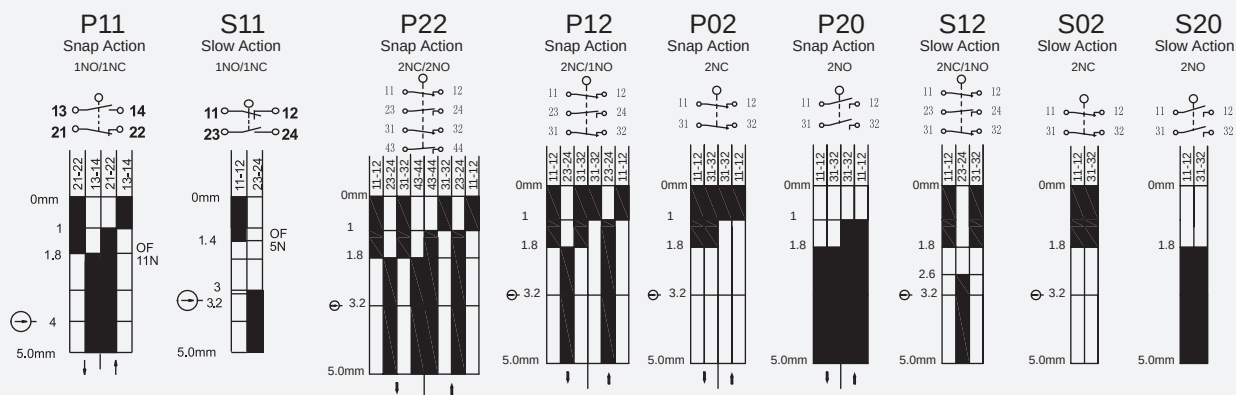
SM3	1	-	P	-	11	-	12	-	H	-	A	-	2
Housing													
20mm mounting	1		P Snap Action		11 1NO/1NC		Head Style		Blank Standard head		A Side exit cable		2 2 meters cable
25mm mounting	2		S Slow Action		12 1NO/2NC				H Horizontal head				
					20 2NO								
					21 2NO/1NC								
					22 2NO/2NC								
					02 2NC								

Specification

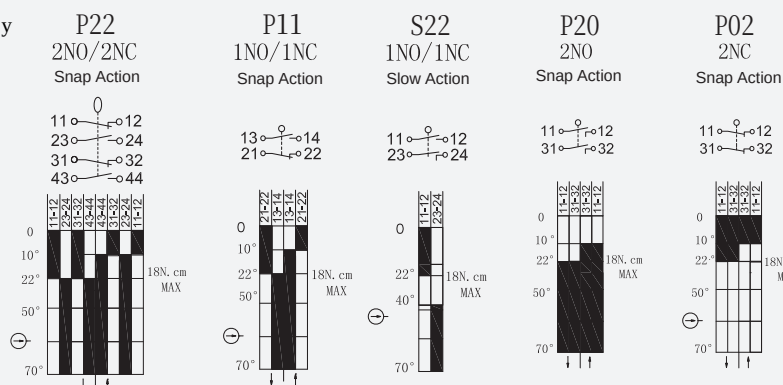
Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Voltage	300V AC (EN60947-5-1)
Rated Thermal Current	5A
Electrical Rating	AC15 B300 DC13 R300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1 x10 ⁷ (operations) Electrically 2 x10 ⁶ (operations)
Operating Temperature	-25~+85°C without formation of ice
Humidity	< 95%RH
Cable	5 core, 0.75mm ² 7 core, 0.5mm ² 9 core, 0.34mm ²
Degree of Protection	IP67



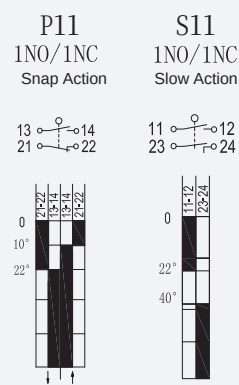
Plunger Style:



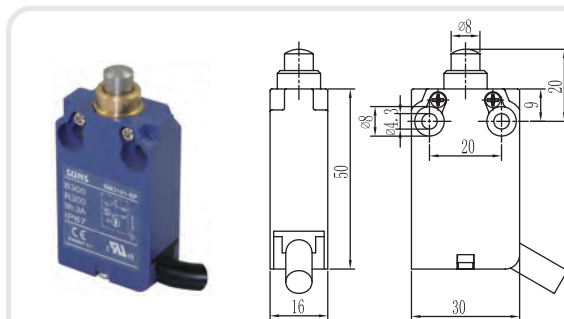
Rotary Style:



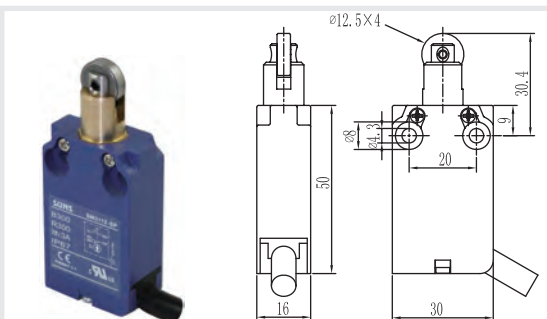
Spring Coil Style:



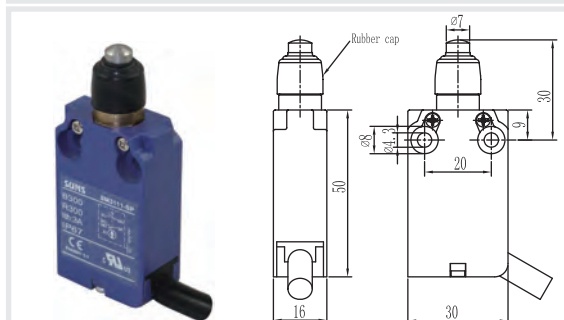
Compact Safety Limit Switches (Modular Design, IP67, 20mm) SM31 SERIES (20mm)



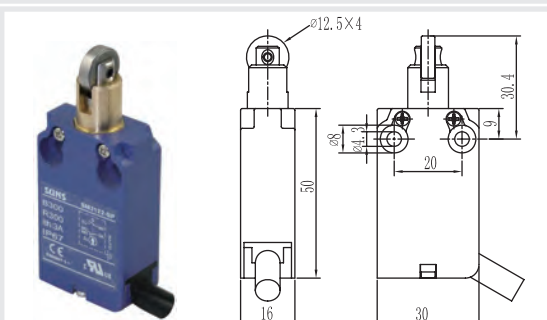
Order Code	Contact block			
SM31P11-01	SP	→	snap action	1NO+1NC
SM31S11-01	SL	→	slow action	1NO+1NC BBM



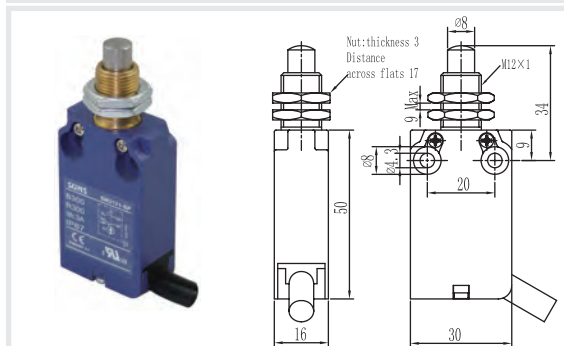
Order Code	Contact block			
SM31P11-12	SP	→	snap action	1NO+1NC
SM31S11-12	SL	→	slow action	1NO+1NC BBM



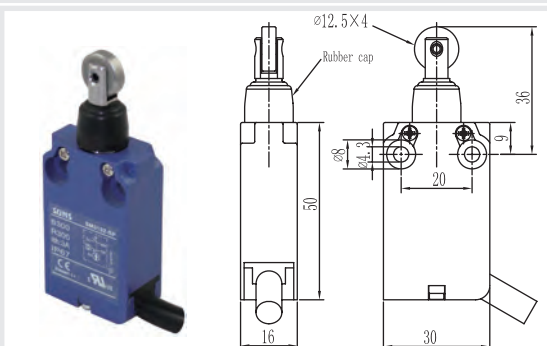
Order Code	Contact block			
SM31P11-11	SP	→	snap action	1NO+1NC
SM31S11-11	SL	→	slow action	1NO+1NC BBM



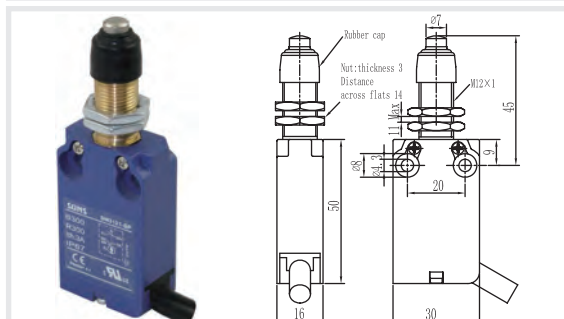
Order Code	Contact block			
SM31P11-22	SP	→	snap action	1NO+1NC
SM31S11-22	SL	→	slow action	1NO+1NC BBM



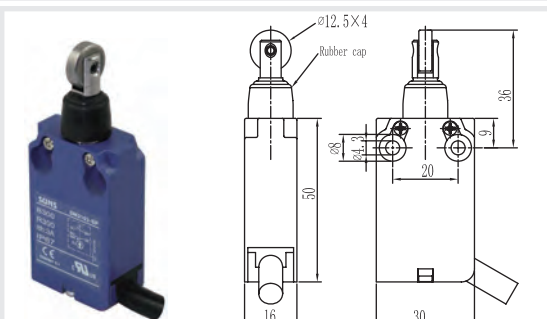
Order Code	Contact block			
SM31P11-21	SP	→	snap action	1NO+1NC
SM31S11-21	SL	→	slow action	1NO+1NC BBM



Order Code	Contact block			
SM31P11-02	SP	→	snap action	1NO+1NC
SM31S11-02	SL	→	slow action	1NO+1NC BBM

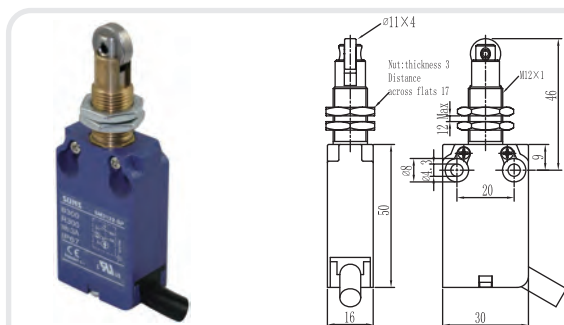


Order Code	Contact block			
SM31P11-31	SP	→	snap action	1NO+1NC
SM31S11-31	SL	→	slow action	1NO+1NC BBM

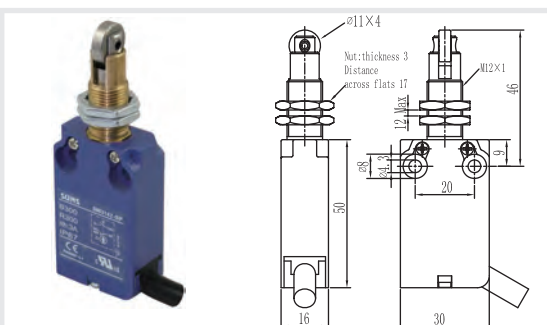


Order Code	Contact block			
SM31P11-03	SP	→	snap action	1NO+1NC
SM31S11-03	SL	→	slow action	1NO+1NC BBM

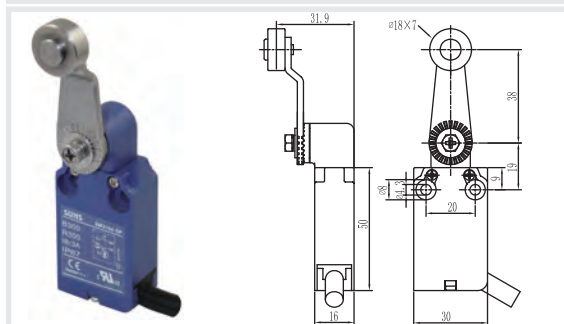
Compact Safety Limit Switches (Modular Design, IP67, 20mm) SM31 SERIES (20mm)



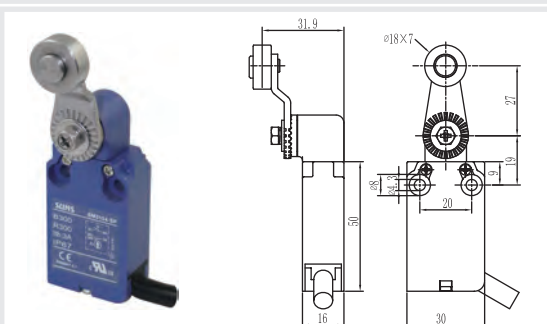
Order Code	Contact block		
SM31P11-32	SP	 snap action	1NO+1NC
SM31S11-32	SL	 slow action	1NO+1NC BBM



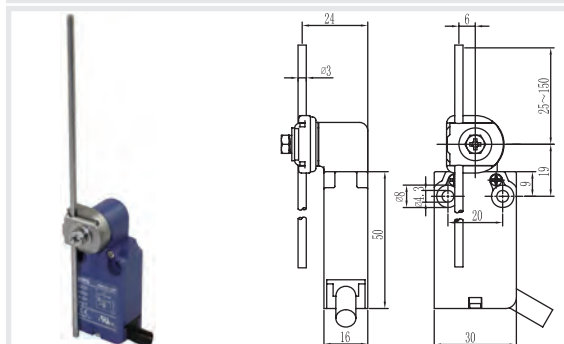
Order Code	Contact block		
SM31P11-42	SP	 snap action	1NO+1NC
SM31S11-42	SL	 slow action	1NO+1NC BBM



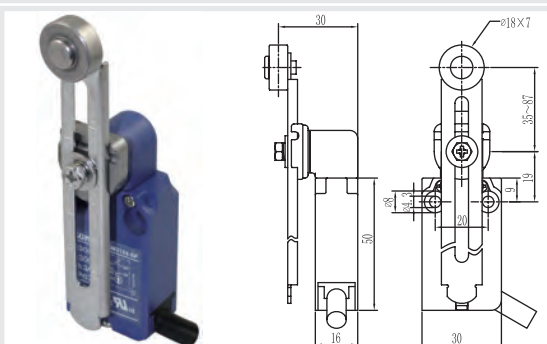
Order Code	Contact block		
SM31P11-04	SP	 snap action	1NO+1NC
SM31S11-04	SL	 slow action	1NO+1NC BBM



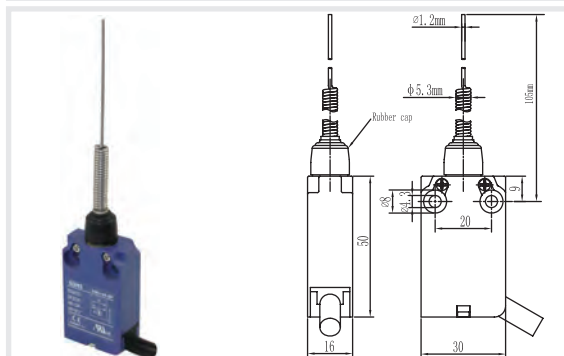
Order Code	Contact block		
SM31P11-04S	SP	 snap action	1NO+1NC
SM31S11-04S	SL	 slow action	1NO+1NC BBM



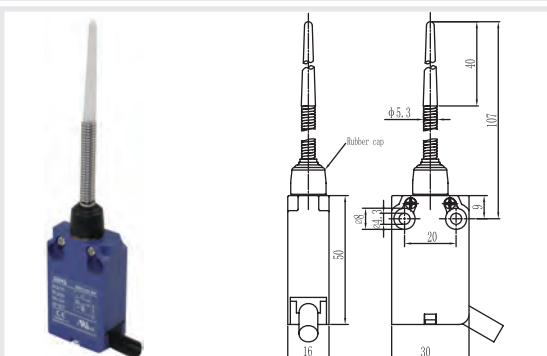
Order Code	Contact block		
SM31P11-07	SP	 snap action	1NO+1NC
SM31S11-07	SL	 slow action	1NO+1NC BBM



Order Code	Contact block		
SM31P11-08	SP	 snap action	1NO+1NC
SM31S11-08	SL	 slow action	1NO+1NC BBM

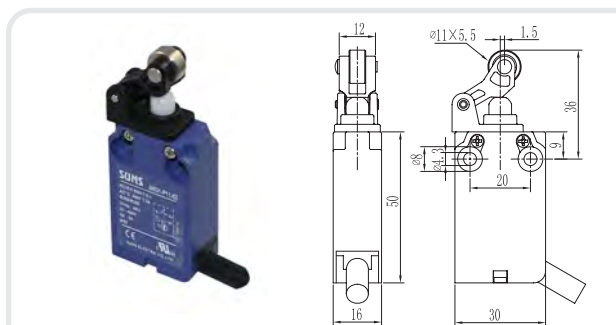


Order Code	Contact block		
SM31P11-69	SP	 snap action	1NO+1NC
SM31S11-69	SL	 slow action	1NO+1NC BBM

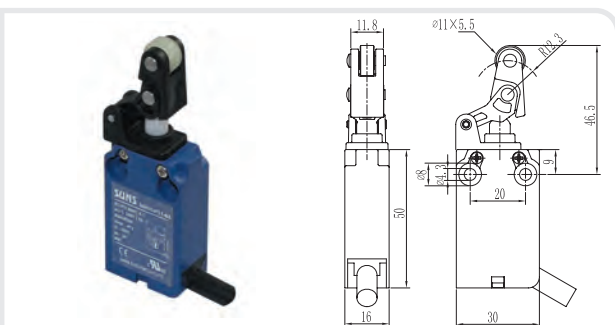


Order Code	Contact block		
SM31P11-66	SP	 snap action	1NO+1NC
SM31S11-66	SL	 slow action	1NO+1NC BBM

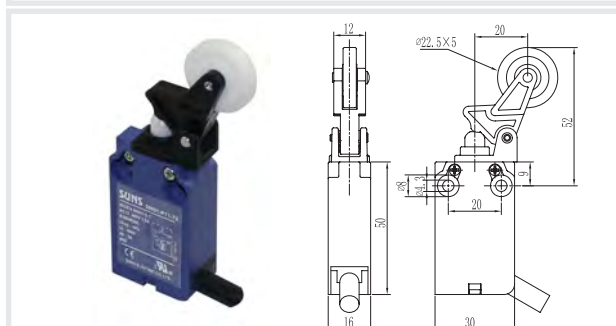
Compact Safety Limit Switches (Modular Design, IP67, 20mm) SM31 SERIES (20mm)



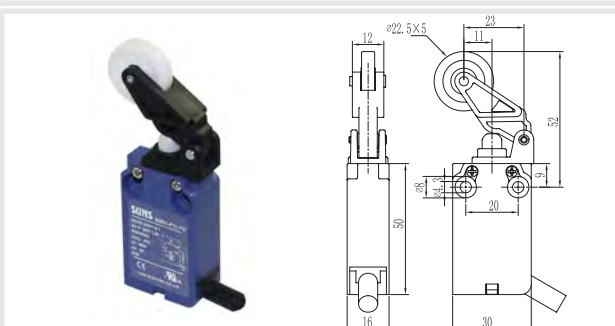
Order Code	Contact block
SM31P11-62	SP snap action 1NO+1NC
SM31S11-62	SL slow action 1NO+1NC BBM



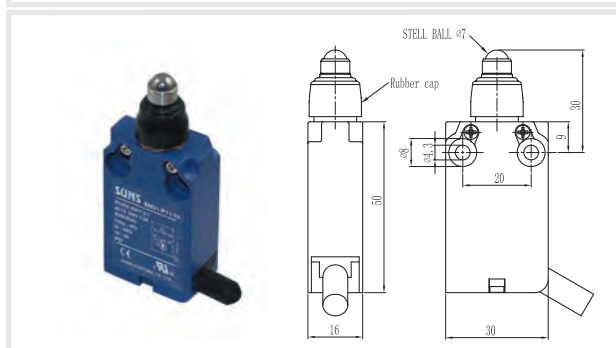
Order Code	Contact block
SM31P11-63	SP snap action 1NO+1NC
SM31S11-63	SL slow action 1NO+1NC BBM



Order Code	Contact block
SM31P11-72	SP snap action 1NO+1NC
SM31S11-72	SL slow action 1NO+1NC BBM

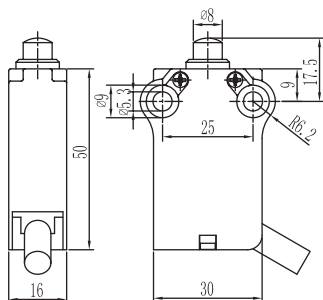


Order Code	Contact block
SM31P11-73	SP snap action 1NO+1NC
SM31S11-73	SL slow action 1NO+1NC BBM

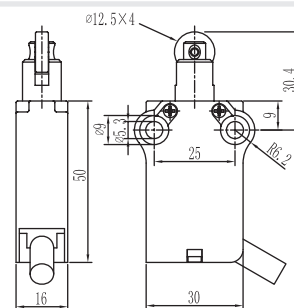


Order Code	Contact block
SM31P11-11 G	SP snap action 1NO+1NC
SM31S11-11 G	SL slow action 1NO+1NC BBM

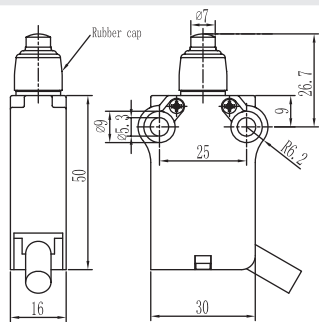
Compact Safety Limit Switches (Modular Design, IP67, 25mm) SM32 SERIES (25mm)



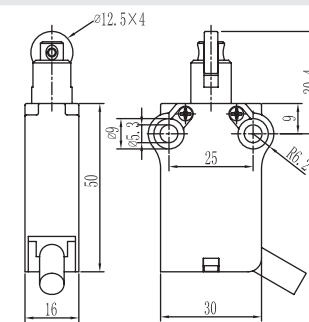
Order Code	Contact block
SM32P11-01	SP snap action 1NO+1NC
SM32S11-01	SL slow action 1NO+1NC BBM



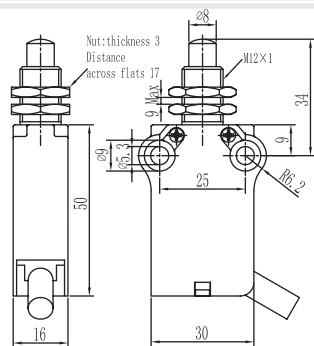
Order Code	Contact block
SM32P11-12	SP snap action 1NO+1NC
SM32S11-12	SL slow action 1NO+1NC BBM



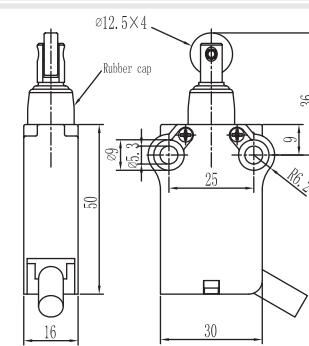
Order Code	Contact block
SM32P11-11	SP snap action 1NO+1NC
SM32S11-11	SL slow action 1NO+1NC BBM



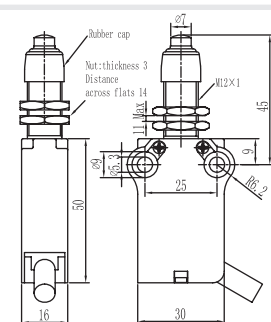
Order Code	Contact block
SM32P11-22	SP snap action 1NO+1NC
SM32S11-22	SL slow action 1NO+1NC BBM



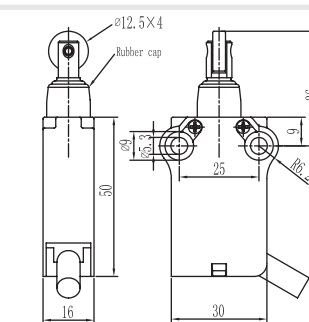
Order Code	Contact block
SM32P11-21	SP snap action 1NO+1NC
SM32S11-21	SL slow action 1NO+1NC BBM



Order Code	Contact block
SM32P11-02	SP snap action 1NO+1NC
SM32S11-02	SL slow action 1NO+1NC BBM

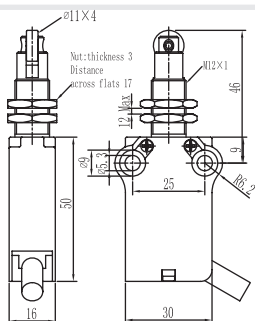


Order Code	Contact block
SM32P11-31	SP snap action 1NO+1NC
SM32S11-31	SL slow action 1NO+1NC BBM

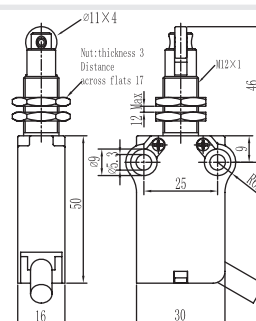


Order Code	Contact block
SM32P11-03	SP snap action 1NO+1NC
SM32S11-03	SL slow action 1NO+1NC BBM

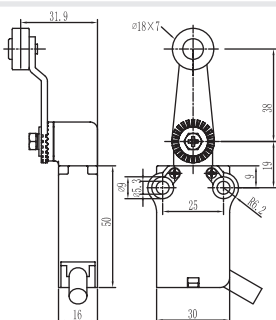
Compact Safety Limit Switches (Modular Design, IP67, 25mm) SM32 SERIES (25mm)



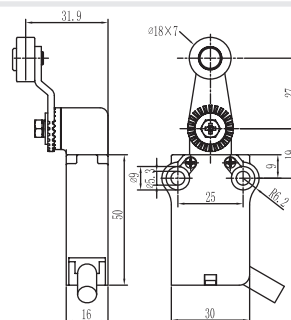
Order Code	Contact block		
SM32P11-32	SP	 snap action	1NO+1NC
SM32S11-32	SL	 slow action	1NO+1NC BBM



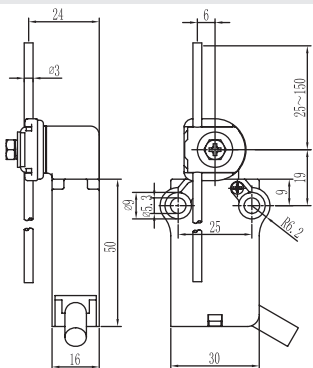
Order Code		Contact block	
SM32P11-42	SP	 snap action	1NO+1NC
SM32S11-42	SL	 slow action	1NO+1NC BBM



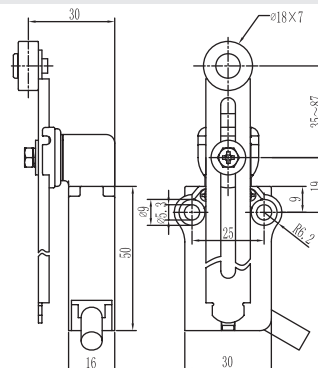
Order Code	Contact block		
SM32P11-04	SP	 snap action	1NO+1NC
SM32S11-04	SL	 slow action	1NO+1NC BBM



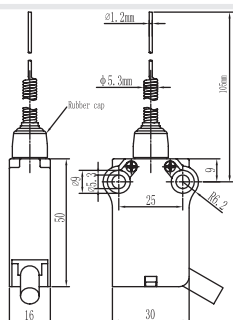
Order Code	Contact block			
SM32P11-04S	SP		snap action	1NO+1NC
SM32S11-04S	SL		slow action	1NO+1NC BBM



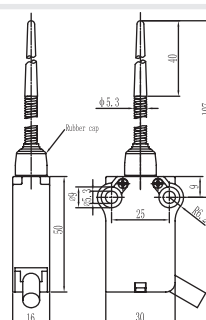
Order Code	Contact block		
SM32P11-07	SP	 snap action	1NO+1NC
SM32S11-07	SL	 slow action	1NO+1NC BBM



Order Code	Contact block			
SM32P11-08	SP		snap action	1NO+1NC
SM32S11-08	SL		slow action	1NO+1NC BBM

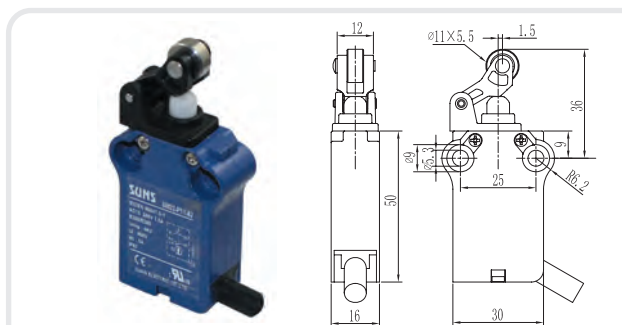


Order Code			
SM32P11-69	SP	snap action	1NO+1NC
SM32S11-69	SL	slow action	1NO+1NC BBM

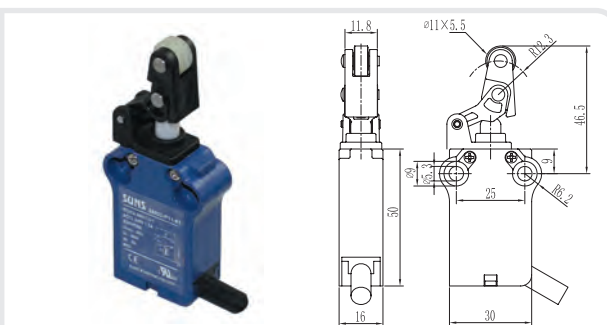


Order Code				
SM32P11-66	SP	snap action	1NO+1NC	
SM32S11-66	SL	slow action	1NO+1NC	BBM

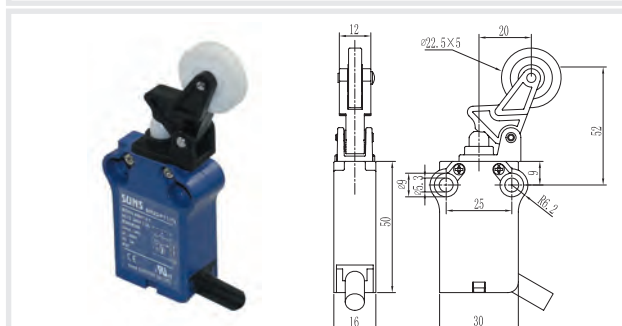
Compact Safety Limit Switches (Modular Design, IP67, 25mm) SM32 SERIES (25mm)



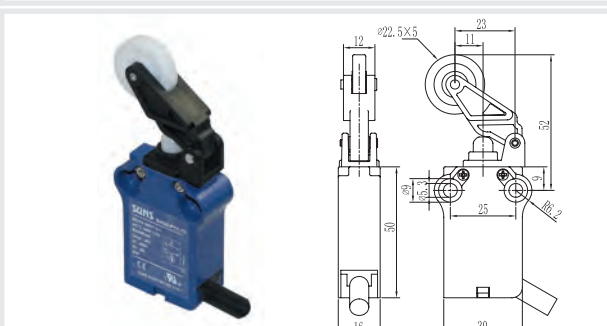
Order Code	Contact block
SM32P11-62	SP snap action 1NO+1NC
SM32S11-62	SL slow action 1NO+1NC BBM



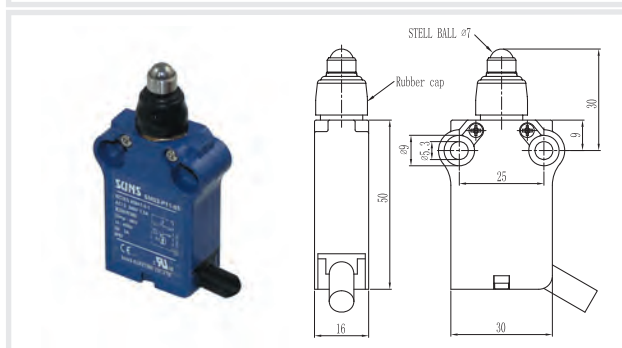
Order Code	Contact block
SM32P11-63	SP snap action 1NO+1NC
SM32S11-63	SL slow action 1NO+1NC BBM



Order Code	Contact block
SM32P11-72	SP snap action 1NO+1NC
SM32S11-72	SL slow action 1NO+1NC BBM



Order Code	Contact block
SM32P11-73	SP snap action 1NO+1NC
SM32S11-73	SL slow action 1NO+1NC BBM



Order Code	Contact block
SM32P11-11 G	SP snap action 1NO+1NC
SM32S11-11 G	SL slow action 1NO+1NC BBM

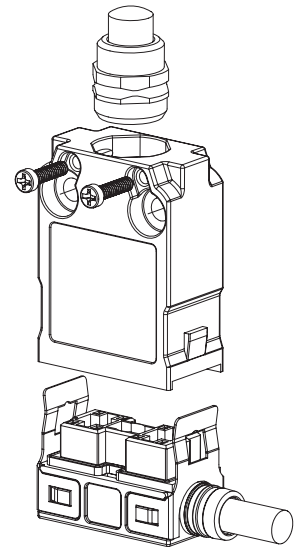
Compact Safety Limit Switches (Modular Design, Plastic Body, IP67) SM31N SERIES (20mm) and SM32N SERIES (25mm)

Selection Guide:

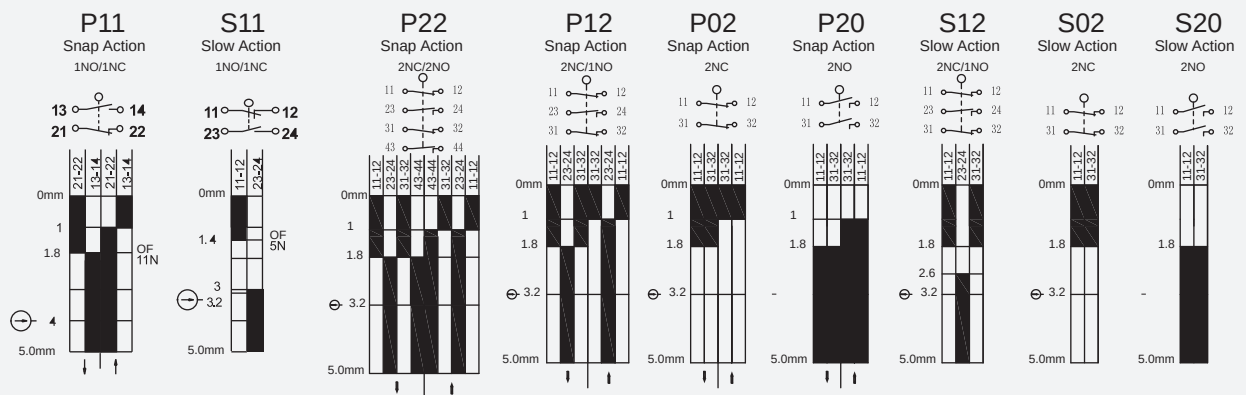
SM3	1	-	N	-	P	-	11	-	12	-	H	-	A	-	2
Housing															
20mm mounting	1				P	Snap Action	11	1NO/1NC	Head Style	Blank		A	side exit cable	2	2 meters cable
25mm mounting	2				S	Slow Action	12	1NO/2NC		H	Horizontal head	B	bottom exit cable		
							20	2NO							
							21	2NO/1NC							
							22	2NO/2NC							
							02	2NC							

Specification

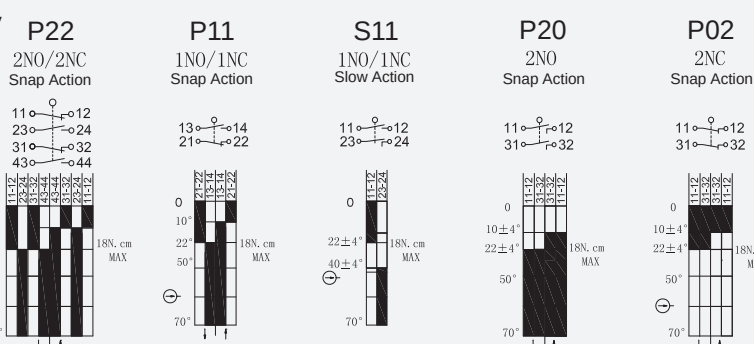
Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Voltage	300V AC (EN60947-5-1)
Rated Thermal Current	5A
Electrical Rating	AC15 B300 DC13 R300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1 x10 ⁷ (operations) Electrically 2 x10 ⁶ (operations)
Operating Temperature	-25~+85°C without formation of ice
Humidity	< 95%
Cable	4 core, 0.5mm ² ; 6 core, 0.5mm ² ; 8 core, 0.34mm ²
Degree of Protection	IP67



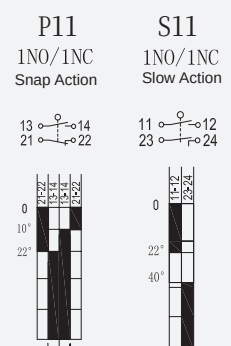
Plunger Style:



Rotary Style:



Spring Coil Style:

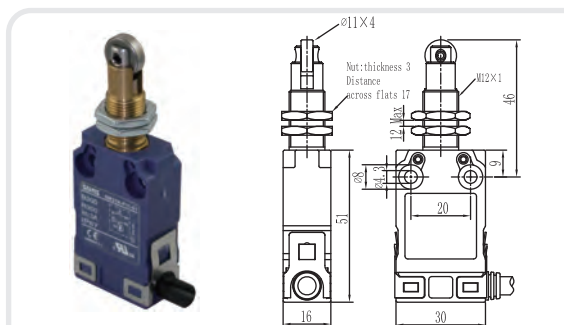


Compact Safety Limit Switches(Fiber Reinforced Plastic, IP67, 20mm) SM31N SERIES (20mm)

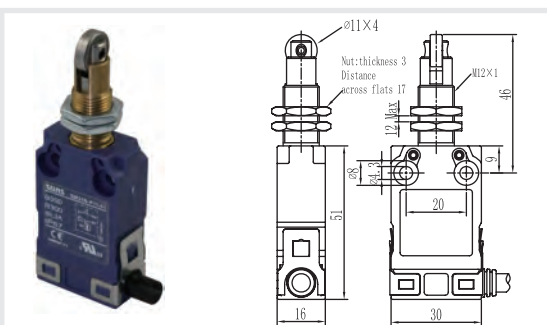
	Order Code SM31NP11-01 SP ↻ snap action 1NO+1NC SM31NS11-01 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-12 SP ↻ snap action 1NO+1NC SM31NS11-12 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-11 SP ↻ snap action 1NO+1NC SM31NS11-11 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-22 SP ↻ snap action 1NO+1NC SM31NS11-22 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-21 SP ↻ snap action 1NO+1NC SM31NS11-21 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-02 SP ↻ snap action 1NO+1NC SM31NS11-02 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-31 SP ↻ snap action 1NO+1NC SM31NS11-31 SL ↻ slow action 1NO+1NC BBM
	Order Code SM31NP11-03 SP ↻ snap action 1NO+1NC SM31NS11-03 SL ↻ slow action 1NO+1NC BBM

* suffix:-A for side exit, -B for Bottom exit and one-digit number for length of the wire (meter).Eg :-A2

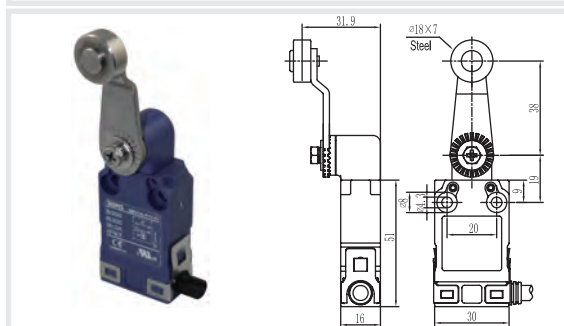
Compact Safety Limit Switches(Fiber Reinforced Plastic, IP67, 20mm) SM31N SERIES (20mm)



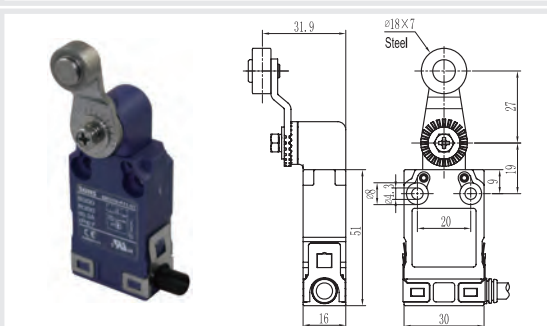
Order Code	Contact block			
SM31NP11-32	SP	→ snap action	1NO+1NC	
SM31NS11-32	SL	→ slow action	1NO+1NC	BBM



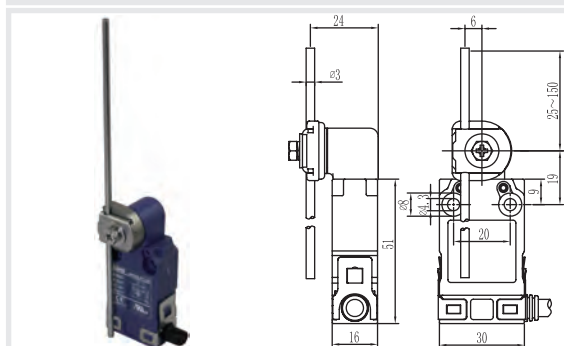
Order Code	Contact block			
SM31NP11-42	SP	→ snap action	1NO+1NC	
SM31NS11-42	SL	→ slow action	1NO+1NC	BBM



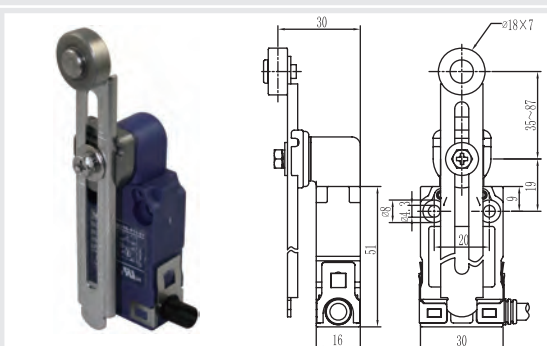
Order Code	Contact block			
SM31NP11-04	SP	→ snap action	1NO+1NC	
SM31NS11-04	SL	→ slow action	1NO+1NC	BBM



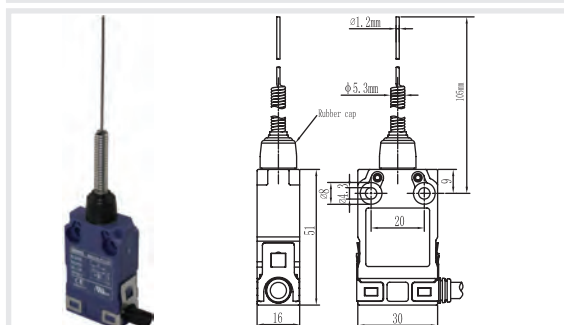
Order Code	Contact block			
SM31NP11-04-S	SP	→ snap action	1NO+1NC	
SM31NS11-04-S	SL	→ slow action	1NO+1NC	BBM



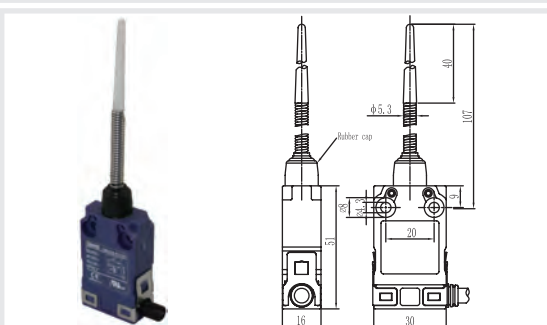
Order Code	Contact block			
SM31NP11-07	SP	→ snap action	1NO+1NC	
SM31NS11-07	SL	→ slow action	1NO+1NC	BBM



Order Code	Contact block			
SM31NP11-08	SP	→ snap action	1NO+1NC	
SM31NS11-08	SL	→ slow action	1NO+1NC	BBM



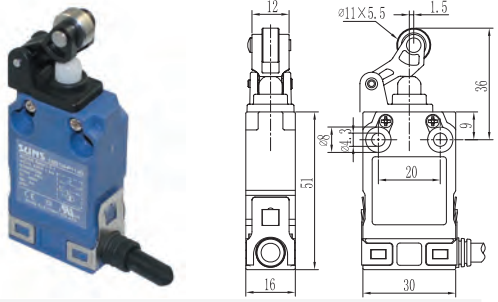
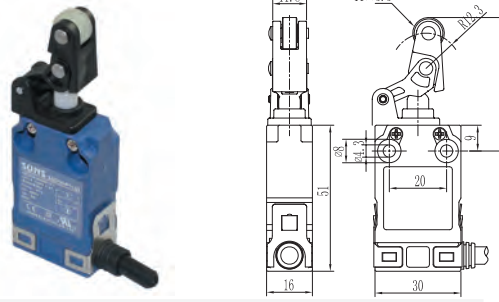
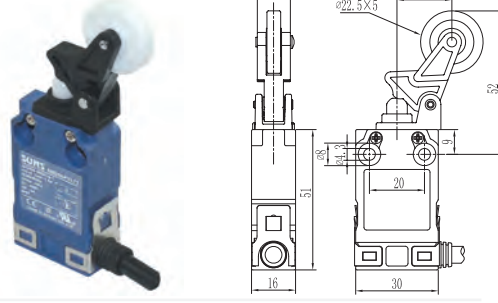
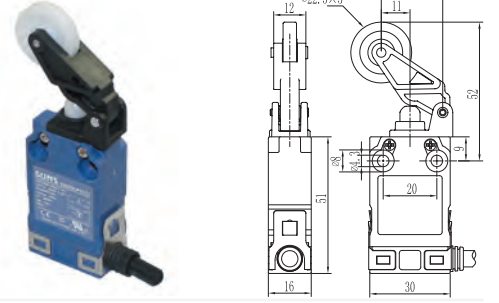
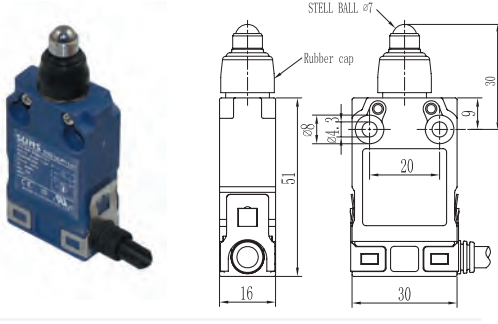
Order Code				
SM31NP11-69	SP	snap action	1NO+1NC	
SM31NS11-69	SL	slow action	1NO+1NC	BBM



Order Code				
SM31NP11-66	SP	snap action	1NO+1NC	
SM31NS11-66	SL	slow action	1NO+1NC	BBM

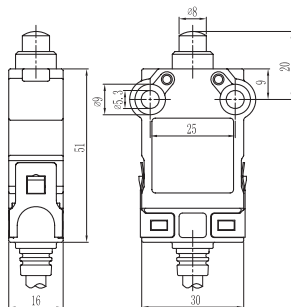
* suffix:-A for side exit,-B for Bottom exit and one-digit number for length of the wire (meter).Eg :-A2

Compact Safety Limit Switches(Fiber Reinforced Plastic, IP67, 20mm) SM31N SERIES (20mm)

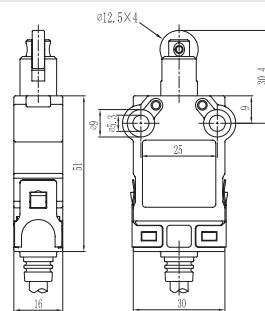
	
Order Code SM31NP11-62 SP snap action 1NO+1NC SM31NS11-62 SL slow action 1NO+1NC BBM	Order Code SM31NP11-63 SP snap action 1NO+1NC SM31NS11-63 SL slow action 1NO+1NC BBM
	
Order Code SM31NP11-72 SP snap action 1NO+1NC SM31NS11-72 SL slow action 1NO+1NC BBM	Order Code SM31NP11-73 SP snap action 1NO+1NC SM31NS11-73 SL slow action 1NO+1NC BBM
	
Order Code SM31NP11-11 G SP snap action 1NO+1NC SM31NS11-11 G SL slow action 1NO+1NC BBM	

* suffix:-A for side exit,-B for Bottom exit and one-digit number for length of the wire (meter).Eg :-A2

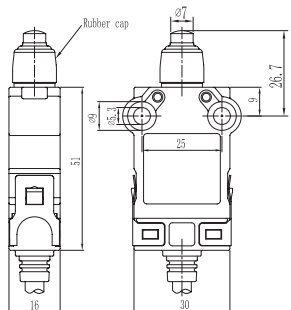
Compact Safety Limit Switches (Fiber Reinforced Plastic, IP67, 25mm) SM32N SERIES (25mm)



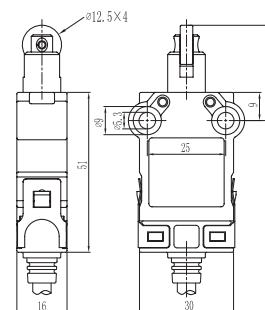
Order Code	Contact block
SM32NP11-01 SP	➔ snap action 1NO+1NC
SM32NS11-01 SL	➔ slow action 1NO+1NC BBM



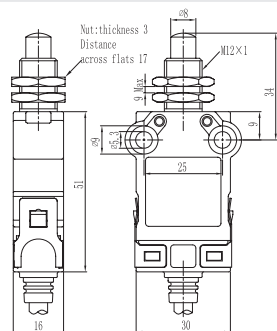
Order Code	Contact block
SM32NP11-12 SP	➔ snap action 1NO+1NC
SM32NS11-12 SL	➔ slow action 1NO+1NC BBM



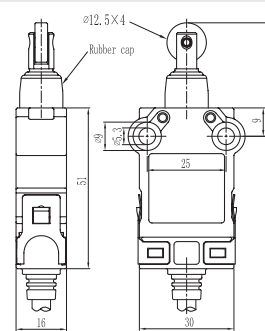
Order Code	Contact block
SM32NP11-11 SP	➔ snap action 1NO+1NC
SM32NS11-11 SL	➔ slow action 1NO+1NC BBM



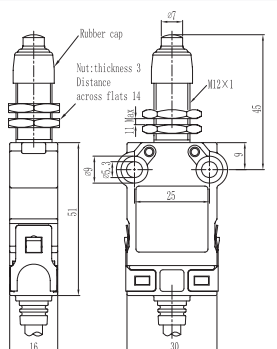
Order Code	Contact block
SM32NP11-22 SP	➔ snap action 1NO+1NC
SM32NS11-22 SL	➔ slow action 1NO+1NC BBM



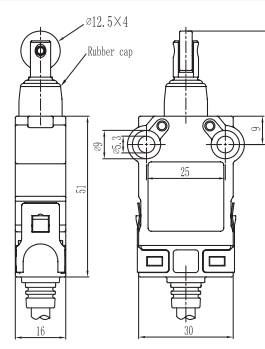
Order Code	Contact block
SM32NP11-21 SP	➔ snap action 1NO+1NC
SM32NS11-21 SL	➔ slow action 1NO+1NC BBM



Order Code	Contact block
SM32NP11-02 SP	➔ snap action 1NO+1NC
SM32NS11-02 SL	➔ slow action 1NO+1NC BBM



Order Code	Contact block
SM32NP11-31 SP	➔ snap action 1NO+1NC
SM32NS11-31 SL	➔ slow action 1NO+1NC BBM



Order Code	Contact block
SM32NP11-03 SP	➔ snap action 1NO+1NC
SM32NS11-03 SL	➔ slow action 1NO+1NC BBM

* suffix: -A for side exit, -B for Bottom exit and one-digit number for length of the wire (meter). Eg :-B2

Compact Safety Limit Switches (Fiber Reinforced Plastic, IP67, 25mm) SM32N SERIES (25mm)

Order Code SM32NP11-32 SP snap action 1NO+1NC SM32NS11-32 SL slow action 1NO+1NC BBM	Order Code SM32NP11-42 SP snap action 1NO+1NC SM32NS11-42 SL slow action 1NO+1NC BBM
Order Code SM32NP11-04 SP snap action 1NO+1NC SM32NS11-04 SL slow action 1NO+1NC BBM	Order Code SM32NP11-04S SP snap action 1NO+1NC SM32NS11-04S SL slow action 1NO+1NC BBM
Order Code SM32NP11-07 SP snap action 1NO+1NC SM32NS11-07 SL slow action 1NO+1NC BBM	Order Code SM32NP11-08 SP snap action 1NO+1NC SM32NS11-08 SL slow action 1NO+1NC BBM
Order Code SM32NP11-69 SP snap action 1NO+1NC SM32NS11-69 SL slow action 1NO+1NC BBM	Order Code SM32NP11-66 SP snap action 1NO+1NC SM32NS11-66 SL slow action 1NO+1NC BBM

* suffix:-A for side exit,-B for Bottom exit and one-digit number for length of the wire (meter).Eg :-B2

Compact Safety Limit Switches (Fiber Reinforced Plastic, IP67, 25mm) SM32N SERIES (25mm)

	
Order Code SM32NP11-62 SP snap action 1NO+1NC SM32NS11-62 SL slow action 1NO+1NC BBM	Order Code SM32NP11-63 SP snap action 1NO+1NC SM32NS11-63 SL slow action 1NO+1NC BBM
	
Order Code SM32NP11-72 SP snap action 1NO+1NC SM32NS11-72 SL slow action 1NO+1NC BBM	Order Code SM32NP11-73 SP snap action 1NO+1NC SM32NS11-73 SL slow action 1NO+1NC BBM
	
Order Code SM32NP11-11 G SP snap action 1NO+1NC SM32NS11-11 G SL slow action 1NO+1NC BBM	

* suffix: -A for side exit, -B for Bottom exit and one-digit number for length of the wire (meter). Eg :-B2

COMPACT LIMIT SWITCHES: AZ-8 SERIES

Features

- Designed for applications of small mounting space
- Constructed with Metal based and plastic cover
- Wide range of actuators available
- Pre-molded flexible cable gland for fast and simple wiring termination
- Positive Opening of NC contacts (for rotary style only)
- Improved current carrying capacity to 10A
- M12 cable gland available

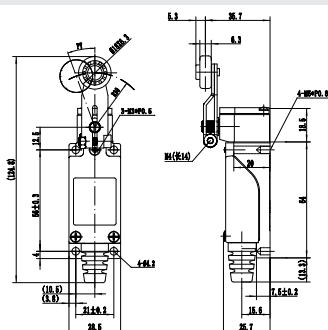
Definitions of Operating Characteristics

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

Specifications

Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/250VAC (EN60947-5-1)
Dielectric Strength	1000VAC for 1 min between current carrying parts 2000VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1 x10 ⁷ (operations) Electrically 5 x10 ⁵ (operations)
Operating Temperature	-20 to +70°C (-4 to 158°F)
Humidity	< 95%
Degree of Protection	IP65

Dimensions Unit: mm



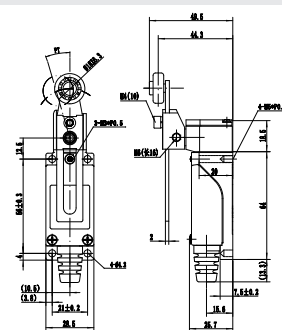
AZ-8104

Snap Action



Operating Characteristics

OF _{max}	18N cm	MD	12°
RF _{min}	3N cm	TT	95°
PT _{max}	20°	PO	25°
OT _{min}	75°		



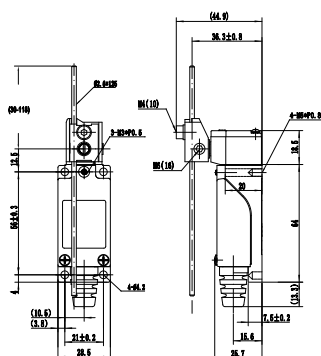
AZ-8108

Snap Action



Operating Characteristics

OF _{max}	18N cm	MD	12°
RF _{min}	3N cm	TT	95°
PT _{max}	20°	PO	25°
OT _{min}	75°		



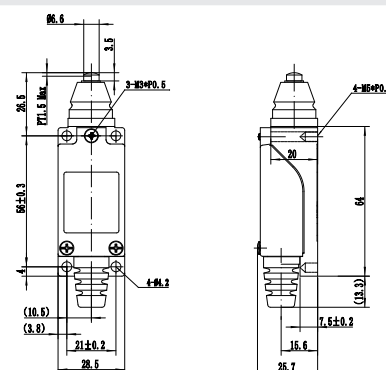
AZ-8107

Snap Action



Operating Characteristics

OF _{max}	18N cm	MD	12°
RF _{min}	3N cm	TT	95°
PT _{max}	20°	PO	25°
OT _{min}	75°		



AZ-8111

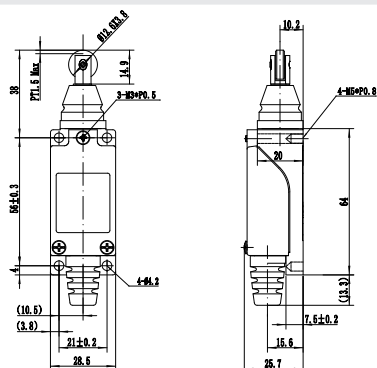
Snap Action



Operating Characteristics

OF _{max}	9N	MD _{max}	1.2mm
RF _{min}	1.5N	TT	5.5mm
PT _{max}	1.5mm	OP	25mm
OT _{min}	4mm		

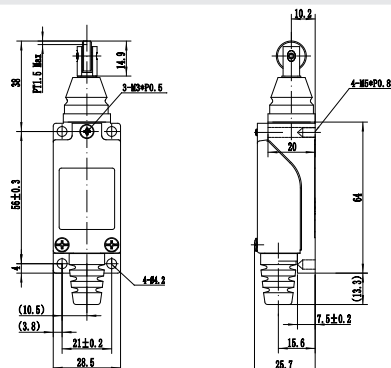
COMPACT LIMIT SWITCHES: AZ-8 SERIES



AZ-8112
Snap Action



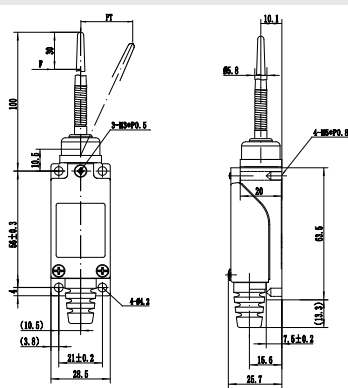
Operating Characteristics			
OF _{max}	9N	MD _{max}	1.2mm
RF _{min}	1.5N	TT	5.5mm
PT _{max}	1.5mm	OP	36.5mm
OT _{min}	4mm		



AZ-8122
Snap Action



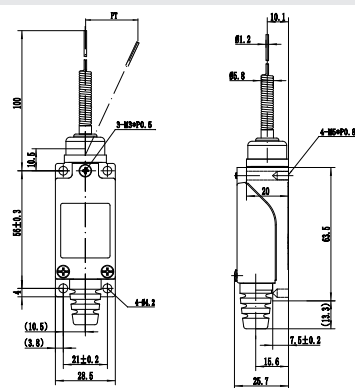
Operating Characteristics			
OF _{max}	9N	MD _{max}	1.2mm
RF _{min}	1.5N	TT	5.5mm
PT _{max}	1.5mm	OP	36.5mm
OT _{min}	4mm		



AZ-8166
Snap Action



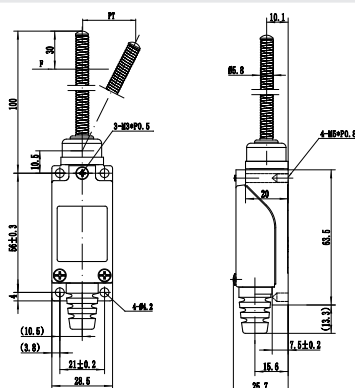
Operating Characteristics			
OF _{max}	2N		
PT _{max}	20°		
OT _{min}	2°		



AZ-8169
Snap Action



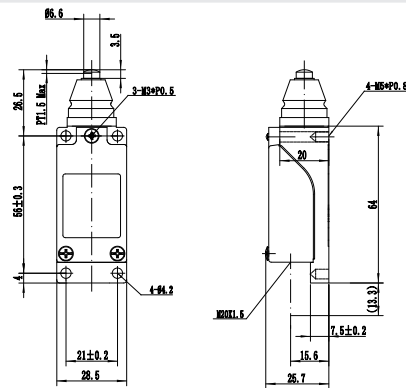
Operating Characteristics			
OF _{max}	2N		
PT _{max}	20°		
OT _{min}	2°		



AZ-8200
Snap Action



Operating Characteristics			
OF _{max}	2N		
PT _{max}	20°		
OT _{min}	2°		



AZ-8111 (M12)

Snap Action



Operating Characteristics			
OF _{max}	9N	MD _{max}	1.2mm
RF _{min}	1.5N	TT	5.5mm
PT _{max}	1.5mm	OP	25mm
OT _{min}	4mm		

METAL BODIED SAFETY LIMIT SWITCHES SN62 SERIES

SUNS products help to make factories run more efficiently, product manufacturing smarter, and automation environments more productive.



Features

- Aluminum die cast body
- Earth grounding surface on same level as switching
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT

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-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Thermal Current	10A/600V AC (EN60947-5-1) UL/cUL Listed (E216958) 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) with no icing
Humidity	< 95%RH
Weight	220-300g
Degree of Protection	IP67

Selection Guide:

SN62
Body
Styles

04
Head Styles

SP

- SP: 1NO/1NC Snap action
- SPT: 2NO/2NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action
- SL4: 3NC Slow Action
- SL5: 3NO Slow Action
- SL6: BBM 2NC/1NO Slow Action changeover
- SL7: MBB 2NC/1NO Slow Action Overlapping
- SL8: BBM 2NO/1NC Slow Action changeover
- SL9: MBB 2NO/1NC Slow Action Overlapping

C
Conduits

- A: 1/2"NPT
- B: PG13.5
- C: M20

R
Aluminum alloy
swing arm

- Blank
- R: with Reset

(AB)

METAL BODIED SAFETY LIMIT SWITCHES SN62 SERIES

Available contact blocks and travel diagrams

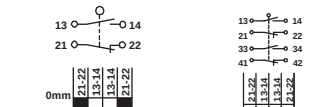
SP
1NO/1NC
Snap Action



Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18, 09 Styles

SPT
2NO/2NC
Snap Action



Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18, 09 Styles

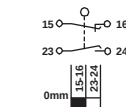
SL
1NO/1NC
Slow Action
(Changeover)



Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18, 09 Styles

SL1
1NO/1NC
Slow Action
(Overlapping)



Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18, 09 Styles

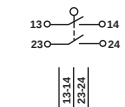
SL2
2NC
Slow Action



Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18, 09 Styles

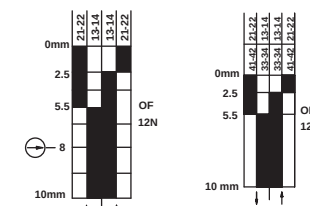
SL3
2NO
Slow Action



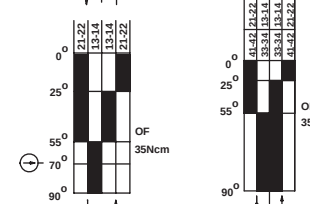
Plunger type
11,12 Styles

Side rotary type
04, 07, 08, 14, 18, 09 Styles

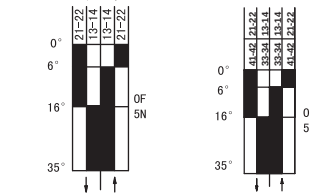
72, 73 Styles



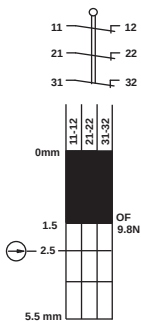
05 Styles



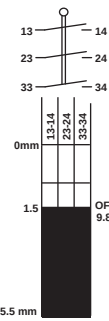
00, 66,69 Styles



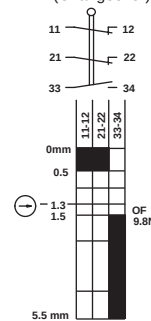
SL4
3NC
Slow Action



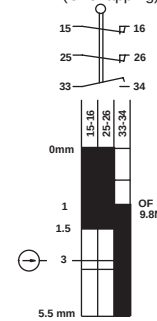
SL5
3NO
Slow Action



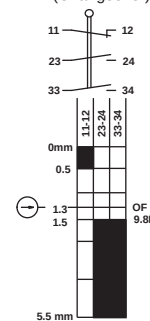
SL6
2NC/1NO
Slow Action
(Changeover)



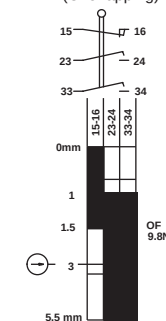
SL7
2NC/1NO
Slow Action
(Overlapping)



SL8
1NC/2NO
Slow Action
(Changeover)

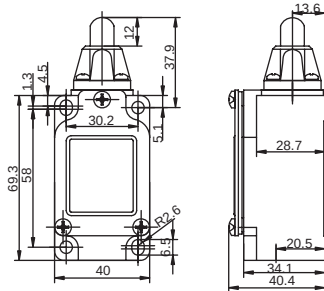


SL9
1NC/2NO
Slow Action
(Overlapping)



METAL BODIED SAFETY LIMIT SWITCHES SN62 SERIES

SN6211

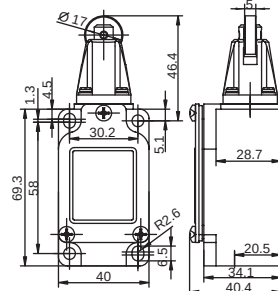


Order Code

Contact block

SN6211-SP- _	SP		snap action	1NO+1NC
SN6211-SL- _	SL		slow action	1NO+1NC BBM
SN6211-SL1- _	SL1		slow action	1NO+1NC MBB
SN6211-SL2- _	SL2		slow action	2NC

SN6212

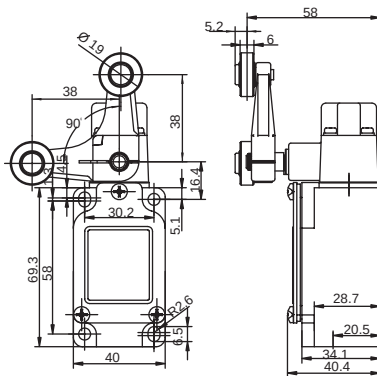


Order Code

Contact block

SN6212-SP- _	SP		snap action	1NO+1NC
SN6212-SL- _	SL		slow action	1NO+1NC BBM
SN6212-SL1- _	SL1		slow action	1NO+1NC MBB
SN6212-SL2- _	SL2		slow action	2NC

SN6205

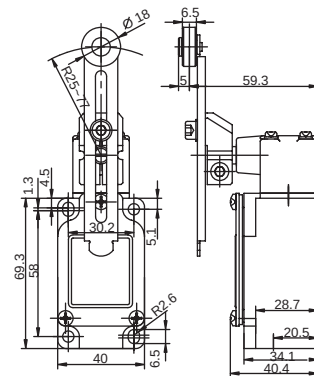


Order Code

Contact block

SN6205-SP- _	SP		snap action	1NO+1NC
SN6205-SL- _	SL		slow action	1NO+1NC BBM

SN6208

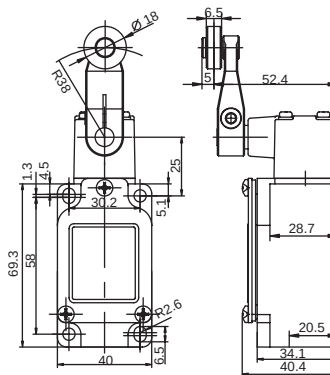


Order Code

Contact block

SN6208-SP- _	SP		snap action	1NO+1NC
SN6208-SL- _	SL		slow action	1NO+1NC BBM
SN6208-SL1- _	SL1		slow action	1NO+1NC MBB
SN6208-SL2- _	SL2		slow action	2NC

SN6204

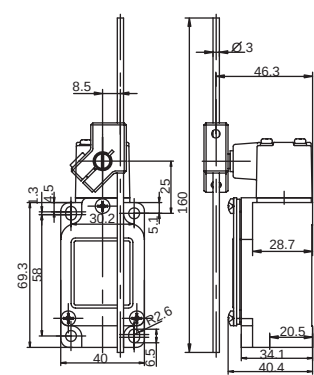


Order Code

Contact block

SN6204-SP- _	SP		snap action	1NO+1NC
SN6204-SL- _	SL		slow action	1NO+1NC BBM
SN6204-SL1- _	SL1		slow action	1NO+1NC MBB
SN6204-SL2- _	SL2		slow action	2NC

SN6207



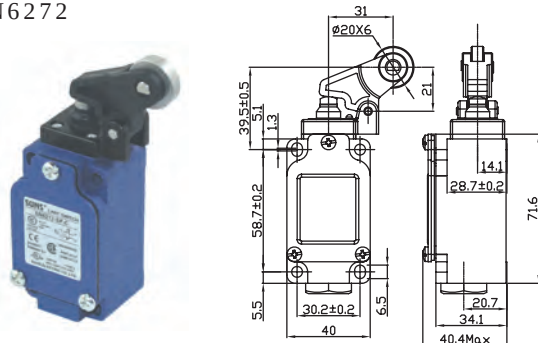
Order Code

Contact block

SN6207-SP- _	SP		snap action	1NO+1NC
SN6207-SL- _	SL		slow action	1NO+1NC BBM
SN6207-SL1- _	SL1		slow action	1NO+1NC MBB
SN6207-SL2- _	SL2		slow action	2NC

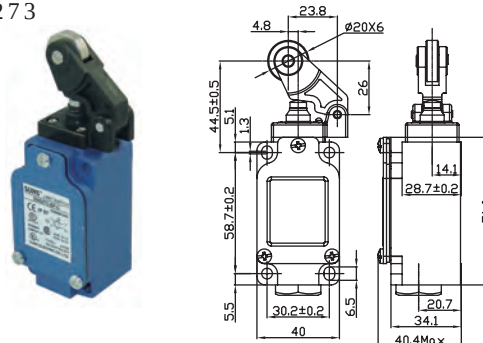
METAL BODIED SAFETY LIMIT SWITCHES SN62 SERIES

SN6272



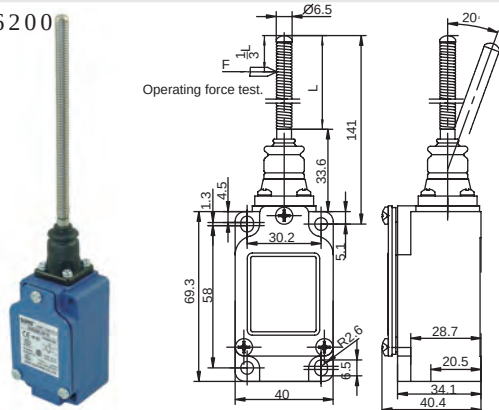
Order Code	Contact block			
SN6272-SP- _	SP		snap action	1NO+1NC
SN6272-SL- _	SL		slow action	1NO+1NC BBM
SN6272-SL1- _	SL1		slow action	1NO+1NC MBB
SN6272-SL2- _	SL2		slow action	2NC

SN6273



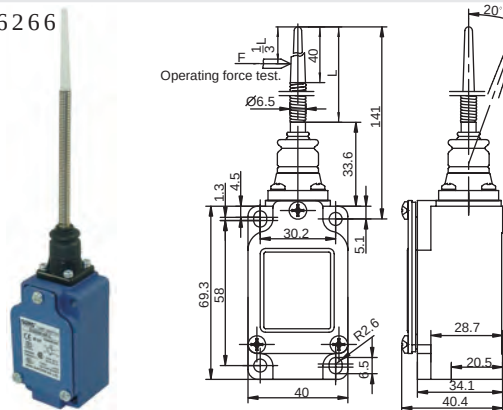
Order Code	Contact block			
SN6273-SP- _	SP		snap action	1NO+1NC
SN6273-SL- _	SL		slow action	1NO+1NC BBM
SN6273-SL1- _	SL1		slow action	1NO+1NC MBB
SN6273-SL2- _	SL2		slow action	2NC

SN6200



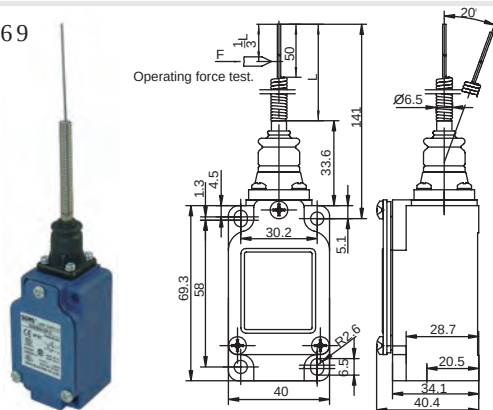
Order Code	Contact block			
SN6200-SP- _	SP		snap action	1NO+1NC

SN6266



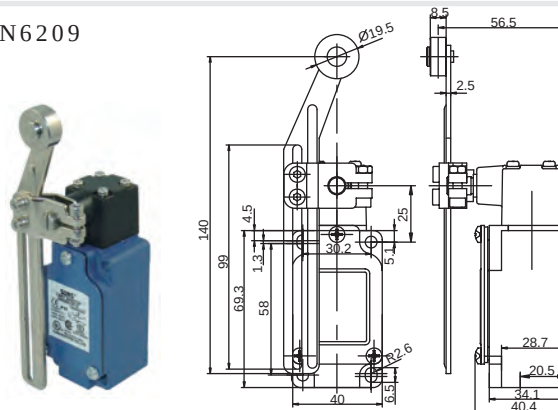
Order Code	Contact block			
SN6266-SP- _	SP		snap action	1NO+1NC

SN6269



Order Code	Contact block			
SN6269-SP- _	SP		snap action	1NO+1NC

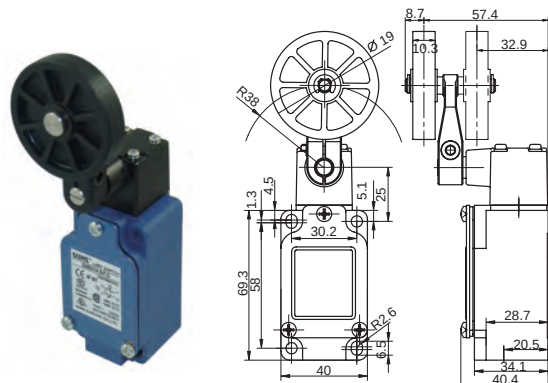
SN6209



Order Code	Contact block			
SN6209-SP- _	SP		snap action	1NO+1NC
SN6209-SL- _	SL		slow action	1NO+1NC BBM
SN6209-SL1- _	SL1		slow action	1NO+1NC MBB
SN6209-SL2- _	SL2		slow action	2NC

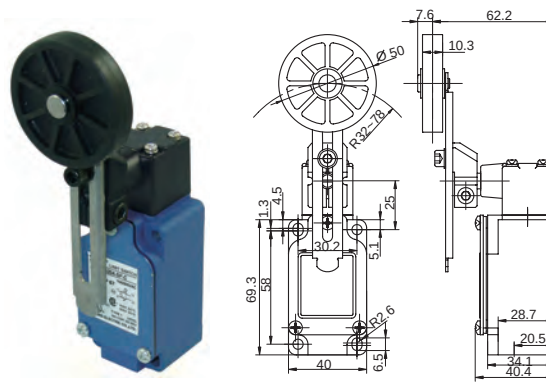
METAL BODIED SAFETY LIMIT SWITCHES SN62 SERIES

SN6214



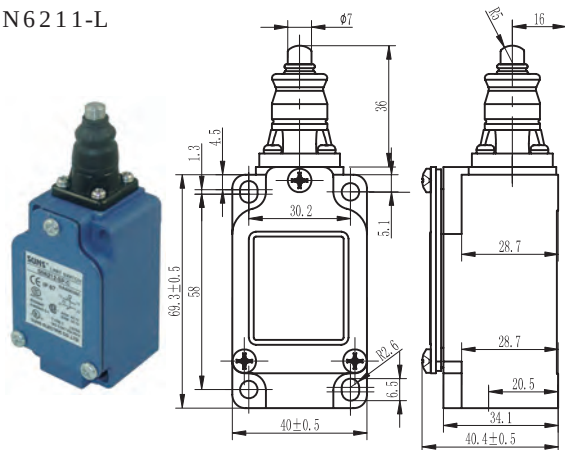
Order Code	Contact block		
SN6214-SP- _	SP		snap action 1NO+1NC
SN6214-SL- _	SL		slow action 1NO+1NC BBM
SN6214-SL1- _	SL1		slow action 1NO+1NC MBB
SN6214-SL2- _	SL2		slow action 2NC

SN6218



Order Code	Contact block		
SN6218-SP- _	SP		snap action 1NO+1NC
SN6218-SL- _	SL		slow action 1NO+1NC BBM
SN6218-SL1- _	SL1		slow action 1NO+1NC MBB
SN6218-SL2- _	SL2		slow action 2NC

SN6211-L



Order Code	Contact block		
SN6211-SP- _L	SP		snap action 1NO+1NC
SN6211-SL- _L	SL		slow action 1NO+1NC BBM
SN6211-SL1- _L	SL1		slow action 1NO+1NC MBB
SN6211-SL2- _L	SL2		slow action 2NC

COMPACT LIMIT SWITCHES SN5 SERIES

Features

- Zinc die cast body, Plastic cover
- Designed for applications with small mounting space
- Highly rigid construction (head and cover snugly fit in box)
- Wide range of actuators available
- Pre-molded flexible cable gland for fast and simple wiring termination

Definitions of Operating Characteristics

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

Specifications

Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	10A/250V 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	-20~+80°C (-14~176°F)
Humidity	< 95%RH
Weight	240-290g
Degree of Protection	IP65

Dimensions Unit: mm

SN5104

Snap Action

Operating Characteristics

OF _{max}	18Ncm
RF _{min}	3Ncm
PT _{max}	20°
OT _{min}	75°
MD	12°
TT	95°

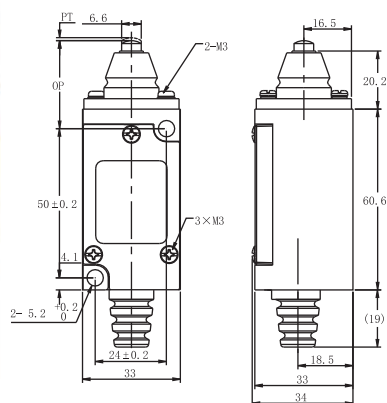
SN5108

Snap Action

Operating Characteristics

OF _{max}	18Ncm
RF _{min}	3Ncm
PT _{max}	20°
OT _{min}	75°
MD	12°
TT	95°

COMPACT LIMIT SWITCHES SN5 SERIES



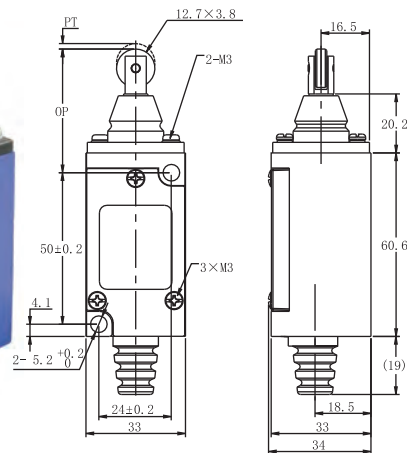
SN5111

Snap Action



Operating Characteristics

OF _{max}	9N
RF _{min}	1.5N
PT _{max}	1.5mm
OT _{min}	4mm
MD _{max}	1.2mm
TT	5.5mm



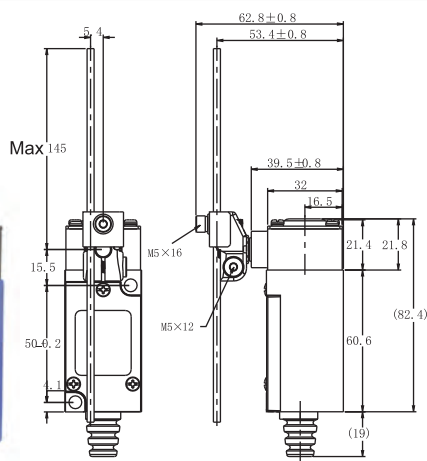
SN5112

Snap Action



Operating Characteristics

OF _{max}	9N
RF _{min}	1.5N
PT _{max}	1.5mm
OT _{min}	4mm
MD _{max}	1.2mm
TT	5.5mm



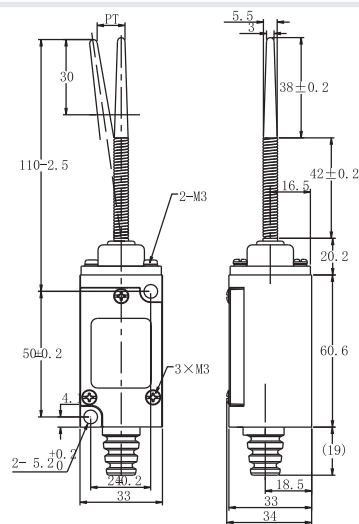
SN5107

Snap Action



Operating Characteristics

OF _{max}	18Ncm
RF _{min}	3Ncm
PT _{max}	20°
OT _{min}	75°
MD	12°
TT	95°



SN5166

Snap Action



Operating Characteristics

OF _{max}	2N
PT _{max}	20°
OT _{min}	2°

COMPACT LIMIT SWITCHES SMN5 SERIES

Features

- Designed for applications with small mounting space
- Highly rigid construction (head and cover snugly fit in box)
- Wide range of actuators available

Definitions of Operating Characteristics

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

Specifications

Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	10A/250V 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	-20~+80°C (-14~176°F)
Humidity	< 95%RH
Weight	240-290g
Degree of Protection	IP66

Selection Guide:

SMN51

Body
Styles

04

Head Styles

SP

- SP: 1NO/1NC Snap action
- SL: BBM 1NO/1NC Slow Action changeover
- SL1: MBB 1NO/1NC Slow Action Overlapping
- SL2: 2NC Slow Action
- SL3: 2NO Slow Action

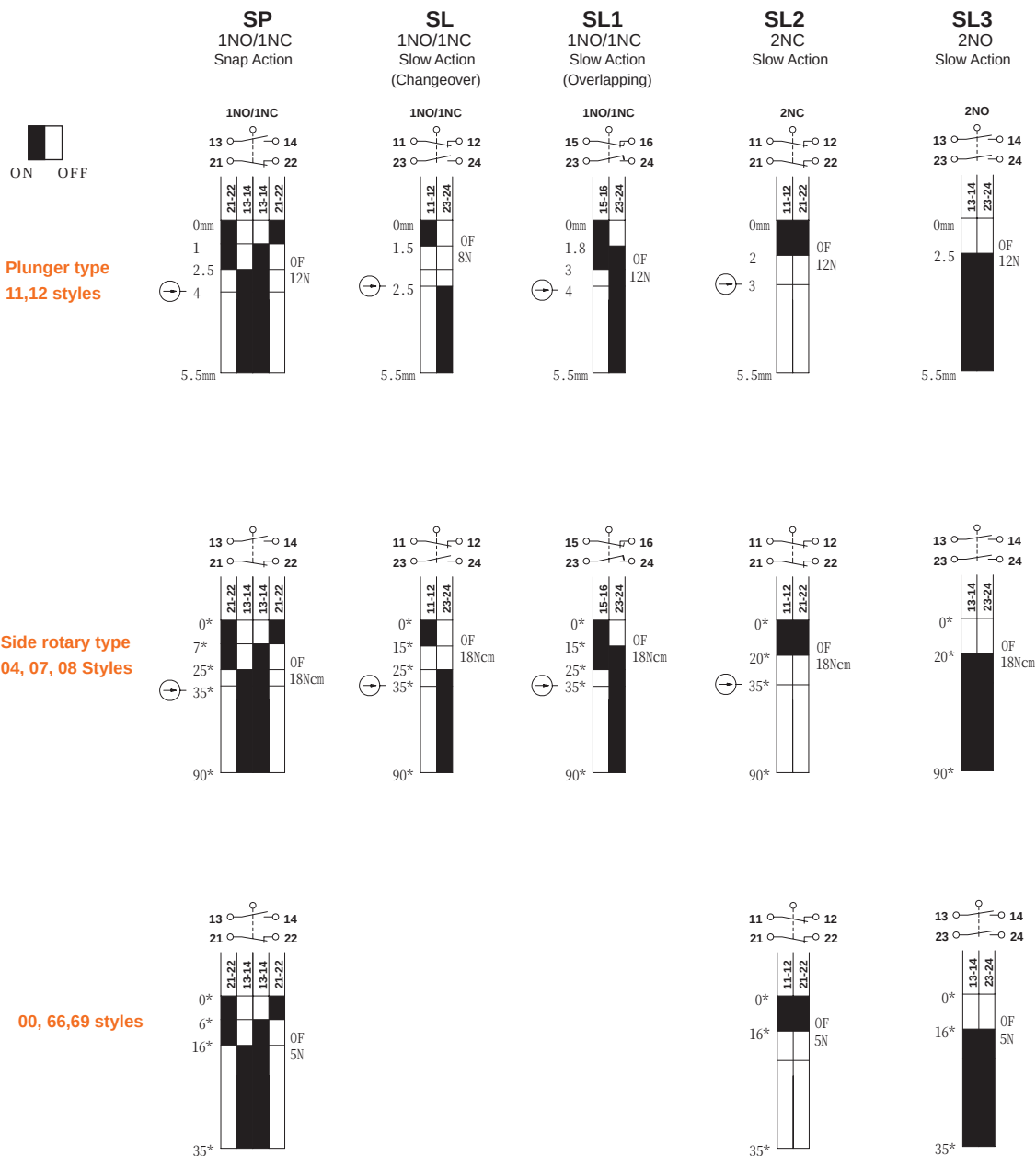
D

Conduits

D: M16 x 1.5

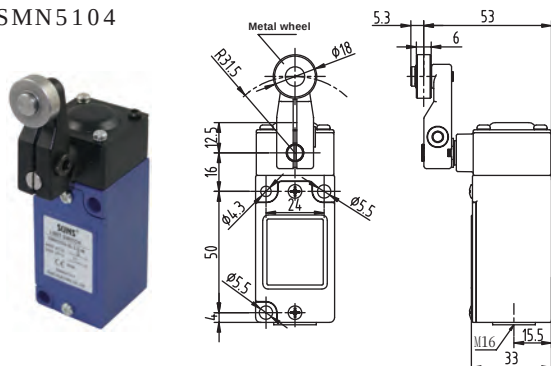
COMPACT LIMIT SWITCHES SMN5 SERIES

Available contact blocks and travel diagrams



COMPACT LIMIT SWITCHES SMN5 SERIES

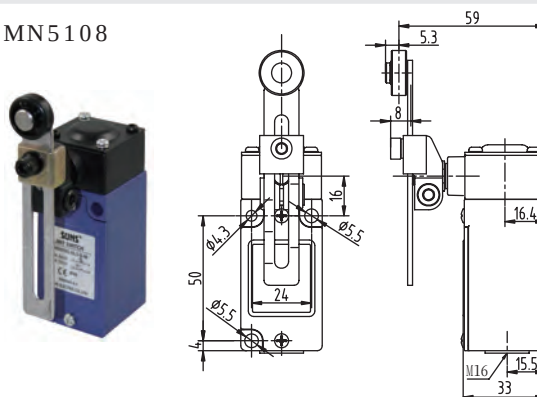
SMN5104



Order Code

SMN5104-SP- _	SP	snap action	1NO+1NC
SMN5104-SL- _	SL	slow action	1NO+1NC BBM
SMN5104-SL1- _	SL1	slow action	1NO+1NC MBB
SMN5104-SL2- _	SL2	slow action	2NC
SMN5104-SL3- _	SL3	slow action	2NO

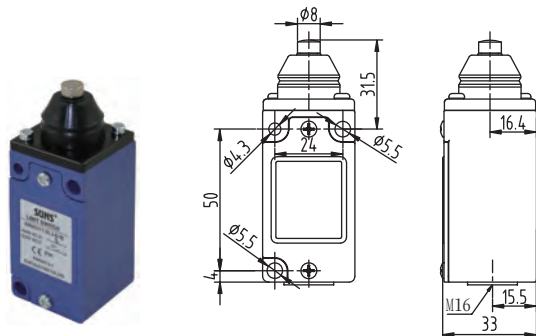
SMN5108



Order Code

SMN5108-SP- _	SP	snap action	1NO+1NC
SMN5108-SL- _	SL	slow action	1NO+1NC BBM
SMN5108-SL1- _	SL1	slow action	1NO+1NC MBB
SMN5108-SL2- _	SL2	slow action	2NC
SMN5108-SL3- _	SL3	slow action	2NO

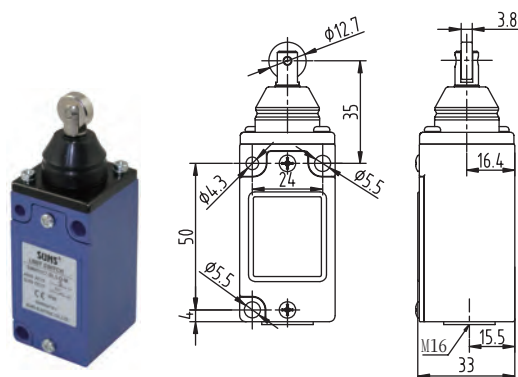
SMN5111



Order Code

SMN5111-SP- _	SP	snap action	1NO+1NC
SMN5111-SL- _	SL	slow action	1NO+1NC BBM
SMN5111-SL1- _	SL1	slow action	1NO+1NC MBB
SMN5111-SL2- _	SL2	slow action	2NC
SMN5111-SL3- _	SL3	slow action	2NO

SMN5112



Order Code

SMN5112-SP- _	SP	snap action	1NO+1NC
SMN5112-SL- _	SL	slow action	1NO+1NC BBM
SMN5112-SL1- _	SL1	slow action	1NO+1NC MBB
SMN5112-SL2- _	SL2	slow action	2NC
SMN5112-SL3- _	SL3	slow action	2NO

SN1 Series Compact Precision Limit Switches

Features

- Robust metal enclosure design
- Compact, space-saving and tightly gang mounting possible
- High sealability, oil-resistant/Immersion-proof type
- Long mechanical life of 20 million operations
- High sensitivity. (M.D. =0.1mm)
- Gold plated contact available for low current applications
- M12 connector type available

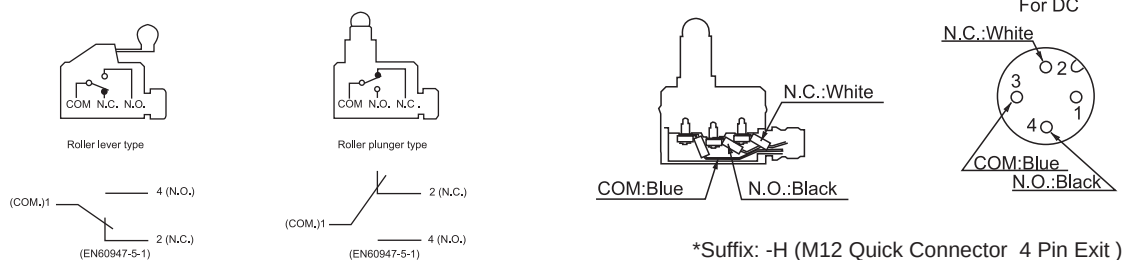
Definitions of Operating Characteristics

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

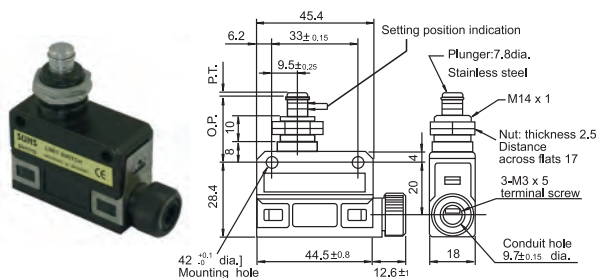
Specifications

Operating Speed	0.02mm-0.5m/sec		
Operating Frequency	120 ops/min		
Insulation Resistance	>100M Ω @500V DC		
Contact Resistance	<25m Ω (initial value)		
Electrical Rating	Standard Load Type (Silver contacts) 5A/250VAC or 5A/30VDC Low Current Type (Gold Plated Contacts) 0.1A/250VAC or 0.1A/30VDC		
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts		
Service Life	Mechanically 2 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)		
Operating Temperature	-30~+80°C (-22~176°F)		
Humidity	< 98%		
Degree of Protection	IP67		

Wiring Diagram



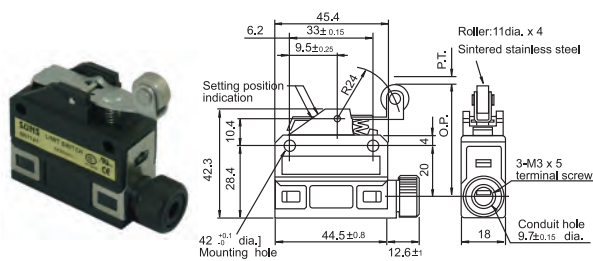
Dimensions Unit: mm



SN1110

Operating Characteristics

- OF_{max} 11.8N
- RF_{min} 4.9N
- PT_{max} 1.5mm
- OT_{min} 3 mm
- MD_{max} 0.1mm
- OP 25.4±0.8mm

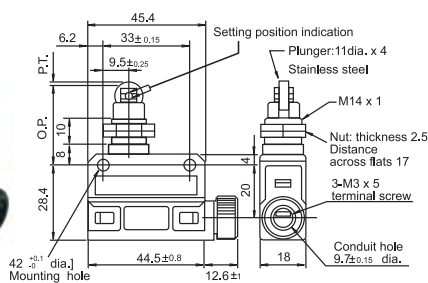


SN1141

Operating Characteristics

- OF_{max} 4.0 N
- RF_{min} 0.78 N
- PT_{max} 2 mm
- OT_{min} 4 mm
- MD_{max} 0.3 mm
- OP 23.1±0.8mm

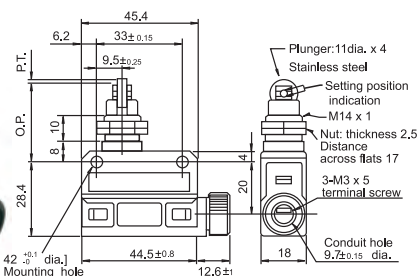
SN1 Series Compact Precision Limit Switches



SN1111

Operating Characteristics

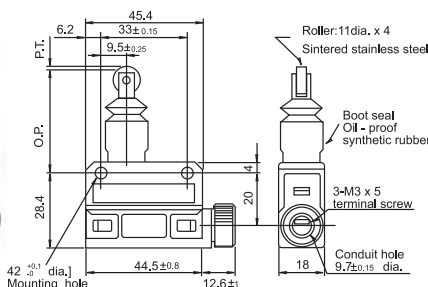
- | | | | |
|---------------------|-------|---------------------|------------|
| • OF _{max} | 11.8N | • OT _{min} | 3 mm |
| • RF _{min} | 4.9N | • MD _{max} | 0.1mm |
| • PT _{max} | 1.5mm | • OP | 31.4±0.8mm |



SN1112

Operating Characteristics

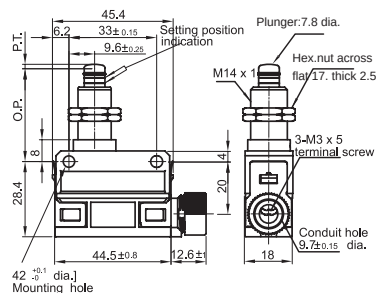
- | | | | |
|---------------------|-------|---------------------|------------|
| • OF _{max} | 11.8N | • OT _{min} | 3 mm |
| • RF _{min} | 4.9N | • MD _{max} | 0.1mm |
| • PT _{max} | 1.5mm | • OP | 31.4±0.8mm |



SN1121

Operating Characteristics

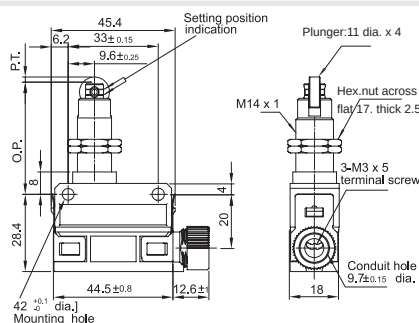
- | | | | |
|---------------------|-------|---------------------|------------|
| • OF _{max} | 11.8N | • OT _{min} | 3 mm |
| • RF _{min} | 4.9N | • MD _{max} | 0.1mm |
| • PT _{max} | 1.5mm | • OP | 41.4±0.8mm |



SN1110-E

Operating Characteristics

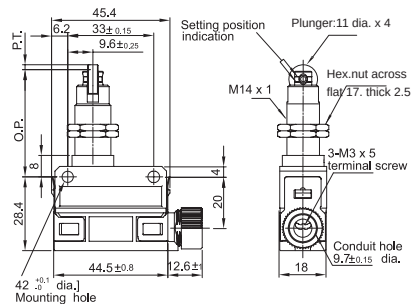
- | | | | |
|---------------------|-------|---------------------|------------|
| • OF _{max} | 11.8N | • OT _{min} | 3 mm |
| • RF _{min} | 4.9N | • MD _{max} | 0.1mm |
| • PT _{max} | 1.5mm | • OP | 35.4±0.8mm |



SN1111-E

Operating Characteristics

- | | | | |
|---------------------|-------|---------------------|------------|
| • OF _{max} | 11.8N | • OT _{min} | 3 mm |
| • RF _{min} | 4.9N | • MD _{max} | 0.1mm |
| • PT _{max} | 1.5mm | • OP | 41.4±0.8mm |



SN1112-E

Operating Characteristics

- | | | | |
|---------------------|-------|---------------------|------------|
| • OF _{max} | 11.8N | • OT _{min} | 3 mm |
| • RF _{min} | 4.9N | • MD _{max} | 0.1mm |
| • PT _{max} | 1.5mm | • OP | 41.4±0.8mm |

MINI ENCLOSED LIMIT SWITCHES SN7 SERIES

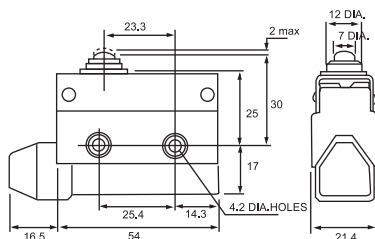
SPECIFICATIONS

Operating Speed	0.05mm-0.5m/sec (panel mount plunger)
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Contact Resistance	<15mΩ (initial value)
Insulation Resistance	>100MΩ min at 500V DC
Rated Thermal Current	10A/250VAC
Operating Temperature	-20 ~ +60°(-4~+140°F)
Dielectric Strength	1000V AC (For 1 min)between current carrying parts 2000V AC (For 1 min)between non-current carrying parts
Service Life	Mechanically 1.0x10 ⁷ (operations) Electrically 5 x10 ⁵ (operations)
Humidity	<95%
Weight	~60g
Degree of Protection	IP64 (IP67 for model with -w suffix)

Definitions of Operating Characteristics

OF Operating Force
RF Releasing Force
OT Overtravel
TT Total Travel

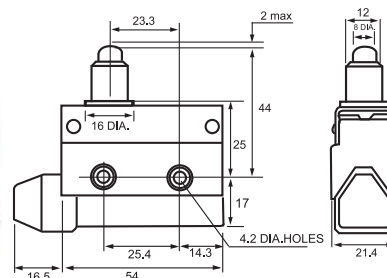
PT Pretravel
MD Movement Differential
OP Operating Position
PO Travel to Positive Opening



SN7100

Operating Characteristics

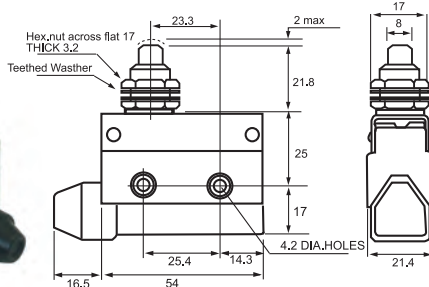
- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 0.8mm
- MD_{max} 0.8mm
- OP 30±0.8mm



SN7110

Operating Characteristics

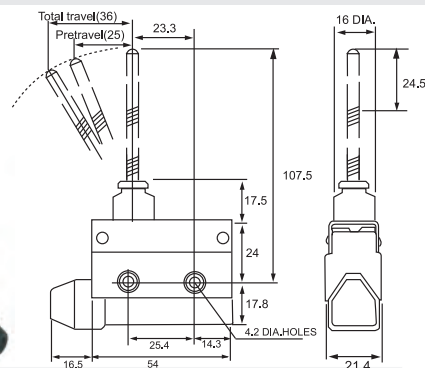
- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 5.0mm
- MD_{max} 0.8mm
- FP_{max} 46mm
- OP 44±1.2mm



SN7310

Operating Characteristics

- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 6.0mm
- MD_{max} 0.8mm
- FP_{max} 23.8
- OP 21.8±0.8mm

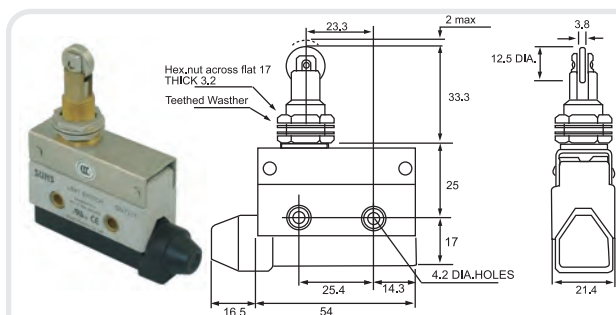


SN7166

Operating Characteristics

- OF_{max} 1.18N
- PT_{max} 25mm
- OT_{min} 11mm
- OP 36mm

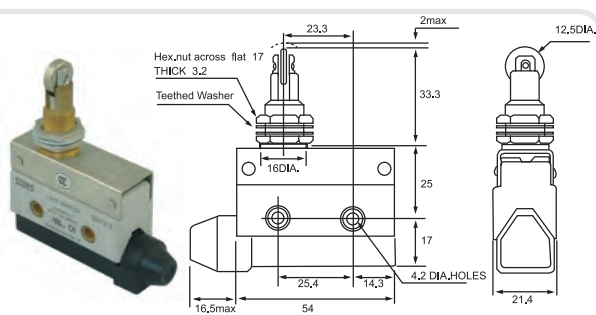
MINI ENCLOSED LIMIT SWITCHES SN7 SERIES



SN7311

Operating Characteristics

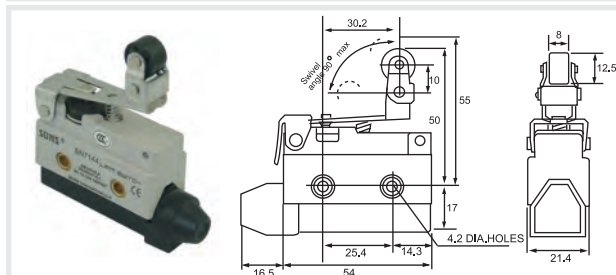
• OF _{max}	5.88N	• OT _{min}	6.0mm
• RF _{min}	0.98N	• MD _{max}	0.8mm
• PT _{max}	2.0mm	• FP _{max}	35.3mm
		• OP	33.3±1.2mm



SN7312

Operating Characteristics

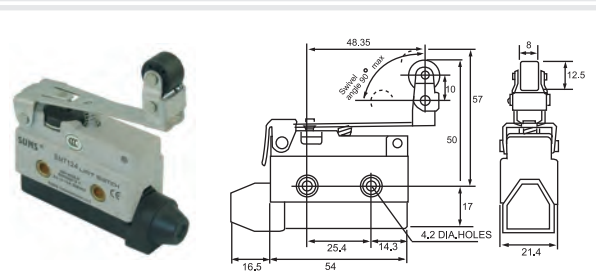
• OF _{max}	5.88N	• OT _{min}	6.0mm
• RF _{min}	0.98N	• MD _{max}	0.8mm
• PT _{max}	2.0mm	• FP _{max}	35.3mm
		• OP	33.3±1.2mm



SN7144

Operating Characteristics

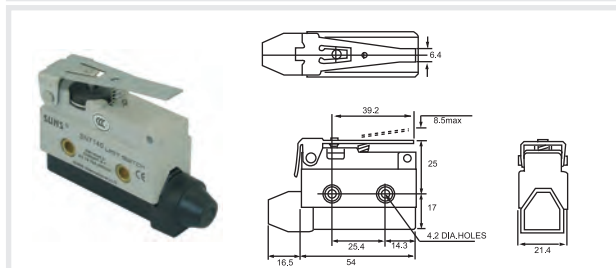
• OF _{max}	2.75N	• OT _{min}	2.0mm
• RF _{min}	0.98N	• MD _{max}	1.5mm
• PT _{max}	6.5mm	• FP _{max}	56mm
		• OP	50±1.6mm



SN7124

Operating Characteristics

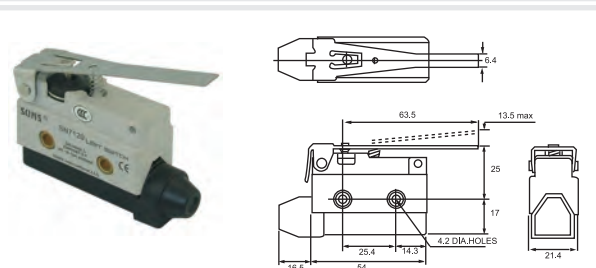
• OF _{max}	2.16N	• OT _{min}	3.0mm
• RF _{min}	0.59N	• MD _{max}	2.4mm
• PT _{max}	11.0mm	• FP _{max}	57
		• OP	50±2.0mm



SN7140

Operating Characteristics

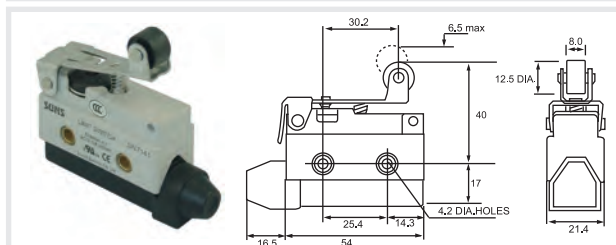
• OF _{max}	2.16N	• OT _{min}	2.5mm
• RF _{min}	0.59N	• MD _{max}	2.0mm
• PT _{max}	8.5mm	• FP _{max}	33.5mm
		• OP	25±1.3mm



SN7120

Operating Characteristics

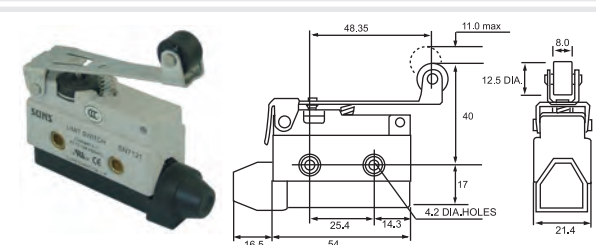
• OF _{max}	1.47N	• OT _{min}	4.0mm
• RF _{min}	0.39N	• MD _{max}	3.2mm
• PT _{max}	13.5mm	• FP _{max}	38.5mm
		• OP	25±2.0mm



SN7141

Operating Characteristics

• OF _{max}	2.35N	• OT _{min}	2.0mm
• RF _{min}	0.87N	• MD _{max}	1.5mm
• PT _{max}	6.5mm	• FP _{max}	46.5mm
		• OP	40±1.6mm

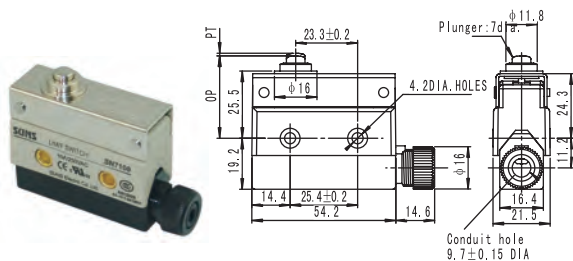


SN7121

Operating Characteristics

• OF _{max}	1.77N	• OT _{min}	3.0mm
• RF _{min}	0.49N	• MD _{max}	2.4mm
• PT _{max}	11.0mm	• FP _{max}	51mm
		• OP	40±1.9mm

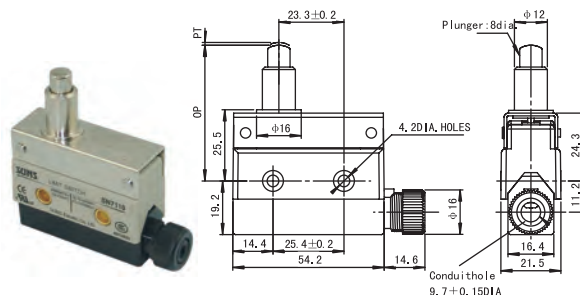
MINI ENCLOSED LIMIT SWITCHES SN7 SERIES (IP67 WATER-PROOF)



SN7100-W

Operating Characteristics

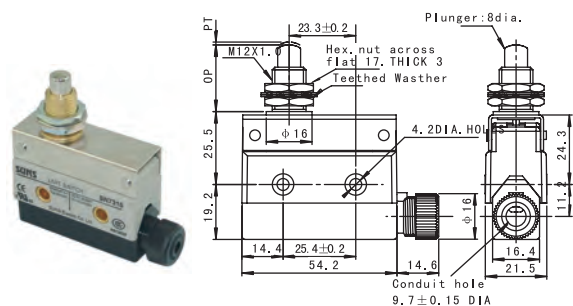
- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 0.8mm
- MD_{max} 0.8mm
- OP 30±0.8mm



SN7110-W

Operating Characteristics

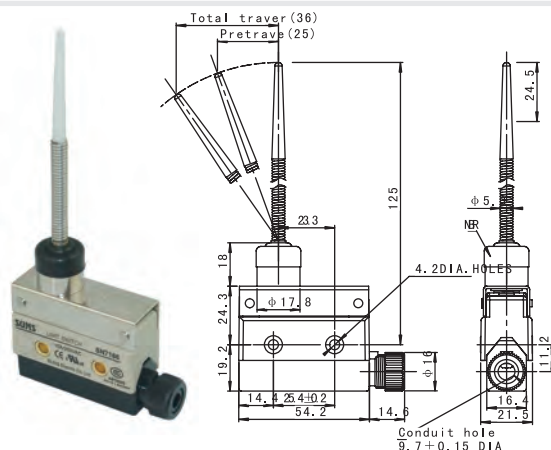
- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 5.0mm
- MD_{max} 0.8mm
- OP 46.8±1.2mm



SN7310-W

Operating Characteristics

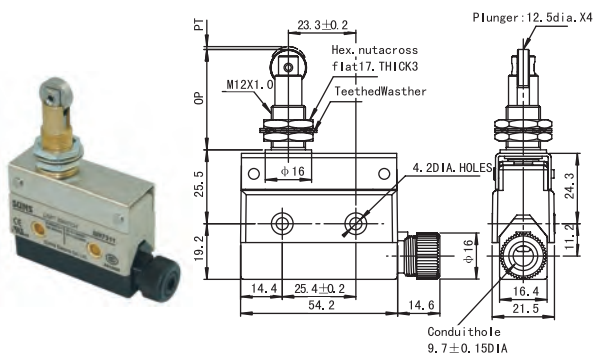
- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 6.0mm
- MD_{max} 0.8mm
- FP_{max} 23.8
- OP 21.8±0.8mm



SN7166-W

Operating Characteristics

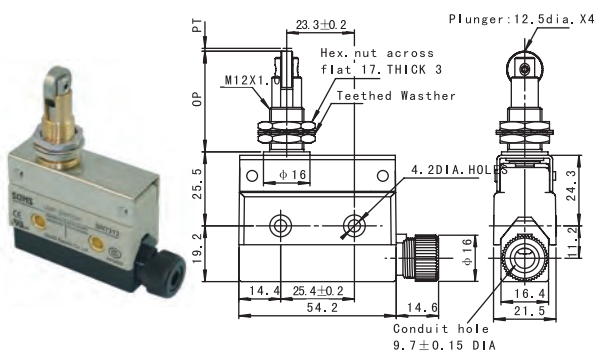
- OF_{max} 1.18N
- PT_{max} 25mm
- OT_{min} 11mm
- OP 36mm



SN7311-W

Operating Characteristics

- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 6.0mm
- MD_{max} 0.8mm
- FP_{max} 35.3mm
- OP 33.3±1.2mm

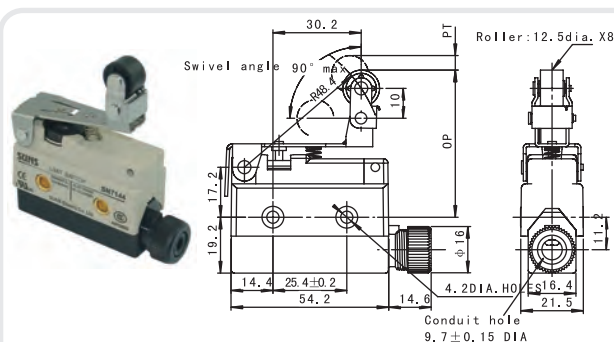


SN7312-W

Operating Characteristics

- OF_{max} 5.88N
- RF_{min} 0.98N
- PT_{max} 2.0mm
- OT_{min} 6.0mm
- MD_{max} 0.8mm
- FP_{max} 35.3mm
- OP 33.3±1.2mm

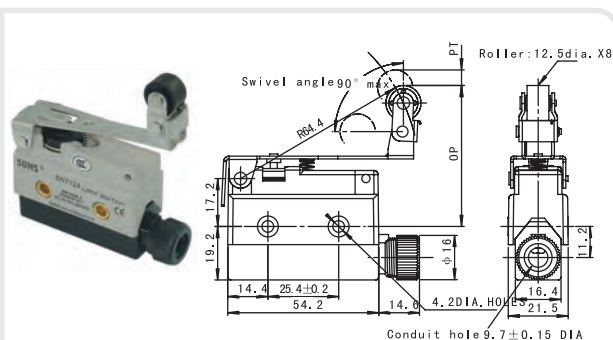
MINI ENCLOSED LIMIT SWITCHES SN7 SERIES (IP67 WATER-PROOF)



SN7144-W

Operating Characteristics

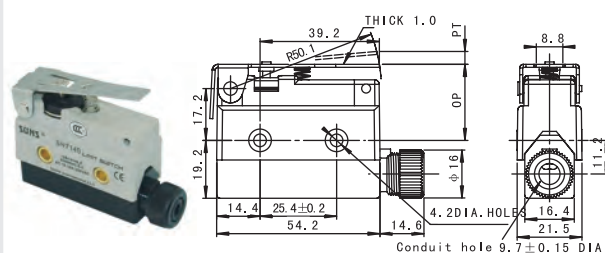
- | | | | |
|---------------------|-------|---------------------|----------|
| • OF _{max} | 2.75N | • OT _{min} | 2.0mm |
| • RF _{min} | 0.98N | • MD _{max} | 1.5mm |
| • PT _{max} | 6.5mm | • FP _{max} | 56mm |
| | | • OP | 50±1.6mm |



SN7124-W

Operating Characteristics

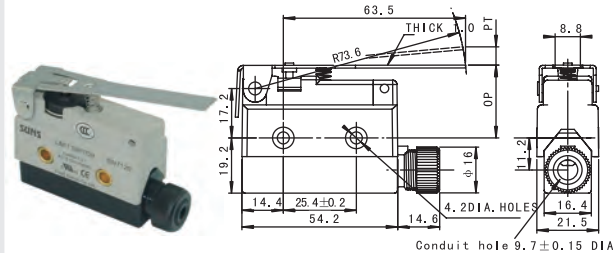
- | | | | |
|---------------------|--------|---------------------|----------|
| • OF _{max} | 2.16N | • OT _{min} | 3.0mm |
| • RF _{min} | 0.59N | • MD _{max} | 2.4mm |
| • PT _{max} | 11.0mm | • FP _{max} | 57 |
| | | • OP | 50±2.0mm |



SN7140-W

Operating Characteristics

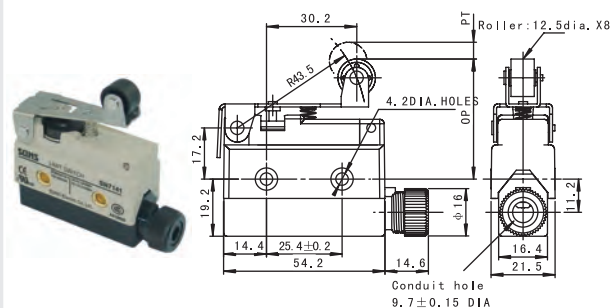
- | | | | |
|---------------------|-------|---------------------|----------|
| • OF _{max} | 2.16N | • OT _{min} | 2.5mm |
| • RF _{min} | 0.59N | • MD _{max} | 2.0mm |
| • PT _{max} | 8.5mm | • FP _{max} | 33.5mm |
| | | • OP | 25±1.3mm |



SN7120-W

Operating Characteristics

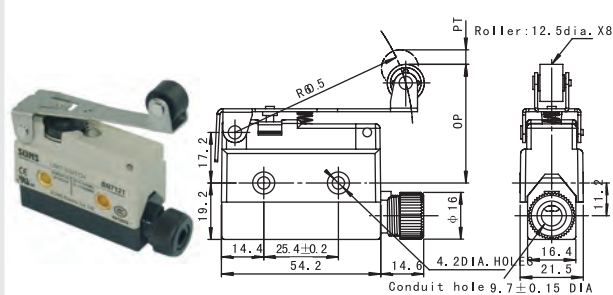
- | | | | |
|---------------------|--------|---------------------|----------|
| • OF _{max} | 1.47N | • OT _{min} | 4.0mm |
| • RF _{min} | 0.39N | • MD _{max} | 3.2mm |
| • PT _{max} | 13.5mm | • FP _{max} | 38.5mm |
| | | • OP | 25±2.0mm |



SN7141-W

Operating Characteristics

- | | | | |
|---------------------|-------|---------------------|----------|
| • OF _{max} | 2.35N | • OT _{min} | 2.0mm |
| • RF _{min} | 0.87N | • MD _{max} | 1.5mm |
| • PT _{max} | 6.5mm | • FP _{max} | 46.5mm |
| | | • OP | 40±1.6mm |



SN7121-W

Operating Characteristics

- | | | | |
|---------------------|--------|---------------------|----------|
| • OF _{max} | 1.77N | • OT _{min} | 3.0mm |
| • RF _{min} | 0.49N | • MD _{max} | 2.4mm |
| • PT _{max} | 11.0mm | • FP _{max} | 51mm |
| | | • OP | 40±1.9mm |

ENCLOSED LIMIT SWITCHES SN9 SERIES

Features

- Compact and rugged Aluminum housing
- Large wiring enclosure
- High precision switch
- High repeatability of switching point
- Long service life
- Large breaking power
- Conduit opening available in:
 - M20: suffix -C
 - 1/2NPT: suffix -A

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

Specifications

Operating Speed	0.02mm-0.5m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 20 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage (UL file E321073)	SN9D/SN9Y 10A 125/250VAC, 2A 480VAC, 1/2HP 125/250VAC SN9S 15A, 1/2HP 125/250VAC
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%RH
Degree of Protection	IP65/IP60

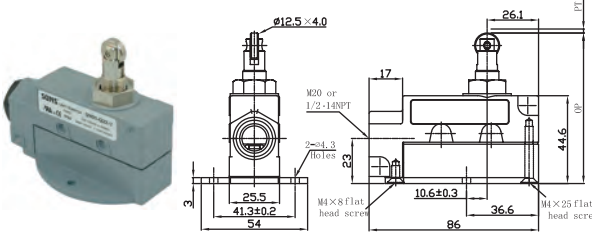
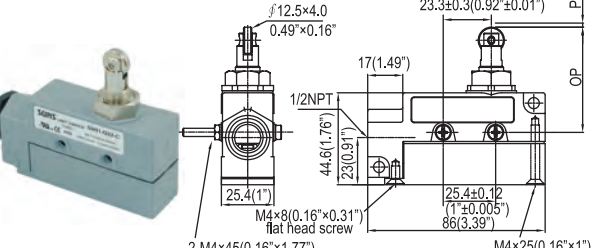
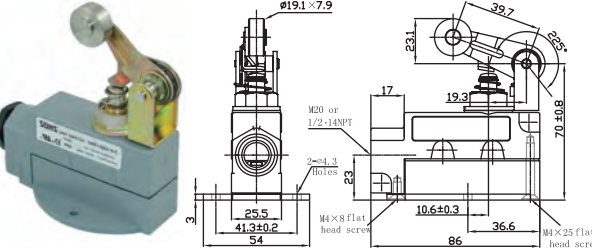
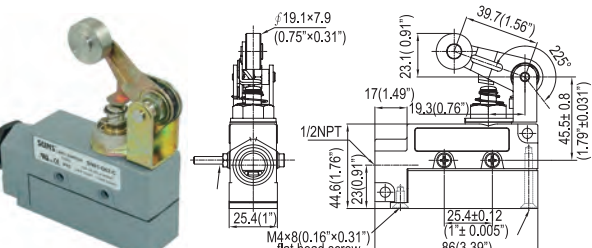
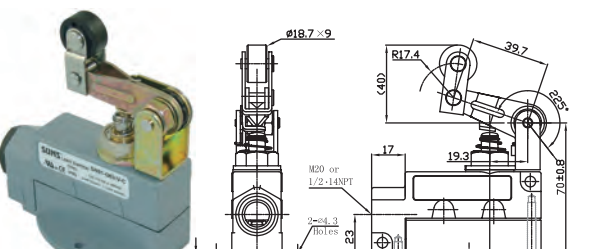
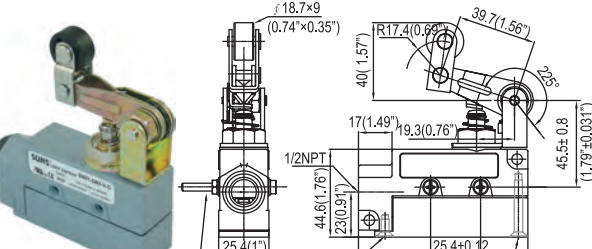
Selection Guide:

SN9	1	Q	-	11	-	A	-	V
	Current	Head Sealed		Head Styles		Conduit		Mounting
	1: 15A 2: 20A 3: 25A D: 10A 2NO/2NC Y: 10A 2NP/2NC (Share common) S: 15A (positive open NC contact)	Q: No Seal N: Sealed		11: Plunger 21: Roller plunger 22: Cross roller plunger 62: Roller arm lever 63: One-way action 00: Coil spring		A: 1/2NPT B: PG13.5 C: M20		blank: side mounting V: Base mounting V2: Diagonal mounting

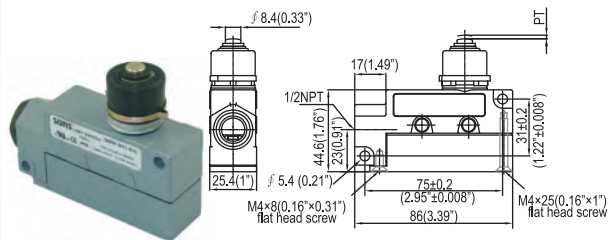
Dimensions Unit: mm

Operating Characteristics SN91-N11-V: OF Max 7.85N, RF Min 2.35N, PT Max 2mm, OT Min 5mm, MD Max 0.1mm, OP 71.4±0.8mm SN92(3)-N11-V: OF Max 10.53N, RF Min 4.01N, PT Max 2.8mm, OT Min 5mm, MD Max 0.4mm, OP 71.4±0.8mm	Operating Characteristics SN91-N11: OF Max 7.85N, RF Min 2.35N, PT Max 2mm, OT Min 5mm, MD Max 0.1mm, OP 45.8±0.8mm SN92(3)-N11: OF Max 10.53N, RF Min 4.01N, PT Max 2.8mm, OT Min 5mm, MD Max 0.4mm, OP 45.8±0.8mm
Operating Characteristics SN91-N21-V: OF Max 5.4N, RF Min 0.98N, PT Max 1mm, OT Min 3.5mm, MD Max 0.12mm, OP 75.2±0.8mm SN92(3)-N21-V: OF Max 7.58N, RF Min 2.64N, PT Max 1.7mm, OT Min 3.5mm, MD Max 0.48mm, OP 75.2±0.8mm	Operating Characteristics SN91-N21: OF Max 5.4N, RF Min 0.98N, PT Max 1mm, OT Min 3.5mm, MD Max 0.12mm, OP 49.7±0.8mm SN92(3)-N21: OF Max 7.58N, RF Min 2.64N, PT Max 1.7mm, OT Min 3.5mm, MD Max 0.48mm, OP 49.7±0.8mm

ENCLOSED LIMIT SWITCHES SN9 SERIES

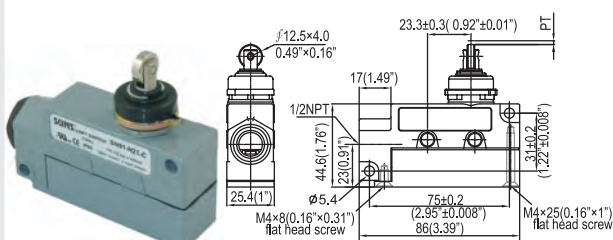
 Operating Characteristics SN91-Q22-V: OF Max 3.8 N, RF Min 1.12N, PT Max 0.5mm, OT Min 3.5mm, MD Max 0.05mm, OP 75.2±0.8mm SN92(3)-Q22-V: OF Max 3.89~6.11N, RF Min 2.78N, PT Max 1.2mm, OT Min 3.5mm, MD Max 0.05~0.2mm, OP 75.2±0.8mm	 Operating Characteristics SN91-Q22: OF Max 3.8 N, RF Min 1.12N, PT Max 0.5mm, OT Min 3.5mm, MD Max 0.05mm, OP 49.7±0.8mm SN92(3)-Q22: OF Max 3.89~6.11N, RF Min 2.78N, PT Max 1.2mm, OT Min 3.5mm, MD Max 0.05~0.2mm, OP 49.7±0.8mm
 Operating Characteristics SN91-Q62-V: OF Max 5.59N, RF Min 1.67N, PT Max 4mm, OT Min 6mm, MD Max 0.4mm SN92(3)-Q62-V: OF Max 8.27N, RF Min 3.33N, PT Max 4.9mm, OT Min 6mm, MD Max 1.6mm	 Operating Characteristics SN91-Q62: OF Max 5.59N, RF Min 1.67N, PT Max 4mm, OT Min 6mm, MD Max 0.4mm SN92(3)-Q62: OF Max 8.27N, RF Min 3.33N, PT Max 4.9mm, OT Min 6mm, MD Max 1.6mm
 Operating Characteristics SN91-Q63-V: OF Max 5.59N, RF Min 1.67N, PT Max 4mm, OT Min 6mm, MD Max 0.4mm SN92(3)-Q63-V: OF Max 8.27N, RF Min 3.33N, PT Max 4.9mm, OT Min 6mm, MD Max 1.6mm	 Operating Characteristics SN91-Q63: OF Max 5.59N, RF Min 1.67N, PT Max 4mm, OT Min 6mm, MD Max 0.4mm SN92(3)-Q63: OF Max 8.27N, RF Min 3.33N, PT Max 4.9mm, OT Min 6mm, D Max 1.6mm

ENCLOSED LIMIT SWITCHES SN9 SERIES



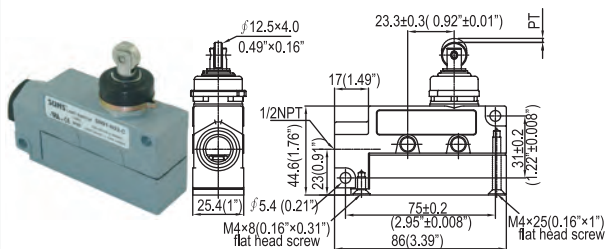
Operating Characteristics
SN91-N11-V2:
 OF Max 7.85N
 RF Min 2.35N
 PT Max 2mm
 OT Min 5mm
 MD Max 0.1mm

Operating Characteristics
SN92(3)-N11-V2:
 OF Max 10.53N
 RF Min 4.01N
 PT Max 2.8mm
 OT Min 5mm
 MD Max 0.4mm



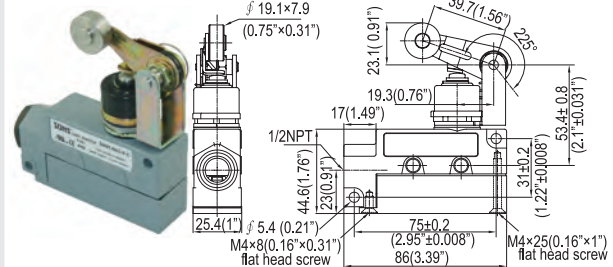
Operating Characteristics
SN91-N21-V2:
 OF Max 5.4N
 RF Min 0.98N
 PT Max 1mm
 OT Min 3.5mm
 MD Max 0.12mm

Operating Characteristics
SN92(3)-N21-V2:
 OF Max 7.58N
 RF Min 2.64N
 PT Max 1.7mm
 OT Min 3.5mm
 MD Max 0.48mm



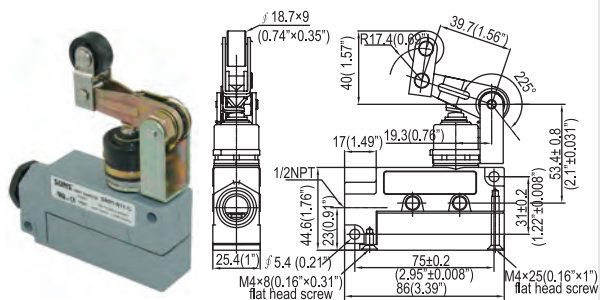
Operating Characteristics
SN91-N22-V2:
 OF Max 5.4N
 RF Min 0.98N
 PT Max 1mm
 OT Min 3.5mm
 MD Max 0.12mm

Operating Characteristics
SN92(3)-N22-V2:
 OF Max 7.58N
 RF Min 2.64N
 PT Max 1.7mm
 OT Min 3.5mm
 MD Max 0.48mm



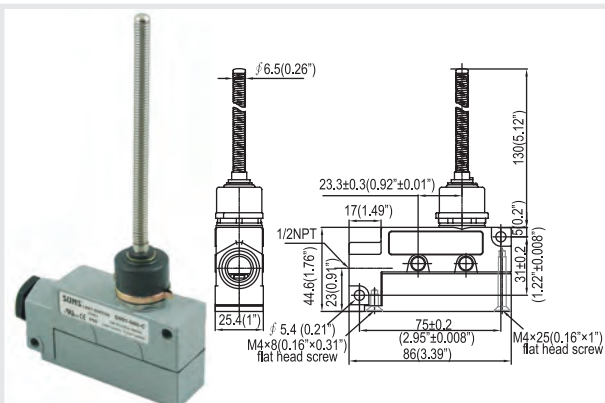
Operating Characteristics
SN91-N62-V2:
 OF Max 6.28N
 RF Min 2.26N
 PT Max 5mm
 OT Min 6mm
 MD Max 0.4mm

Operating Characteristics
SN92(3)-N62-V2:
 OF Max 8.96N
 RF Min 4.12N
 PT Max 5.9mm
 OT Min 6mm
 MD Max 1.6mm



Operating Characteristics
SN91-N63-V2:
 OF Max 6.28N
 RF Min 2.26N
 PT Max 5mm
 OT Min 6mm
 MD Max 0.4mm

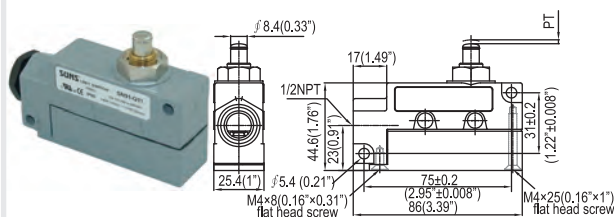
Operating Characteristics
SN92(3)-N63-V2:
 OF Max 8.96N
 RF Min 4.12N
 PT Max 5.9mm
 OT Min 6mm
 MD Max 1.6mm



Operating Characteristics
SN91-N00-V2:
 OF Max 2 N
 PT Max 16°

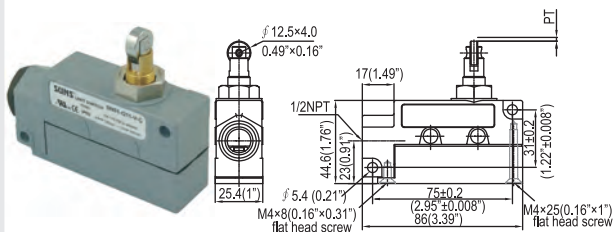
Operating Characteristics
SN92(3)-N00-V2:
 OF Max 2.62N
 PT Max 16°

ENCLOSED LIMIT SWITCHES SN9 SERIES



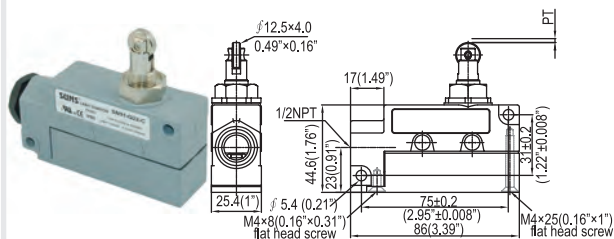
Operating Characteristics
SN91-Q11-V2:
 OF Max 3.8 N
 RF Min 1.12N
 PT Max 0.5 mm
 OT Min 5.5mm
 MD Max 0.05mm

Operating Characteristics
SN92(3)-Q11-V2:
 OF Max 3.89~6.11N
 RF Min 2.78N
 PT Max 1.2mm
 OT Min 5.5mm
 MD Max 0.05~0.2mm



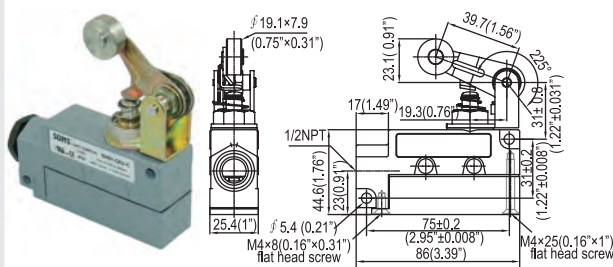
Operating Characteristics
SN91-Q21-V2:
 OF Max 3.8 N
 RF Min 1.12N
 PT Max 0.5mm
 OT Min 3.5mm
 MD Max 0.05mm

Operating Characteristics
SN92(3)-Q21-V2:
 OF Max 3.89~6.11N
 RF Min 2.78N
 PT Max 1.2mm
 OT Min 3.5mm
 MD Max 0.05~0.2mm



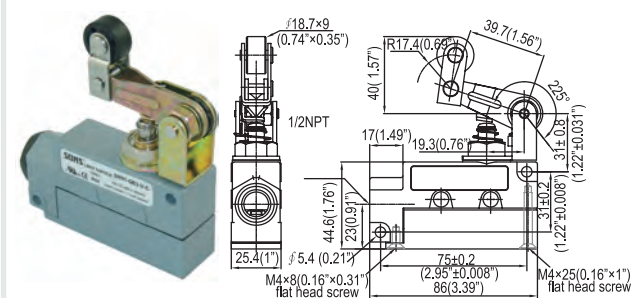
Operating Characteristics
SN91-Q22-V2:
 OF Max 3.8 N
 RF Min 1.12N
 PT Max 0.5mm
 OT Min 3.5mm
 MD Max 0.05mm

Operating Characteristics
SN92(3)-Q22-V2:
 OF Max 3.89~6.11N
 RF Min 2.78N
 PT Max 1.2mm
 OT Min 3.5mm
 MD Max 0.05~0.2mm



Operating Characteristics
SN91-Q62-V2:
 OF Max 5.59N
 RF Min 1.67N
 PT Max 4mm
 OT Min 6mm
 MD Max 0.4mm

Operating Characteristics
SN92(3)-Q62-V2:
 OF Max 8.27N
 RF Min 3.33N
 PT Max 4.9mm
 OT Min 6mm
 MD Max 1.6mm



Operating Characteristics
SN91-Q63-V2:
 OF Max 5.59N
 RF Min 1.67N
 PT Max 4mm
 OT Min 6mm
 MD Max 0.4mm

Operating Characteristics
SN92(3)-Q63-V2:
 OF Max 8.27N
 RF Min 3.33N
 PT Max 4.9mm
 OT Min 6mm
 MD Max 1.6mm

ENCLOSED LIMIT SWITCHES SF9 SERIES

Features

- Compact and rugged Aluminum housing
- Large wiring enclosure
- High precision switch
- High repeatability of switching point
- Long service life
- Large breaking power

Definitions of Operating Characteristics

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

Specifications

Operating Speed	0.02mm-0.5m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 20 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage	SF9D/SF9Y 10A 125/250VAC, 2A 480VAC, 1/2HP 125/250VAC SF9S 15A, 1/2HP 125/250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1 x10 ⁷ (operations) Electrically 5 x10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%
Degree of Protection	IP65/IP60

Selection Guide:

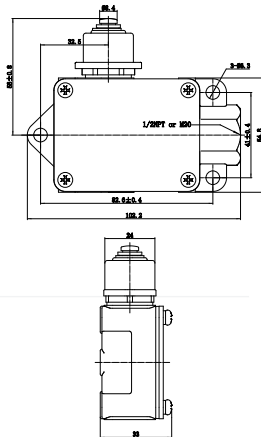
SF9 2	Q -	11 -	A -	L -	R
Current	Head Sealed	Head Styles	Conduit	Actuator location	Resettable
2: 20A 3: 25A D: 10A 2NO/2NC Y: 10A 2NP/2NC (Share common) S: 15A (positive open NC contact)	Q: No Seal N: Sealed	11: Plunger 21: Cross roller plunger 22: Roller plunger 62: Roller arm lever 63: One-way action 00: Coil spring	A: 1/2NPT B: PG13.5 C: M20	Blank: on the right L: on the left	Blank: R: Resettable

Dimensions Unit: mm

SF9_-N11-A-L:



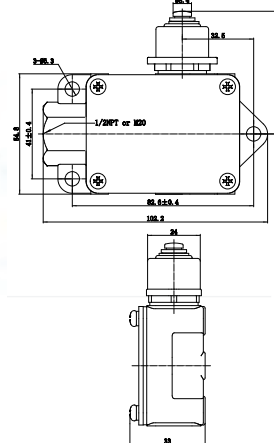
OF Max	11.2N (2.5 lbs)
PT Max	2.39mm (0.094 in)
OT Min	5.56mm (0.219 in)
MD Max	0.26mm (0.01 in)



SF9_-N11-A:



OF Max	11.2N (2.5 lbs)
PT Max	2.39mm (0.094 in)
OT Min	5.56mm (0.219 in)
MD Max	0.26mm (0.01 in)

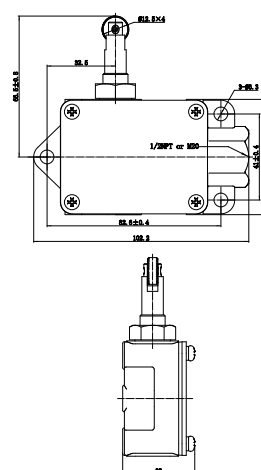


SF9_-Q22-A-L:



OF Max	11.2N (2.5 lbs)
PT Max	2.39mm (0.094 in)
OT Min	3.96mm (0.156 in)
MD Max	0.26mm (0.01 in)

*Roller orientation field adjustable

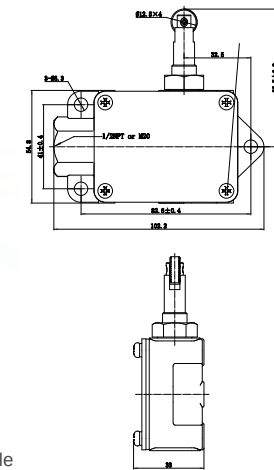


SF9_-Q22-A:



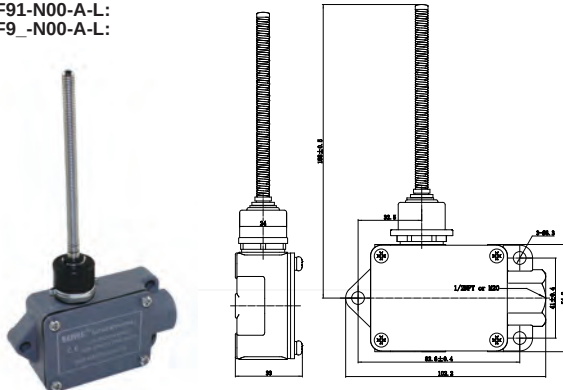
OF Max	11.2N (2.5 lbs)
PT Max	2.39mm (0.094 in)
OT Min	3.96mm (0.156 in)
MD Max	0.26mm (0.01 in)

*Roller orientation field adjustable



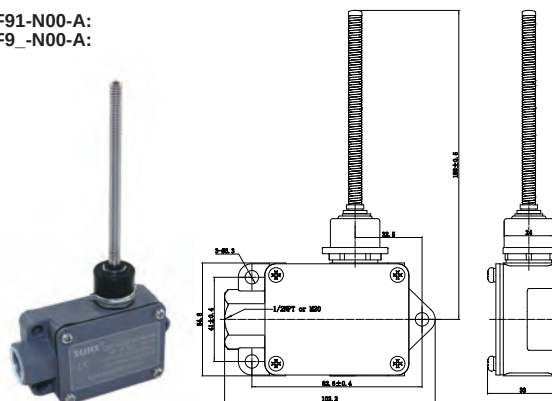
ENCLOSED LIMIT SWITCHES SF9 SERIES

SF91-N00-A-L:
SF9_N00-A-L:



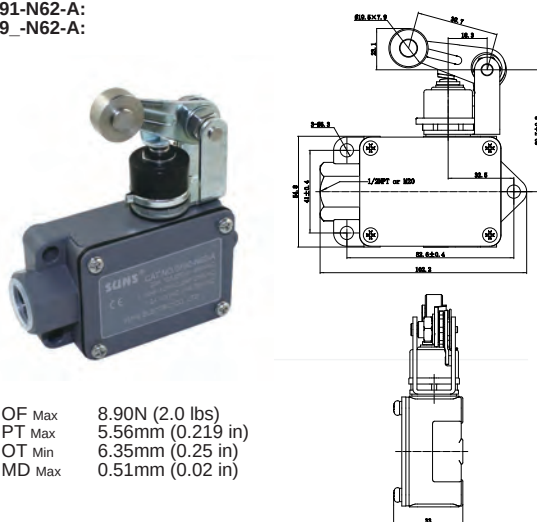
PT Max 15°

SF91-N00-A:
SF9_N00-A:



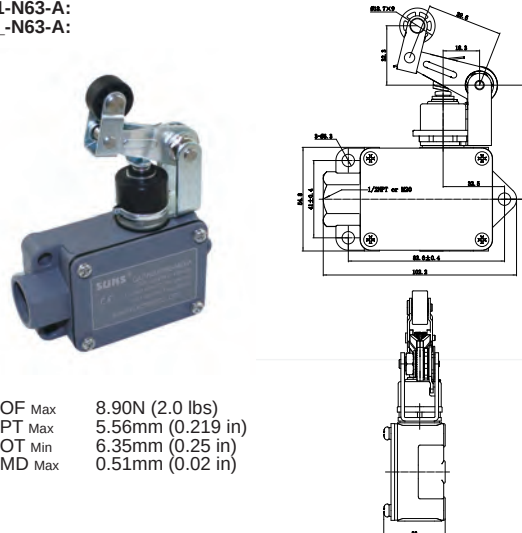
PT Max 15°

SF91-N62-A:
SF9_N62-A:



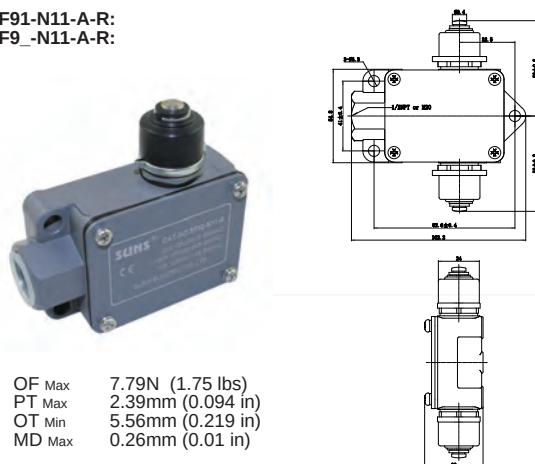
OF Max 8.90N (2.0 lbs)
PT Max 5.56mm (0.219 in)
OT Min 6.35mm (0.25 in)
MD Max 0.51mm (0.02 in)

SF91-N63-A:
SF9_N63-A:



OF Max 8.90N (2.0 lbs)
PT Max 5.56mm (0.219 in)
OT Min 6.35mm (0.25 in)
MD Max 0.51mm (0.02 in)

SF91-N11-A-R:
SF9_N11-A-R:



OF Max 7.79N (1.75 lbs)
PT Max 2.39mm (0.094 in)
OT Min 5.56mm (0.219 in)
MD Max 0.26mm (0.01 in)

ENCLOSED LIMIT SWITCHES SP9 SERIES

Features

- Compact and rugged Aluminum housing
- Large wiring enclosure
- High precision switch
- High repeatability of switching point
- Long service life
- Large breaking power
- Conduit opening available in:
M20: suffix -C
1/2NPT: suffix -A

Definitions of Operating Characteristics

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

Specifications

Operating Speed	0.02mm-0.5m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 20 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Current/Voltage (UL file E321073)	SP9D/SP9Y 10A 125/250VAC, 2A 480VAC, 1/2HP 125/250VAC SP9S 15A, 1/2HP 125/250VAC
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	IP65/IP60

Selection Guide:

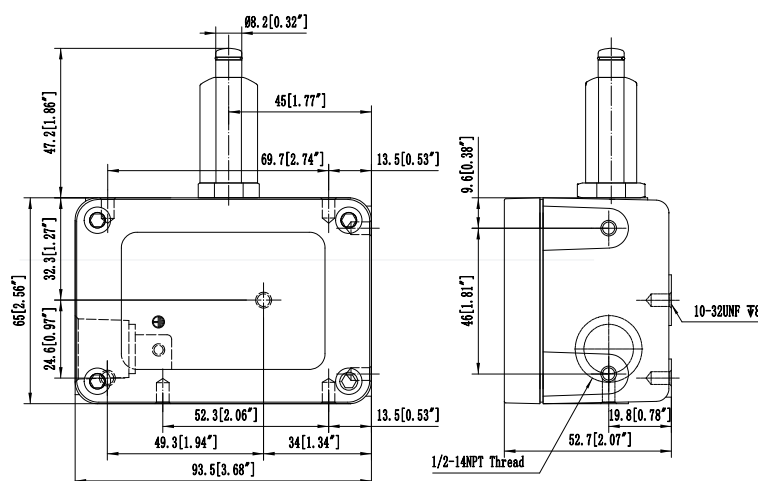
SP9	1	Q	-	11	-	A
	Current	Head Sealed		Head Styles (See Below)		Conduit
	1: 15A	Q: No Seal				A: 1/2NPT
	2: 20A	N: Sealed				B: PG13.5
	3: 25A					C: M20
	D: 10A 2NO/2NC					
	Y: 10A 2NP/2NC (Share common)					
	S: 15A (positive open NC contact)					



SP91-N04-A

Dimensions Unit: mm

SP9_Q11-A:



Operating Characteristics:

SP91:

- OF_{max} 13.3N
- PT_{max} 1.98mm
- OT_{min} 4.78mm
- DT_{max} 0.10mm
- OP 47.2*1.52mm

SP92/SP93:

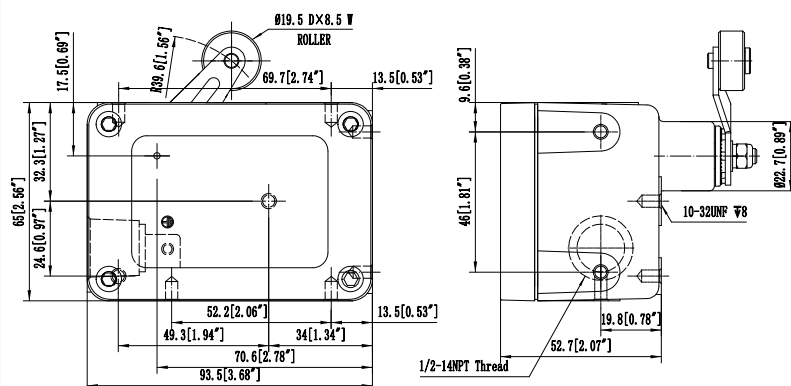
- OF_{max} 8.9N
- PT_{max} 1.27mm
- OT_{min} 3.18mm
- DT_{max} 0.23mm
- OP 46*1.52mm

SP9D/SP9Y:

- OF_{max} 13.3N
- PT_{max} 2.77mm
- OT_{min} 3.58mm
- DT_{max} 1.52mm
- OP 46*1.52mm

ENCLOSED LIMIT SWITCHES SP9 SERIES

SP9_-N04-A:



Operating Characteristics:

SP91:

- OF_{max} 5.56N
- PT_{max} 8°
- OT_{min} 90°
- DT_{max} 0.25°

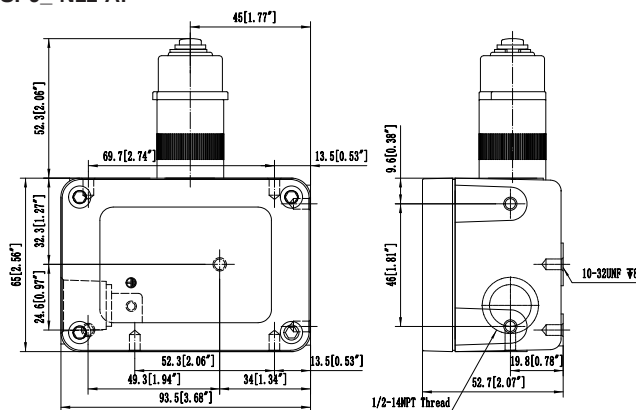
SP92/SP93:

- OF_{max} 8.9N
- PT_{max} 8°
- OT_{min} 25°
- DT_{max} 0.4°

SP9D/SP9Y:

- OF_{max} 6.67N
- PT_{max} 10°
- OT_{min} 25°
- DT_{max} 0.4°

SP9_-N11-A:



Operating Characteristics:

SP91:

- OF_{max} 15.5N
- PT_{max} 1.98mm
- OT_{min} 4.78mm
- DT_{max} 0.10mm
- OP 47.2*1.52mm

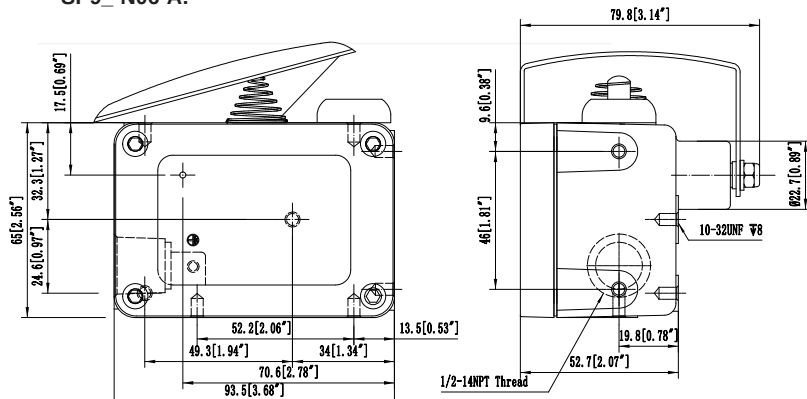
SP92/SP93:

- OF_{max} 11.1N
- PT_{max} 1.27mm
- OT_{min} 3.18mm
- DT_{max} 0.23mm
- OP 46*1.52mm

SP9D/SP9Y:

- OF_{max} 15.5N
- PT_{max} 2.77mm
- OT_{min} 3.58mm
- DT_{max} 1.52mm
- OP 46*1.52mm

SP9_-N06-A:



Operating Characteristics:

- OF_{max} 11.1N

SNH Series Limit Switches for Hoisting and Mechanical Handling

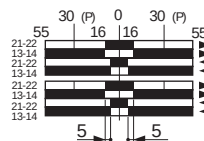
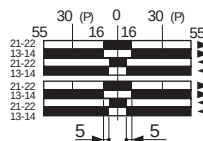
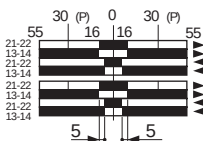
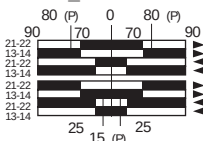
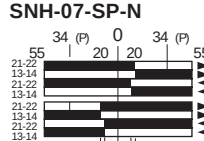
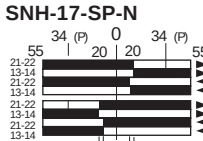
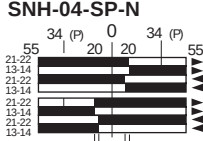
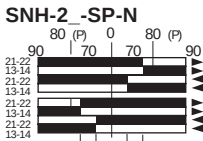
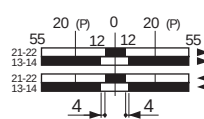
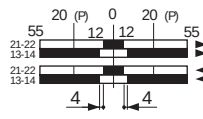
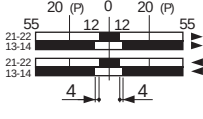
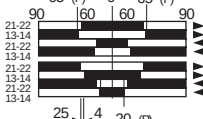
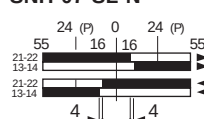
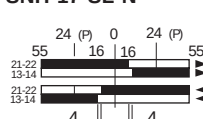
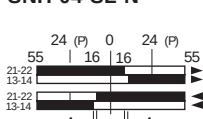
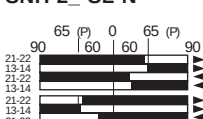
Environment

Products	IEC 947-5-1, EN 60 947-5-1, VDE 0660-200, UL 508, CSA C22-2
Conforming to standards	Machine assemblies
Ambient air temperature	Operation: - 25 ~ 70 °C Storage: - 40 ~ 70 °C
Vibration resistance	9 gn (10- 500 Hz),
Shock resistance	68 gn,
Electric shock protection	Class I conforming to IEC 536 and NF C 20-030
Degree of protection	IP54
Cable entry	1/2NPT, M20x1.5, PG13.5
Rated operational characteristics	AC-15 ; A600 (Ue = 240 V, Ie = 3 A) DC-13 ; Q300 (Ue = 250 V, Ie = 0.27 A) conforming to IEC 947-5-1 Appendix A, EN 60 947-5-1
Rated insulation voltage	Ui = 600 V degree of pollution 3 conforming to IEC 947-1 and VDE 0110, Ui = 600 V conforming to UL 508, CSA C22-2 No.14
Rated impulse withstand voltage	U imp = 6 kV conforming to IEC 947-1, IEC 664
Positive operation	N/C contacts with positive opening operation to IEC 947-5-1 Section 3, EN 60 947-5-1
Resistance across terminals	≤ 25 m Ω
Short-circuit protection	10A cartridge fuse type gG (gl)
Cabling	Screw clamp terminals. : Clamping capacity, min. : 1 x 0.5 mm ² , max. : 2 x 2.5 mm ²
Minimum actuation speed	0.001 m/minute,
Electrical durability	Conforming to IEC 947-5-1 Appendix C. Utilization categories AC-15 and DC-13. Maximum operating rate : 3600 operating cycles per hour. Load factor : 0.5



SNH Series Limit Switches for Hoisting and Mechanical Handling

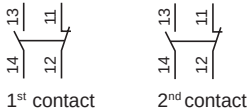
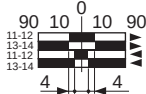
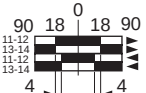
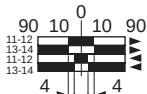
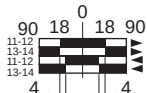
Type of operating head	Rotary with spring return to off position Maximum displacement : 55 ° in each direction			Stay put 90 ° in each direction
	SNH-07 	SNH-17 	SNH-04 	SNH-27 SNH-28 
Type of operator	Metal rod, $\varnothing 6$ mm	Thermoplastic roller lever	Large thermoplastic roller lever	Metal rods, $\varnothing 6$ mm crossed or T(1)
References	 N/C contact with positive opening operation (P) = positive opening point			

snap action	SNH-07-SP-T 				SNH-17-SP-T 				SNH-04-SP-T 				SNH-2-SP-T 			
	SNH-07-SP-N 				SNH-17-SP-N 				SNH-04-SP-N 				SNH-2-SP-N 			
slow break	SNH-07-SL-T 				SNH-17-SL-T 				SNH-04-SL-T 				SNH-2-SL-T 			
	SNH-07-SL-N 				SNH-17-SL-N 				SNH-04-SL-N 				SNH-2-SL-N 			
Weight (kg)	1.110				1.145				1.155				1.135			

Complementary characteristics

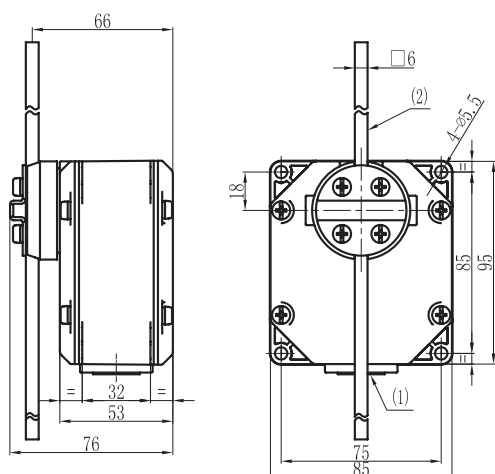
Maximum actuation speed	1.5m/s		
Mechanical durability	10 million operating cycles		
Minimum torque	for tripping	0.45N.m	0.60N.m
	for positive opening	0.75N.m	0.70N.m

SNH Series Limit Switches for Hoisting and Mechanical Handling

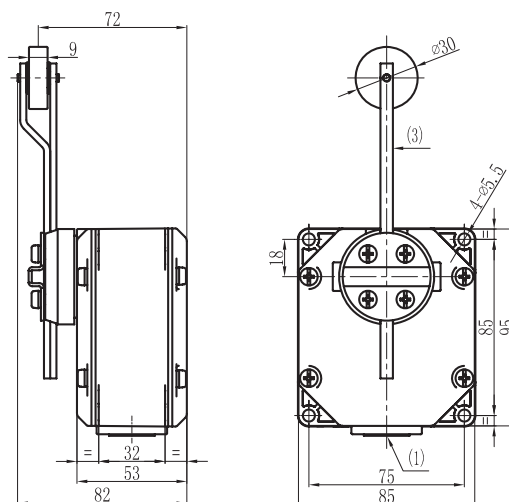
Type of switch	Standard	For corrosive atmospheres
		
Features	Zinc alloy enclosure Zinc plated steel lever, spring return to off position Cam angles 10 ° and 18 ° Maximum displacement : 90 °	Zinc alloy enclosure Stainless steel lever, spring return to off position Cam angles 10 ° and 18 ° Maximum displacement : 90 °
2 single-pole C/O snap action Both contacts operate in each direction  1 st contact 2 nd contact	SNH-37-SP-S 1 st contact  2 nd contact 	SNH-37-SP-S(Stainless) 1 st contact  2 nd contact 
Weight(Kg)	1.170	1.170
Mechanical durability	0.3 million operating cycles	
Minimum tripping torque	1 N.m	

SNH Series Limit Switches for Hoisting and Mechanical Handling

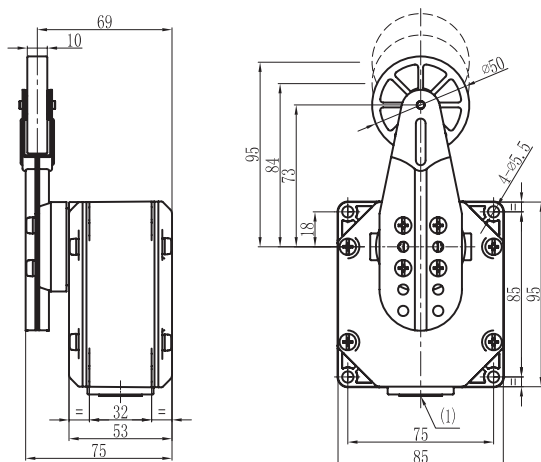
SNH-07



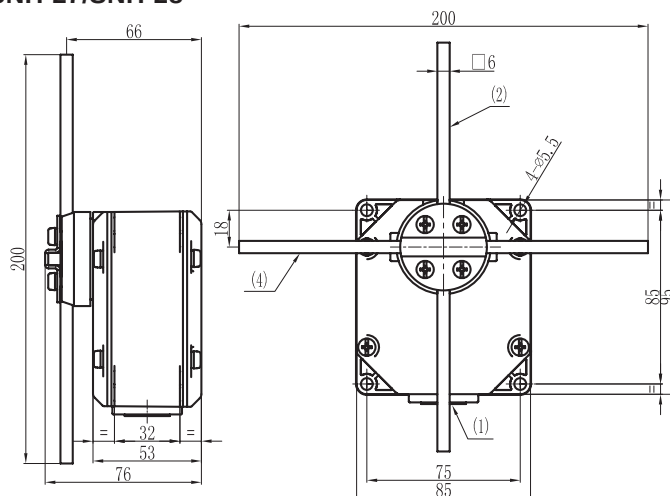
SNH-17



SNH-04



SNH-27/SNH-28



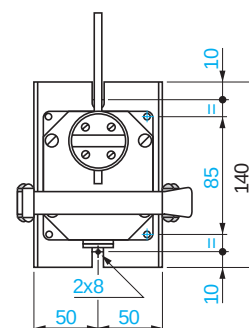
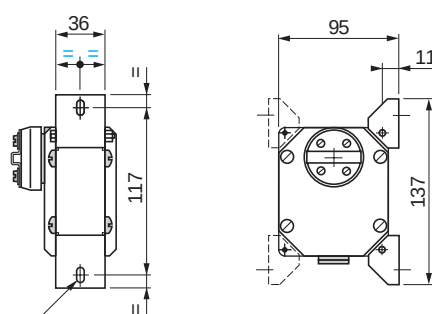
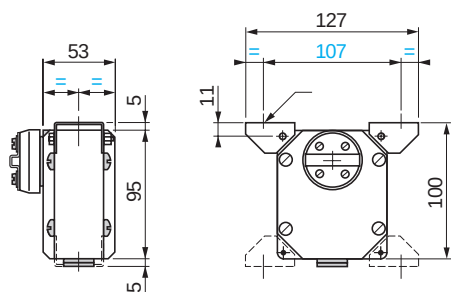
- (1) 1 cable entry: M20, 1/2NPT or PG13.5
- (2) Rod length: 200mm
- (3) Rod + roller length: 160mm
- (4) Rod length: 200mm for SNH-27, 300mm for SNH-28

Alternative fixing using 2 adjustable brackets

Quick fixing/release bracket

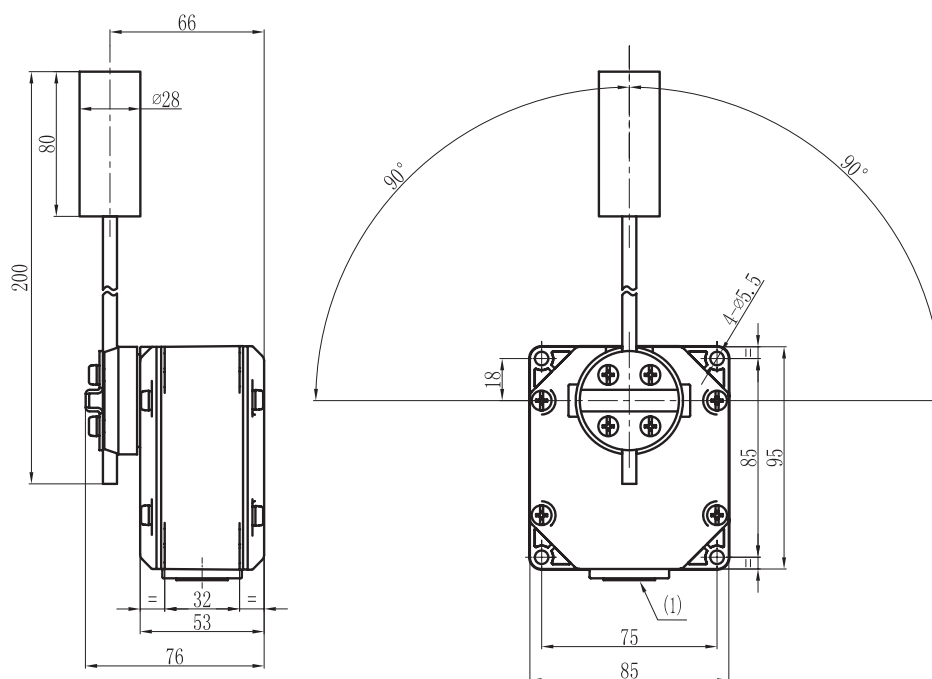
Horizontal position

Vertical position



SNH Series Limit Switches for Hoisting and Mechanical Handling

SNH-37



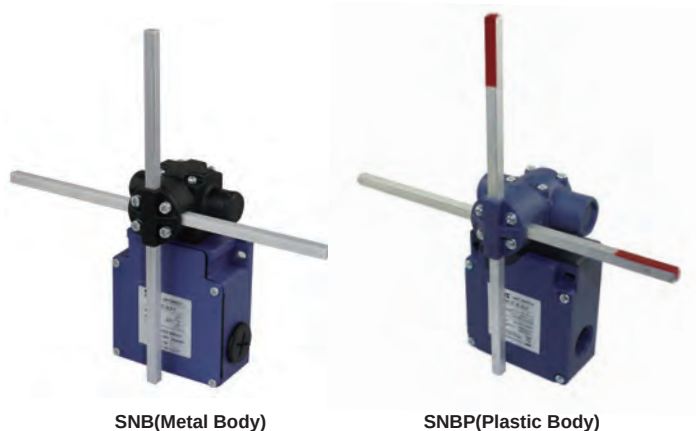
SNB(P) Series Limit Switches for Hoisting and Mechanical Handling

Type of operating head	Rotary
Type of operator	Crossed metal rods (Standard rod 200mm, 300mm version available)

Selection Guide

Housing Material		Zinc alloy	Plastic
Operation Type	Single-speed	SNB-27-SL-N*	SNBP-27-SL-N*
	Two-speed	SNB-27-SL2-N*	SNBP-27-SL2-N*
	Bypass	SNB-27-SL-T*	SNBP-27-SL-T*
Weight (Kg)		0.550	0.315

* Add suffix -R to have operating head with opposite direction



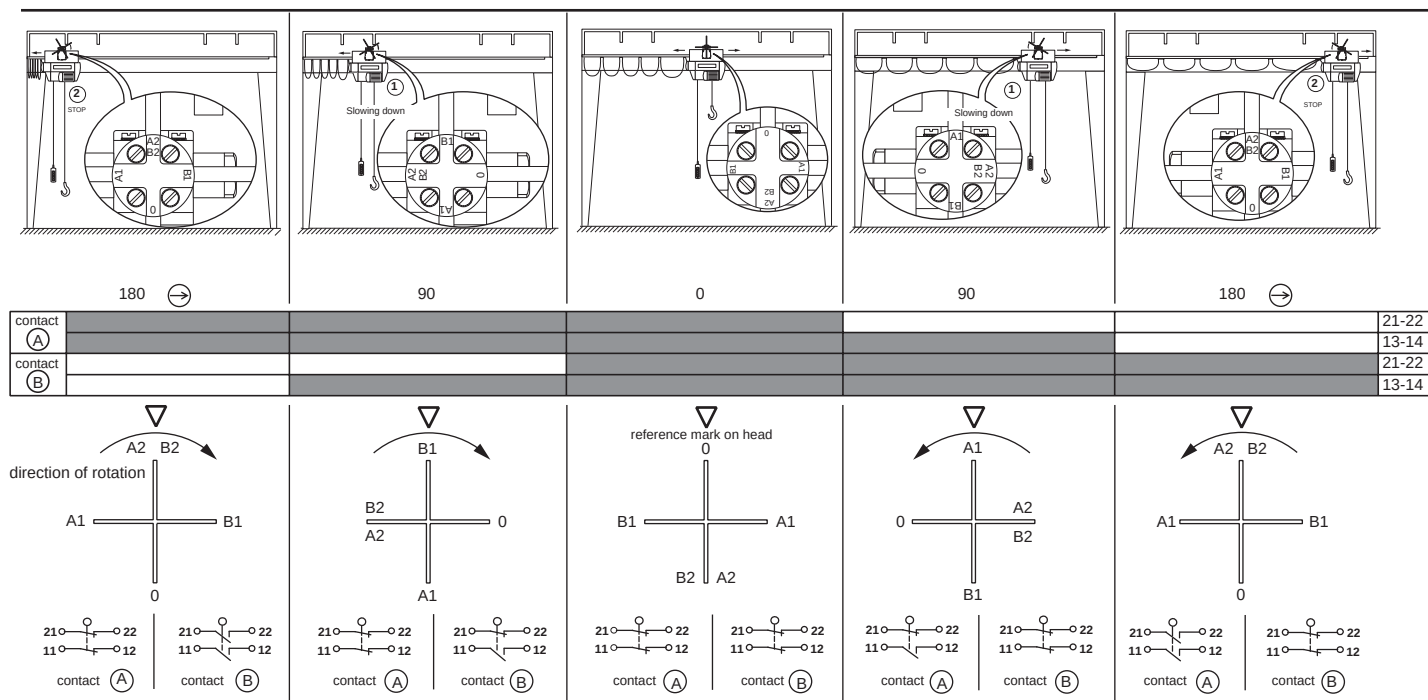
References	N/C contact with positive opening operation	(P)= positive opening point
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Characteristics

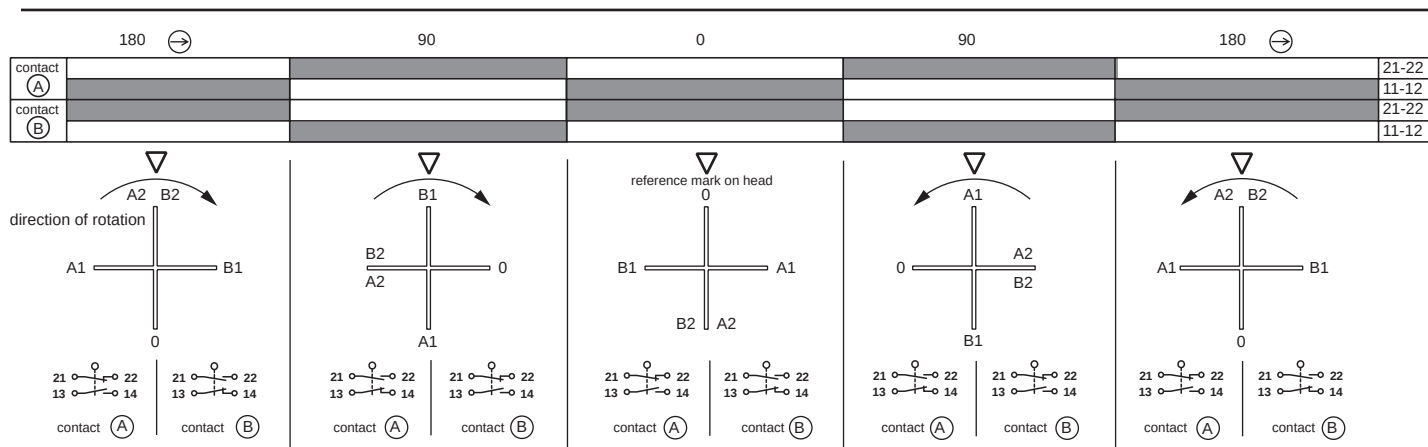
Products	IEC 947-5-1, EN 60 947-5-1, VDE 0660-200	
Conforming to standards	Machine assemblies	IEC 204-1, EN 60 204-1, NF C 79-130
Ambient air temperature	Operation : - 25 ~ 70 °C Storage: - 40 ~ 70 °C	
Resistance to vibration	25 gn(10 - 500Hz) conforming to IEC 68-2-6	
Resistance to shock	50 gn conforming to IEC 68-2-27	
Electric shock protection	Class I conforming to IEC 536 and NF C 20-030	
Degree of protection	IP66	
Mechanical durability	2 million Op. cycles	
Torque	for tripping	0.5 Nm
	for positive opening	0.75 Nm
Maximum actuation speed	1.5m/s	
Rated operational characteristics	AC-15 ; A300 or Ue = 240 V, Ie = 3 A DC-13 ; Q150 or Ue = 215 V, Ie = 0.55 A) conforming to IEC 947-5-1 Appendix A,	
Rated insulation voltage	Ui = 600 V degree of pollution 3 conforming to IEC 97-1,EN60947-5-1	
Rated impulse withstand voltage	U imp = 6 kV conforming to IEC 947-1, IEC 664	
Positive operation	N/C contacts with positive opening operation conforming to IEC 947-5-1 , EN 60 947-5-1	
Short-circuit protection	10A cartridge fuse type gG(gl)	
Conduits	1/2NPT,M20X1.5,PG13.5	
Cabling	Screw and captive cable clamp terminals. Clamping capacity, min.: 1 x 0.34 mm ² , max.: 2 x 1.5 mm ² or 1 x 2.5 mm ² depending on contact Screw tightening torque max.:1.2Nm	

SNB(P) Series Limit Switches for Hoisting and Mechanical Handling

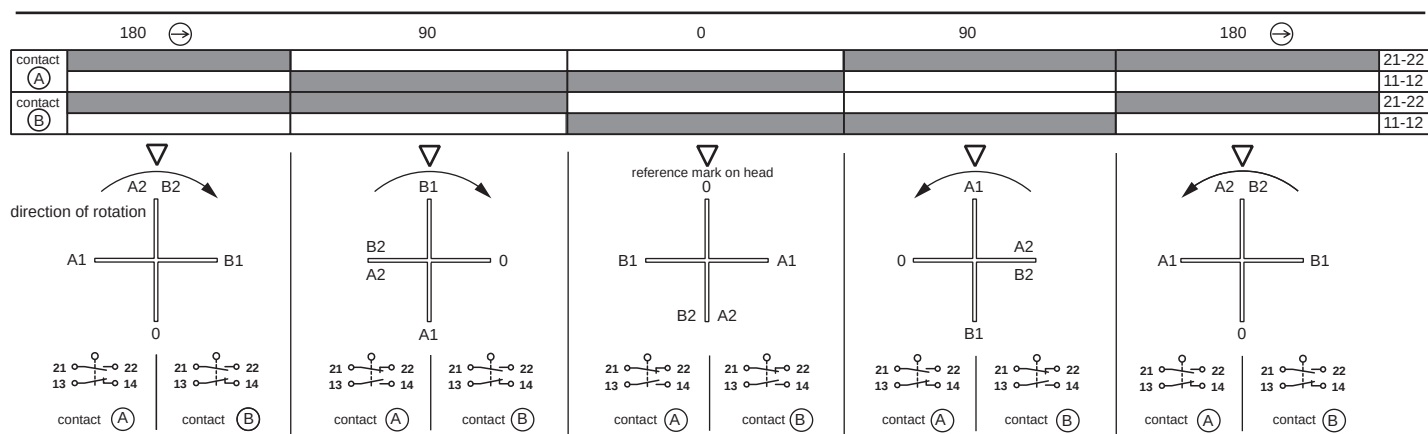
Switch Operation for SNB(P)-27-SL2-N: Two-speed

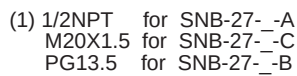


Switch Operation for SNB(P)-27-SL-T: Bypass



Switch Operation for SNB(P)-27-SL-N: Single-speed



SNB-27

(1) 1/2NPT for SNBP-27--A
M20X1.5 for SNBP-27--C
PG13.5 for SNBP-27--B

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

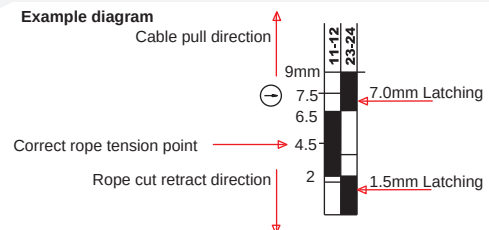
C

Conduits

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

LR

Example diagram



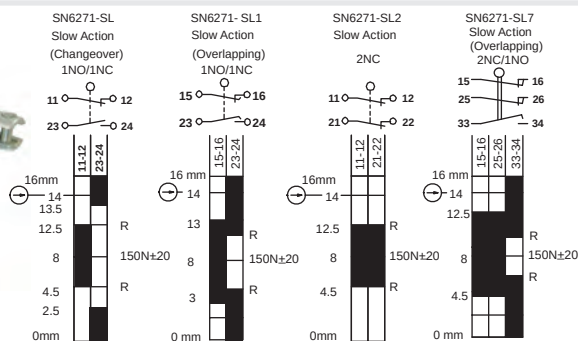
Explanation of Travel Diagram

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



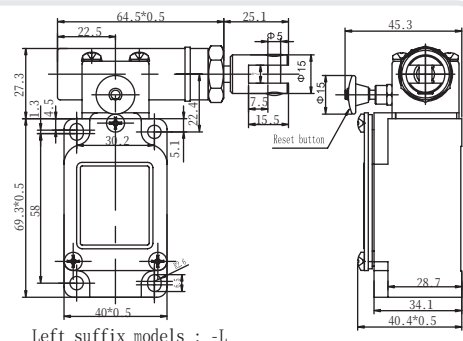
SN6271



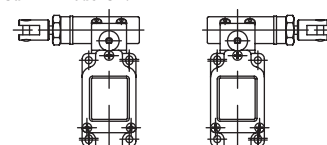
Order Code

Contact block

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	

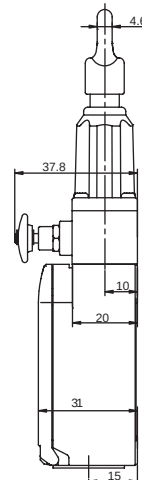
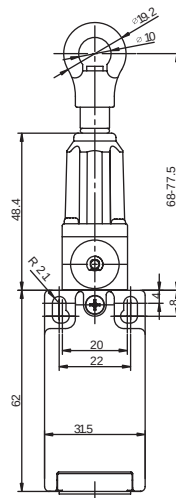
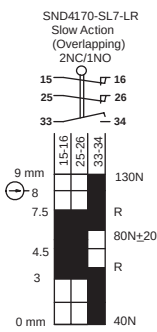
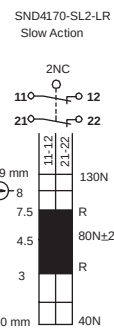
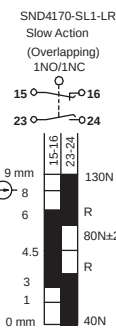
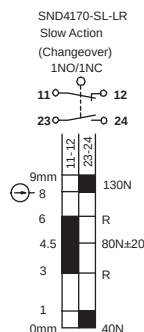


Left suffix models : -L



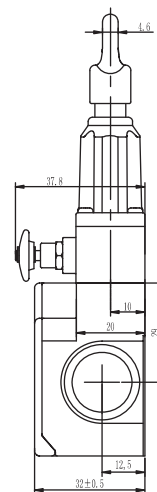
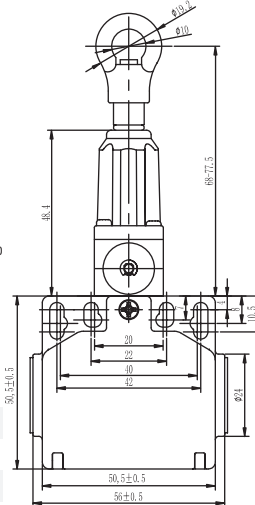
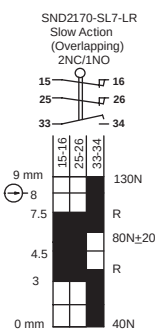
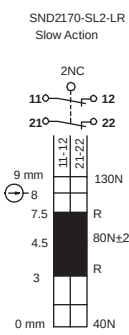
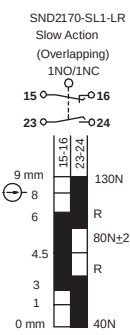
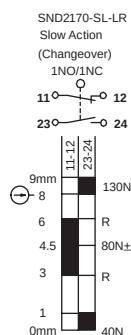
CABLE PULL SAFETY SWITCHES (Two - Way Actuation)

SND4170-LR



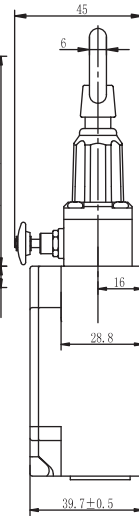
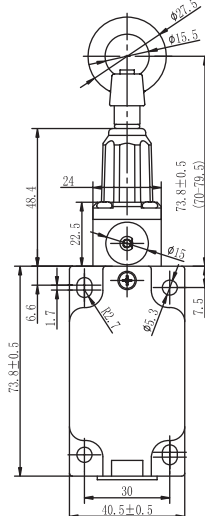
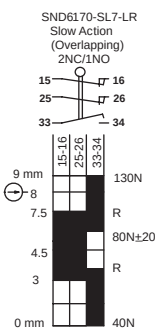
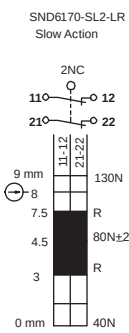
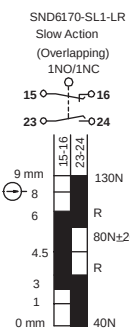
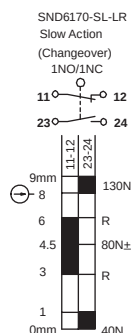
Order Code	Contact block		
SND4170-SL-LR	SL		slow action 1NO+1NC BBM
SND4170-SL1-LR	SL1		slow action 1NO+1NC MBB
SND4170-SL2-LR	SL2		slow action 2NC
SND4170-SL7-LR	SL7		slow action 2NC+1NO

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

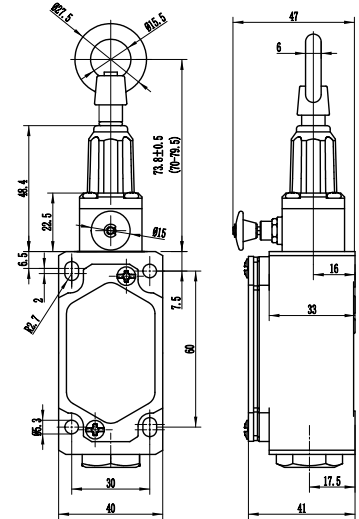
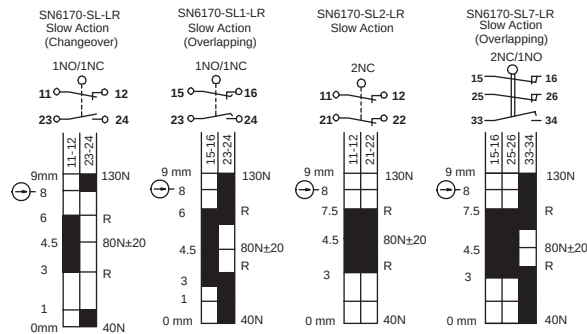
SND6170-LR



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

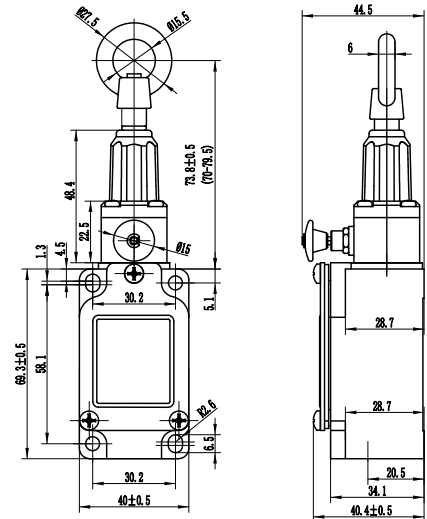
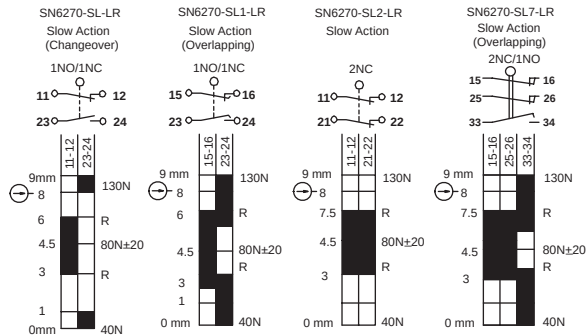
CABLE PULL SAFETY SWITCHES (Two - Way Actuation)

SN6170-LR



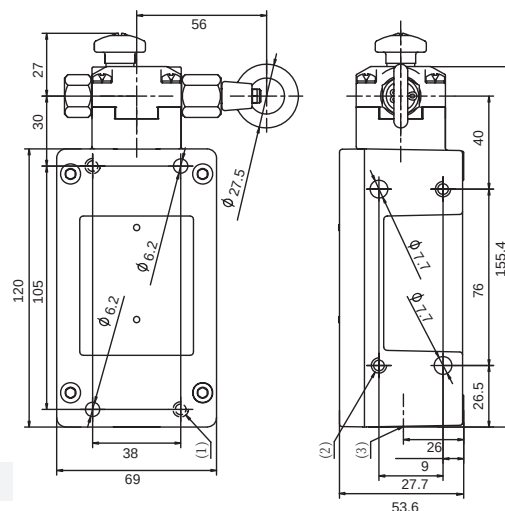
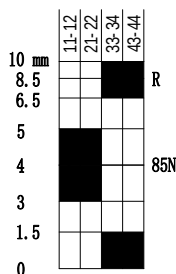
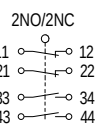
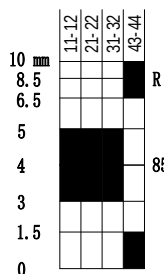
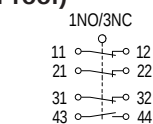
Order Code	Contact block		
SN6170-SL-LR	SL	→ slow action	1NO+1NC BBM
SN6170-SL1-LR	SL1	→ slow action	1NO+1NC MBB
SN6170-SL2-LR	SL2	→ slow action	2NC
SN6170-SL7-LR	SL7	→ slow action	2NC+1NO

SN6270-LR

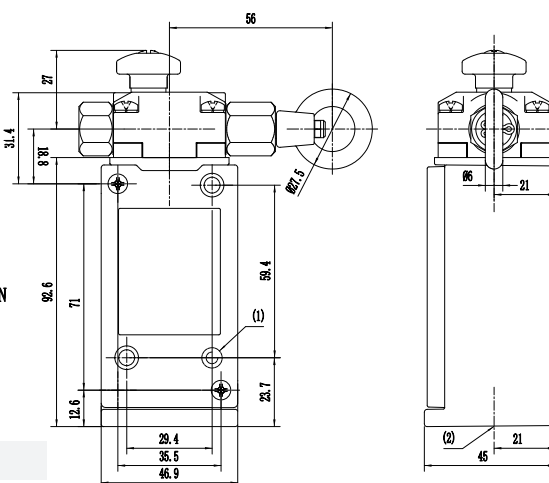
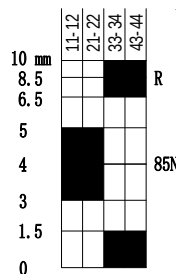
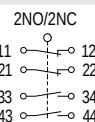
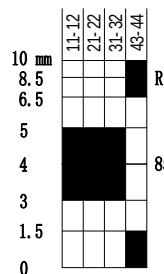
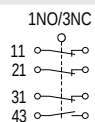


Order Code	Contact block		
SN6270-SL-LR	SL	→ slow action	1NO+1NC BBM
SN6270-SL1-LR	SL1	→ slow action	1NO+1NC MBB
SN6270-SL2-LR	SL2	→ slow action	2NC
SN6270-SL7-LR	SL7	→ slow action	2NC+1NO

HES-7A-70(Explosion - Proof)

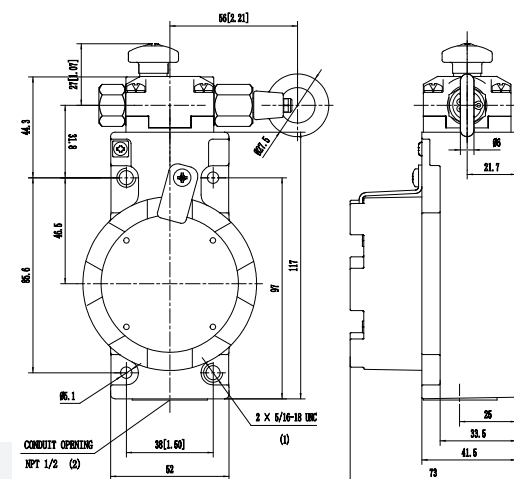
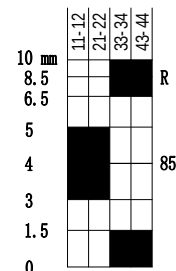
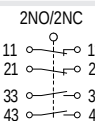
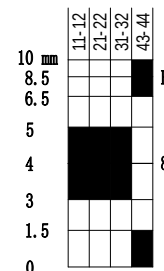
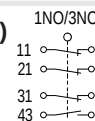


HES-8A-70 (1NO/3NC)



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

A blue and red Seimens hydraulic pump. The pump has a blue body with a red circular label on the front. The label contains the text "SEIMENS" and "HYDRAULIC PUMP". A silver metal ring is attached to the side of the pump.



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

<http://www.suns-usa.com>

CP-7 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
- Conform to EN60947-5-5, ISO13850, ISOTR 12100, IEC 60947-5-1, EN 418

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 x10 ⁶ (operations) Electrical: 5 x10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%RH
Degree of Protection	IP67

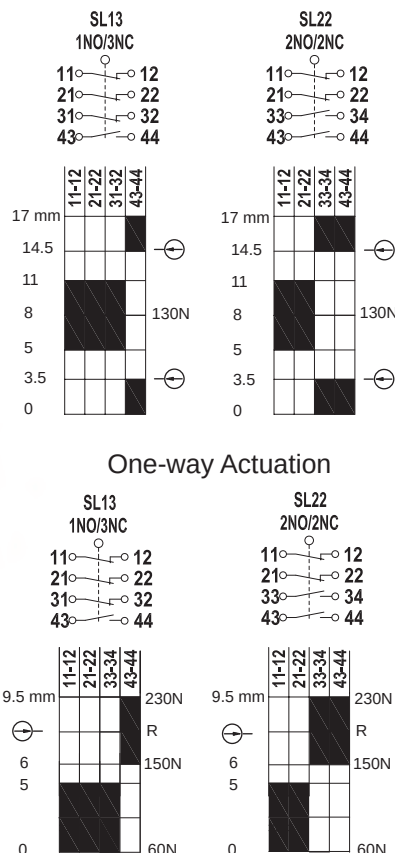
Selection Guide:

CP-7170	-	SL22	-	A	-	R	-	24	-	E	-	N
		Contact Block		Conduits		Blank: Momentary		LED		Emergency stop button		One-way or two-way
		SL13: 1NO/3NC		A: 1/2NPT		R: Manual reset		Blank		Blank		Blank: Two-way Actuation
		SL22: 2NO/2NC		C: M20				24: 24VDC		E: Emergency stop button		N: One-way Actuation
								120: 120VAC				
								240: 240VAC				
								240U: 12-250VAC/DC				

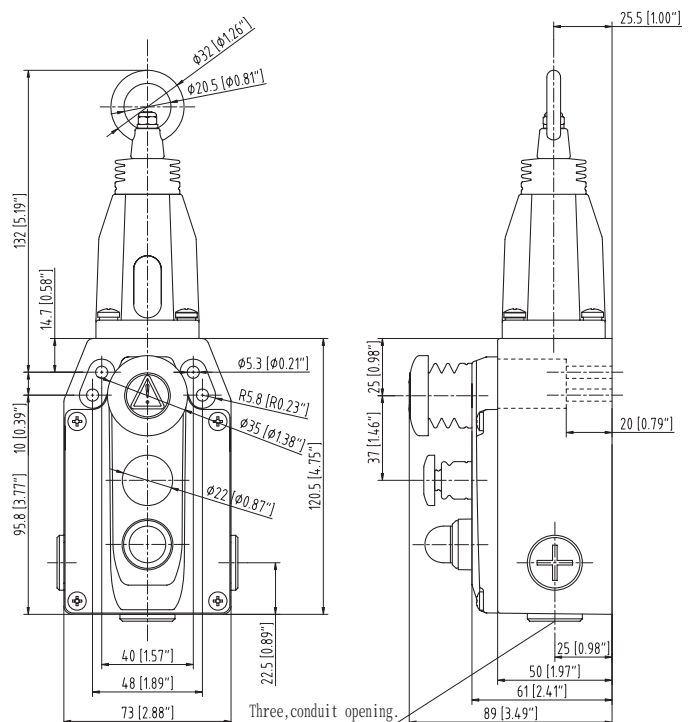
Please contact us for other contact block configuration

Two-way Actuation

CP-7170



One-way Actuation



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 x10 ⁷ (operations) Electrically 5 x10 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

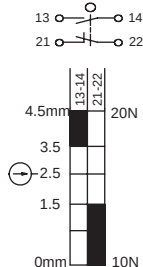
R

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

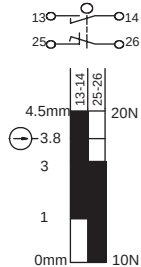
SND4170



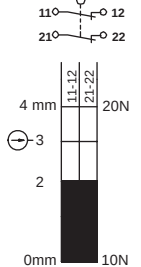
SND4170-SL Slow Action (Changeover)



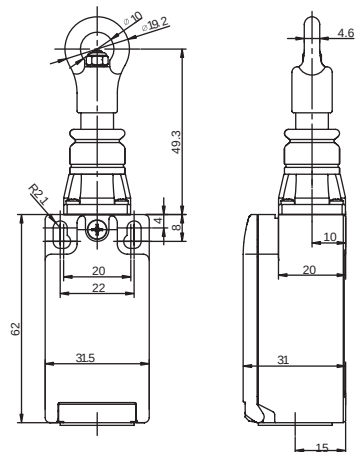
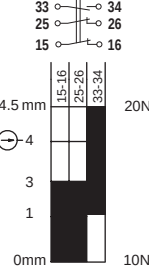
SND4170-SL1 Slow Action (Overlapping)



SND4170-SL2 Slow Action



SND4170-SL7 Slow Action (Overlapping)



Order Code

Contact block

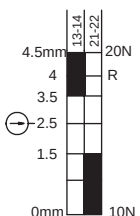
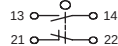
SND4170-SL- _	SL	→	slow action	1NO+1NC	BBM
SND4170-SL1- _	SL1	→	slow action	1NO+1NC	MBB
SND4170-SL2- _	SL2	→	slow action	2NC	
SND4170-SL7- _	SL7	→	slow action	2NC+1NO	

CABLE PULL SAFETY SWITCHES (One - Way Actuation)

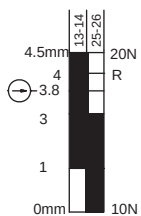
SND4170-R



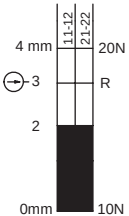
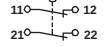
SND4170-SL-R
Slow Action
(Changeover)



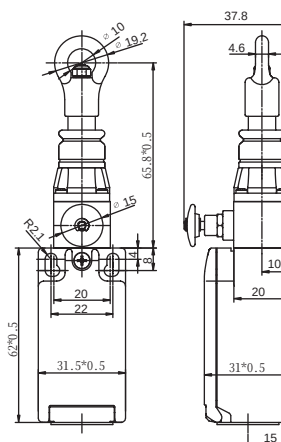
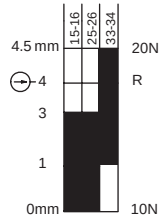
SND4170-SL1-R
Slow Action
(Overlapping)



SND4170-SL2-R
Slow Action



SND4170-SL7-R
Slow Action
(Overlapping)



Order Code

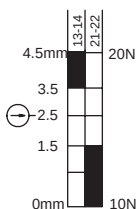
Contact block

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

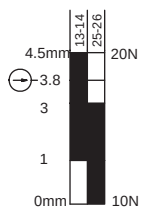
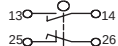
SND2170



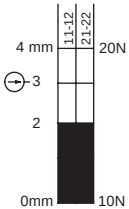
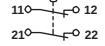
SND2170-SL
Slow Action
(Changeover)



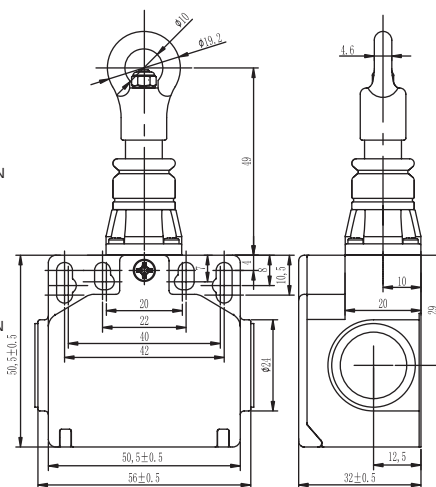
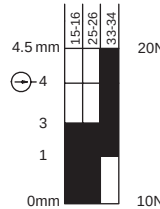
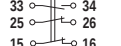
SND2170-SL1
Slow Action
(Overlapping)



SND2170-SL2
Slow Action



SND2170-SL7
Slow Action
(Overlapping)



Order Code

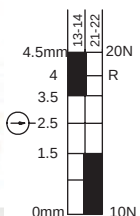
Contact block

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	

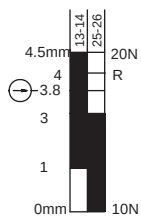
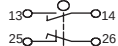
SND2170-R



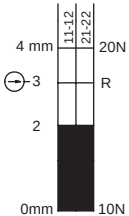
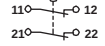
SND2170-SL-R
Slow Action
(Changeover)



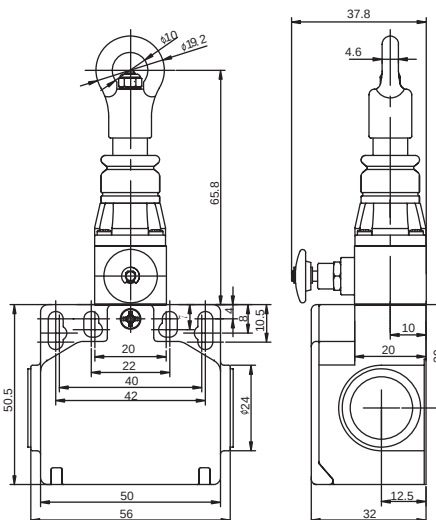
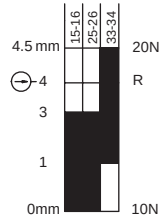
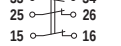
SND2170-SL1-R
Slow Action
(Overlapping)



SND2170-SL2-R
Slow Action



SND2170-SL7-R
Slow Action
(Overlapping)



Order Code

Contact block

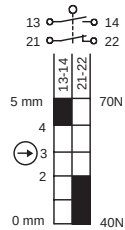
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SND2170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SND2170-SL2- _R	SL2		slow action	2NC	
SND2170-SL7- _R	SL7		slow action	2NC+1NO	

CABLE PULL SAFETY SWITCHES (One - Way Actuation)

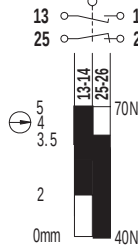
SND6170



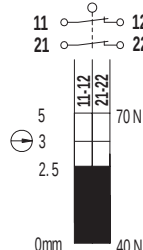
SND6170-SL
Slow Action
(Changeover)



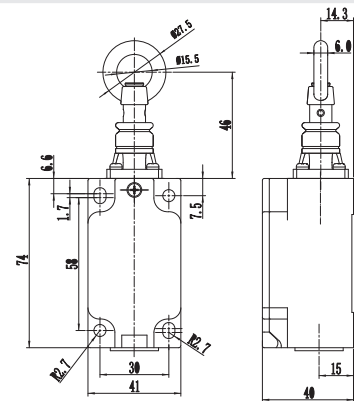
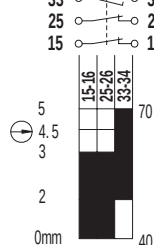
SND6170-SL1
Slow Action
(Overlapping)



SND6170-SL2
Slow Action



SND6170-SL7
Slow Action
(Overlapping)



Order Code

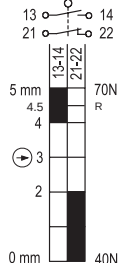
Contact block

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	

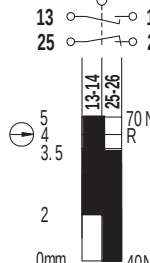
SND6170-R



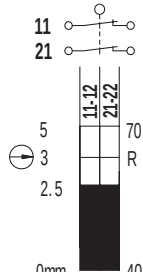
SND6170-SL-R
Slow Action
(Changeover)



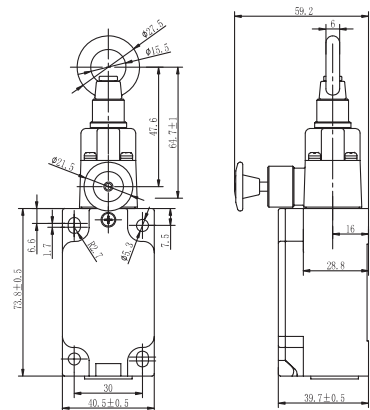
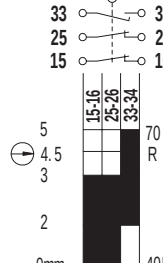
SND6170-SL1-R
Slow Action
(Overlapping)



SND6170-SL2-R
Slow Action



SND6170-SL7-R
Slow Action
(Overlapping)



Order Code

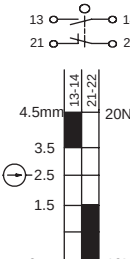
Contact block

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	

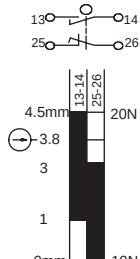
SN4170



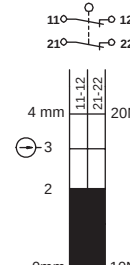
SN4170-SL
Slow Action
(Changeover)



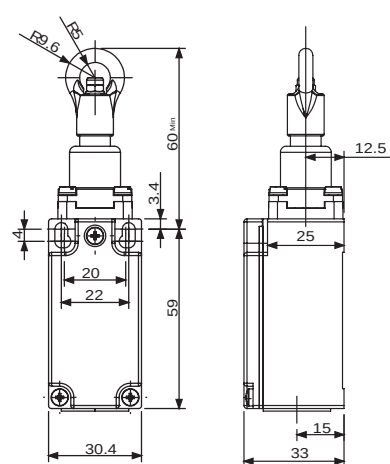
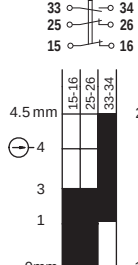
SN4170-SL1
Slow Action
(Overlapping)



SN4170-SL2
Slow Action



SN4170-SL7
Slow Action
(Overlapping)



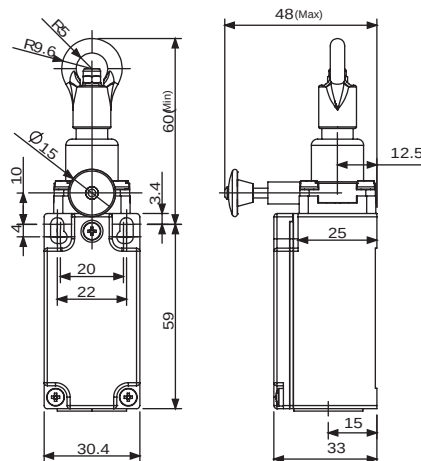
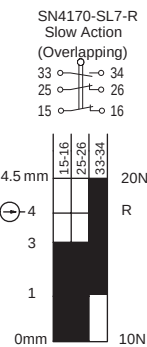
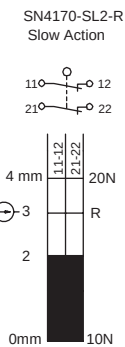
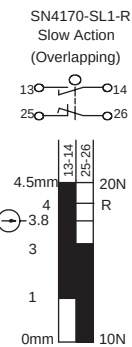
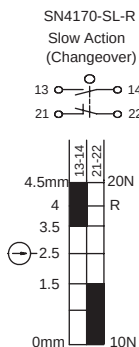
Order Code

Contact block

SN4170-SL-	SL		slow action	1NO+1NC	BBM
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

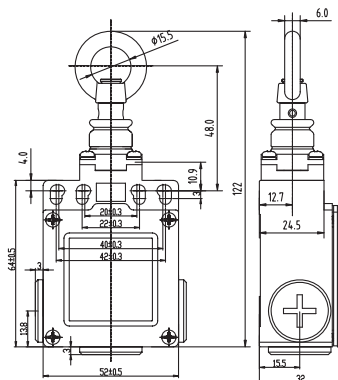
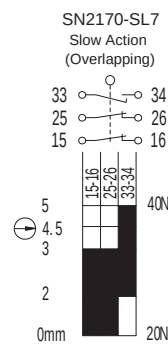
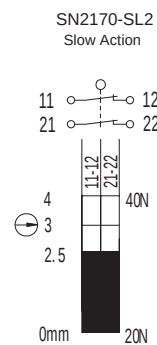
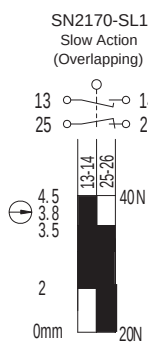
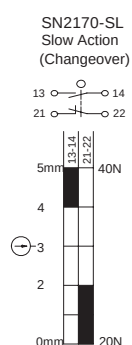


Order Code

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

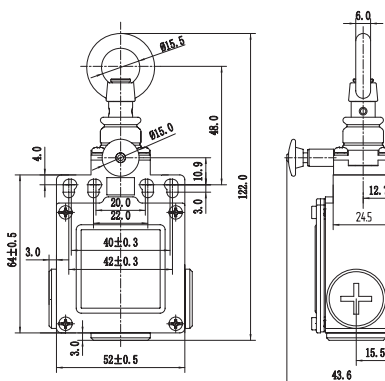
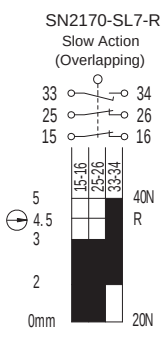
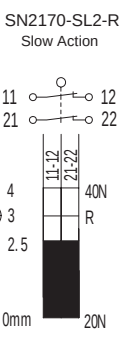
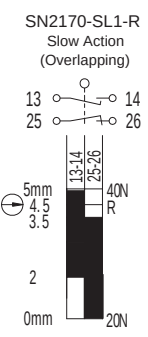
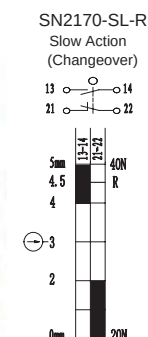


Order Code

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



Order Code

Contact block

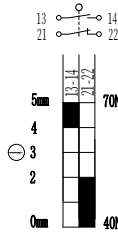
SN2170-SL- _R	SL		slow action	1NO+1NC	BBM
SN2170-SL1- _R	SL1		slow action	1NO+1NC	MBB
SN2170-SL2- _R	SL2		slow action	2NC	
SN2170-SL7- R	SL7		slow action	2NC+1NO	

CABLE PULL SAFETY SWITCHES (One - Way Actuation)

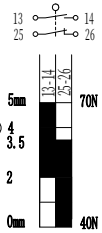
SN6170



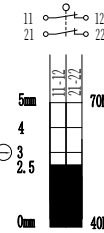
SN6170-SL
Slow Action
(Changeover)



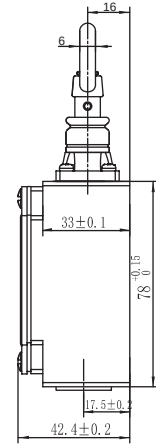
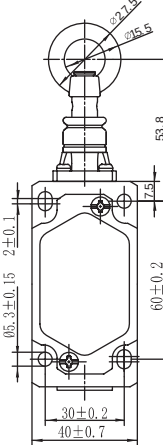
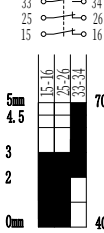
SN6170-SL1
Slow Action
(Overlapping)



SN6170-SL2
Slow Action



SN6170-SL7
Slow Action
(Overlapping)



Order Code

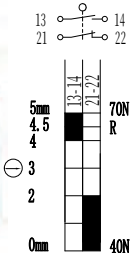
Contact block

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	

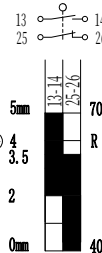
SN6170-R



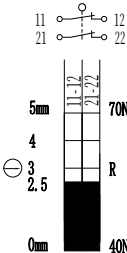
SN6170-SL-R
Slow Action
(Changeover)



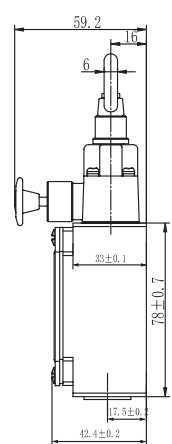
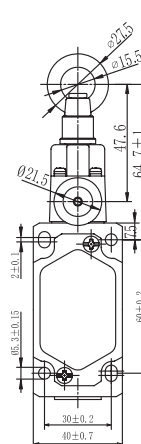
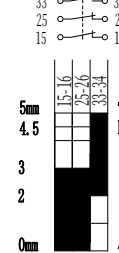
SN6170-SL1-R
Slow Action
(Overlapping)



SN6170-SL2-R
Slow Action



SN6170-SL7-R
Slow Action
(Overlapping)

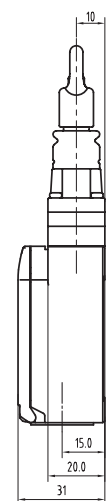
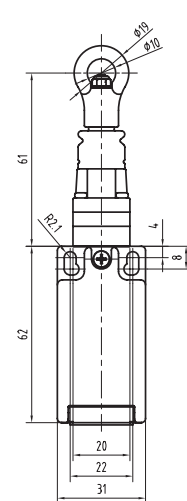
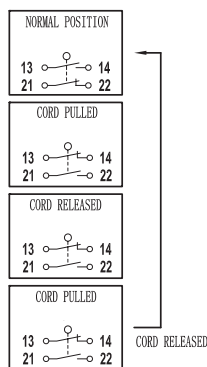


Order Code

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



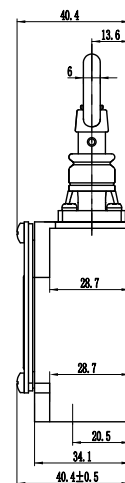
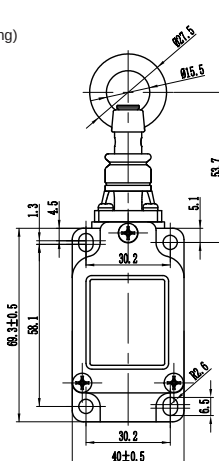
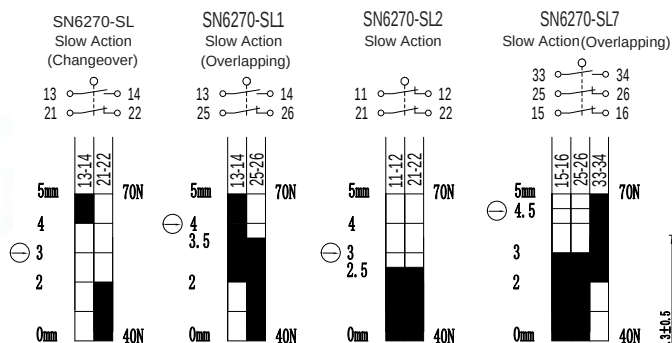
Order Code

Contact block

SND4170-SL- C M	SL		slow action	1NO+1NC	BBM
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CABLE PULL SAFETY SWITCHES (One - Way Actuation)

SN6270

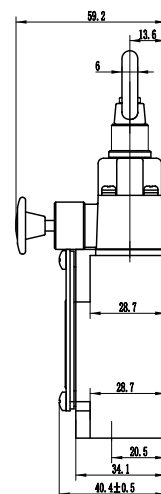
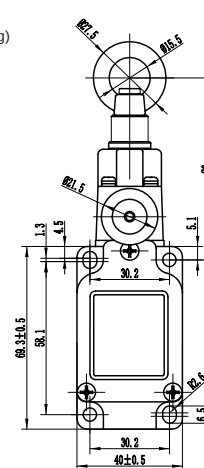
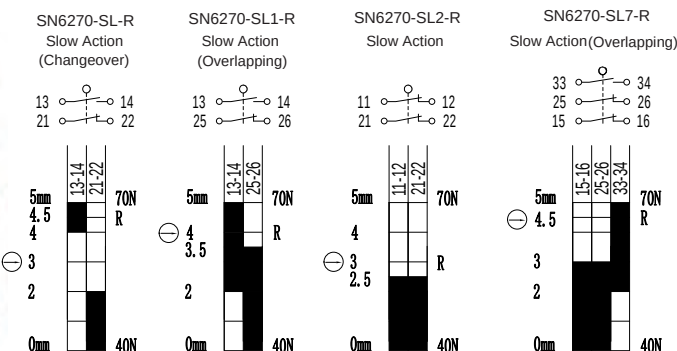


Order Code

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

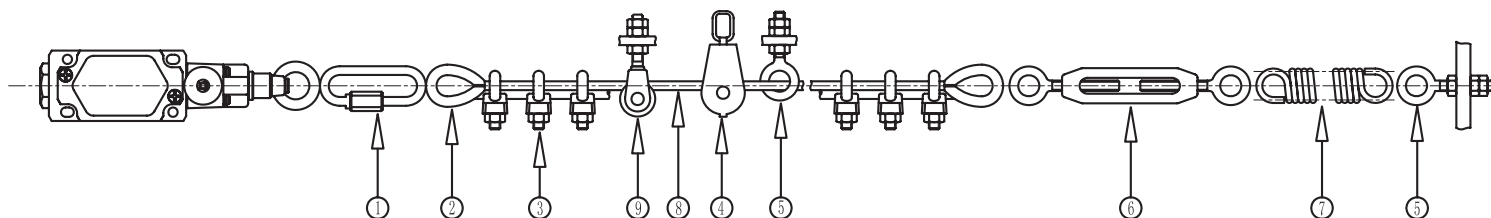


Order Code

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	

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-08-020 (20 m rope)
 CPA-08-035 (35 m rope)
 CPA-08-100 (100 m rope)



⑨ CPA-09

INTERLOCKING SAFETY SWITCHES

Features

- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions
- Horizontal or Vertical Operation

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/s
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 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%
Degree of Protection	IP67/ IP66(SMN4)

Plastic-Bodied Interlock Safety Switch

Selection Guide

SND2191

Body Type

- SND2191 Mini Plastic Body, 2 Conduit
- SMN4191 Plastic Body, 1 Conduit
- SND4191 Plastic Body, 1 Conduit
- SND6191 Large Plastic Body, 1 Conduit
- SN6191 Metal Body, 1 Conduit
- SN6291 Metal Body, 1 Conduit
- SN6391 Metal Body, 3 Conduit

SL

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

C

Conduit

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

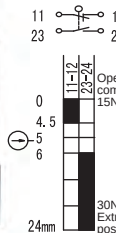
SND2191



SND2191-SL

Slow Action (Changeover)

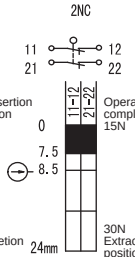
1NO/1NC



SND2191-SL2

Slow Action

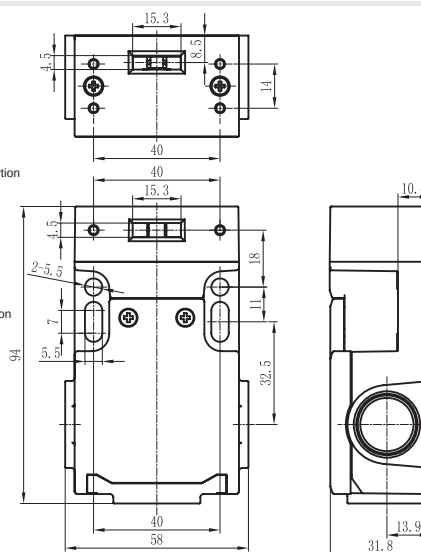
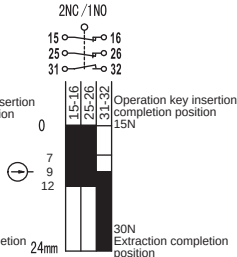
2NC



SND2191-SL7

Slow Action (Overlapping)

2NC/1NO



Order Code

Contact block

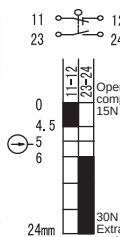
SND2191-SL- _	SL	→	slow action	1NO+1NC	BBM
SND2191-SL2- _	SL2	→	slow action	2NC	
SND2191-SL7- _	SL7	→	slow action	2NC/1NO	MBB

INTERLOCKING SAFETY SWITCHES

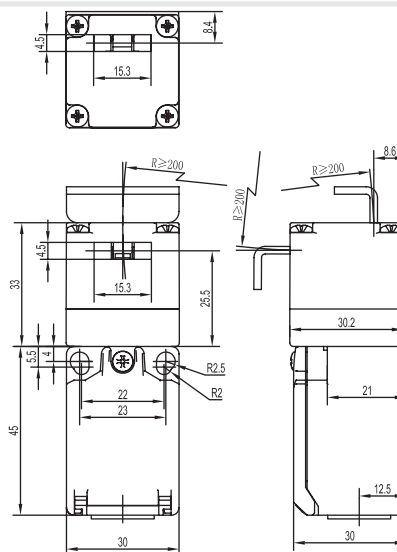
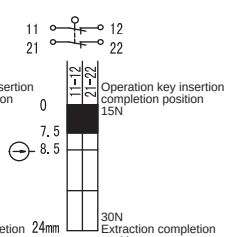
SMN4191



SMN4191-SL
slow action
(Changeover)
1NO/1NC



SMN4191-SL2
slow action
(Overlapping)
2NC



Order Code

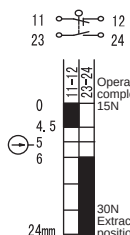
Contact block

SMN4191-SL- _	SL		slow action	1NO+1NC	BBM
SMN4191-SL2- _	SL2		slow action	2NC	

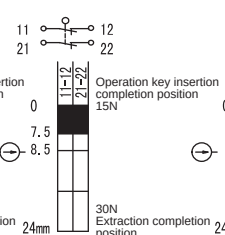
SND4191



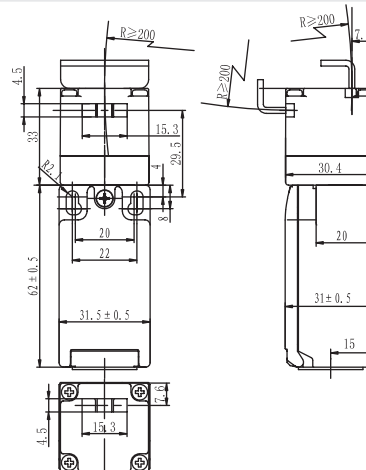
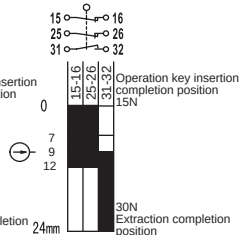
SND4191-SL
Slow Action
(Changeover)
1NO/1NC



SND4191-SL2
Slow Action
2NC



SND4191-SL7
Slow Action
(Overlapping)
2NC/1NO



Order Code

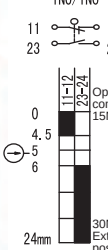
Contact block

SND4191-SL- _	SL		slow action	1NO+1NC	BBM
SND4191-SL2- _	SL2		slow action	2NC	
SND4191-SL7- _	SL7		slow action	2NC/1NO	MBB

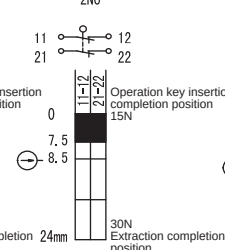
SND6191



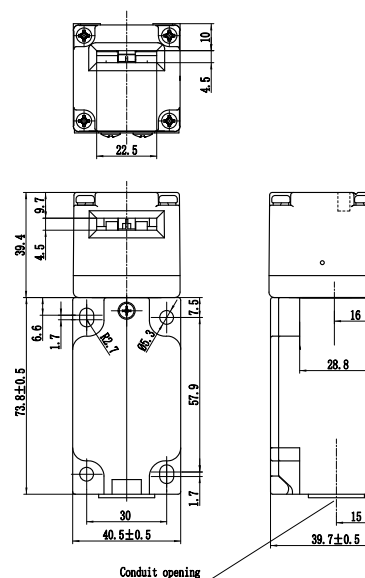
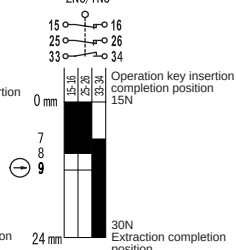
SND6191-SL
slow action
(Changeover)
1NO/1NC



SND6191-SL2
slow action
2NC



SND6191-SL7
slow action
(Overlapping)
2NC/1NO



Order Code

Contact block

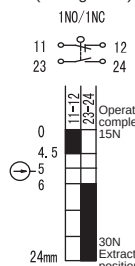
SND6191-SL- _	SL		slow action	1NO+1NC	BBM
SND6191-SL2- _	SL2		slow action	2NC	
SND6191-SL7- _	SL7		slow action	2NC/1NO	

INTERLOCKING SAFETY SWITCHES

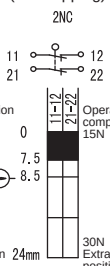
SN6191 Metal Enclosure, Metal Head



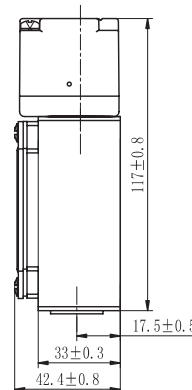
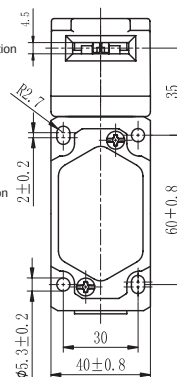
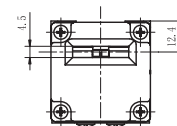
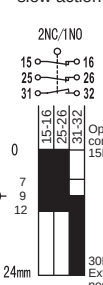
SN6191-SL
slow action
(Changeover)



SN6191-SL2
slow action
(Overlapping)



SN6191-SL7
slow action



Order Code

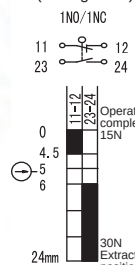
Contact block

SN6191-SL- _	SL		slow action	1NO+1NC BBM
SN6191-SL2- _	SL2		slow action	2NC
SN6191-SL7- _	SL7		slow action	2NC/1NO

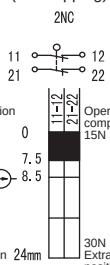
SN6291 Metal Enclosure, Metal Head



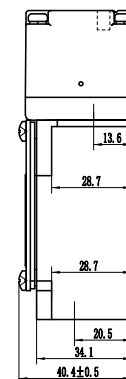
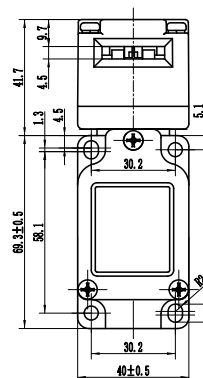
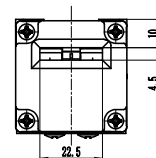
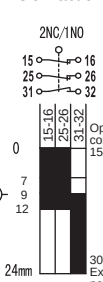
SN6291-SL
slow action
(Changeover)



SN6291-SL2
slow action
(Overlapping)



SN6291-SL7
slow action



Order Code

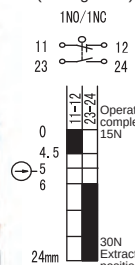
Contact block

SN6291-SL- _	SL		slow action	1NO+1NC BBM
SN6291-SL2- _	SL2		slow action	2NC
SN6291-SL7- _	SL7		slow action	2NC/1NO

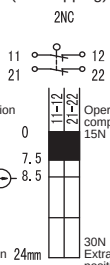
SN6391 Metal Enclosure, Metal Head



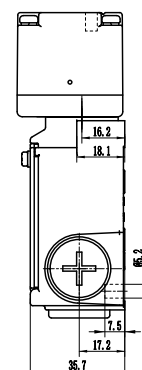
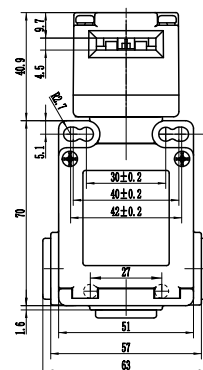
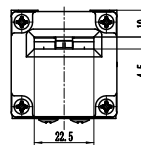
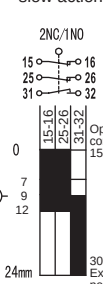
SN6391-SL
slow action
(Changeover)



SN6391-SL2
slow action
(Overlapping)



SN6391-SL7
slow action



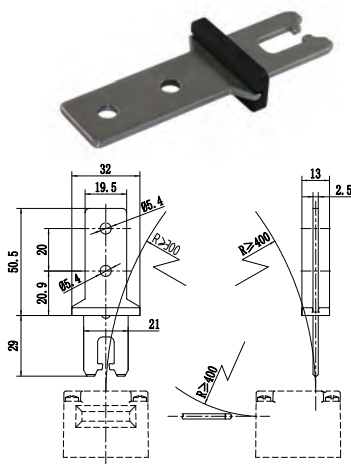
Order Code

Contact block

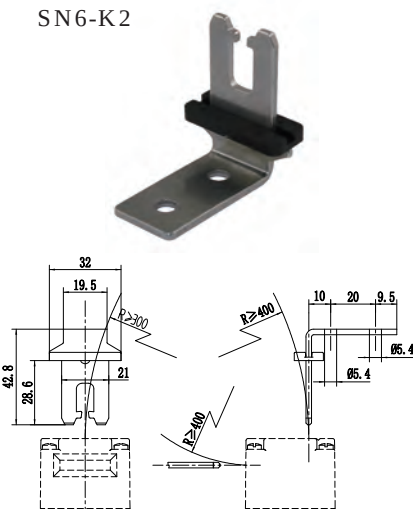
SN6391-SL- _	SL		slow action	1NO+1NC BBM
SN6391-SL2- _	SL2		slow action	2NC
SN6391-SL7- _	SL7		slow action	2NC/1NO

INTERLOCKING SAFETY SWITCHES KEY

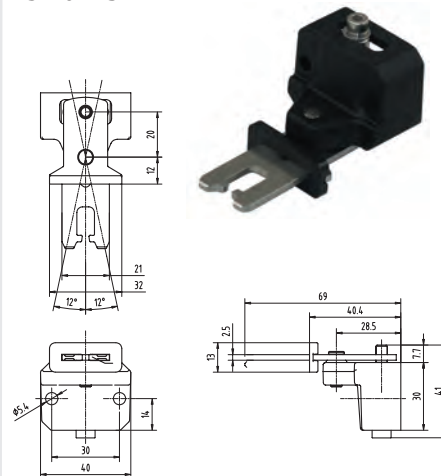
SN6-K1



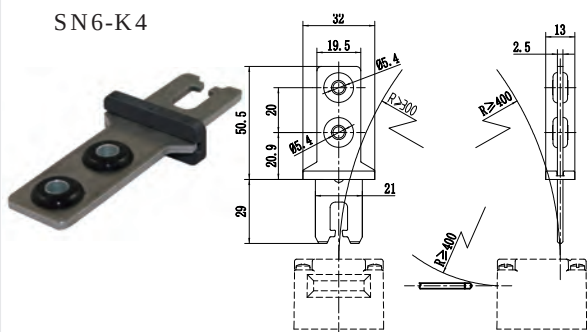
SN6-K2



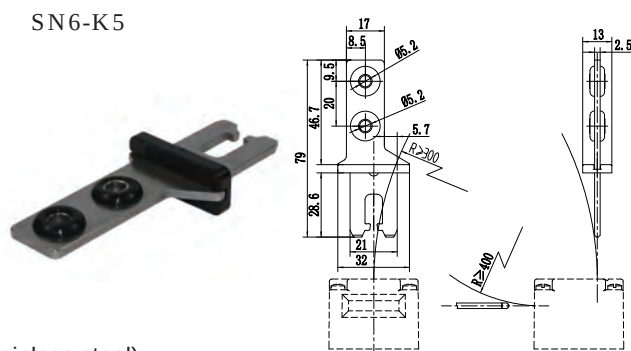
SN6-K3



SN6-K4

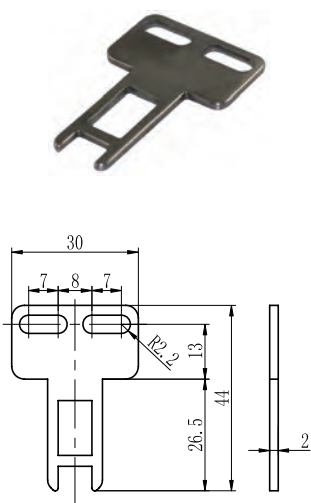


SN6-K5

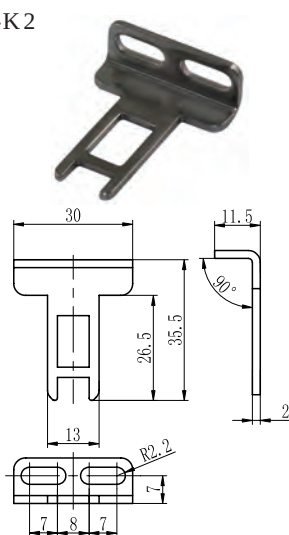


. For use with SN6,SS6191 and SSD6191 (Material: stainless steel)

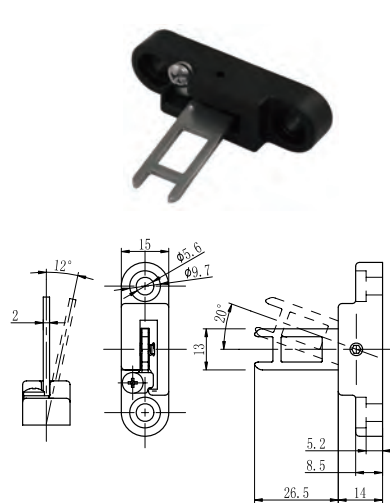
SND-K1



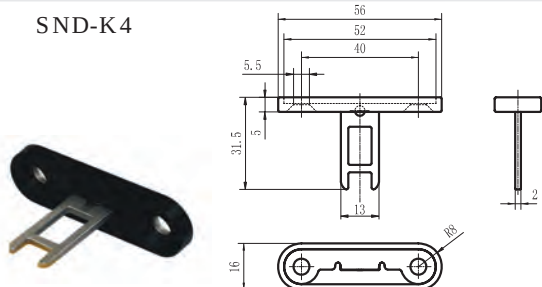
SND-K2



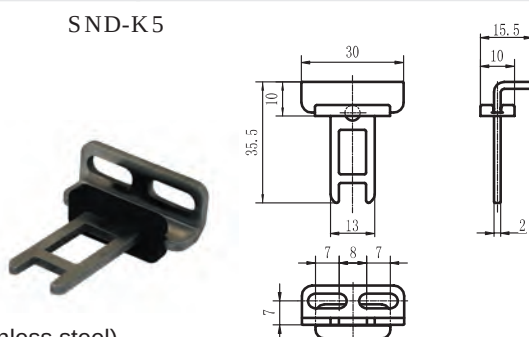
SND-K3



SND-K4



SND-K5



. For use with SND2, SND4, SMN4 and SND6 (Material: stainless steel)

Compact Safety Interlock Switches (Modular Design, Plastic Body, IP67) SM31N Series

Specification

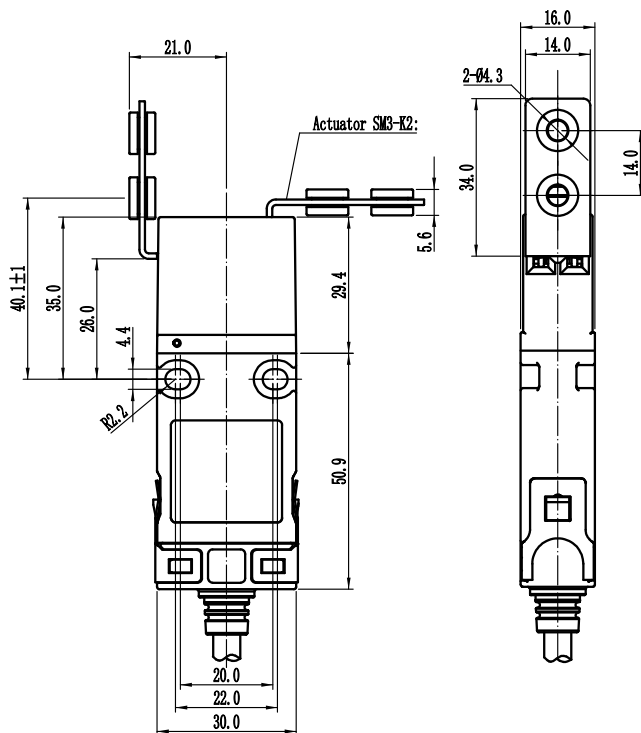
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ (initial value)
Rated Voltage	300V AC (EN60947-5-1)
Rated Thermal Current	5A
Electrical Rating	AC15 B300 DC13 R300
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Operating Temperature	-25~+85°C without formation of ice
Humidity	< 95%
Degree of Protection	IP67



Selection Guide:

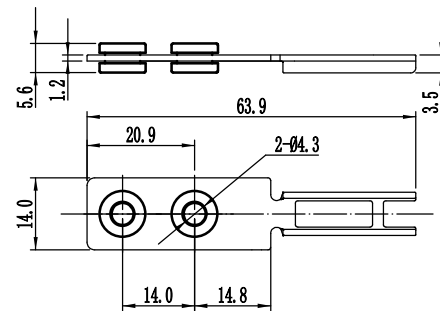
SM31N-S-	11	-	91	-	A2
	11	1NO/1NC			A2 side exit 2 meter cable
	12	1NO/2NC			B2 bottom exit 2 meter cable
	02	2NC			
	22	2NO/2NC			

Dimensions (mm)

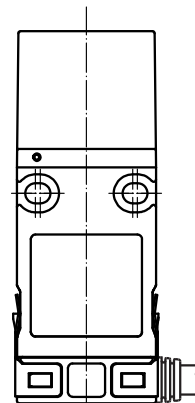
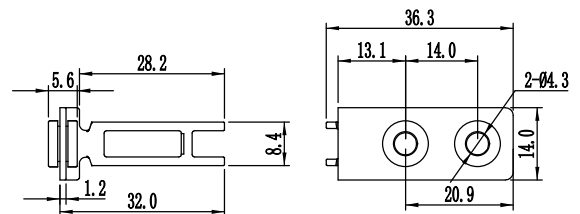


(-B: Cable Exit from Bottom)

SM3-K1



SM3-K2



(-A: Cable Exit from Side)

SND4121 SERIES (SINGLE CONDUIT ENTRY)

Features

- Glass fiber reinforced plastic body
- Easily interchangeable contact block
- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive opening of NC contacts
- 4 x 90° actuator positions
- Cable entry available: M20, PG13.5 and 1/2"NPT
- Conform to EN 50047 standard

Definitions of Operating Characteristics

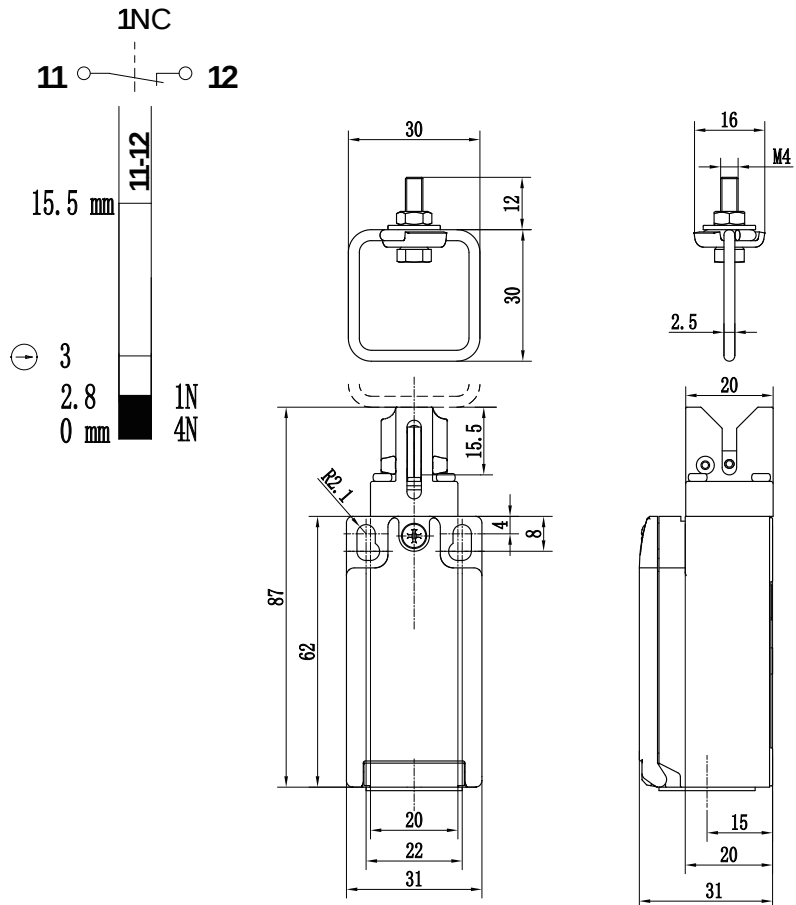
- OF Operating Force
 RF Releasing Force
 OT Overtravel
 TT Total Travel
 PT Pretravel
 MD Movement Differential
 OP Operating Position
 PO Travel to Positive Opening



Specifications

Operating Speed	0.05mm-2m/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) with no icing
Humidity	< 95%
Weight	50-100g
Degree of Protection	IP67

SND4212-SL-



Multi-Entry Trapped Key-Operated Safety Interlock Switch SS6/SSD6 SERIES

DESCRIPTION

SUNS SS/SSD6191 trapped key safety interlock switch is designed for holding a door or gate closed while a hazard still exists. This is particularly important where there is momentum in the machine. In other words, even when the machine is signaled to stop, parts of the machine are still moving. This could pose an injury risk if the access gate or door is not held closed.

Features

- Robust zinc die cast head assembly with glass fiber reinforced plastic or zinc die cast body
- Three solenoids voltages: 24Vac/dc, 120Vac and 240Vac
- Power-to-lock or power-to-unlock types for key trap (2500N holding force)
- Flexible switching arrangement
- 24 V, 110 Vac, and 230 Vac coil voltages
- Override mechanism in cover
- Head may be rotated into 4 different positions
- Three conduit openings (knock-out style)
- Switch position provides status
- Choice of different contact blocks
- Indicators for switch and solenoid status (optional)
- Positive Opening of NC contacts
- Cable entry available: M20, and 1/2"NPT
- Approval: CE, cULus

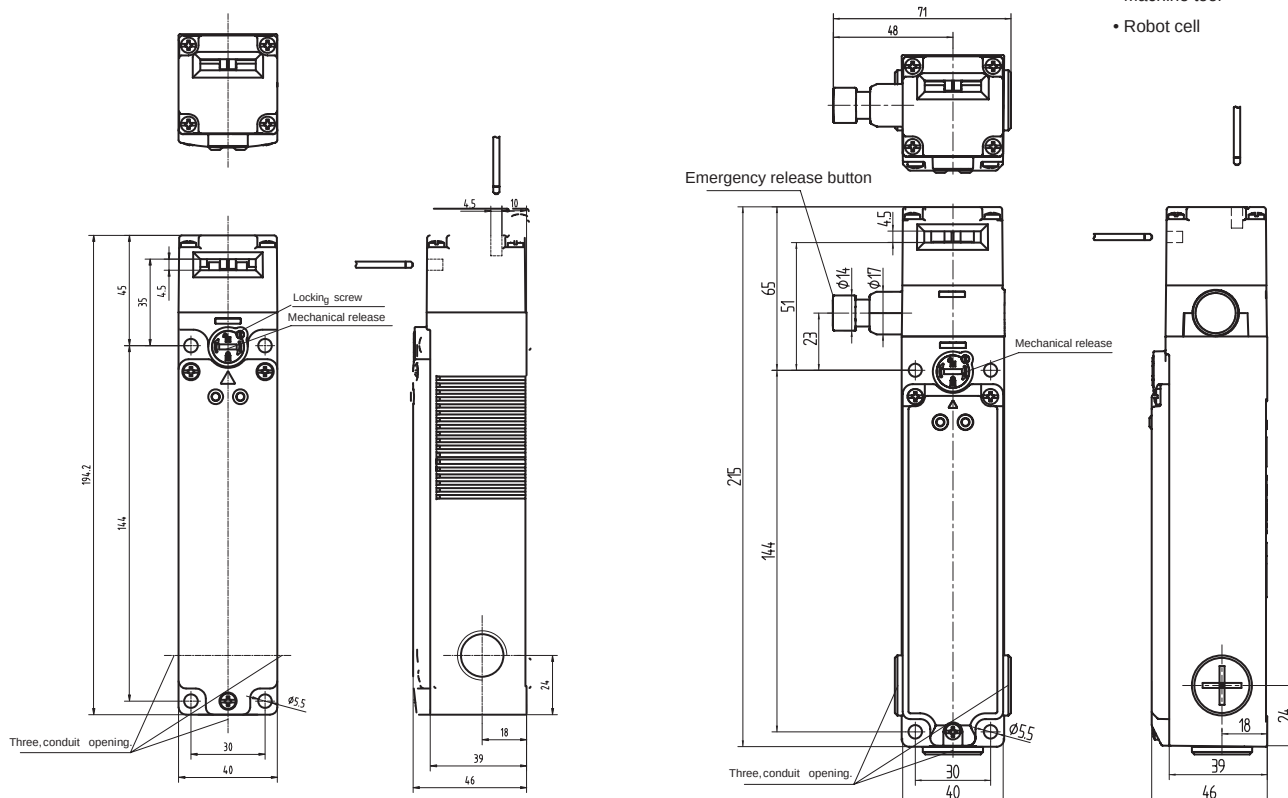
BENEFITS

- Product may be applied to most applications worldwide
- Tough, cost-effective, double-insulated enclosure
- Choice of key trapping methodology
- Four contacts that can be arranged in any configuration¹
- Multiple voltages provide for every geography
- Has a method to open door (in case of power loss, etc.)
- One part number may be used for multiple applications
- Flexible wiring options
- Can diagnose status of gate/door (gate/door closed and locked, gate/door closed and unlocked, gate/door open)



POTENTIAL APPLICATIONS

- Woodworking machinery
- Printing/paper finishing equipment
- Plastic molding equipment
- Packaging machinery
- Bailing
- Pumping equipment
- Semiconductor manufacturing equipment
- Packaging wrapping
- Specialty equipment
- Machine tool
- Robot cell



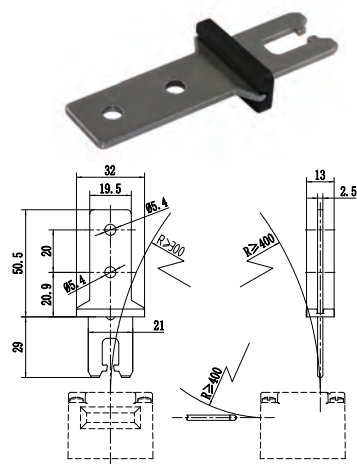
SPECIFICATIONS

Designation and Utilization Category		Rated Operational Current Ie (A) at Rated Operational Voltage Ue (V)					
		24Vdc	125Vdc	250Vdc	120Vac	240Vac	600Vac
AC15	A600	-	-	-	6A	3A	1.2A
DC13	Q300	4A	0.55A	0.27A	-	-	-

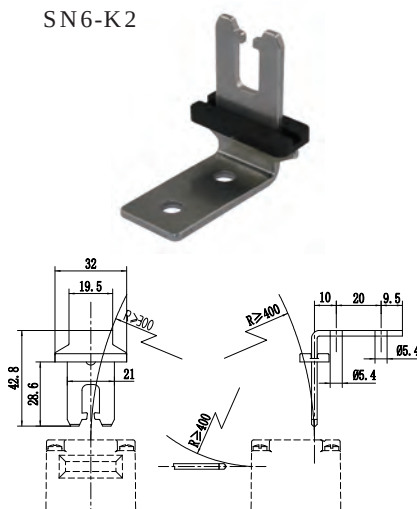
Rated thermal current (Ith)	10A
Sealing	SSD6191 IP65; NEMA 1, 4, 12, 13 SS6191 IP67; NEMA 1, 4, 6, 12, 13
Rated impulse withstand (Uimp)	2500 V
Pollution degree	3 (macro-environment, installation environment)
Rated insulation voltage (Ui)	600 V
Operating temperature range	-25 °C to 50 °C [-13 °F to 122 °F]
Storage temperature range	-40 °C to 85 °C [-40 °F to 185 °F]
Short-circuit protective device (type/maximum rating)	Class J fuse (10 A/600 Vac)
Expected mechanical life	1,000,000 operations
Conditional short-circuit current	1000 A
Solenoid operating voltage and power	24 Vac: +10 %, -15 %, 4 W 240 Vac: +10 %, -15 %, 9 W 120 Vac: +10 %, -15 %, 8 W 48 Vdc: +10 %, -20 %, 7 W

IEC/EN60947-5-1.

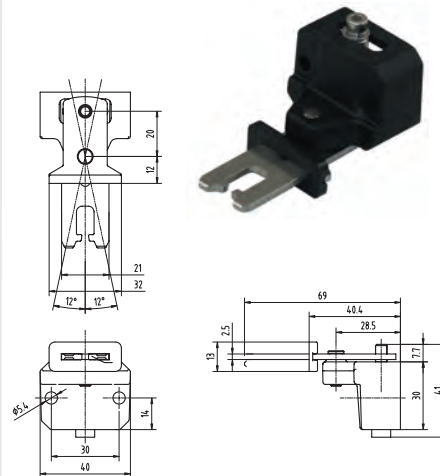
SN6-K1



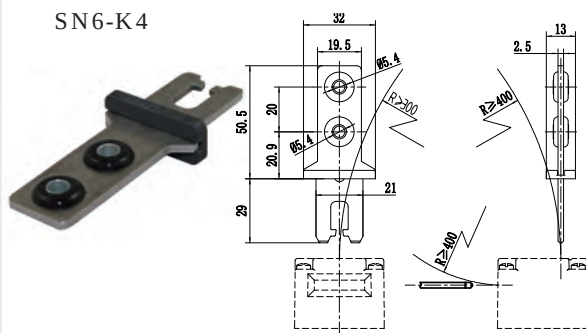
SN6-K2



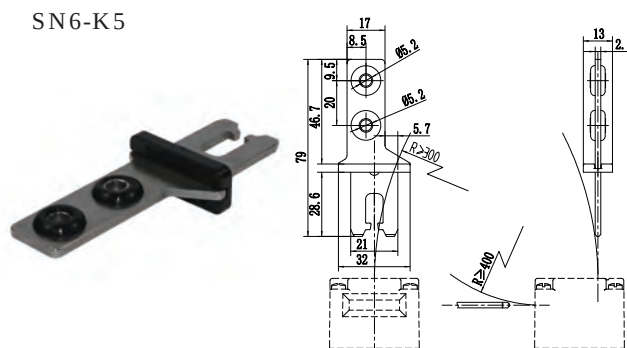
SN6-K3



SN6-K4



SN6-K5



Multi-Entry Trapped Key-Operated Safety Interlock Switch SS6/SSD6 SERIES

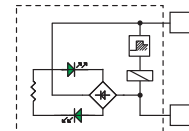
Selection Guide:

SS6191	-	SL13	-	U	-	24	-	L1	-	A	-	R	-	Z2
Body Style		Contact Configuration (see below)		Locking Type		Solenoid Voltage and Power		LED Indicators		Conduits				Head Orientation
SS6191: Metal body				U: Power to unlock		24: 20-26VAC 20-28VDC		None: No LED		A: 1/2"NPT		Blank		Blank: Front
SSD6191: Plastic Body				N: Power to lock		120: 100-120VAC 240: 200-240VAC		L1: see below L2: see below		C: M20		R: with emergency release		Z2: Left Z3: Back Z4: Right

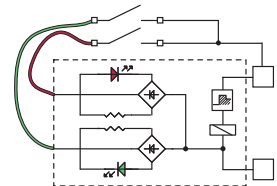
CIRCUIT AND TRAVEL DIAGRAMS

	Key inserted & Locked	Key inserted & Unlocked	Key Removed
Contact block Code 			
SL13A 2NC/1NO (1NC)*			
SL13B 2NC (1NC/1NO)*			
SL13C 3NC (1NO)*			
SL22A 2NC/1NO (1NO)*			
SL22B 1NC/1NO (1NC/1NO)*			
SL04A 2NC (2NC)*			
SL04B 3NC (1NC)*			
* Door monitor contacts			

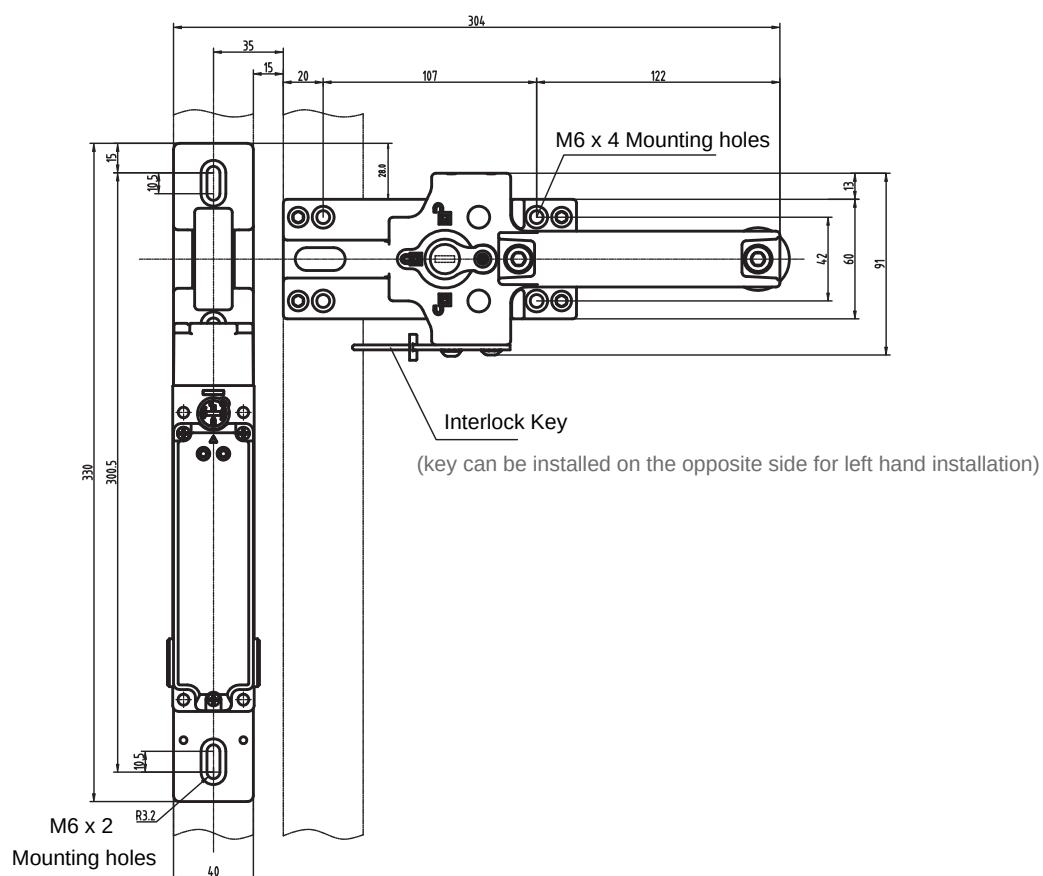
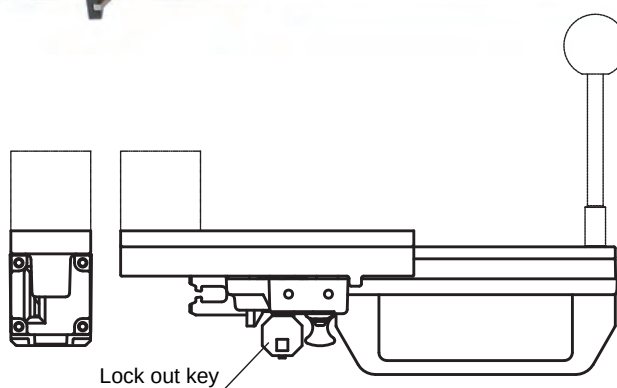
LED option L1:
Two green LEDs are switched ON directly by the solenoid power supply (24 V AC/DC versions only). Wiring is not necessary.



LED option L2:
Two LED connection wires are available, one green and one red. Through suitable connections to the contact block, it is possible to control the different states of the switch (24 V AC/DC versions only).



Key-Operated Safety Interlock Switch Mounting Hardware SS6-SHK



SAFETY SWITCHES FOR HINGES LIDS/GUARDS

Features

- Galvanically separated contacts
- Screw terminals with self-lifting clamps for easy wiring
- Positive Opening of NC contacts
- 4 x 90° actuator positions

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

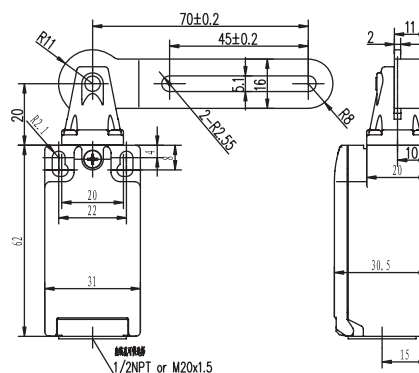
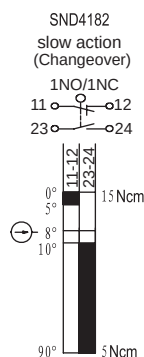


Specifications

Operating Speed	0.05mm-0.5m/s
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

PLASTIC-BODIED Safety Switch

SND4182

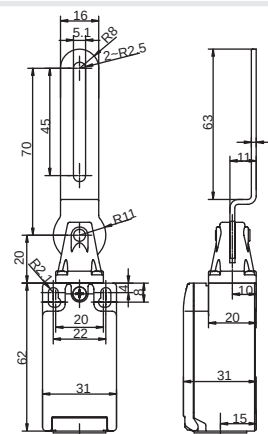
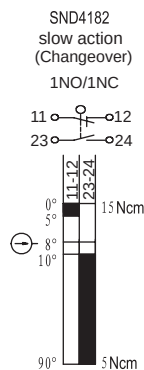


Order Code

Contact block

SND4182-SL SL slow action 1NO+1NC BBM

SND4182-S

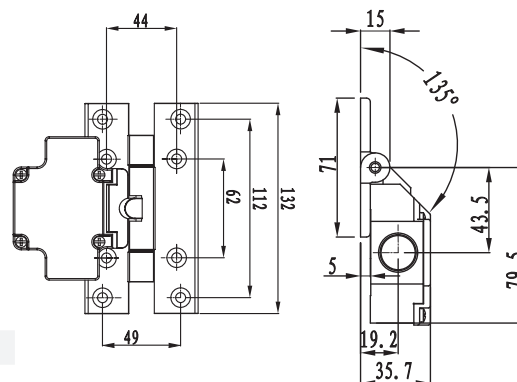
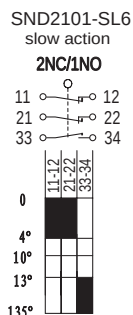


Order Code

Contact block

SND4182-SL-S SL slow action 1NO+1NC BBM

SND2101



Order Code

Contact block

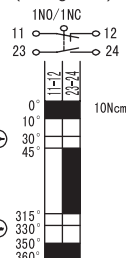
SND2101-SL6-SL SL slow action 1NO+2NC BBM

SAFETY SWITCHES FOR HINGES LIDS/GUARDS

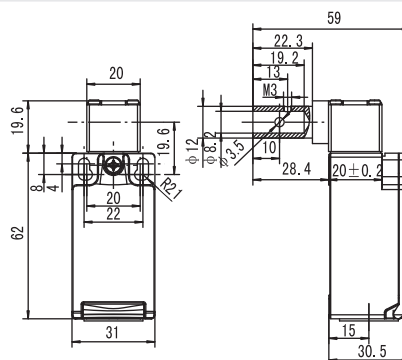
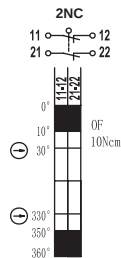
SND4181



SND4181-SL
slow action
(Changeover)



SND4181-SL2
slow action



Order Code

SND4181-SL-

Contact block

SL  slow action

1NO+1NC BBM

SND4181-SL2_

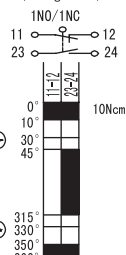
SL2  slow action

2NC

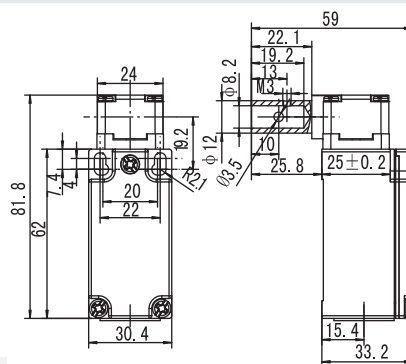
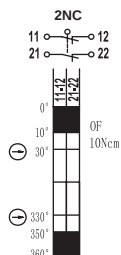
SN4181



SN4181-SL
Slow Action
(Changeover)



SN4181-SL2
Slow Action



Order Code

SN4181-SL- _

Contact block

SL  slow action

1NO+1NC BBM

SN4181-SL2- _

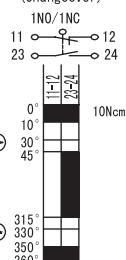
SL2  slow action

2NC

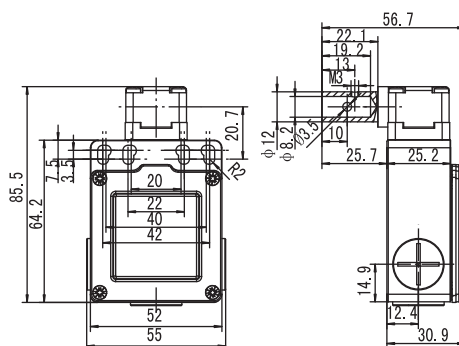
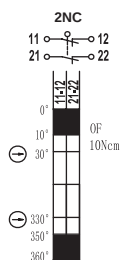
SN2181



SN2181-SL
Slow Action
(Changeover)



SN2181-SL2
Slow Action



Order Code

SN2181-SL- _

Contact block

SL  slow action

1NO+1NC BBM

SN2181-SL2- _

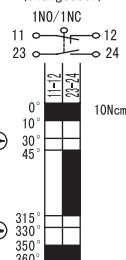
SL2  slow action

2NC

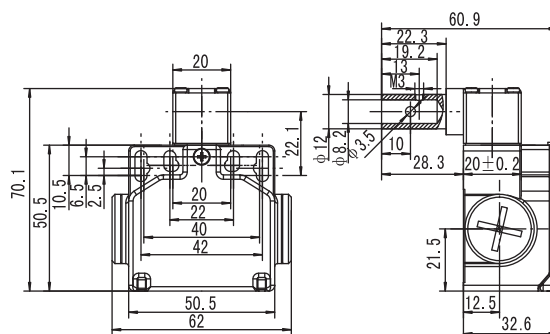
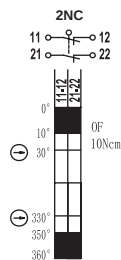
SND2181



SND2181-SL
Slow Action
(Changeover)



SND2181-SL2
Slow Action



Order Code

SND2181-SL_

Contact block

SL  slow action

1NO+1NC BBM

SND2181-SL2_

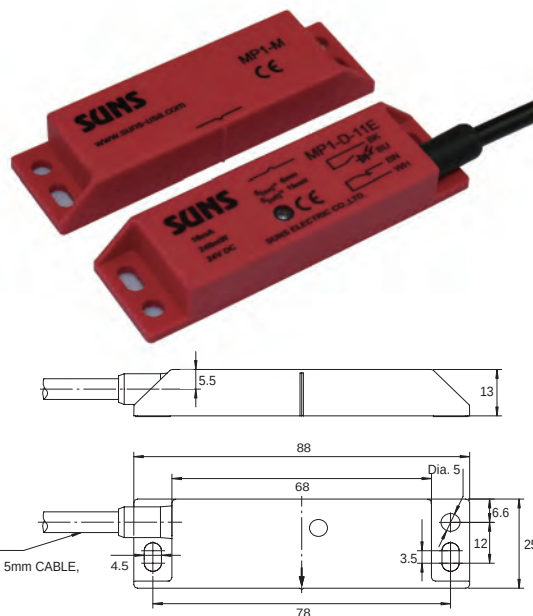
SL2  slow action

2NC

MP-1 Series Magnetic Safety Switches (IP68)

Technical Specifications

Housing material	Glassfiber Reinforced Plastics
Ambient temperature	-25 to 70°C (-13 to 158°F)
Degree of protection	IP 68 (IEC/EN 60529)
Switching voltage	100V AC/DC 400mA or
Switching current I _e max.	230VAC 2A 30VDC 1A
Auxiliary contact	24V DC
Switching voltage	10mA
Switching current I _e max.	
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



Ordering table

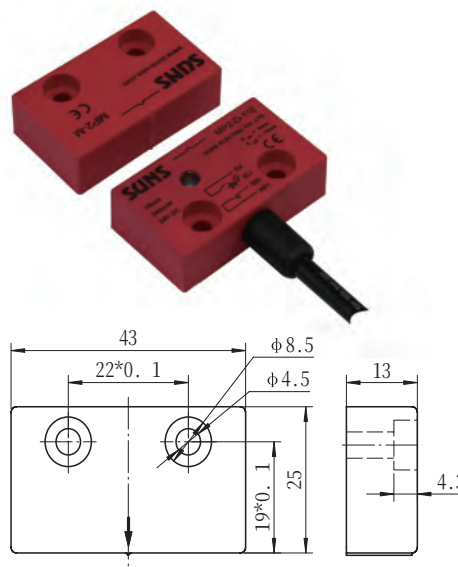
* Dimensions of the actuators are the same as switches except without cable

Item	Actuator Part Number	Switching Distance S _{on} [mm]	Circuit Diagram Gate Closed	Maximum Contact Ratings
MP1-D-03P	MP1-M	S _{on} : 6mm		100V AC/DC 400mA
MP1-D-03PM	MP1-MM	S _{on} : 9mm		
MP1-D-03PL	MP1-ML	S _{on} : 18mm		
MP1-D-03S	MP1-M	S _{on} : 6mm		100V AC/DC 400mA
MP1-D-03SM	MP1-MM	S _{on} : 9mm		
MP1-D-03SL	MP1-ML	S _{on} : 18mm		
MP1-D-11	MP1-M	S _{on} : 6mm S _{off} : 15mm		100V AC/DC 400mA
MP1-D-11M	MP1-MM	S _{on} : 9mm S _{off} : 18mm		
MP1-D-11E	MP1-M	S _{on} : 6mm S _{off} : 15mm		
MP1-D-11ME	MP1-MM	S _{on} : 9mm S _{off} : 18mm		24VDC 10mA
MP1-D-12S	MP1-M	S _{on} : 6mm S _{off} : 15mm		
MP1-D-12SM	MP1-MM	S _{on} : 9mm S _{off} : 18mm		
MP1-D-12SE	MP1-M	S _{on} : 6mm S _{off} : 15mm		24VDC 10mA
MP1-D-12SME	MP1-MM	S _{on} : 9mm S _{off} : 18mm		
MP1-D-12	MP1-M	S _{on} : 6mm S _{off} : 15mm		100V AC/DC 400mA
MP1-D-12M	MP1-MM	S _{on} : 9mm S _{off} : 18mm		
MP1-D-12E	MP1-M	S _{on} : 6mm S _{off} : 15mm		
MP1-D-12ME	MP1-MM	S _{on} : 9mm S _{off} : 18mm		24VDC 10mA
MP1-D-04E	MP1-M	S _{on} : 6mm		
MP1-D-04EM	MP1-MM	S _{on} : 9mm		
MP1-D-02	MP1-M	S _{on} : 6mm		100V AC/DC 400mA
MP1-D-02M	MP1-MM	S _{on} : 9mm		
MP1-A-10	MP1-M	S _{on} : 6mm		
MP1-A-10M	MP1-MM	S _{on} : 9mm		230VAC 2A 30VDC 1A

MP-2 Series Magnetic Safety Switches (IP68)

Technical Specifications

Housing material	Glassfiber Reinforced Plastics
Ambient temperature	-25 to 70°C (-13 to 158°F)
Degree of protection	IP 68 (IEC/EN 60529)
Switching voltage	100V AC/DC 400mA
Switching current $I_{e\max.}$	
Auxiliary contact	24V DC
Switching voltage	10mA
Switching current $I_{e\max.}$	
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



Ordering table

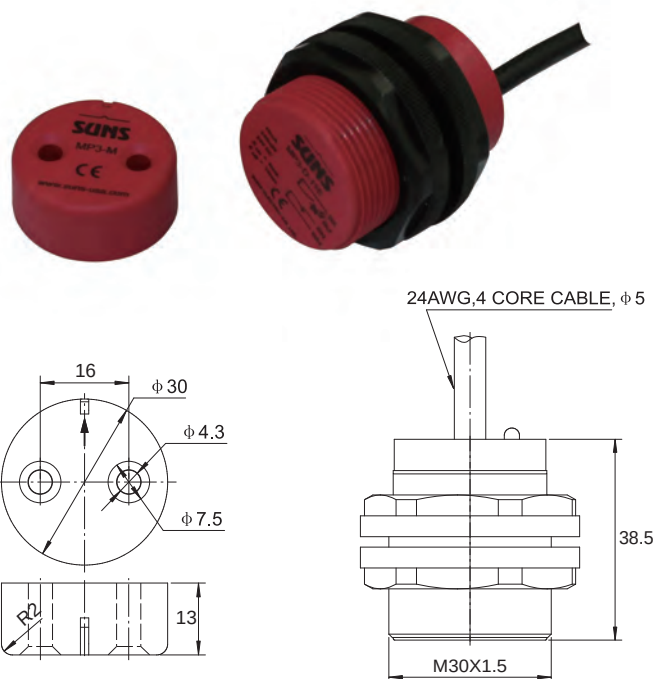
* Dimensions of the actuators are the same as switches except without cable

Item	Actuator Part Number	Switching Distance S_{on} [mm]	Circuit Diagram Gate Closed	Maximum Contact Ratings
MP2-D-03P	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		100V AC/DC 400mA
MP2-D-03S	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		100V AC/DC 400mA
MP2-D-11	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		100V AC/DC 400mA
MP2-D-11E	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		24VDC 10mA
MP2-D-12S	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		100V AC/DC 400mA
MP2-D-12SE	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		24VDC 10mA
MP2-D-02	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		100V AC/DC 400mA
MP2-D-12	MP2-M	$S_{on} : 6\text{mm}$ $S_{off} : 15\text{mm}$		100V AC/DC 400mA

MP-3 Series Magnetic Safety Switches (IP68)

Technical Specifications

Housing material	Glassfiber Reinforced Plastics
Ambient temperature	-25 to 70 °C (-13 to 158°F)
Degree of protection	IP 68 (IEC/EN 60529)
Switching voltage	100V AC/DC
Switching current I _e max.	400mA
Auxiliary contact	24V DC
Switching voltage	10mA
Switching current I _e max.	
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



Ordering table

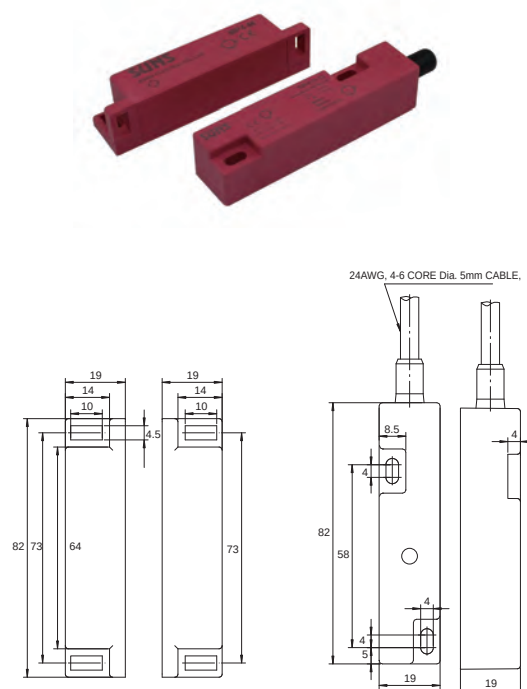
* Dimensions of the actuators are the same as switches except without cable

Item	Actuator Part Number	Switching Distance S _{on} [mm]	Circuit Diagram Gate Closed	Maximum Contact Ratings
MP30-D-03P	MP30-M	S _{on} : 6mm		100V AC/DC 400mA
MP30-D-03PM	MP30-MM	S _{on} : 9mm		
MP30-D-03S	MP30-M	S _{on} : 6mm		100V AC/DC 400mA
MP30-D-03SM	MP30-MM	S _{on} : 9mm		
MP30-D-11	MP30-M	S _{on} : 6mm S _{off} : 15mm		100V AC/DC 400mA
MP30-D-11M	MP30-MM	S _{on} : 9mm S _{off} : 18mm		
MP30-D-11E	MP30-M	S _{on} : 6mm S _{off} : 15mm		24VDC 10mA
MP30-D-11ME	MP30-MM	S _{on} : 9mm S _{off} : 18mm		
MP30-D-12S	MP30-M	S _{on} : 6mm S _{off} : 15mm		100V AC/DC 400mA
MP30-D-12SM	MP30-MM	S _{on} : 9mm S _{off} : 18mm		
MP30-D-12SE	MP30-M	S _{on} : 6mm S _{off} : 15mm		24VDC 10mA
MP30-D-12SME	MP30-MM	S _{on} : 9mm S _{off} : 18mm		
MP30-D-02	MP30-M	S _{on} : 6mm S _{off} : 15mm		100V AC/DC 400mA
MP30-D-02M	MP30-MM	S _{on} : 9mm S _{off} : 18mm		

MP-4 Series Magnetic Safety Switches (IP68)

Technical Specifications

Housing material	Glassfiber Reinforced Plastics
Ambient temperature	-25 to 70°C (-13 to 158°F)
Degree of protection	IP 68 (IEC/EN 60529)
Switching voltage	100V AC/DC 400mA or
Switching current $I_{e\max}$	230VAC 2A 30VDC 1A
Auxiliary contact	24V DC
Switching voltage	10mA
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



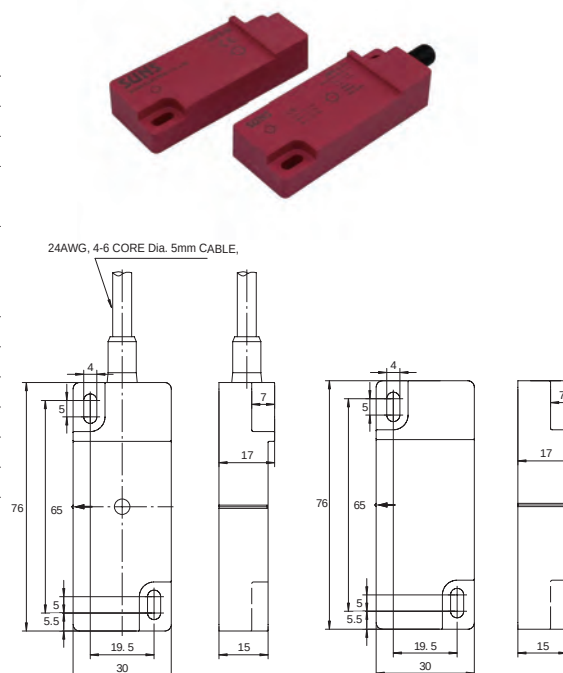
Ordering table

Item	Actuator Part Number	Switching Distance S_{on} [mm]	Circuit Diagram Gate Closed	Maximum Contact Ratings
MP4-A-10	MP4-M	S_{on} :6mm		230VAC 2A 30VDC 1A
MP4-A-10M	MP4-MM	S_{on} :9mm		
MP4-D-03P	MP4-M	S_{on} :6mm		100V AC/DC 400mA
MP4-D-03PM	MP4-MM	S_{on} :9mm		
MP4-D-03S	MP4-M	S_{on} :6mm		100V AC/DC 400mA
MP4-D-03SM	MP4-MM	S_{on} :9mm		
MP4-D-11	MP4-M	S_{on} :6mm S_{off} :15mm		100V AC/DC 400mA
MP4-D-11M	MP4-MM	S_{on} :9mm S_{off} :18mm		
MP4-D-11E	MP4-M	S_{on} :6mm S_{off} :15mm		24VDC 10mA
MP4-D-11EM	MP4-MM	S_{on} :9mm S_{off} :18mm		
MP4-D-12S	MP4-M	S_{on} :6mm S_{off} :6mm		100V AC/DC 400mA
MP4-D-12SM	MP4-MM	S_{on} :9mm S_{off} :18mm		
MP4-D-12SE	MP4-M	S_{on} :6mm S_{off} :15mm		24VDC 10mA
MP4-D-12SME	MP4-MM	S_{on} :9mm S_{off} :18mm		
MP4-D-12	MP4-M	S_{on} :6mm S_{off} :15mm		100V AC/DC 400mA
MP4-D-12M	MP4-MM	S_{on} :9mm S_{off} :18mm		
MP4-D-12E	MP4-M	S_{on} :6mm S_{off} :15mm		24VDC 10mA
MP4-D-12ME	MP4-MM	S_{on} :9mm S_{off} :18mm		

MP-5 Series Magnetic Safety Switches (IP68)

Technical Specifications

Housing material	Glassfiber Reinforced Plastics
Ambient temperature	-25 to 70°C (-13 to 158°F)
Degree of protection	IP 68 (IEC/EN 60529)
Switching voltage	100V AC/DC 400mA or
Switching current $I_{e,max}$	230VAC 2A 30VDC 1A
Auxiliary contact	24V DC
Switching voltage	10mA
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



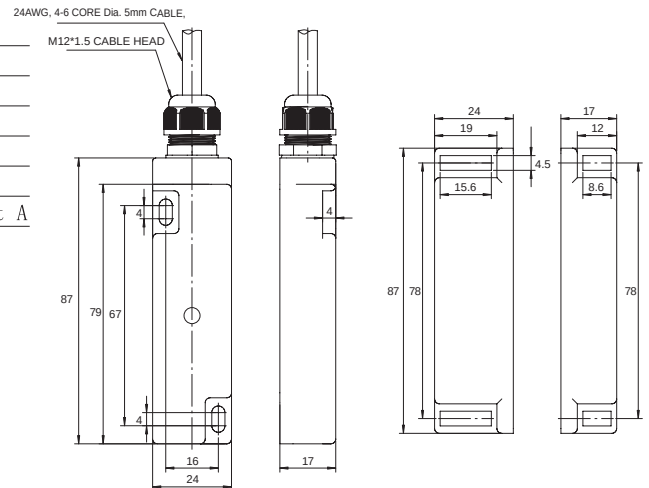
Ordering table

Item	Actuator Part Number	Switching Distance S_{on} [mm]	Circuit Diagram Gate Closed	Maximum Contact Ratings
MP5-A-10	MP5-M	S_{on} :6mm		230VAC 2A 30VDC 1A
MP5-A-10M	MP5-MM	S_{on} :9mm		
MP5-D-03P	MP5-M	S_{on} :6mm		100V AC/DC 400mA
MP5-D-03PM	MP5-MM	S_{on} :9mm		
MP5-D-03S	MP5-M	S_{on} :6mm		100V AC/DC 400mA
MP5-D-03SM	MP5-MM	S_{on} :9mm		
MP5-D-11	MP5-M	S_{on} :6mm S_{off} :15mm		100V AC/DC 400mA
MP5-D-11M	MP5-MM	S_{on} :9mm S_{off} :18mm		
MP5-D-11E	MP5-M	S_{on} :6mm S_{off} :15mm		24VDC 10mA
MP5-D-11EM	MP5-MM	S_{on} :9mm S_{off} :18mm		
MP5-D-12S	MP5-M	S_{on} :6mm S_{off} :6mm		100V AC/DC 400mA
MP5-D-12SM	MP5-MM	S_{on} :9mm S_{off} :18mm		
MP5-D-12SE	MP5-M	S_{on} :6mm S_{off} :15mm		24VDC 10mA
MP5-D-12SME	MP5-MM	S_{on} :9mm S_{off} :18mm		
MP5-D-12	MP5-M	S_{on} :6mm S_{off} :15mm		100V AC/DC 400mA
MP5-D-12M	MP5-MM	S_{on} :9mm S_{off} :18mm		
MP5-D-12E	MP5-M	S_{on} :6mm S_{off} :15mm		24VDC 10mA
MP5-D-12ME	MP5-MM	S_{on} :9mm S_{off} :18mm		

MP-6 Series Magnetic Safety Switches (IP68)

Technical Specifications

Housing material	Glassfiber Reinforced Plastics
Ambient temperature	-25 to 70°C (-13 to 158°F)
Degree of protection	IP 68 (IEC/EN 60529)
Switching voltage	100V AC/DC 400mA or
Switching current $I_{e\max}$	230VAC 2A 30VDC 1A
Auxiliary contact	24V DC
Switching voltage	10mA
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



Ordering table

Item	Actuator Part Number	Switching Distance S_{on} [mm]	Circuit Diagram Gate Closed	Maximum Contact Ratings
MP6-A-10	MP6-M	S_{on} :10mm S_{off} : 30mm		230VAC 2A 30VDC 1A
MP6-A-01	MP6-M	S_{on} :10mm S_{off} : 30mm		230VAC 2A 30VDC 1A
MP6-D-02	MP6-M	S_{on} :10mm S_{off} : 30mm		100V AC/DC 400mA
MP6-D-11	MP6-M	S_{on} :10mm S_{off} : 30mm		100V AC/DC 400mA
MP6-D-12	MP6-M	S_{on} :10mm S_{off} : 30mm		100V AC/DC 400mA

MP50-2RZ Series Magnetic Safety Switches (IP67)

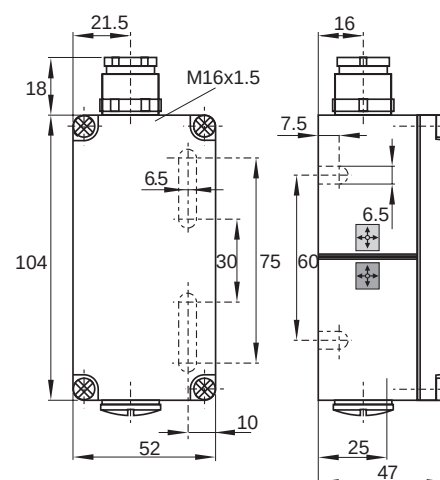
Features

- Robust metal housing
- Large wiring compartment
- High resistance to vibration
- High switching capacity
- IEC 60947-5-3, EN 954-1
- Long switching distance



Technical Specifications

Housing material	Aluminum die cast
Ambient temperature	-25 to 90° C (-13 to 194 F)
Degree of protection	IP 67 (IEC/EN 60529)
Safety Contact Rating	250Vac / 3Amps max. 120VA/W
Dielectric Strength	> 600VAC (50/60Hz)
Switching time	Close: 0.3-1.5ms Open: 0.5 ms (max)
Contact Configuration	1NO/1NC
Actuating Speed	18m/s (max)
Switching Accuracy	+/- 0.25mm
Switching Distance	35mm
Method of operation	Magnetic, reed contact
Mech. life	10 millions cycles
Vibration resistance	As per IEC/EN 60947-5-2
Impact strength	50 g/ms
Shock resistance	11 g/ms
EMC compliance	In acc.with EN 61496-1/EN 50022 Part A



RDS SERIES RFID NON-CONTACT SAFETY SWITCH

Features

- Actuation without contact, using RFID technology
- Digitally coded actuator
- 3 LEDs for status display
- Connecting up to 32 sensors in series
- Short-circuit protection, polarity-reversing protection
- Safety category: up to SIL 3, PL e and Category 4

Specifications

Operating voltage	24VDC
Operating current	<20mA
Max. output current	200mA
For safety applications up to	SIL3 acc. to EN 62061 PL e acc. to EN ISO 13849-1 Type 4 acc. to EN ISO 14119
Housing material	Fiber-reinforced plastic
Operating temperature	-25°+70°
Switching frequency	2Hz
Sensing distance	10mm
Enclosure protection	IP69K

Selection Guide:

RDS	1	-	D	1	L2	-	0
	Code Mechanism			Output Configuration	Connection Type		Actuator*
	1: Low level**			1: Standard 7 outputs	L01: 0.1m cable		None: Sensor only
	2: High level**			2: With external device monitoring output	L05: 0.5m cable		S: Standard actuator
	3: Blank actuator***			3: Inverse RFID output	L2: 2m cable		E: Extended-range actuator
					L10: 10m cable		
					M: M12 connector		

* For actuator only, part number would be: RDA1, RDA2 or RDA3 followed by -S or -E
 ** Low level means the sensor recognises all low level coded actuators. High level are defined by one to one correspondence
 *** Blank actuators sold separately can be programmed into high level actuators by putting them near the intended sensor and waiting for RFID_OUT Led blinking 5 times. Afterwards, The actuator can be recognised.

Pictures:

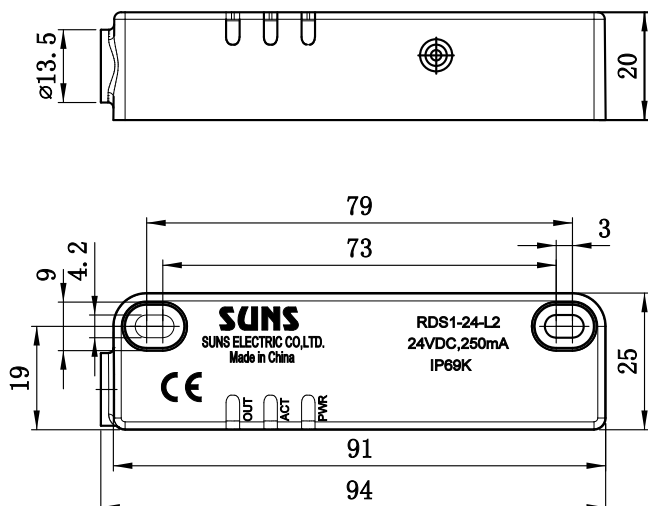


Wiring Diagram:

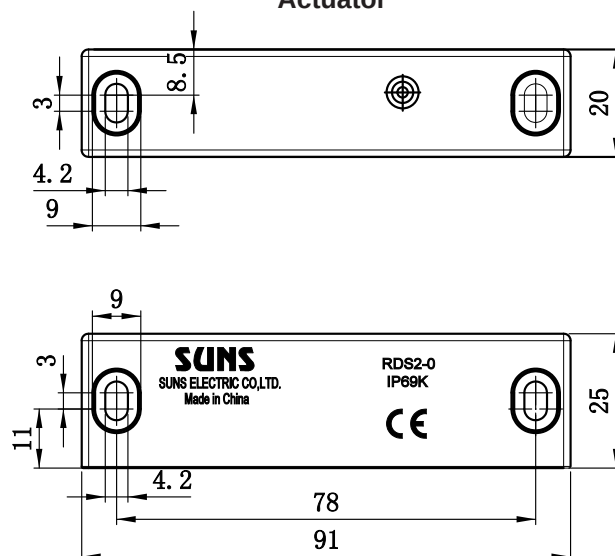
Brown	VCC (10-30V)
Blue	GND (Ground line)
Orange	GPIO_OUT (Safety output)
Red	GPIO_OUT (Safety output)
Green	RFID_OUT (RFID authentication through output)
White	IN1 (input 1)
Yellow	IN2 (input 2)
Black	PROGRAM (Programming mouth)

Dimensions:

Sensor



Actuator



Limit Switches with Manual Reset for Over-Speed Devices

Features

- Glass fiber reinforced plastic body
- Conform to EN 60947-5-1, IEC 60947-5-1, UL508,
- ASME A17.1/5, EN 81-1, EN 81-2 Standards
- High sensibility and low actuating force
- Galvanically separated contacts
- Positive Opening of NC contacts
- Conform to EN 50047 standard

Specifications

Operating Speed	0.05mm-2m/s
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Service Life	Mechanically 10 millions (operations)
Operating Temperature	-25~+80°C (-13~176°F) with no icing
Actuating force	6 N (+/- 2 N)
Actuating Distance	< 0.5mm
Contact Opening	2 x 2 mm
Degree of Protection	IP67

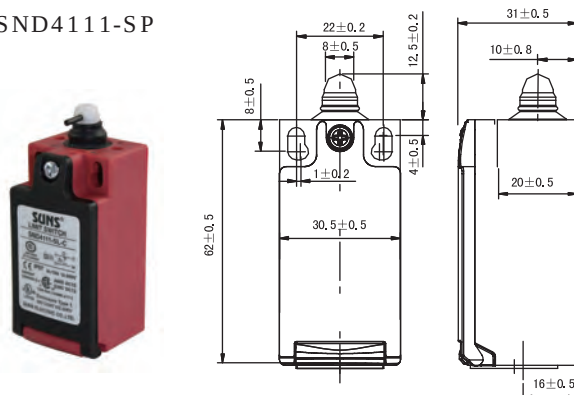
Selection Guide:

SND41	04	SP
Head Styles		
Contact Block For SND41		
SP: 1NO/1NC Contact For SLD41		
SL: 1NO/1NC contact		
SL0: 1NC Contact		
SL1: 1NO/1NC contact		
SL2: 2NC Contact		
SL3: 2NO Contact		
SL4: 3NC Contact		
SL5: 3NO Contact		
SL6: 2NC/1NO Contact		

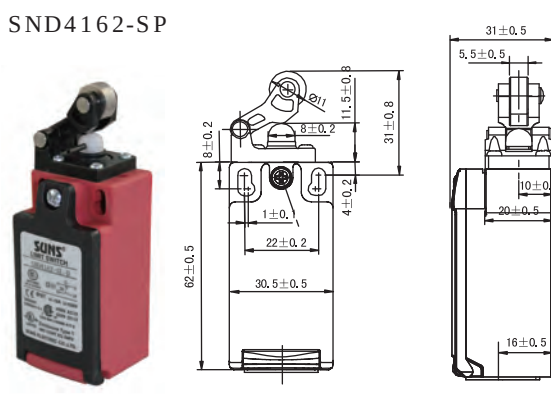
C	-	LAT
Conduits		
A: 1/2"NPT		
B: PG13.5		
C: M20		
D: M16		

Dimensions Unit: mm

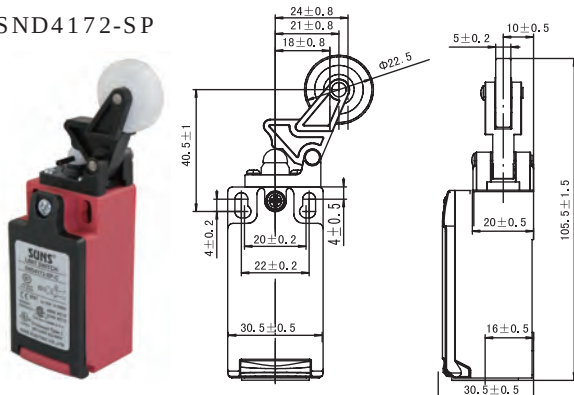
SND4111-SP



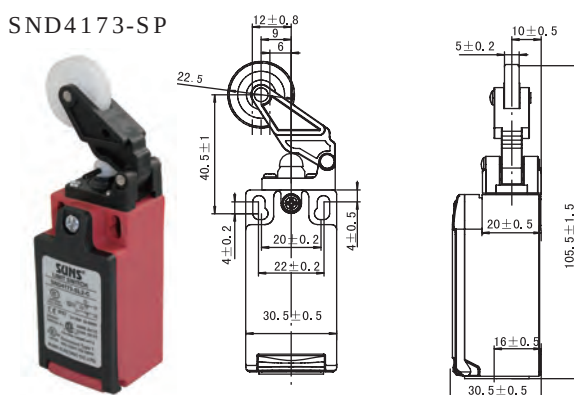
SND4162-SP



SND4172-SP

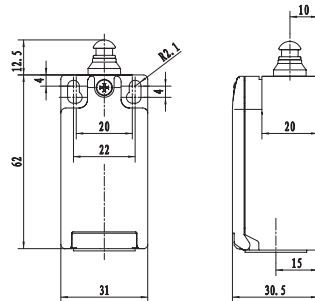


SND4173-SP

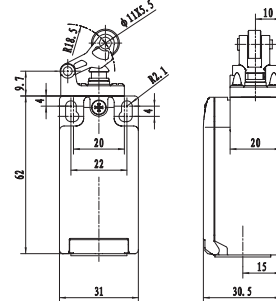


Limit Switches with Manual Reset for Over-Speed Devices

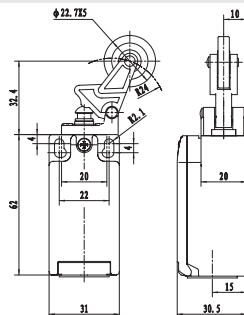
SSD4 Series



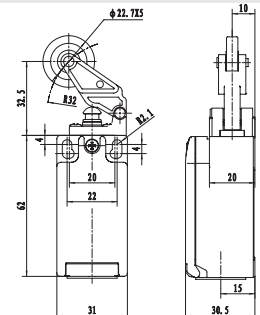
Order Code **SSD4111-S01** Contact block slow action 1NC



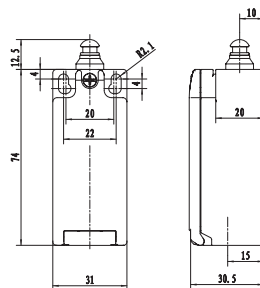
Order Code **SSD4162-S01** Contact block slow action 1NC



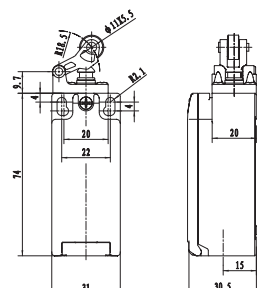
Order Code **SSD4172-S01** Contact block slow action 1NC



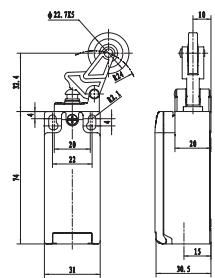
Order Code **SSD4173-S01** Contact block slow action 1NC



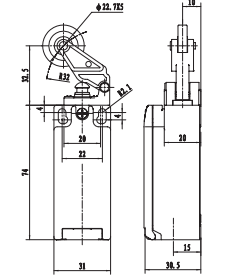
Order Code **SSD4211-SL** Contact block slow action 1NC/1NO BBM
SSD4211-SL2 slow action 2NC
SSD4211-SL6 slow action 2NC/1NO



Order Code **SSD4262-SL** Contact block slow action 1NC/1NO BBM
SSD4262-SL2 slow action 2NC
SSD4262-SL3 slow action 2NC/1NO



Order Code **SSD4272-SL** Contact block slow action 1NC/1NO BBM
SSD4272-SL2 slow action 2NC
SSD4272-SL6 slow action 2NC/1NO



Order Code **SSD4273-SL** Contact block slow action 1NC/1NO BBM
SSD4273-SL2 slow action 2NC
SSD4273-SL6 slow action 2NC/1NO

Latching Limit Switch with Remote Reset SSD4 SERIES (3-CONDUIT ENTRIES)

Introduction

SSD4 latching limit switch with remote reset is designed for use for applications, where an intentional reset of the switch is required. The switch can be remotely reset without being physically near it.

Applications

- overspeed governor, particularly suitable for machine room less lifts.
- Wind generators, or similar applications with service areas difficult to access

Features

- Glass fiber reinforced plastic body
- Glass fiber reinforced plastic body
- Conform to EN 60947-5-1, IEC 60947-5-1, UL508, ASME A17.1/5, EN 81-1, EN 81-2 Standards
- Reset with electric pulse 24VDC, 48VDC 120VAC or 240VAC options
- Galvanically separated contacts
- Prewired with 3 possible cable entry positions
- Positive Opening of NC contacts
- Conform to EN 50047 standard



Specifications:

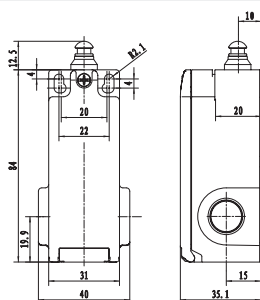
Operating Speed	0.05mm-0.5m/sec
Rated Current/Voltage	10A/600V AC (EN60947-5-1)
	AC15 A600 / DC13 Q300
Service Life	Mechanically 50,000 (operations)
Operating Temperature	-25~+50°C (-13~122°F) with no icing
Actuating force	6 N (+/- 2 N)
Actuating Distance	< 0.5mm
Contact Opening	2 x 2 mm
Degree of Protection	IP67

Solenoid:

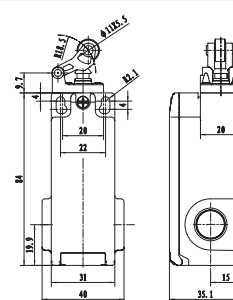
Rated voltage (Ue):	24 VDC (+/- 10%)
	48 VDC (+/- 10%)
	120 VAC (+/- 10%)
	240 VAC (+/- 10%)
Rated current (Ie):	3 A (24 VDC)
	1.5 A (48 VDC)
	0.8A (120VAC)
	0.5 A (230 V)
Solenoid duty cycle:	3% ED
Power supply time	Power supply time: min. 0.2s, max 0.5s
	Time without power supply: min. 30s
Max operating frequency:	100 operations cycles/hour

Selection Guide:

SSD44 11 -	SL6 -	120 -	L -	D - 2
Enclosure Type	Contact Block	Solenoid voltage rating	Cable Exit	Conduits Cable Length
43: Body length 84mm (3 conduit entries)	SL: 1NO/1NC Contact	24: 24VDC	L: Cable Exit Left	D: M16
44: Body length 106mm (3 conduit entries)	SL0: 1NC Contact	48: 48VDC	M: Cable Exit Bottom	
45: Body length 95.7mm (3 conduit entries)	SL2: 2NC Contact	120: 110-125VAC	R: Cable Exit Right	
	SL4: 3NC Contact	240: 220-240VAC		
	SL5: 3NO Contact			
	SL6: 2NC/1NO Contact			

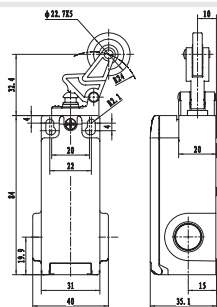


Order Code Contact block
SSD4311-S01 slow action 1NC

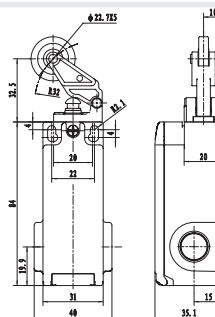


Order Code Contact block
SSD4362-S01 slow action 1NC

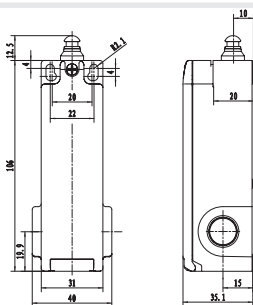
Latching Limit Switch with Remote Reset SSD4 SERIES



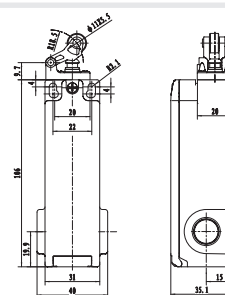
Order Code Contact block
SSD4372-S01 ⊕ slow action 1NC



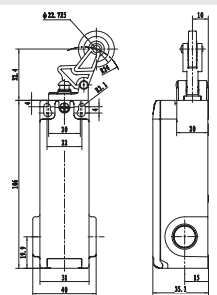
Order Code Contact block
SSD4373-S01 ⊕ slow action 1NC



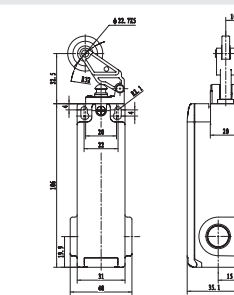
Order Code Contact block
SSD4411-SL ⊕ slow action 1NC/1NO BBM
SSD4411-SL2 ⊕ slow action 2NC
SSD4411-SL6 ⊕ slow action 2NC/1NO



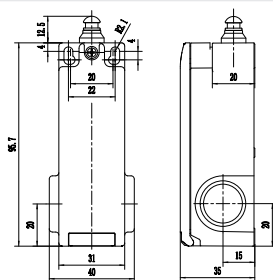
Order Code Contact block
SSD4462-SL ⊕ slow action 1NC/1NO BBM
SSD4462-SL2 ⊕ slow action 2NC
SSD4462-SL6 ⊕ slow action 2NC/1NO



Order Code Contact block
SSD4472-SL ⊕ slow action 1NC/1NO BBM
SSD4472-SL2 ⊕ slow action 2NC
SSD4472-SL6 ⊕ slow action 2NC/1NO



Order Code Contact block
SSD4473-SL ⊕ slow action 1NC/1NO BBM
SSD4473-SL2 ⊕ slow action 2NC
SSD4473-SL6 ⊕ slow action 2NC/1NO



Order Code Contact block
SSD4511-SL ⊕ slow action 1NC/1NO BBM
SSD4511-SL2 ⊕ slow action 2NC
SSD4511-SL6 ⊕ slow action 2NC/1NO

6098 LIMIT SWITCHES FOR ELEVATOR APPLICATIONS

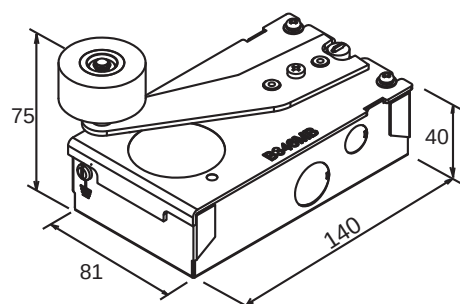
Features

- Zinc plated steel enclosure
- Transparent cover for checking adjusting contacts
- 40mm big rubber roller for quite operation
- Super large contacts with self-clean function for maintenance free operation
- Available in 1NO, 1NC, 2NO, 2NC contact
- Tripper style for safety application

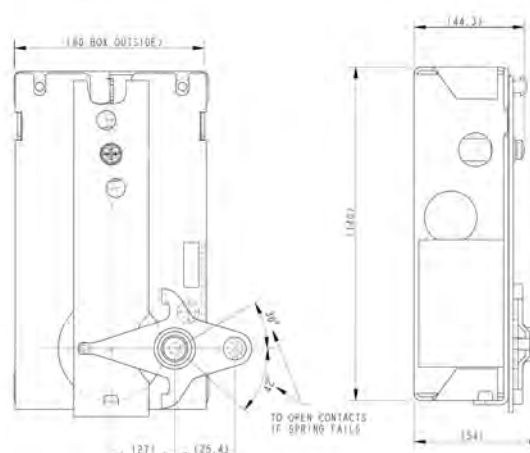


Dimensions: (mm)

roller: 40mm dia x 20mm



6098NM



6098NR

Available Styles:

Part Number	Contact Type:	Lever Position
6098NM1	1NC	As Shown on Drawing Above
6098NM2	1NC	Opposite
6098NM3	2NC	As Shown on Drawing Above
6098NM4	2NC	Opposite
6098NM8	1NO	As Shown on Drawing Above
6098NM9	1NO	Opposite
6098NM10	2NO	As Shown on Drawing Above
6098NM11	2NO	Opposite
6098NR1	1NC	As Shown on Drawing Above
6098NR2	1NC	Opposite
6098NR3	2NC	As Shown on Drawing Above
6098NR4	2NC	Opposite

DOOR CONTACT EDC SERIES

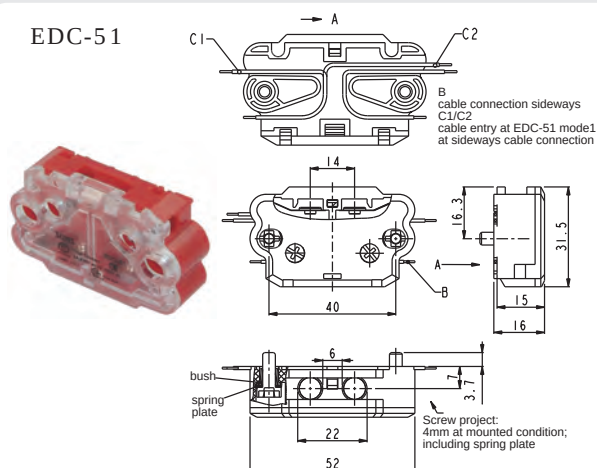
Features

- For use in controlling the closure position of lift doors or as switch for locking mechanism of automatic doors safety switch with positive contact
- Quiet Functioning
- Self-cleaning double break contact for long service life

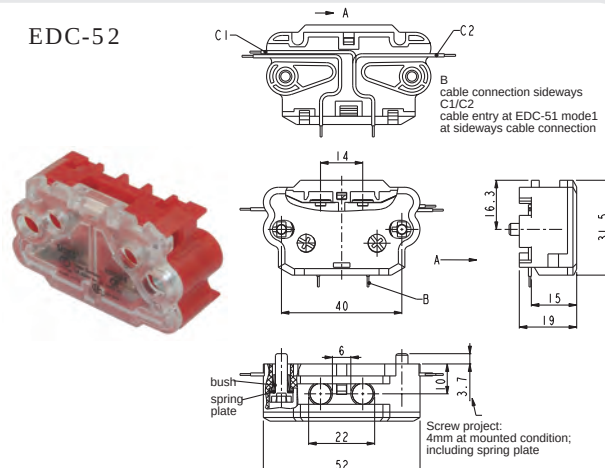
Specifications

Enclosure Material	Fiber reinforced PA6/66 (UL94-V0)
Cover Material	Polycarbonate (UL94-V0) transparent
Actuator	Silver-plated brass with PA6/66 (UL94-V0) enclosure
Contact Material	Cu-rivets with silver coating
Mounting	2xM4 thread rolling captive screws
Contact Type	1NC
Termination	M3.5 screw switch self-lifting clamp (conductor cross-section 0.5 to 1.5 mm ²)
Switching Frequency	30 ops/min
Rated Thermal Current (I _{th})	4A
Rated Operation Current/Voltage (I _e /U _e)	2A/230VAC; 2A/200VDC (according to EN81-1, -2)
Short-time current protective device	Fuse 6A gL
Ambient Temperature	-30~+80°C (-22~176°F)
Mechanical Life	Mechanically 10 millions operations
Degree of Protection	IP20 to IEC/EN60529
Standards	EN81, CAN/CSA-B44.1/ASME-A15.5, VDE 0660

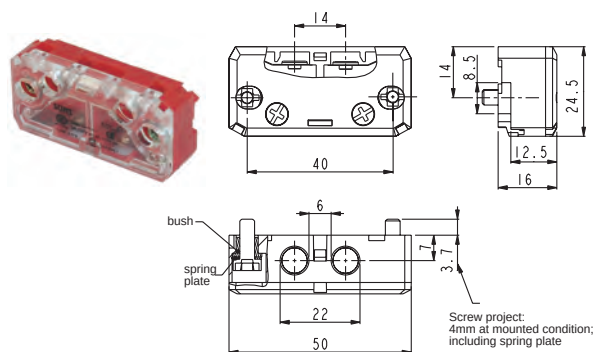
EDC-51



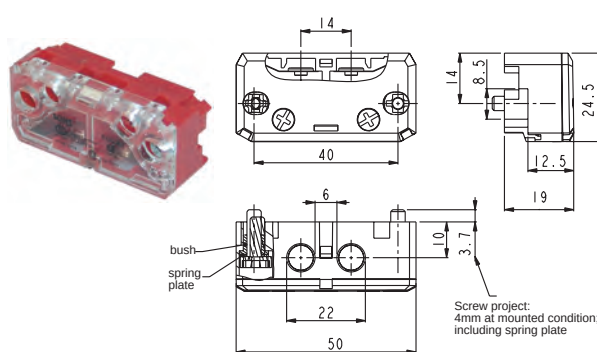
EDC-52



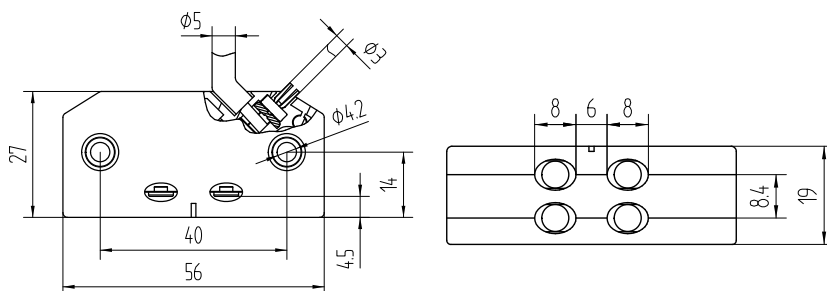
EDC-61



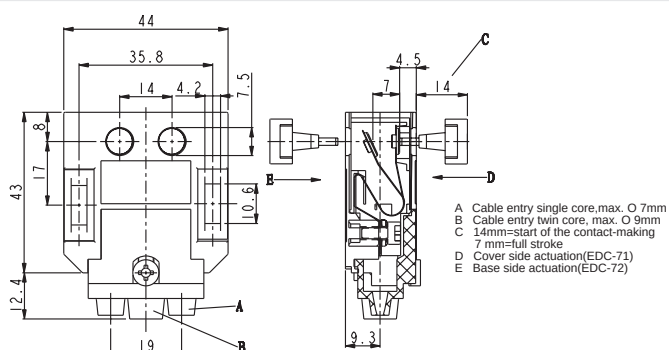
EDC-62



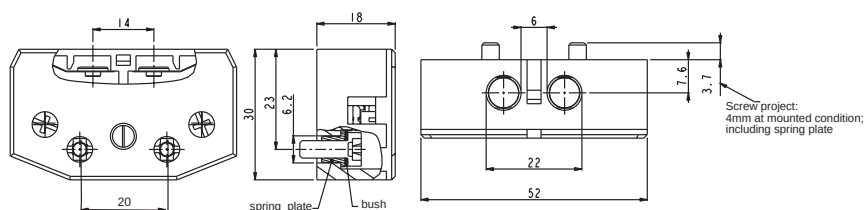
DOOR CONTACT EDC SERIES



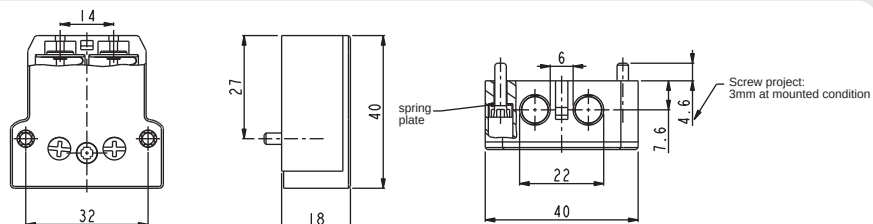
EDC-63



EDC-71 EDC-72



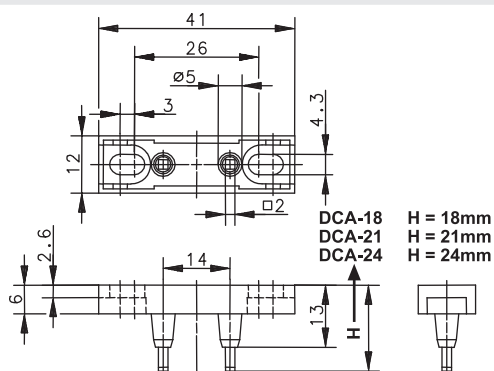
EDC-8



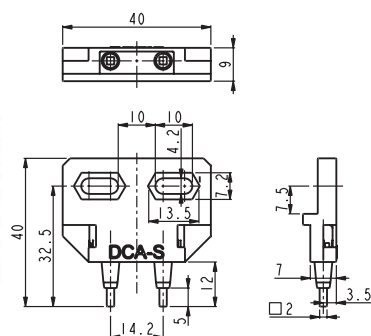
EDC-92

DCA ACTUATOR FOR DOOR CONTACT

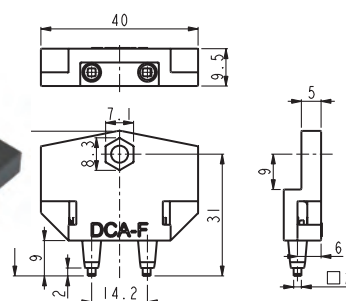
For use with EDC5,EDC6,EDC7,EDC8,EDC9 door contacts



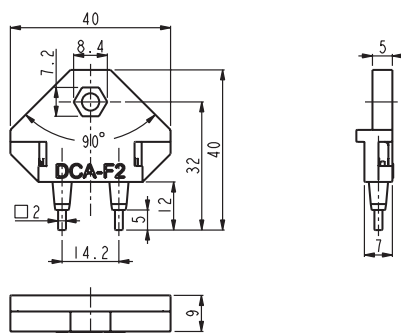
DCA-18 DCA-21 DCA-24



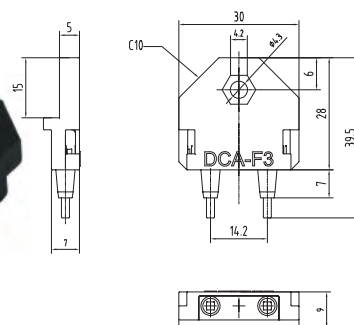
DCA-S



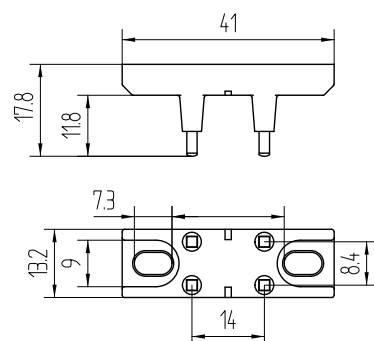
DCA-F



DCA-F2



DCA-F3



DCA-18T

HMS/HLS/HNS Series Heavy Duty Limit Switches

Features

- Heavy duty zinc die cast body
- Conform to EN 60947-5-1, IEC 60947-5-1, UL508, NEMA250, CSA22.2 Standards
- Wide range of actuator available
- High repeatability (0.03mm for linear travel)
- Available in three body styles: compact, standard and Non-plug-in

Specifications

Operating Speed	0.05mm-2m/sec
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Service Life	Mechanically 10 millions (operations) Electrically 1 million (operations)
Operating Temperature	-28.9~+85°C (-20~185°F)
Vibration Resistance	25gn (10..150 Hz, 11ms) per IEC60068-2-6
Shock Resistance	60gn (9ms) per IEC 60068-2-27
Dielectric Strength	2200VAC for 1 minute
Short Circuit Protection	10A fuse
Terminal Wire Size	12-22AWG (2.05-0.644mm ²)
Degree of Protection	IP 67 conforming to IEC 60529, NEMA Types 2, 4, 6, 6P, 12, 13

Electrical Ratings

IEC 60947-5-1 / EN 90947-5-1						
Designation & Utilization Category	Rated operational current I _e (A) at rated operational voltage U _e					VA rating Make Break
AC15 A600	120V	240V	380V	480V	600V	7200 720
	6A	3A	1.9A	1.5A	1.2A	
DC13 Q300	125VDC	250VDC				69 69
	0.55	0.27				

* Wider operating temperature models are available. Please contact us.

HMS
Compact



HLS
Standard



HNS
Non-plug-in



Selection Guide:

HLS	1	A	04	A	-	F	-	UR	
Body Styles	Contact Block	1/2NPT Conduit (Contact us for other types)	Head Style	Applied on to Lever Arms Style	Rubber Seal Type	Indicator Light	Rotary Head Shaft Diameter		
HMS: Compact	1: SPDT (1NO/1NC) Snap action			B: Standard	Blank: Standard	Blank: None	Blank: 11.0mm		
HLS: Standard	2: DPDT (2NO/2NC) Snap action			A: High precision	F: Fluorite rubber	UR: Red indicator light universal voltage(12V-270V)	(AB): 8.0mm		
HNS: Non-plug-in	3: DPDT (2NO/2NC) 2 stages			N: Low torque			(CH): 7.0mm		
	4: DPDT (2NO/2NC) center neutral operation		2 digit or 2 digit + 1 letter	D: High precision low torque			(HW): 7.3mm		
	5: 4NO Slow action (for HNS only)			C: Maintained					
	6: 3NO/1NC Slow action (for HNS only)			TB: Neutral position					
	7: 2NO/2NC Slow action (for HNS only)			TA: Neutral position (high precision)					
	8: 1NO/3NC Slow action (for HNS only)			E: 360° rotation					
	9: 4NC Slow action (for HNS only)								

HMS/HLS Series Heavy Duty Limit Switches

Plunger type

01 Styles



11 Styles



12 Styles



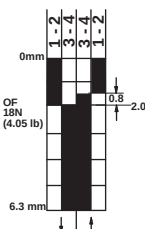
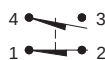
13 Styles



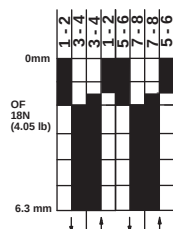
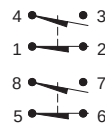
05 Styles



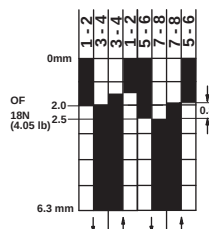
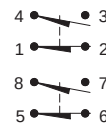
HMS-1A/
HLS-1A
1NO/1NC



HMS-2A/
HLS-2A
2NO/2NC



HMS-3A/
HLS-3A
2NO/2NC(2-stages)



* Note: Operating Force (OF) is 31.1N(7 lb) for Plunger type 01 style.

Side Plunger type

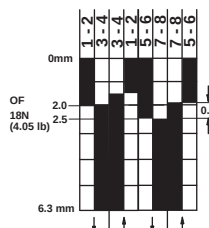
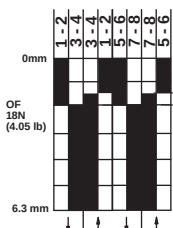
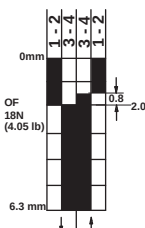
11H Styles



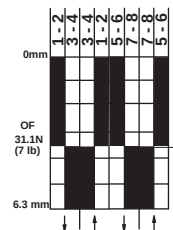
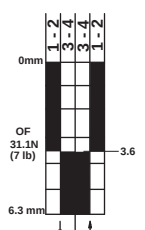
12H Styles



13H Styles



Side Plunger (Maintained) type 10H Styles



ON OFF

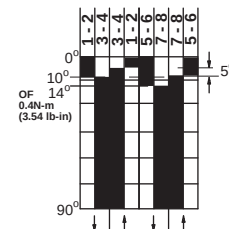
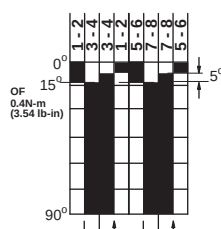
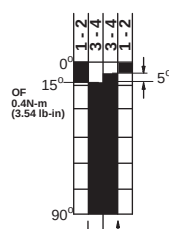
Spring coil type



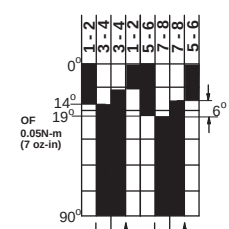
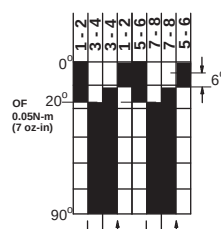
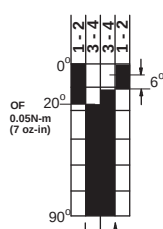
00

66

69

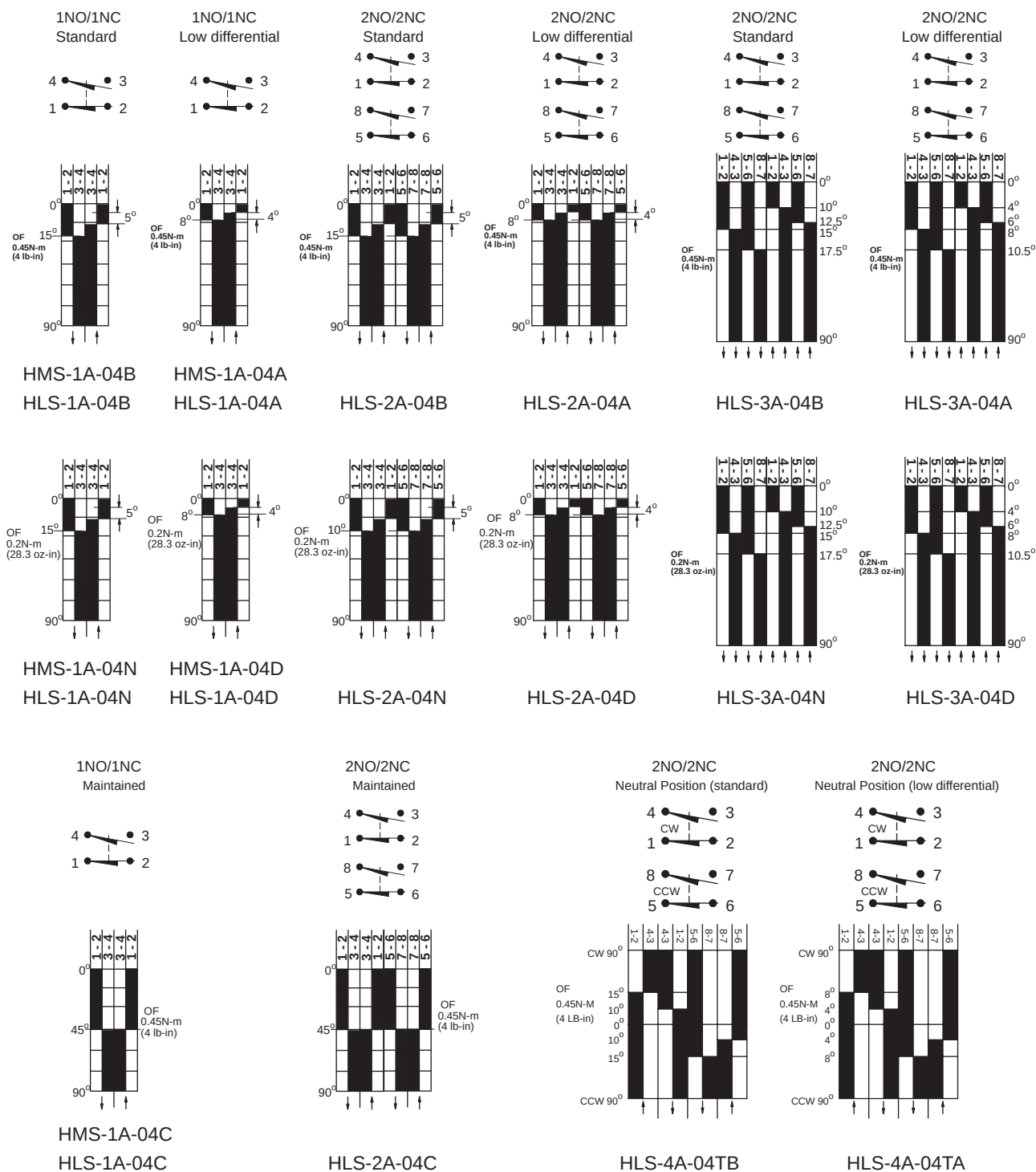


Cat Whisker type 68 Styles

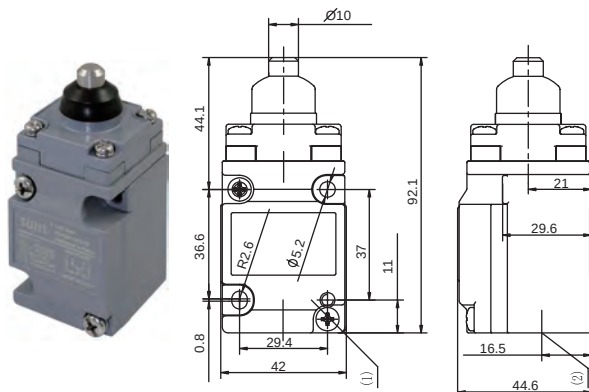


HMS/HLS Series Heavy Duty Limit Switches

Travel Diagram for Rotary Lever Styles

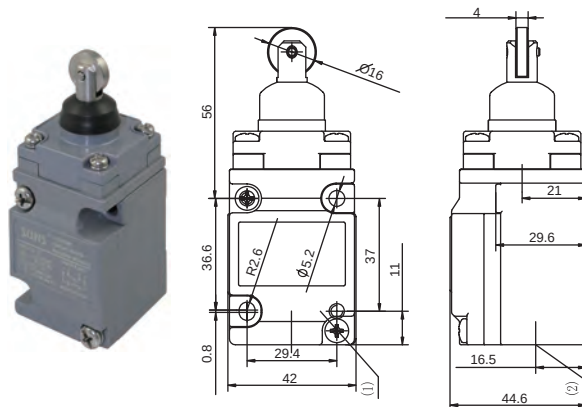


HMS Series Heavy Duty Limit Switches



Order Code

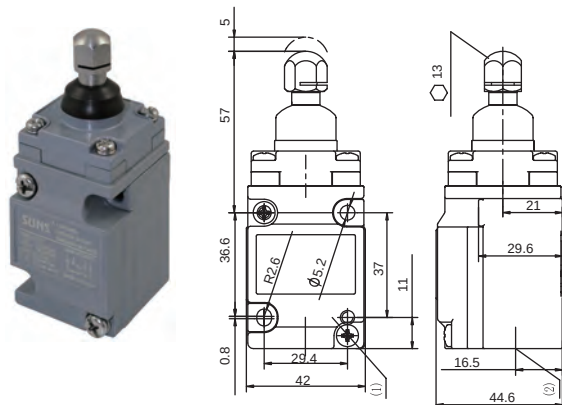
HMS-1A-11: 1NO/1NC



Order Code

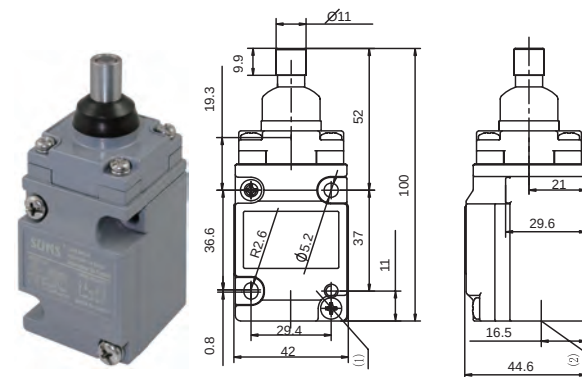
HMS-1A-12: 1NO/1NC

Adjustable Operating Position (OP)



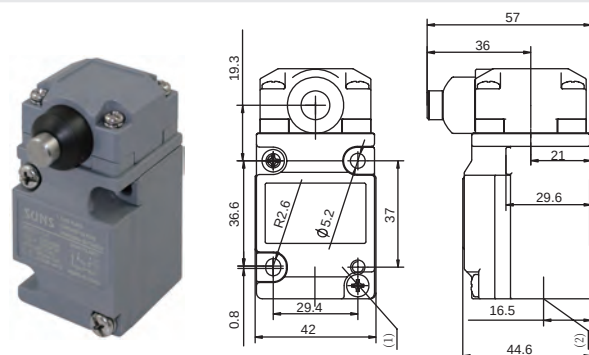
Order Code

HMS-1A-13: 1NO/1NC



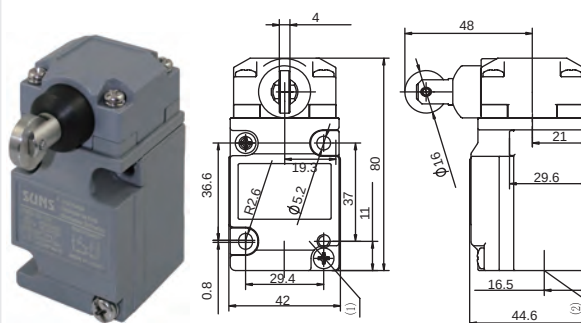
Order Code

HMS-1A-01: 1NO/1NC



Order Code

HMS-1A-11H: 1NO/1NC



Order Code

HMS-1A-12H: 1NO/1NC

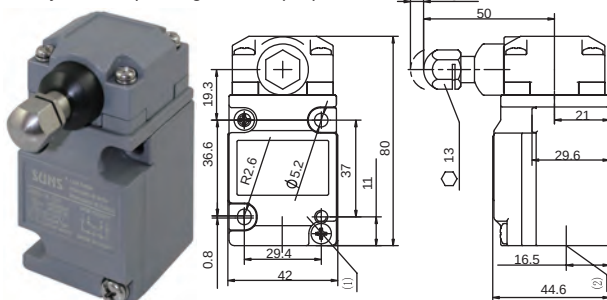
* Note: roller can be adjust to cross orientation

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

HMS Series Heavy Duty Limit Switches

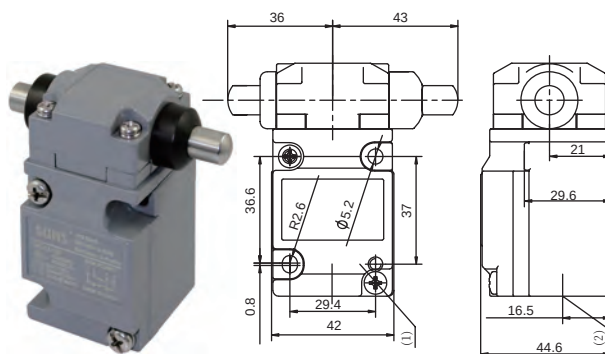
Adjustable Operating Position (OP)



Order Code

HMS-1A-13H: 1NO/1NC

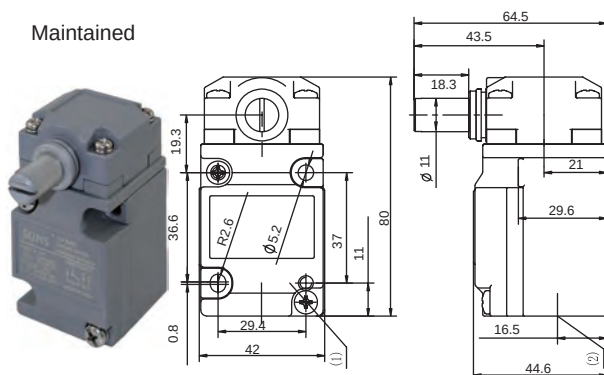
Maintained



Order Code

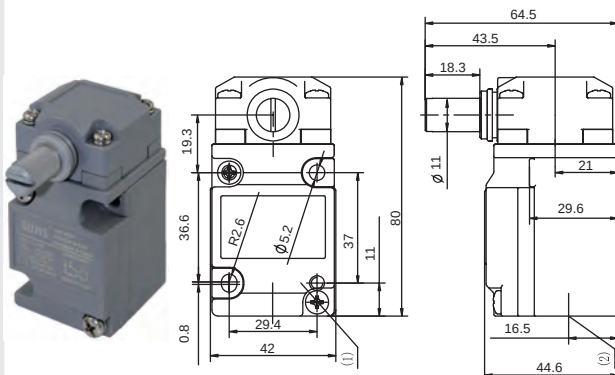
HMS-1A-10H: 1NO/1NC

Maintained



Order Code

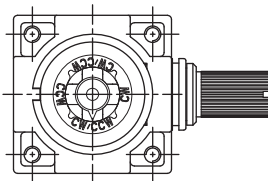
HMS-1A-04C: 1NO/1NC



Order Code

HMS-1A-04B: 1NO/1NC Standard Pretravel
HMS-1A-04A: 1NO/1NC Low Pretravel
HMS-1A-04N: 1NO/1NC Low Torque
HMS-1A-04D: 1NO/1NC Low Torque, Low Pretravel

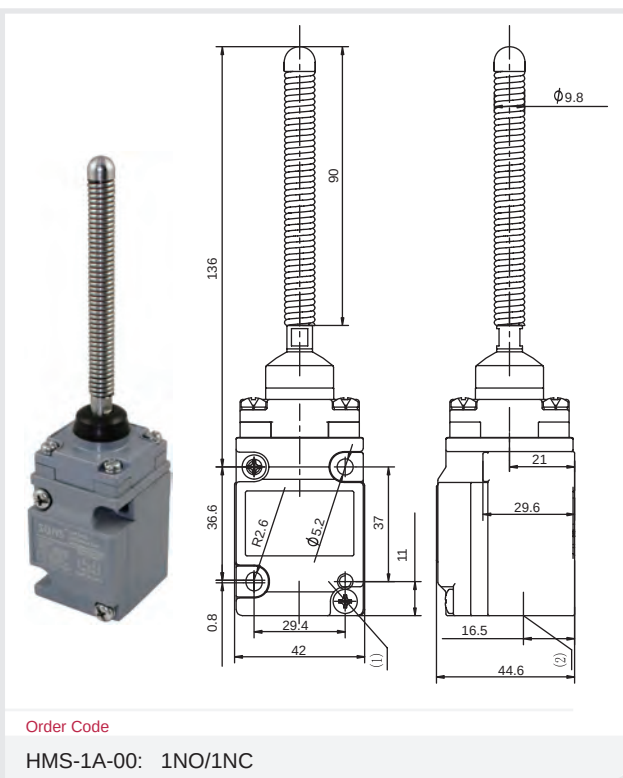
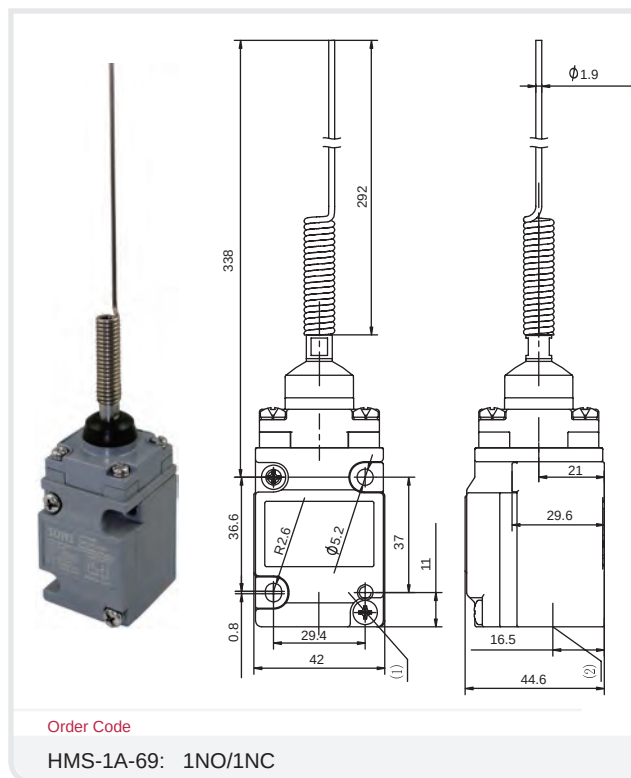
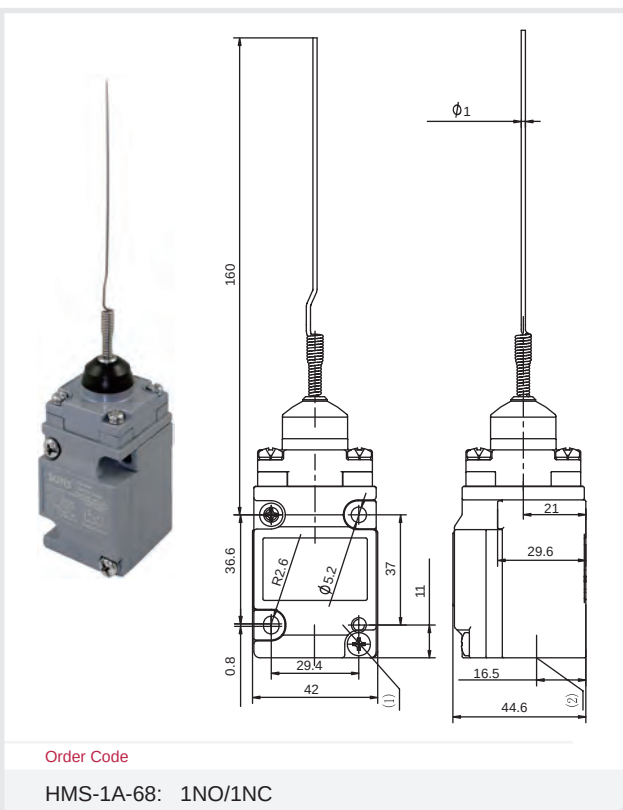
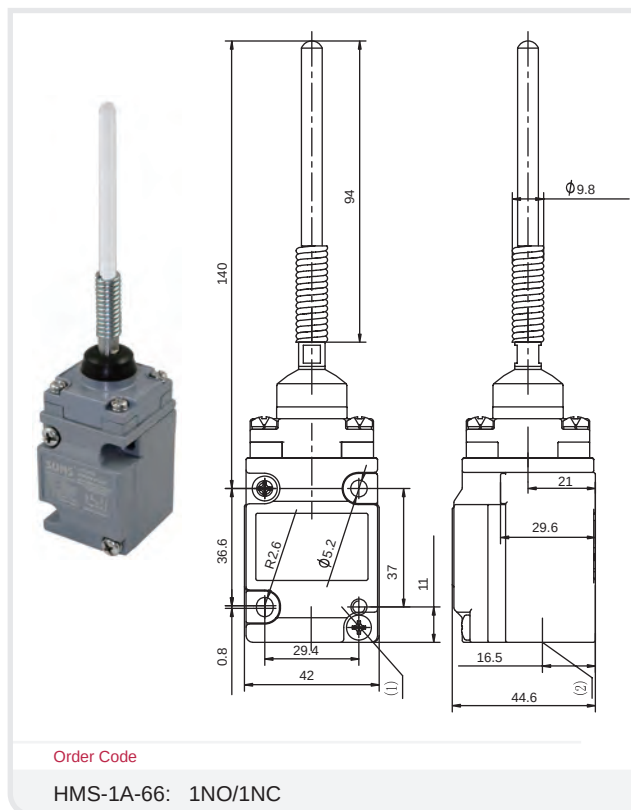
Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

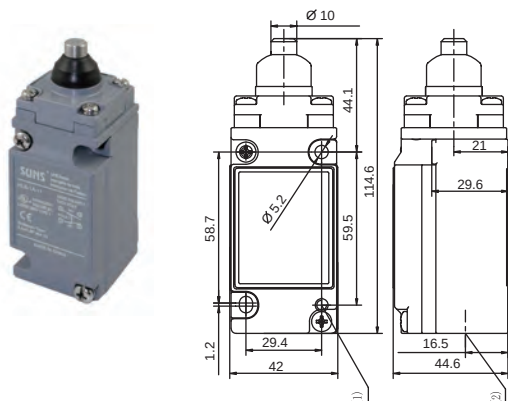
HMS Series Heavy Duty Limit Switches



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

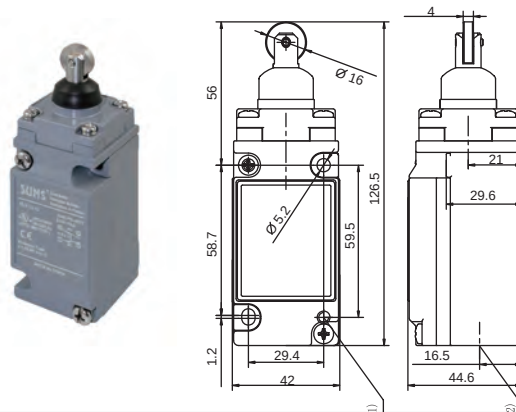
(2) Conduit opening type: 1/2NPT

HLS Series Heavy Duty Limit Switches



Order Code

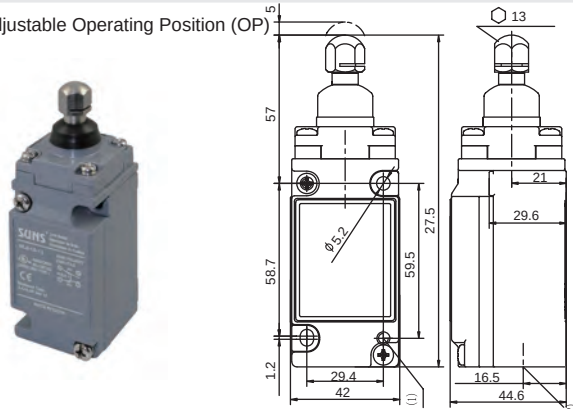
HLS-1A-11: 1NO/1NC
HLS-2A-11: 2NO/2NC
HLS-3A-11: 2NO/2NC (2-stage)



Order Code

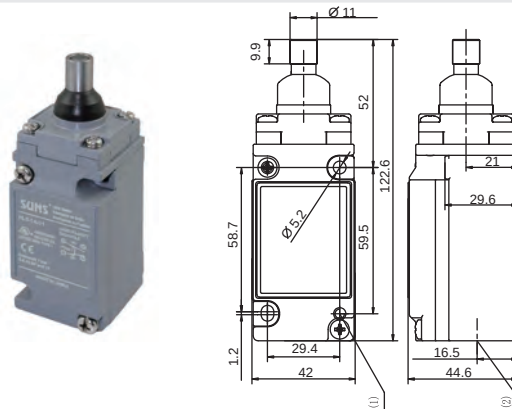
HLS-1A-12: 1NO/1NC
HLS-2A-12: 2NO/2NC
HLS-3A-12: 2NO/2NC (2-stage)

Adjustable Operating Position (OP)



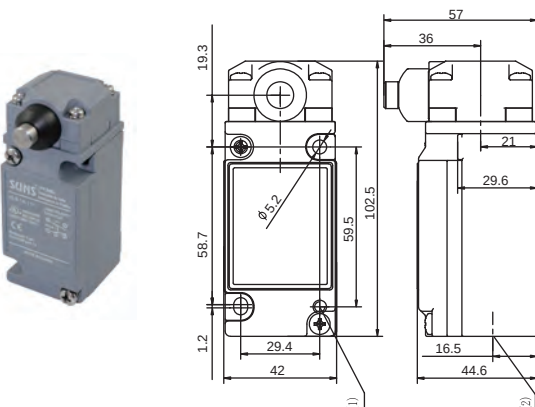
Order Code

HLS-1A-13: 1NO/1NC
HLS-2A-13: 2NO/2NC
HLS-3A-13: 2NO/2NC (2-stage)



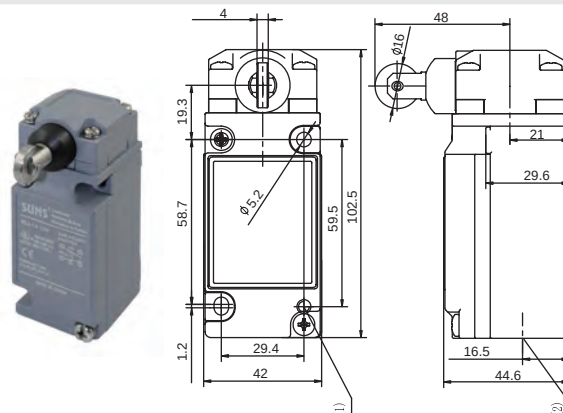
Order Code

HLS-1A-01: 1NO/1NC
HLS-2A-01: 2NO/2NC
HLS-3A-01: 2NO/2NC (2-stage)



Order Code

HLS-1A-11H: 1NO/1NC
HLS-2A-11H: 2NO/2NC
HLS-3A-11H: 2NO/2NC (2-stage)



* Note: roller can be adjust to cross orientation

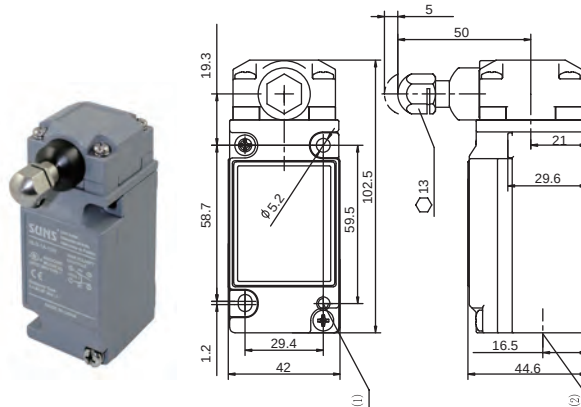
Order Code

HLS-1A-12H: 1NO/1NC
HLS-2A-12H: 2NO/2NC
HLS-3A-12H: 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

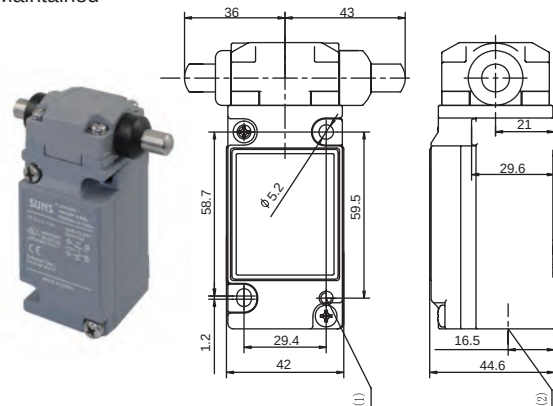
HLS Series Heavy Duty Limit Switches



Order Code

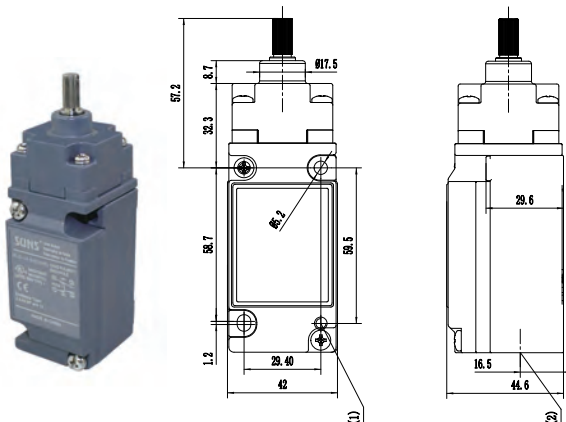
HLS-1A-13H: 1NO/1NC
HLS-2A-13H: 2NO/2NC
HLS-3A-13H: 2NO/2NC (2-stage)

Maintained



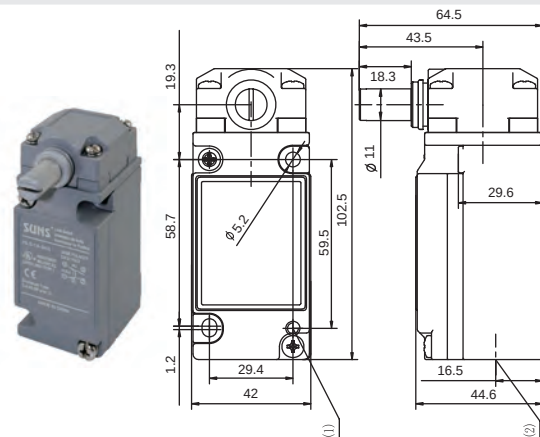
Order Code

HLS-1A-10H: 1NO/1NC
HLS-2A-10H: 2NO/2NC



Order Code

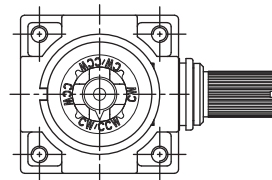
HLS-1A-05B: 1NO/1NC
HLS-2A-05B: 2NO/2NC



Order Code

HLS-1A-04B: 1NO/1NC Standard Pretravel
HLS-1A-04A: 1NO/1NC Low Pretravel
HLS-1A-04N: 1NO/1NC Low Torque
HLS-1A-04D: 1NO/1NC Low Torque, Low Pretravel
HLS-2A-04B: 2NO/2NC Standard Pretravel
HLS-2A-04A: 2NO/2NC Low Differential Travel
HLS-2A-04N: 2NO/2NC Low Torque
HLS-2A-04D: 2NO/2NC Low Torque, Low Pretravel
HLS-3A-04B: 2NO/2NC (2-stage) Standard Pretravel
HLS-3A-04A: 2NO/2NC (2-stage) Low Pretravel
HLS-3A-04N: 2NO/2NC (2-stage) Low Torque
HLS-3A-04D: 2NO/2NC (2-stage) Low Torque, Low Differential Travel

Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



Neutral Position

HLS-4A-04TA: 2NO/2NC (Low Pretravel)
HLS-4A-04TB: 2NO/2NC

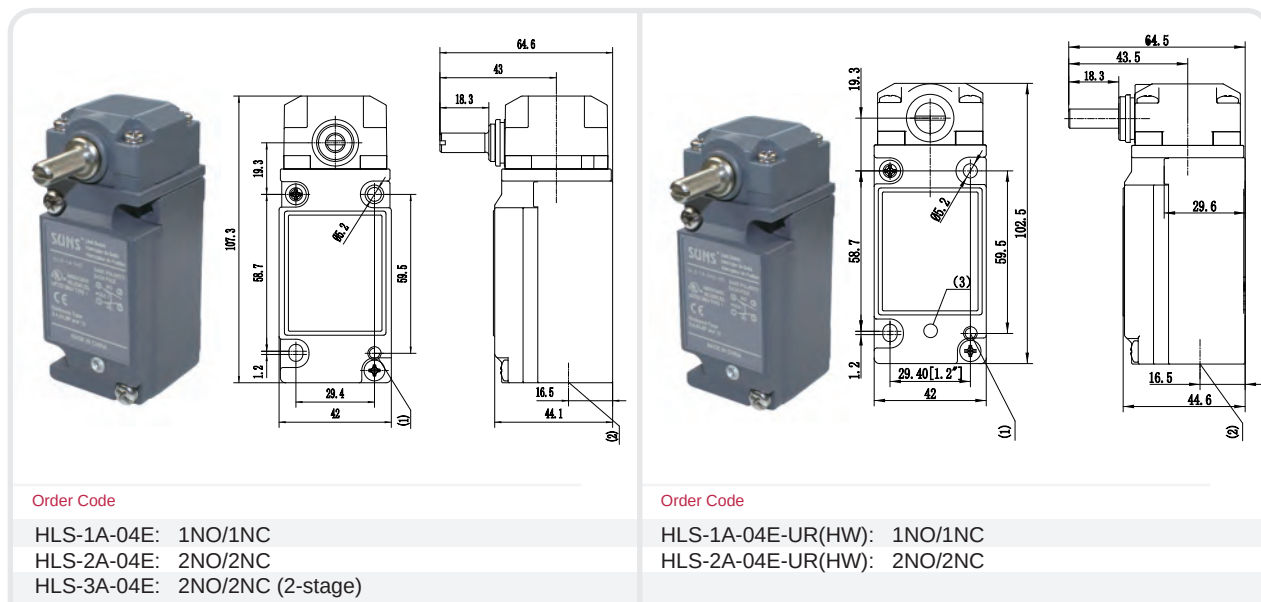
Maintained

HLS-1A-04C: 1NO/1NC
HLS-2A-04C: 2NO/2NC

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

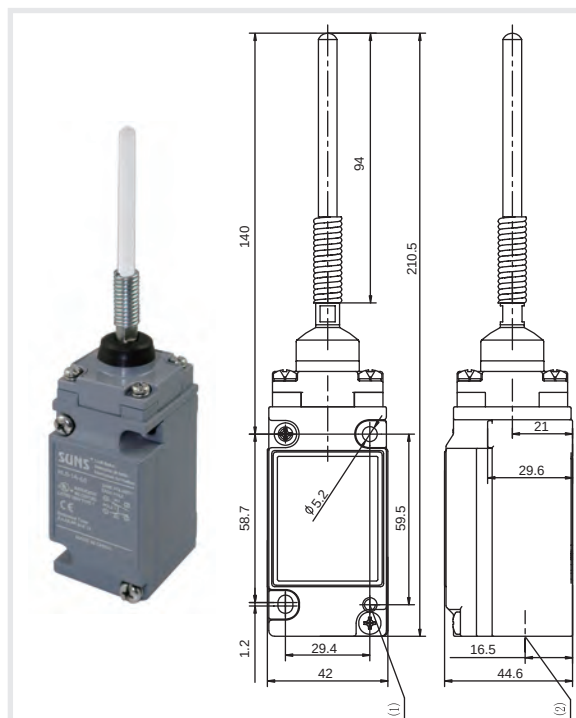
(2) Conduit opening type: 1/2NPT

HLS Series Heavy Duty Limit Switches



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.
(2) Conduit opening type: 1/2 NPT
(3) LED indicator light

HLS Series Heavy Duty Limit Switches

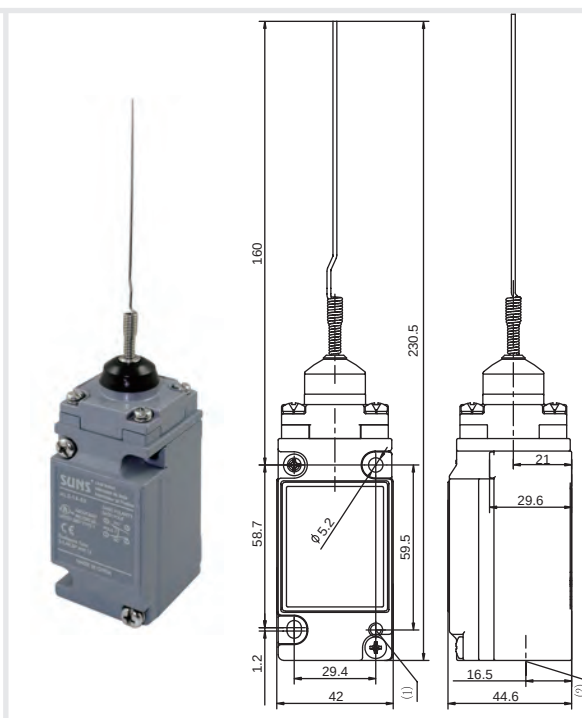


Order Code

HLS-1A-66: 1NO/1NC

HLS-2A-66: 2NO/2NC

HLS-3A-66: 2NO/2NC (2-stage)

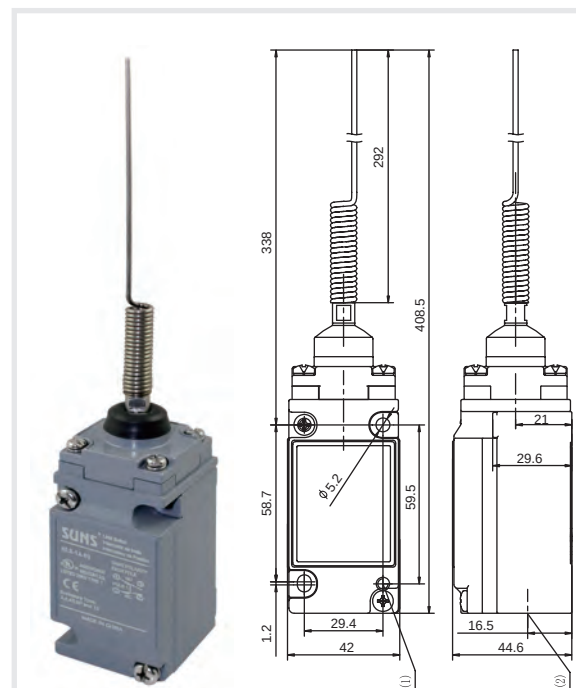


Order Code

HLS-1A-68: 1NO/1NC

HLS-2A-68: 2NO/2NC

HLS-3A-68: 2NO/2NC (2-stage)

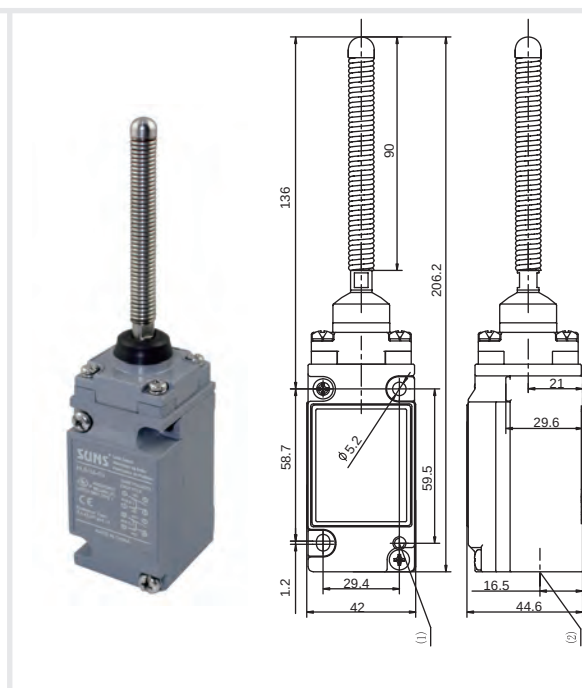


Order Code

HLS-1A-69: 1NO/1NC

HLS-2A-69: 2NO/2NC

HLS-3A-69: 2NO/2NC (2-stage)



Order Code

HLS-1A-00: 1NO/1NC

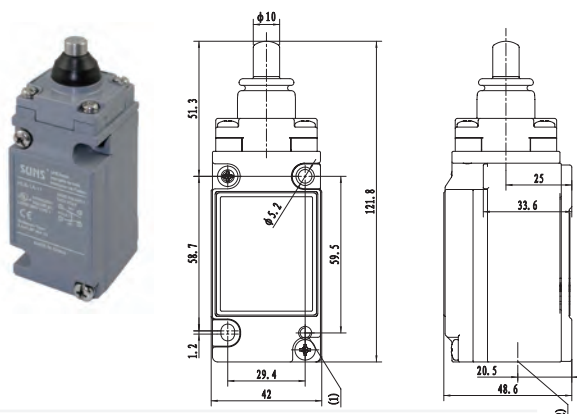
HLS-2A-00: 2NO/2NC

HLS-3A-00: 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

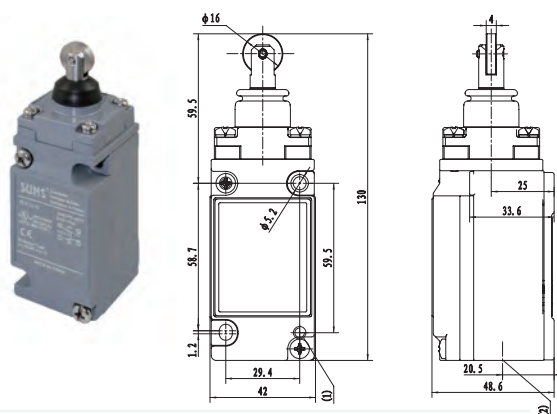
(2) Conduit opening type: 1/2NPT

HLS (AB) Series Heavy Duty Limit Switches



Order Code

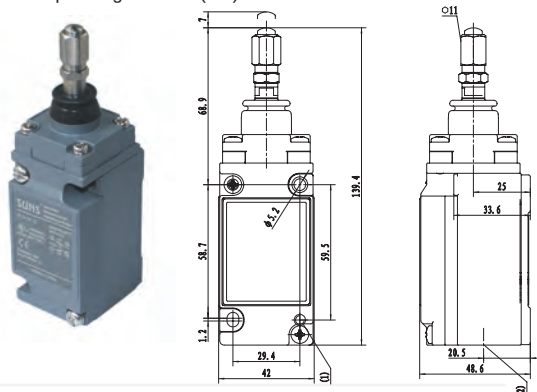
HLS-1A-11(AB): 1NO/1NC
HLS-2A-11(AB): 2NO/2NC
HLS-3A-11(AB): 2NO/2NC (2-stage)



Order Code

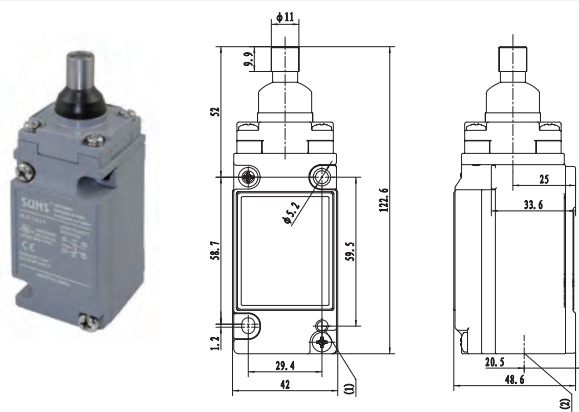
HLS-1A-12(AB): 1NO/1NC
HLS-2A-12(AB): 2NO/2NC
HLS-3A-12(AB): 2NO/2NC (2-stage)

Adjustable Operating Position (OP)



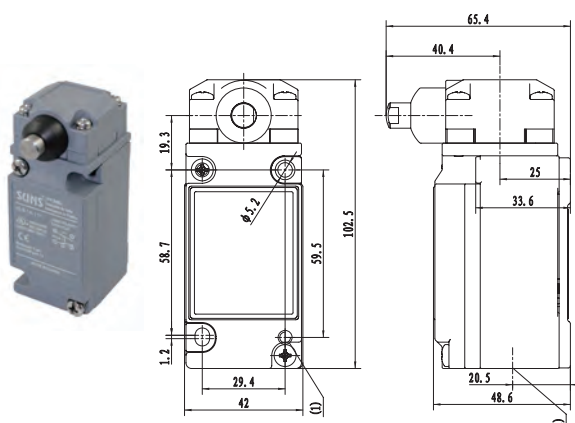
Order Code

HLS-1A-13(AB): 1NO/1NC
HLS-2A-13(AB): 2NO/2NC
HLS-3A-13(AB): 2NO/2NC (2-stage)



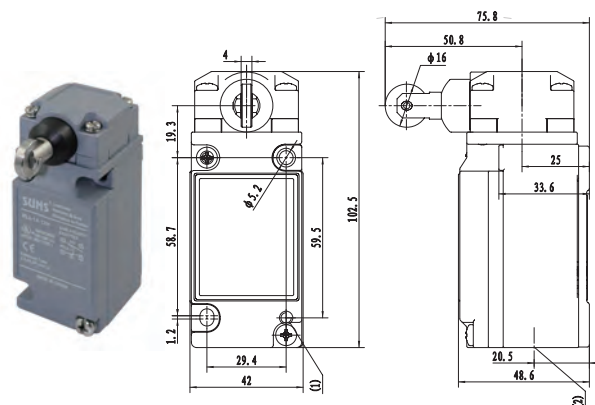
Order Code

HLS-1A-01(AB): 1NO/1NC
HLS-2A-01(AB): 2NO/2NC
HLS-3A-01(AB): 2NO/2NC (2-stage)



Order Code

HLS-1A-11H(AB): 1NO/1NC
HLS-2A-11H(AB): 2NO/2NC
HLS-3A-11H(AB): 2NO/2NC (2-stage)



* Note: roller can be adjust to cross orientation

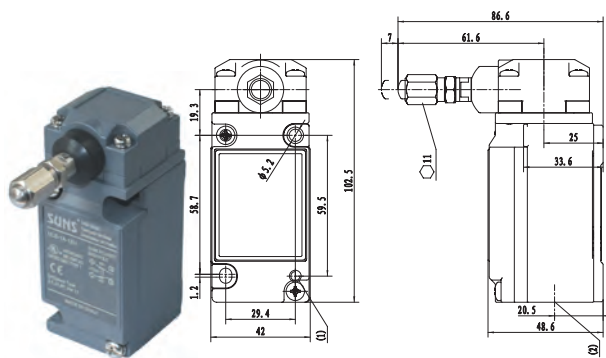
Order Code

HLS-1A-12H(AB): 1NO/1NC
HLS-2A-12H(AB): 2NO/2NC
HLS-3A-12H(AB): 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

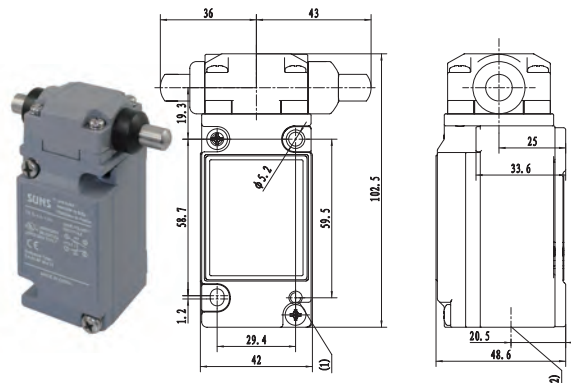
HLS(AB) Series Heavy Duty Limit Switches



Order Code

HLS-1A-13H(AB): 1NO/1NC
HLS-2A-13H(AB): 2NO/2NC
HLS-3A-13H(AB): 2NO/2NC (2-stage)

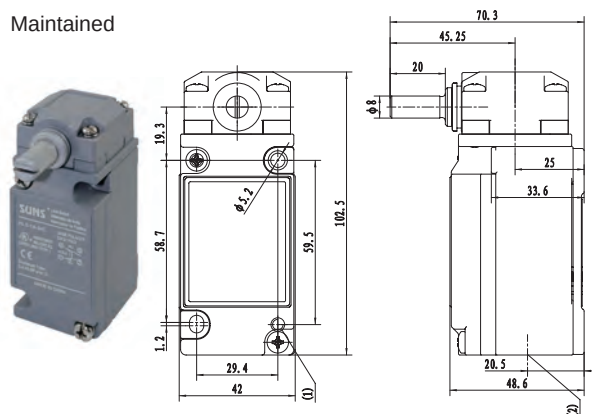
Maintained



Order Code

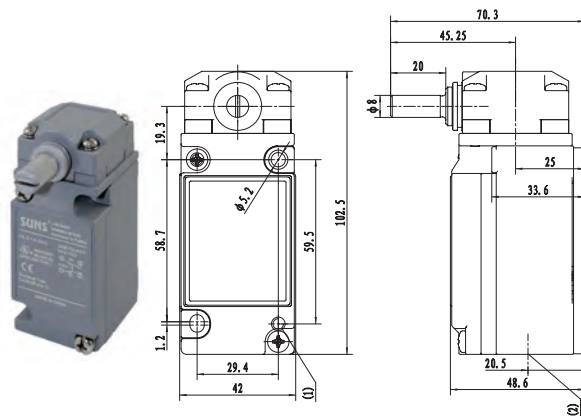
HLS-1A-10H(AB): 1NO/1NC
HLS-2A-10H(AB): 2NO/2NC

Maintained



Order Code

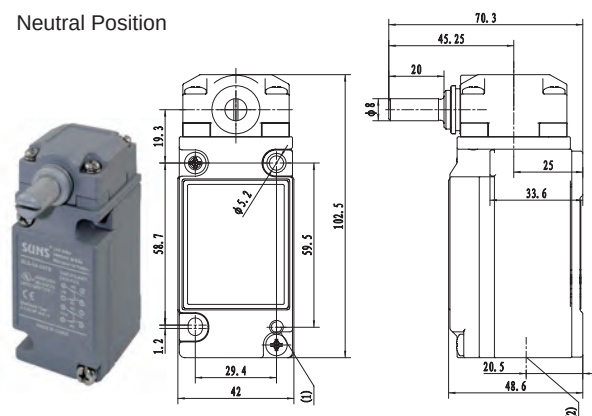
HLS-1A-04C(AB): 1NO/1NC
HLS-2A-04C(AB): 2NO/2NC



Order Code

HLS-1A-04B(AB): 1NO/1NC Standard Pretravel
HLS-1A-04A(AB): 1NO/1NC Low Pretravel
HLS-1A-04N(AB): 1NO/1NC Low Torque
HLS-1A-04D(AB): 1NO/1NC Low Torque, Low Pretravel
HLS-2A-04B(AB): 2NO/2NC Standard Pretravel
HLS-2A-04A(AB): 2NO/2NC Low Differential Travel
HLS-2A-04N(AB): 2NO/2NC Low Torque
HLS-2A-04D(AB): 2NO/2NC Low Torque, Low Pretravel
HLS-3A-04B(AB): 2NO/2NC (2-stage) Standard Pretravel
HLS-3A-04A(AB): 2NO/2NC (2-stage) Low Pretravel
HLS-3A-04N(AB): 2NO/2NC (2-stage) Low Torque
HLS-3A-04D(AB): 2NO/2NC (2-stage) Low Torque, Low Differential Travel

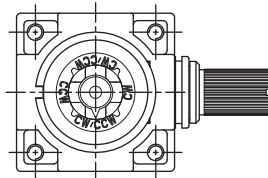
Neutral Position



Order Code

HLS-4A-04TA(AB): 2NO/2NC (Low Pretravel)
HLS-4A-04TB(AB): 2NO/2NC

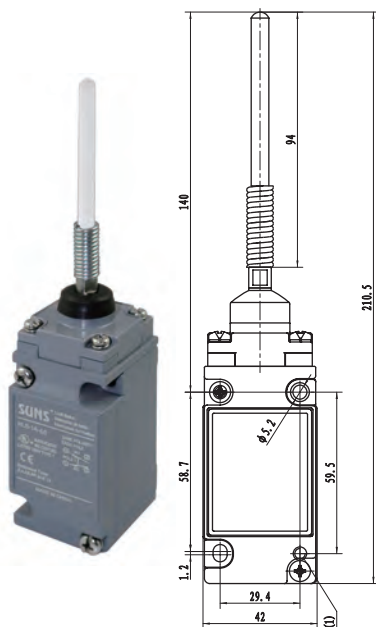
Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

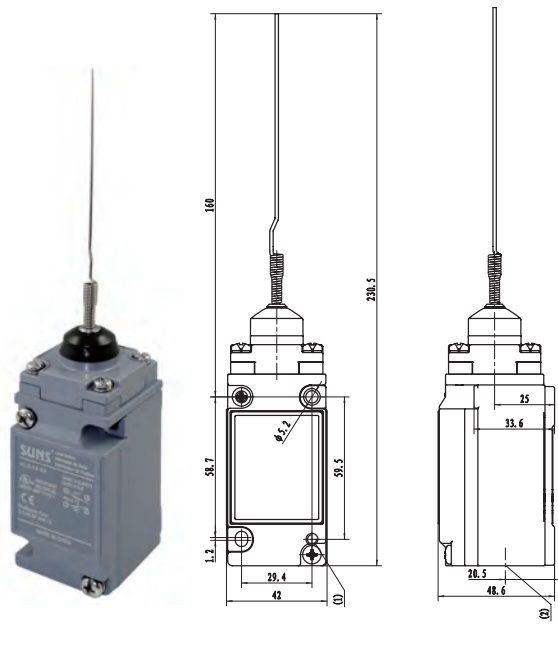
(2) Conduit opening type: 1/2NPT

HLS (AB) Series Heavy Duty Limit Switches



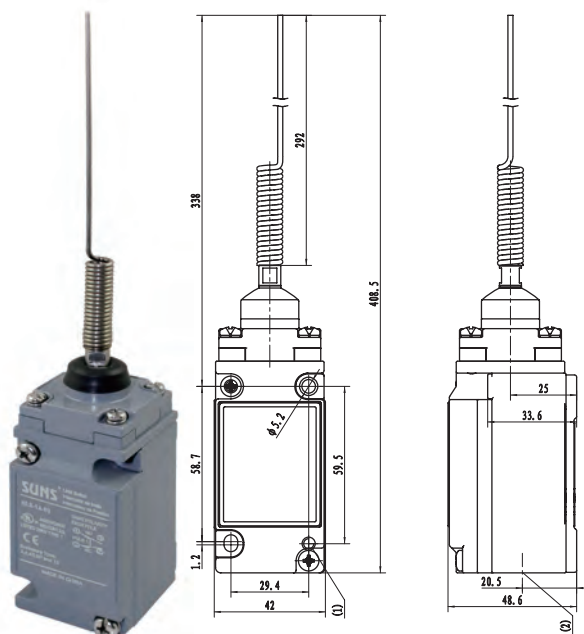
Order Code

HLS-1A-66(AB): 1NO/1NC
HLS-2A-66(AB): 2NO/2NC
HLS-3A-66(AB): 2NO/2NC (2-stage)



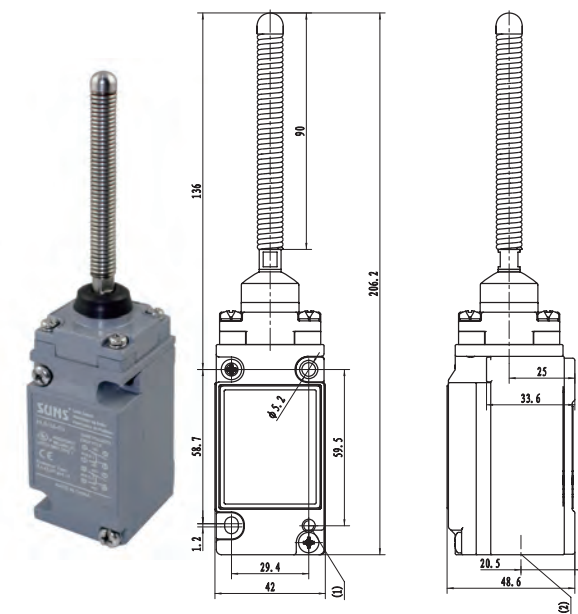
Order Code

HLS-1A-68(AB): 1NO/1NC
HLS-2A-68(AB): 2NO/2NC
HLS-3A-68(AB): 2NO/2NC (2-stage)



Order Code

HLS-1A-69(AB): 1NO/1NC
HLS-2A-69(AB): 2NO/2NC
HLS-3A-69(AB): 2NO/2NC (2-stage)



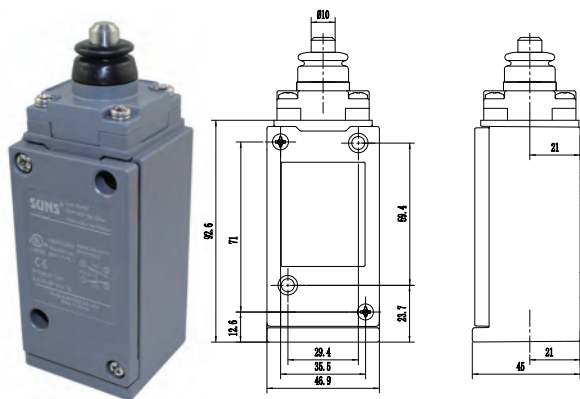
Order Code

HLS-1A-00(AB): 1NO/1NC
HLS-2A-00(AB): 2NO/2NC
HLS-3A-00(AB): 2NO/2NC (2-stage)

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

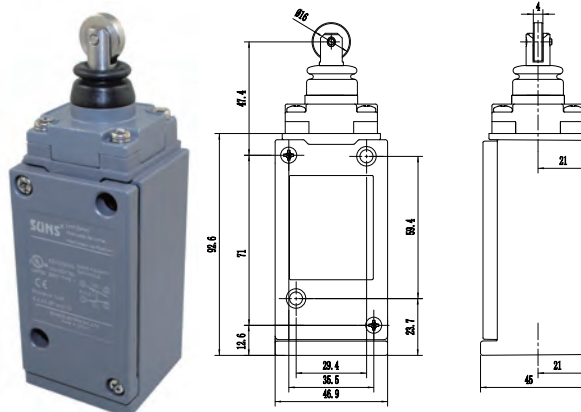
(2) Conduit opening type: 1/2NPT

HMS Series Heavy Duty Limit Switches



Order Code

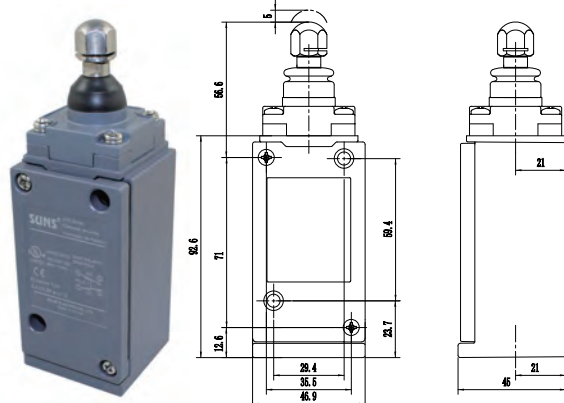
HNS-1A-11: 1NO/1NC



Order Code

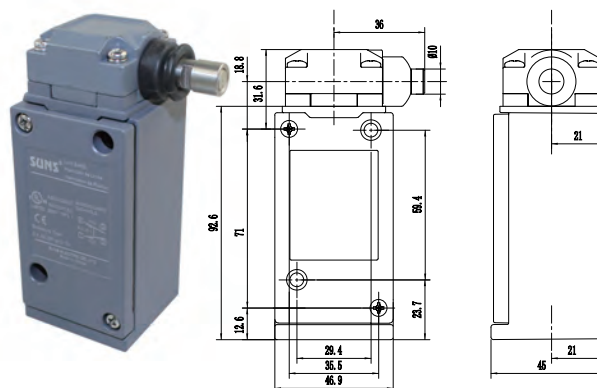
HNS-1A-12: 1NO/1NC

Adjustable Operating Position (OP)



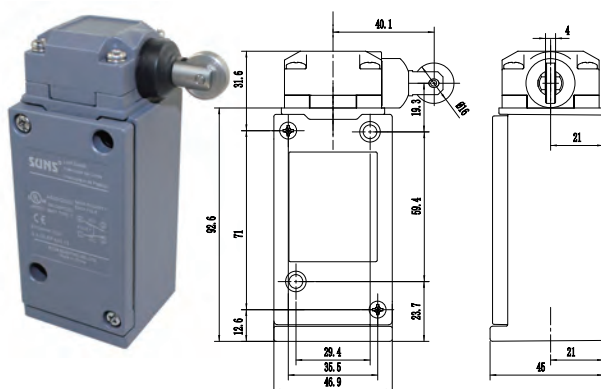
Order Code

HNS-1A-13: 1NO/1NC



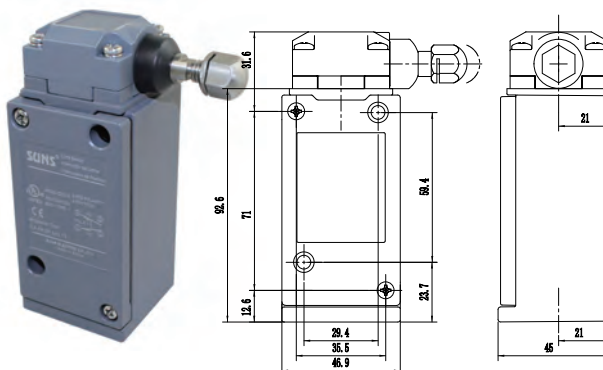
Order Code

HNS-1A-11H: 1NO/1NC



Order Code

HNS-1A-12H: 1NO/1NC



Order Code

HNS-1A-13H: 1NO/1NC

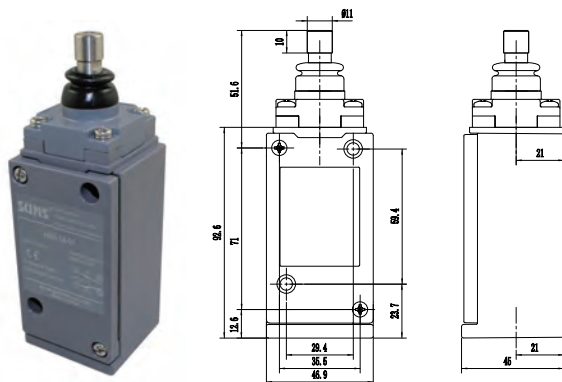
* Note: roller can be adjust to cross orientation

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

HNS Series Heavy Duty Limit Switches

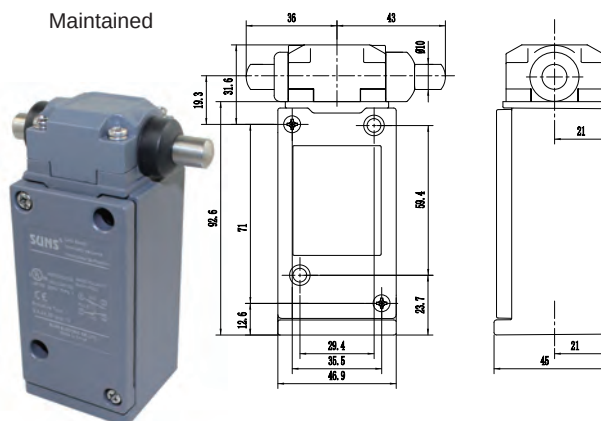
Adjustable Operating Position (OP)



Order Code

HNS-1A-01: 1NO/1NC

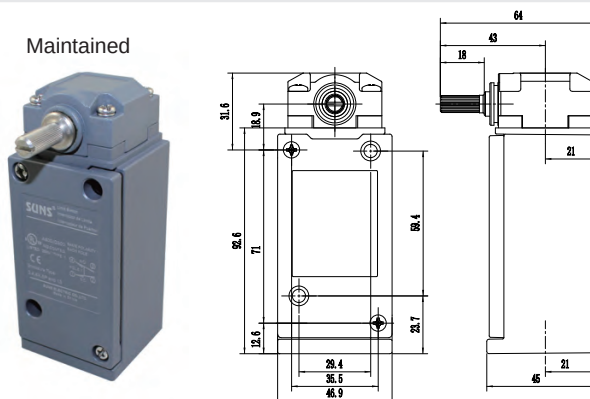
Maintained



Order Code

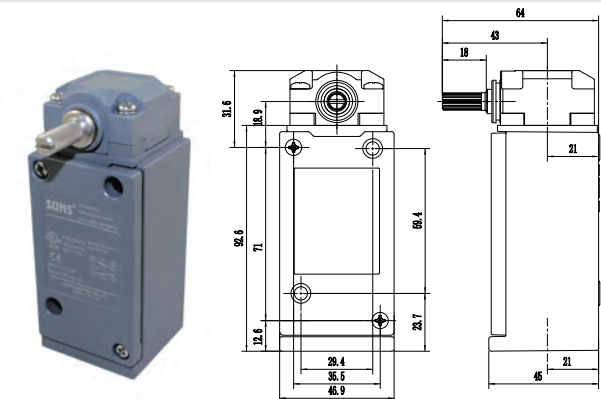
HNS-1A-10H: 1NO/1NC

Maintained



Order Code

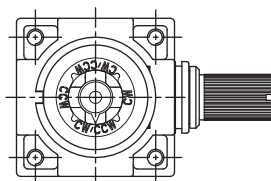
HNS-1A-04C: 1NO/1NC



Order Code

HNS-1A-04B: 1NO/1NC Standard Pretravel
HNS-1A-04A: 1NO/1NC Low Pretravel
HNS-1A-04N: 1NO/1NC Low Torque
HNS-1A-04D: 1NO/1NC Low Torque, Low Pretravel

Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.

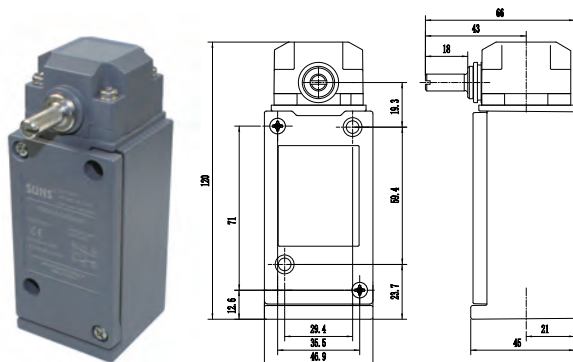


Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

HNS Series Heavy Duty Limit Switches

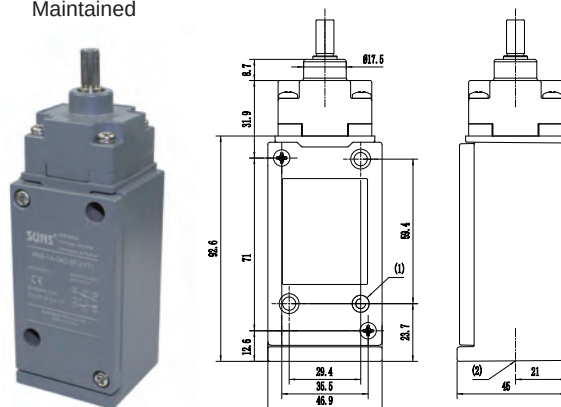
Adjustable Operating Position (OP)



Order Code

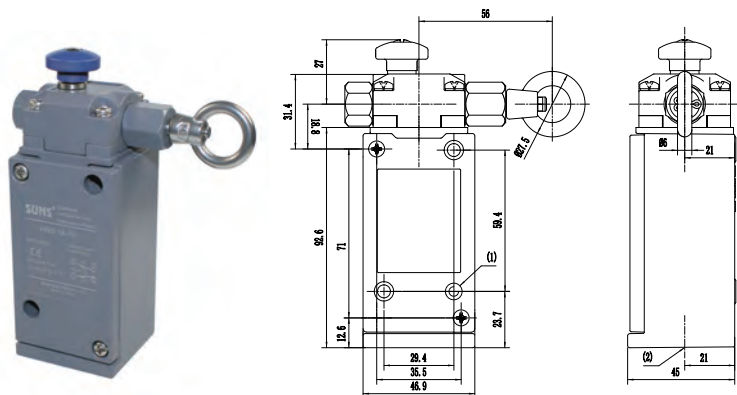
HNS-1A-04E: 1NO/1NC

Maintained



Order Code

HNS-1A-05B: 1NO/1NC



Order Code

HNS-1A-70: 1NO/1NC

Note. (1) 2 x 10-24 UNC hole on the back for back side mounting. (2) Conduit opening type: 1/2NPT

HNS Series Heavy Duty Limit Switches



Note. (1) 2 x 10-24 UNC hole on the back for back side mounting.

(2) Conduit opening type: 1/2NPT

HES Series Heavy Duty Limit Switches for Hazardous Location (EEX)

Features

- Heavy duty zinc die cast body
- Conform to EN 60947-5-1, IEC 60947-5-1, UL508, NEMA250, CSA22.2 Standards
- Wide range of actuator available
- High repeatability (0.03mm for linear travel)

Electrical Ratings

IEC 60947-5-1 / EN 90947-5-1						
Designation & Utilization Category	Rated operational current I _e (A) at rated operational voltage U _e					VA rating Make Break
AC15 A600	120V 6A	240V 3A	380V 1.9A	480V 1.5A	600V 1.2A	7200 720
DC13 Q300	125VDC 0.55	250VDC 0.27				69 69

Specifications

Operating Speed	0.05mm-2m/sec
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Service Life	Mechanically 10 millions (operations) Electrically 1 million (operations)
Operating Temperature	-28.9~+85°C (-20~185°F)
Vibration Resistance	25gn (10..150 Hz, 11ms) per IEC60068-2-6
Shock Resistance	60gn (9ms) per IEC 60068-2-27
Dielectric Strength	2200VAC for 1 minute
Short Circuit Protection	10A fuse
Terminal Wire Size	12-22AWG (2.05-0.644mm ²)
Degree of Protection	IP 67 conforming to IEC 60529, NEMA Types 2, 4, 6, 6P, 12, 13

HES HAZARDOUS LOCATION RATINGS: CLASS I DIV GROUPS B,C,D
CLASS II DIV GROUPS E,F,G

* Wider operating temperature models are available. Please contact us.

Selection Guide:

HES	1	A	04	A	-	F	-
Body Styles	Contact Block	1/2NPT Conduit (Contact us for other types)	Head Style	Applied on to Lever Arms Style		Rubber seal type	Rotary head shaft diameter
	1: SPDT (1NO/1NC) Snap action			B: Standard		Blank: Standard	Blank: 11.0mm
	2: DPDT (2NO/2NC) Snap action			N: Low torque		F: Fluorite Rubber	(AB): 8.0mm
	3: DPDT (2NO/2NC) 2 stages			D: High precision low torque			(CH): 7.0mm
	4: DPDT (2NO/2NC) center neutral operation		2 digit or 2 digit + 1 letter	C: Maintained			(HW): 7.3mm
				TB: Neutral Position			
				TA: Neutral Position (High Precision)			

HES Series Heavy Duty Limit Switches for Hazardous Location (EEX)

Plunger type

01 Styles

11 Styles



12 Styles

13 Styles

05 Styles



Side Plunger type

11H Styles

12H Styles

13H Styles



Side Plunger (Maintained) type

10H Styles



Spring coil type



00

66

69

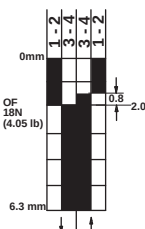
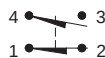
Cat Whisker type

68 Styles



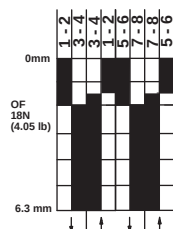
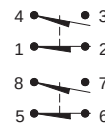
HES-1A

1NO/1NC



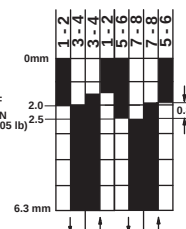
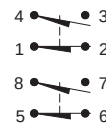
HES-2A

2NO/2NC

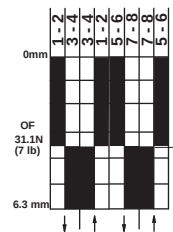
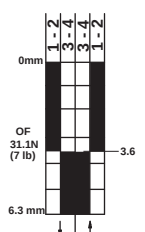
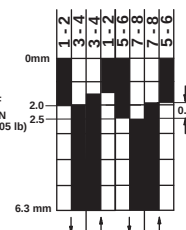
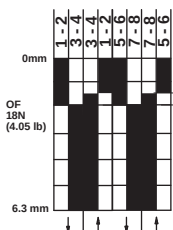
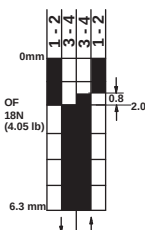


HES-3A

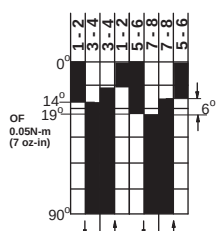
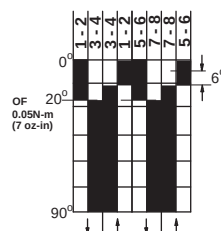
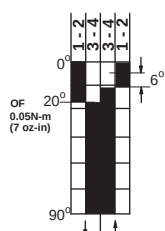
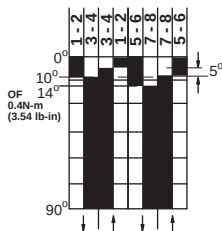
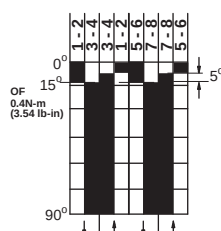
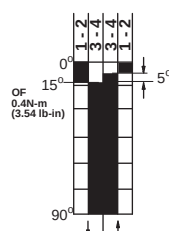
2NO/2NC(2-stages)



* Note: Operating Force (OF) is 31.1N(7 lb)for Plunger type 01 style.

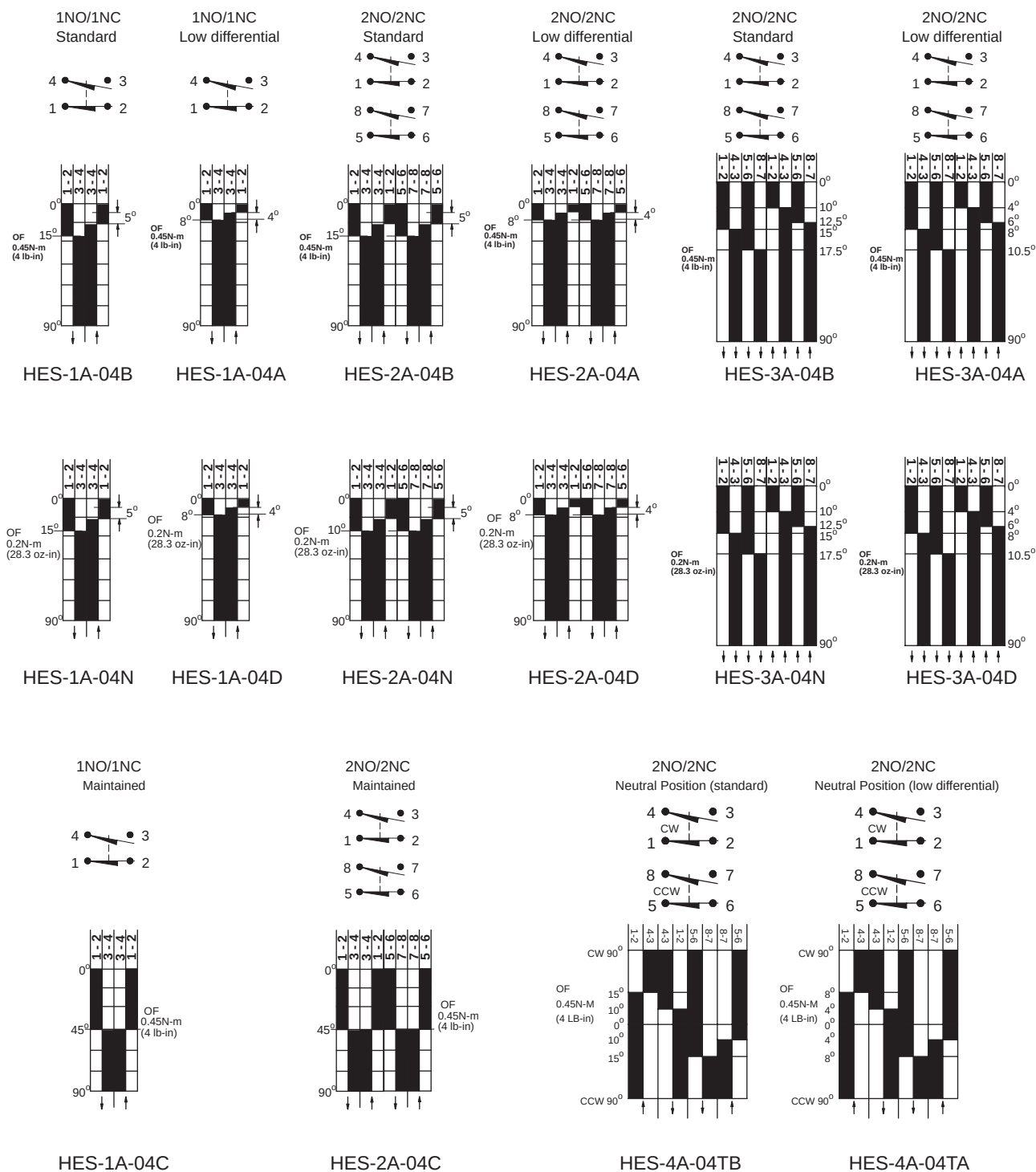


ON OFF

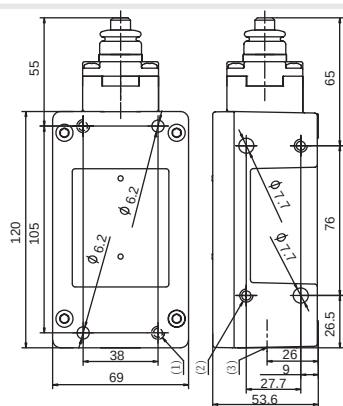


HES Series Heavy Duty Limit Switches for Hazardous Location (EEX)

Travel Diagram for Rotary Lever Styles

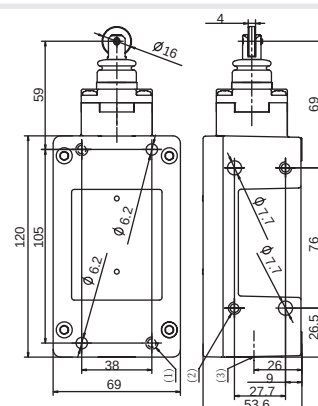


HES Series Heavy Duty Limit Switches for Hazardous Location (EEX)



Order Code

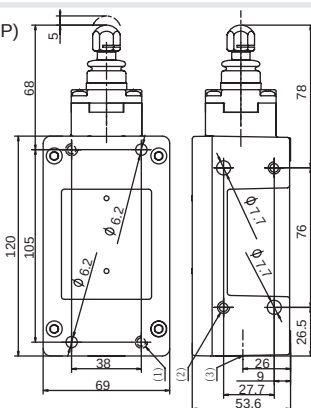
HES-1A-11: 1NO/1NC
HES-2A-11: 2NO/2NC
HES-3A-11: 2NO/2NC (2-stage)



Order Code

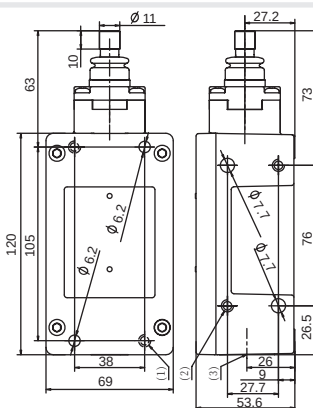
HES-1A-12: 1NO/1NC
HES-2A-12: 2NO/2NC
HES-3A-12: 2NO/2NC (2-stage)

Adjustable Operating Position (OP)



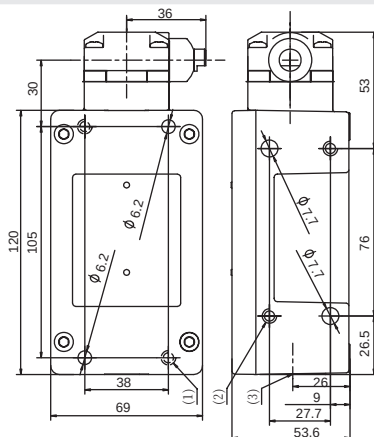
Order Code

HES-1A-13: 1NO/1NC
HES-2A-13: 2NO/2NC
HES-3A-13: 2NO/2NC (2-stage)



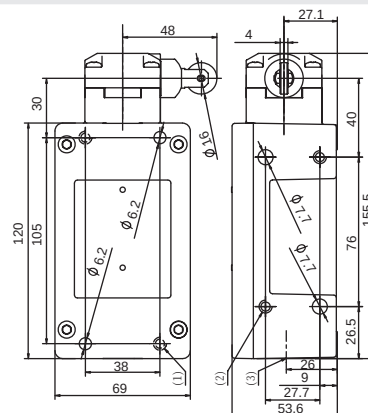
Order Code

HES-1A-01: 1NO/1NC
HES-2A-01: 2NO/2NC
HES-3A-01: 2NO/2NC (2-stage)



Order Code

HES-1A-11H: 1NO/1NC
HES-2A-11H: 2NO/2NC
HES-3A-11H: 2NO/2NC (2-stage)



* Note: roller can be adjust to cross orientation

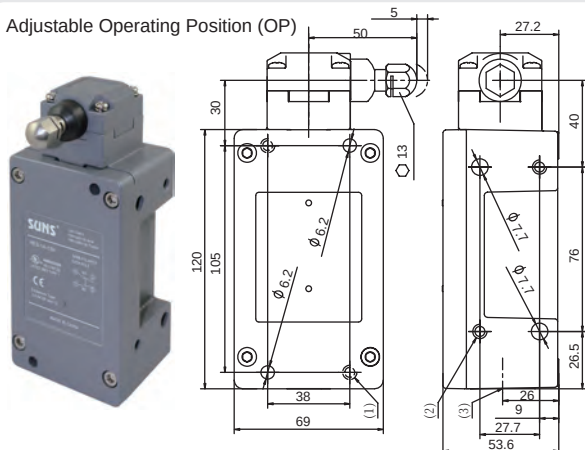
Order Code

HES-1A-12H: 1NO/1NC
HES-2A-12H: 2NO/2NC
HES-3A-12H: 2NO/2NC (2-stage)

* Note; 1) 2 x 1/4-20UNT (depth 0.63") for back side mounting
2) 2 x 1/4-20UNT (depth 0.32") on the side for side mounting
3) Conduit opening: 1/2NPT (standard), 3/4NPT on special request.

HES Series Heavy Duty Limit Switches for Hazardous Location (EEX)

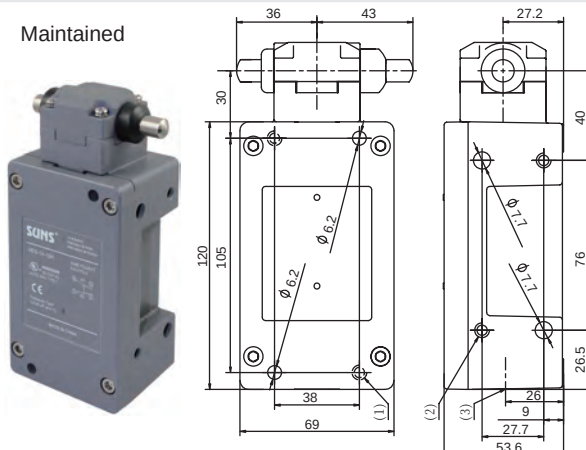
Adjustable Operating Position (OP)



Order Code

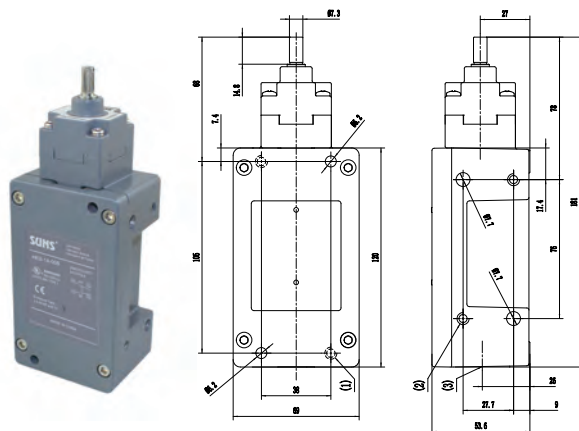
HES-1A-13H: 1NO/1NC
HES-2A-13H: 2NO/2NC
HES-3A-13H: 2NO/2NC (2-stage)

Maintained



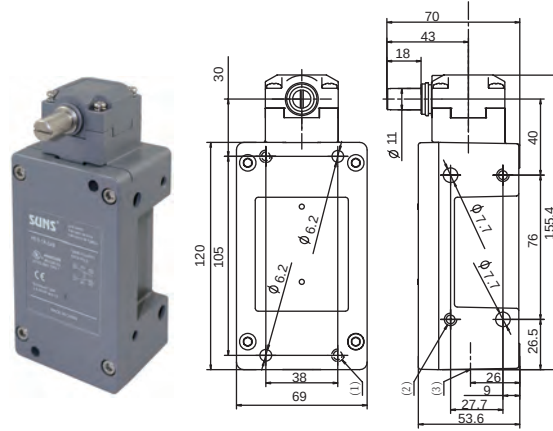
Order Code

HES-1A-10H: 1NO/1NC
HES-2A-10H: 2NO/2NC



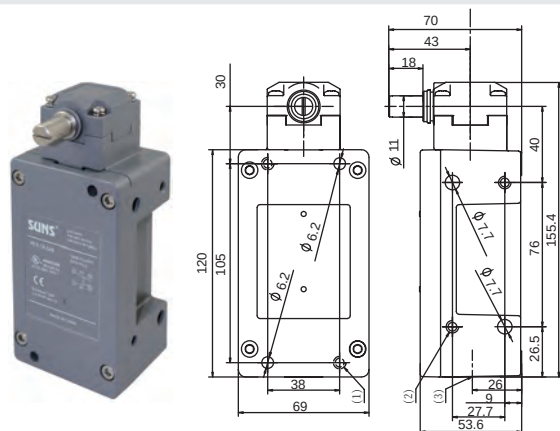
Order Code

HES-1A-05B: 1NO/1NC
HES-2A-05B: 2NO/2NC



Order Code

HES-1A-04B: 1NO/1NC Standard Pretravel
HES-1A-04A: 1NO/1NC Low Pretravel
HES-1A-04N: 1NO/1NC Low Torque
HES-1A-04D: 1NO/1NC Low Torque, Low Pretravel
HES-2A-04B: 2NO/2NC Standard Pretravel
HES-2A-04A: 2NO/2NC Low Differential Travel
HES-2A-04N: 2NO/2NC Low Torque
HES-2A-04D: 2NO/2NC Low Torque, Low Pretravel
HES-3A-04B: 2NO/2NC (2-stage) Standard Pretravel
HES-3A-04A: 2NO/2NC (2-stage) Low Pretravel
HES-3A-04N: 2NO/2NC (2-stage) Low Torque
HES-3A-04D: 2NO/2NC (2-stage) Low Torque, Low Differential Travel



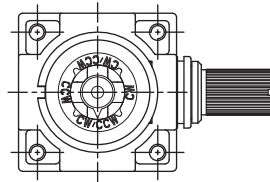
Neutral Position

HES-4A-04TA: 2NO/2NC (Low Pretravel)
HES-4A-04TB: 2NO/2NC

Maintained

HES-1A-04C: 1NO/1NC
HES-2A-04C: 2NO/2NC

Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.



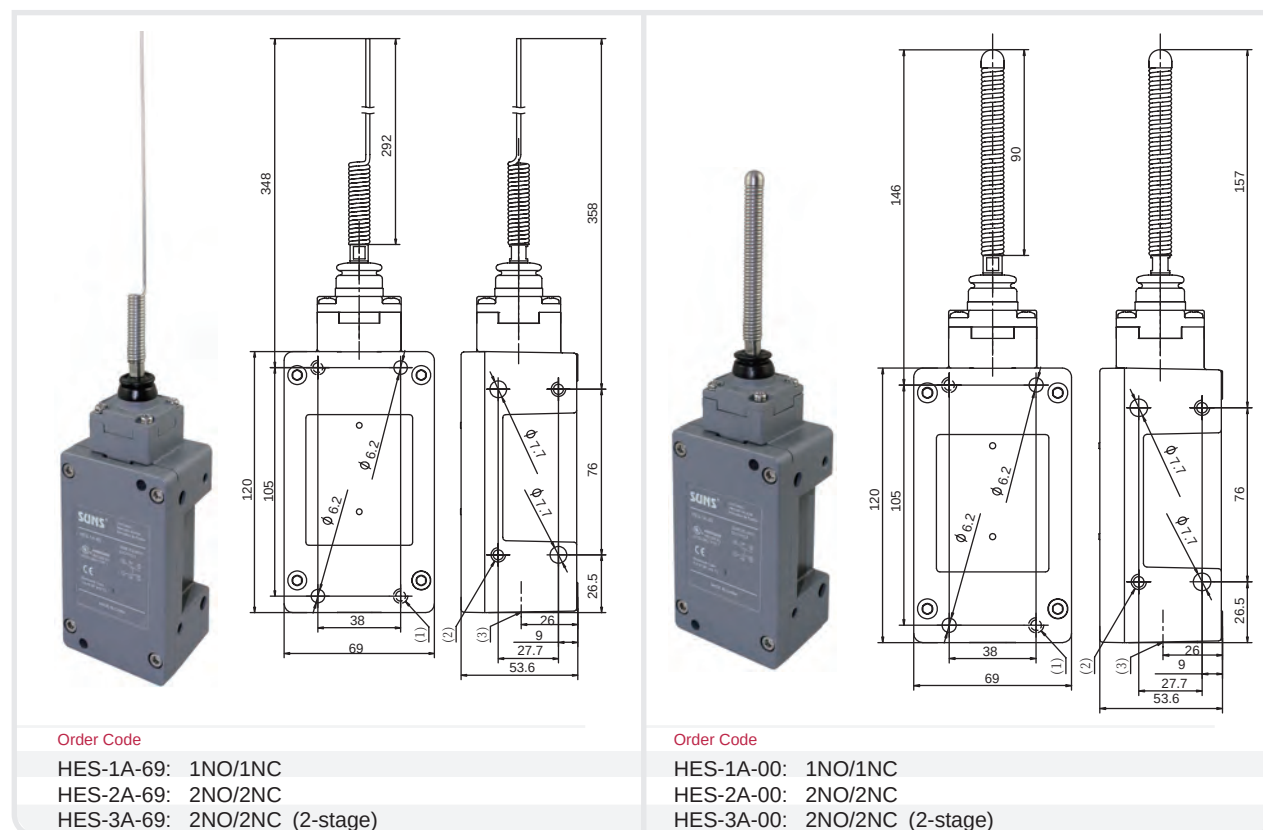
- * Note; 1) 2 x 1/4-20UNT (depth 0.63") for back side mounting
2) 2 x 1/4-20UNT (depth 0.32") on the side for side mounting
3) Conduit opening: 1/2NPT (standard), 3/4NPT on special request.

Order Code

HES-1A-66: 1NO/1NC
HES-2A-66: 2NO/2NC
HES-3A-66: 2NO/2NC (2-stage)

Order Code

HES-1A-68: 1NO/1NC
HES-2A-68: 2NO/2NC
HES-3A-68: 2NO/2NC (2-stage)



<http://www.suns-usa.com>

Levers for Rotary Heads (HMS/HLS/HNS/HES Heavy Duty Limit Switches)



Cast Aluminum Lever Arms with Roller

Add '-P' suffix for nylon roller (following part numbers are with steel roller)

Arm Length in. (mm)	Roller Diameter in. (mm)	Roller Width in. (mm)	Part Number
1.38 (35)	0.75 (19)	0.25 (6.3)	H-04B1
		0.63 (16)	H-04B2
	0.63 (16)	0.25 (6.3)	H-04B3
		0.63 (16)	H-04B4
1.5 (38)	0.75 (19)	0.25 (6.3)	H-04B5
		0.63 (16)	H-04C1
	0.63 (16)	0.25 (6.3)	H-04C2
		0.63 (16)	H-04C3
		0.63 (16)	H-04C4
		1(25.4)	H-04C5
2 (51)	0.75 (19)	0.25 (6.3)	H-4C5
		1.97(50)	H-4C5
	0.63 (16)	0.25 (6.3)	H-04D1
		0.63 (16)	H-04D2
		0.25 (6.3)	H-04D3
		0.63 (16)	H-04D4
2.5 (63.5)	0.75 (19)	0.25 (6.3)	H-04E1
		0.63 (16)	H-04E2
	0.63 (16)	0.25 (6.3)	H-04E3
		0.63 (16)	H-04E4
3 (76)	0.75 (19)	0.25 (6.3)	H-04F1
		0.63 (16)	H-04F2
	0.63 16	0.25 (6.3)	H-04F3
		0.63 16	H-04F4

* Mounting hole center to roller center distance

90° Forked Cast Aluminum Lever Arms with Roller

Add '-P' suffix for nylon roller (following part numbers are with steel roller)



Arm Length in. (mm)	Roller Position	Roller		Part Number
		Diameter in. (mm)	Width in. (mm)	
1.5 (38)	Rollers on same side	0.75 (19)	0.25 (6.3)	H-05-1
		0.63 (16)	0.25 (6.3)	H-05-3
	R.H. Rollers on opposite side	0.75 (19)	0.25 (6.3)	H-05-1RH
		0.63 (16)	0.25 (6.3)	H-05-3RH
	L.H. Rollers on opposite side	0.75 (19)	0.25 (6.3)	H-05-1LH
		0.63 (16)	0.25 (6.3)	H-05-3LH

* Mounting hole center to roller center distance

Adjustable Length Lever Arm with Steel Roller

Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08-3
	0.63 (16)	0.63 (16)	H-08-4
	0.75(19)	0.25(6.3)	H-08-5
Bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08B-3
	0.63 (16)	0.63 (16)	H-08B-4
	0.75(19)	0.25(6.3)	H-08B-5

Adjustable Length Lever Arm with Nylon Roller

Lever Length in. (mm)	Roller Dia. in. (mm)	Roller Width in. (mm)	Part Number
Non-bendable, adjustable from 22-101mm	0.63 (16)	0.25 (6.3)	H-08-3P
	1 (25.4)	0.63 (16)	H-08-5P
	0.75(19)	0.25(6.3)	H-08-7P
	0.63 (16)	0.25 (6.3)	H-08B-3P
Bendable, adjustable from 22-101mm	1.0 (25.4)	0.63 (16)	H-08B-5P
	2 (51)	0.25 (6.3)	H-08B-6P

* Mounting hole center to roller center distance

* For used with 11mm shaft (suffix blank); 7.0mm and 7.3mm shaft (suffix -HW); and 8.0mm shaft (suffix -AB)



Levers for Rotary Heads (HMS/HLS/HES Heavy Duty Limit Switches)

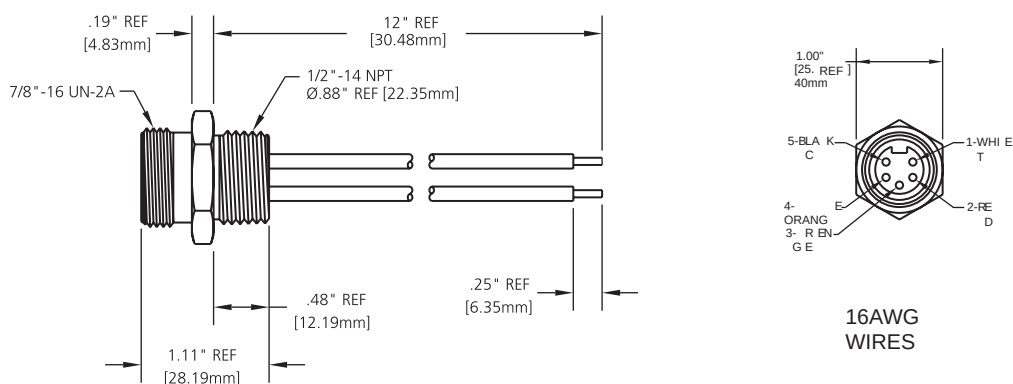


Rod Type Lever Arms

Description	Length in. (mm)	Part Number
Stainless Steel Rod	10 (254)	H-07-10
Spring Rod, Steel	12 (304)	H-07S-12
Spring Rod, Delrin	12 (304)	H-07P-12
Looped Delrin Rod Arm	160MM(6.3IN.)	H-06
Looped Delrin Rod Arm	228MM(9IN.)	H-09

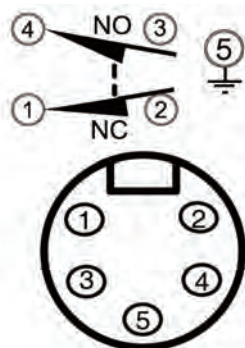
* For used with 11mm shaft (suffix blank); 7.0mm shaft (suffix -CH); 7.3mm shaft (suffix -HW) and 8.0mm shaft (suffix -AB)

NPT12-16-5P MALE STRAIGHT WITH 1/2" - 14NPT THREADS (5-PIN)

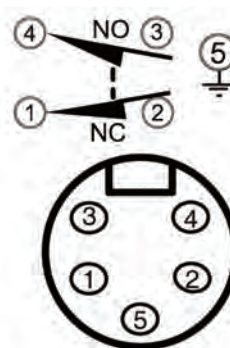


For prewired limit switches with NPT-12-16-5P connector, add -Q1 or -Q9 suffix

-Q1: wiring diagram



-Q9: wiring diagram



HEX Series Heavy Duty Limit Switches for Hazardous Location (EEX)

Features

- Aluminum die cast body or corrosion-resistant stainless steel body
- Conform to EN 60947-5-1, IEC 60947-5-1, UL508, NEMA250, CSA22.2 Standards
- Wide range of actuator available
- High repeatability (0.03mm for linear travel)

Electrical Ratings

IEC 60947-5-1 / EN 90947-5-1						
Designation & Utilization Category	Rated operational current I _e (A) at rated operational voltage U _e					VA rating Make Break
AC15 A600	120V	240V	380V	480V	600V	7200 720
	6A	3A	1.9A	1.5A	1.2A	
DC13 Q300	125VDC	250VDC				69 69
	0.55	0.27				

Specifications

Operating Speed	0.05mm-2m/sec
Rated Current/Voltage	10A/600V AC (EN60947-5-1) AC15 A600 / DC13 Q300
Service Life	Mechanically 10 millions (operations) Electrically 1 million (operations)
Operating Temperature	-28.9~+85°C (-20~185°F)
Vibration Resistance	25gn (10..150 Hz, 11ms) per IEC60068-2-6
Shock Resistance	60gn (9ms) per IEC 60068-2-27
Dielectric Strength	2200VAC for 1 minute
Short Circuit Protection	10A fuse
Terminal Wire Size	12-22AWG (2.05-0.644mm ²)
Degree of Protection	IP 67 conforming to IEC 60529, NEMA Types 2, 4, 6, 6P, 12, 13
HEX HAZARDOUS LOCATION RATINGS:	CLASS I DIV GROUPS B,C,D CLASS II DIV GROUPS E,F,G CLASS III DIV 1 AND 2

* Wider operating temperature models are available. Please contact us.



Selection Guide:

HEX	S	1	A	04	A	-	F	
	Housing Material	Contact Block	Conduit	Head Style	Applied on to Lever Arms Style	Contact Material	Rubber Seal Type	Rotary Head Shaft Diameter
	Blank: Aluminum	1: SPDT (1NO/1NC) Snap action	A: 1/2NPT			Blank: Silver	Blank: Standard	Blank: 11.0mm
	S: Stainless steel	2: DPDT (2NO/2NC) Snap action	F: 3/4NPT			K: Gold plated	F: Fluorite rubber	(AB): 8.0mm
		3: DPDT (2NO/2NC) 2 stages		2 digit or 2 digit + 1 letter	B: Standard			(CH): 7.0mm
		4: DPDT (2NO/2NC) Center neutral operation			A: High precision			(HW): 7.3mm
		5: DPDT (4NO) Slow action			N: Low torque			
		6: DPDT (3NO/1NC) Slow action			D: High precision low torque			
		7: DPDT (2NO/2NC) Slow action			C: Maintained			
		8: DPDT (1NO/3NC) Slow action			TB: Neutral position			
		9: DPDT (4NC) Slow action			TA: Neutral position (High precision)			

HEX Series Heavy Duty Limit Switches for Hazardous Location (EEX)

Plunger type

01 Styles

11 Styles



12 Styles

13 Styles



Side Plunger type

11H Styles

12H Styles

13H Styles



Side Plunger (Maintained) type

10H Styles



Spring coil type

00

66

69



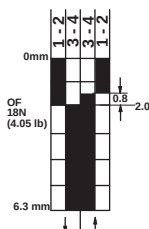
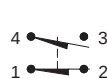
Cat Whisker type

68 Styles



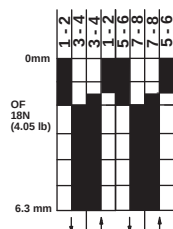
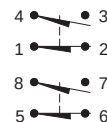
HEX-1A

1NO/1NC



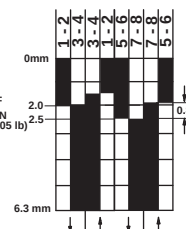
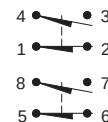
HEX-2A

2NO/2NC

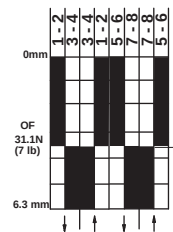
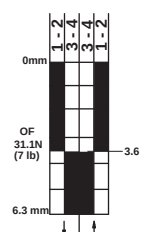
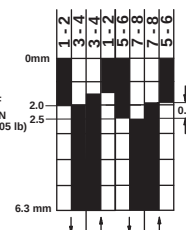
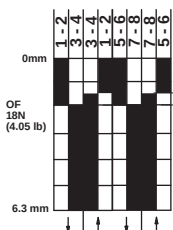
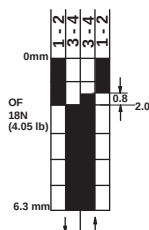


HEX-3A

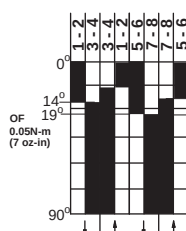
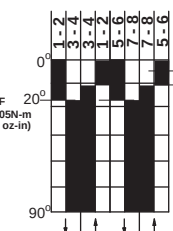
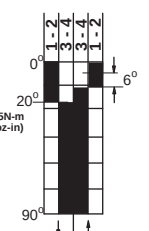
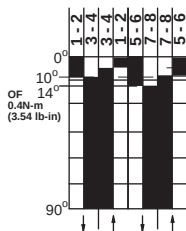
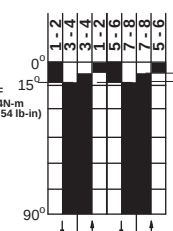
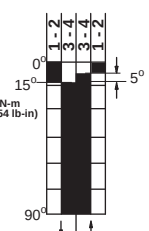
2NO/2NC (2-stages)



* Note: Operating Force (OF) is 31.1N (7 lb) for Plunger type 01 style.

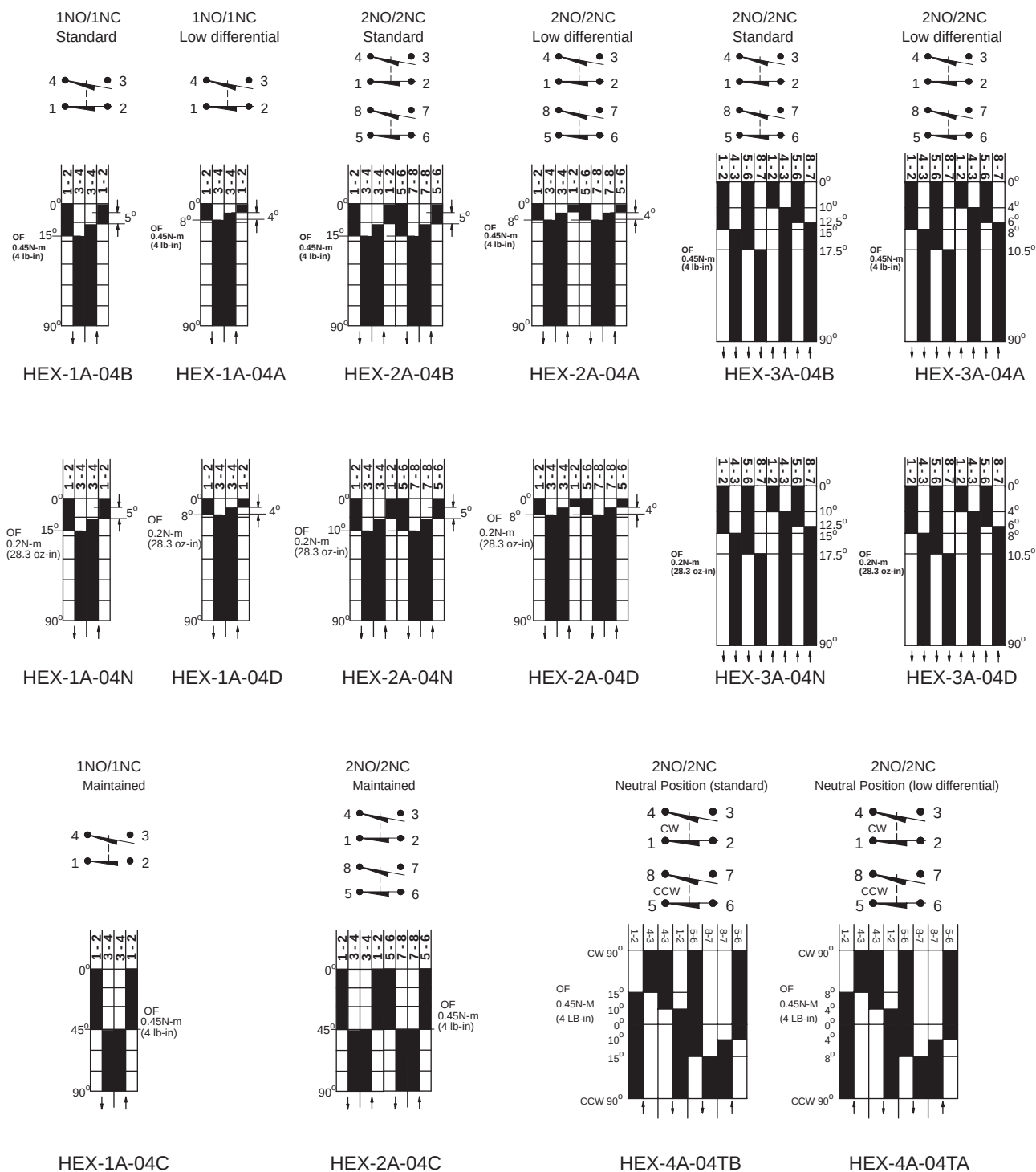


ON OFF

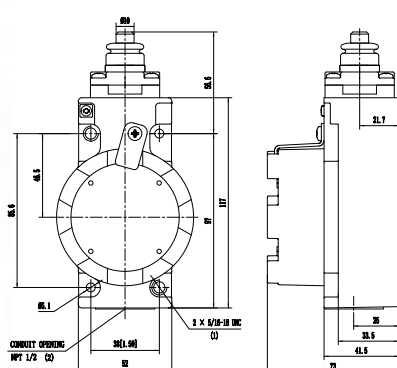


HEX Series Heavy Duty Limit Switch HEX for Hazardous Location (EEX)

Travel Diagram for Rotary Lever Styles

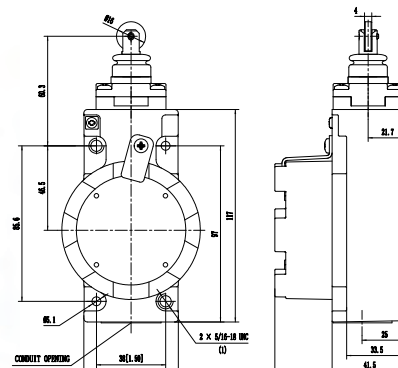


HEX Series Heavy Duty Limit Switches



Order Code

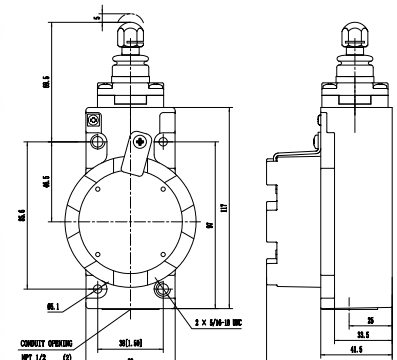
HEX-1A-11: 1NO/1NC
 HEX-2A-11: 2NO/2NC
 HEX-3A-11: 2NO/2NC (2-stage)



Order Code

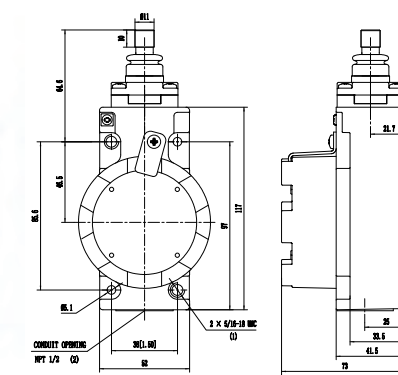
HEX-1A-12: 1NO/1NC
 HEX-2A-12: 2NO/2NC
 HEX-3A-12: 2NO/2NC (2-stage)

Adjustable Operating Position (OP)



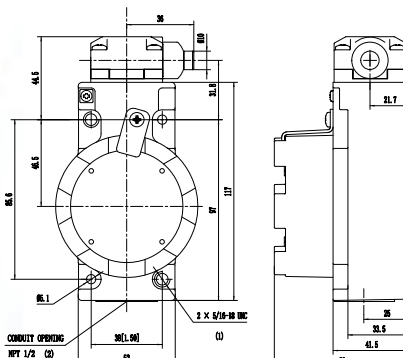
Order Code

HEX-1A-13: 1NO/1NC
 HEX-2A-13: 2NO/2NC
 HEX-3A-13: 2NO/2NC (2-stage)



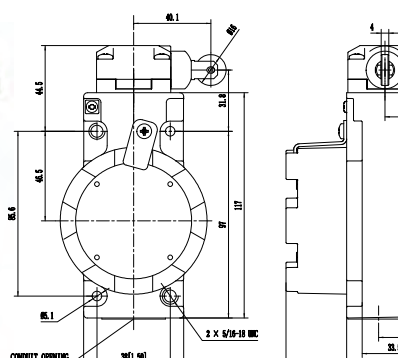
Order Code

HEX-1A-01: 1NO/1NC
 HEX-2A-01: 2NO/2NC
 HEX-3A-01: 2NO/2NC (2-stage)



Order Code

HEX-1A-11H: 1NO/1NC
 HEX-2A-11H: 2NO/2NC
 HEX-3A-11H: 2NO/2NC (2-stage)

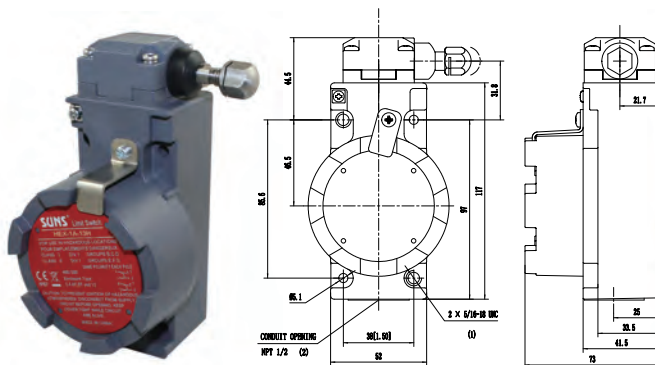


* Note: roller can be adjust to cross orientation

Order Code

HEX-1A-12H: 1NO/1NC
 HEX-2A-12H: 2NO/2NC
 HEX-3A-12H: 2NO/2NC (2-stage)

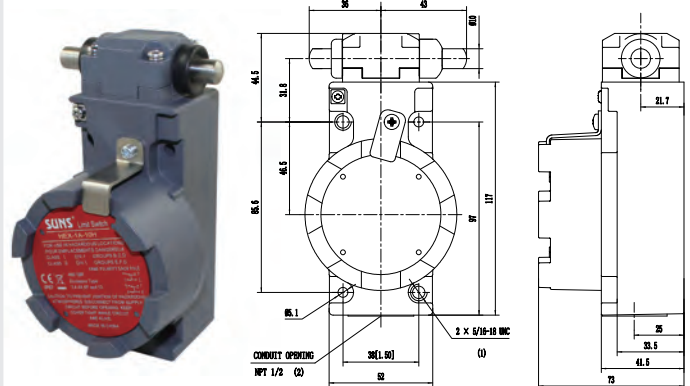
HEX Series Heavy Duty Limit Switches



Order Code

HEX-1A-13H: 1NO/1NC
HEX-2A-13H: 2NO/2NC
HEX-3A-13H: 2NO/2NC (2-stage)

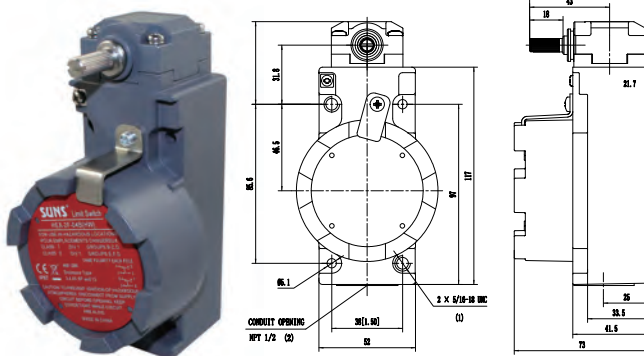
Maintained



Order Code

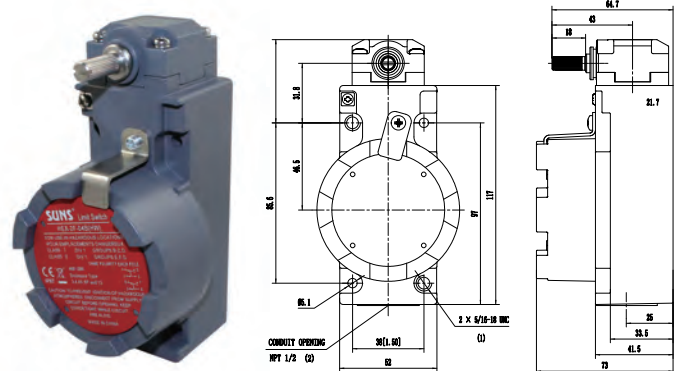
HEX-1A-10H: 1NO/1NC
HEX-2A-10H: 2NO/2NC

360° Rotary 4-Position Maintained



Order Code

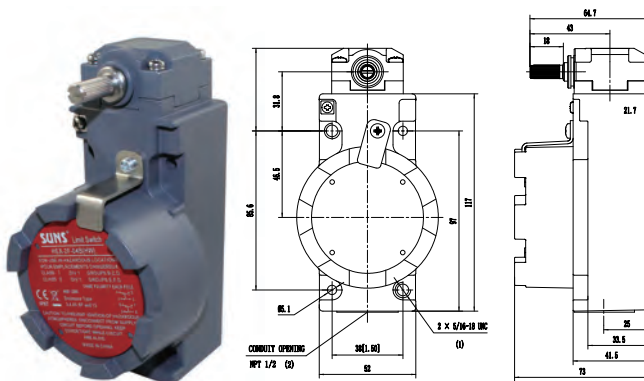
HEX-2A-04C: 2NO/2NC



Order Code

HEX-1A-04B: 1NO/1NC Standard Pretravel
HEX-1A-04A: 1NO/1NC Low Pretravel
HEX-1A-04N: 1NO/1NC Low Torque
HEX-1A-04D: 1NO/1NC Low Torque, Low Pretravel
HEX-2A-04B: 2NO/2NC Standard Pretravel
HEX-2A-04A: 2NO/2NC Low Differential Travel
HEX-2A-04N: 2NO/2NC Low Torque
HEX-2A-04D: 2NO/2NC Low Torque, Low Pretravel
HEX-3A-04B: 2NO/2NC (2-stage) Standard Pretravel
HEX-3A-04A: 2NO/2NC (2-stage) Low Pretravel
HEX-3A-04N: 2NO/2NC (2-stage) Low Torque
HEX-3A-04D: 2NO/2NC (2-stage) Low Torque, Low Differential Travel

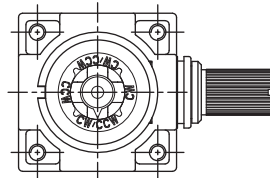
Neutral Position



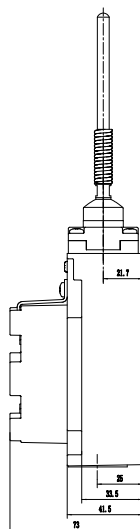
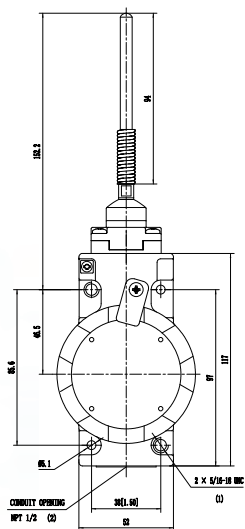
Order Code

HEX-4A-04TA: 2NO/2NC (Low Pretravel)
HEX-4A-04TB: 2NO/2NC

Head is factory set to operate the contacts in both the CW and CCW directions. To make change, simply pull out and rotate the arrow to the letters representing the desired direction: CW, CCW, or CW/CCW.

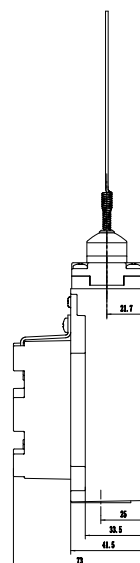
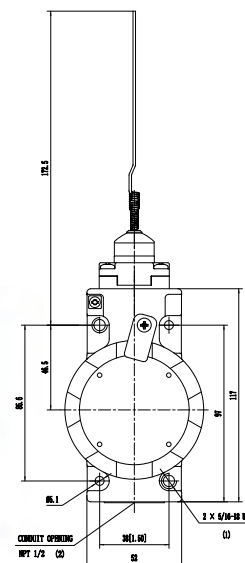


HEX Series Heavy Duty Limit Switches



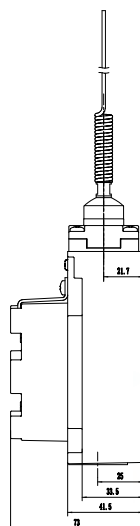
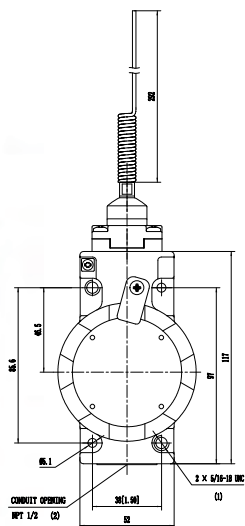
Order Code

HEX-1A-66: 1NO/1NC
HEX-2A-66: 2NO/2NC
HEX-3A-66: 2NO/2NC (2-stage)



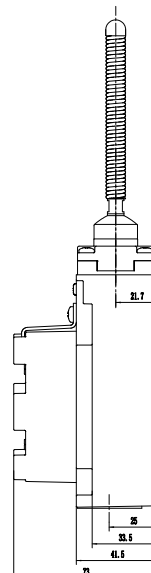
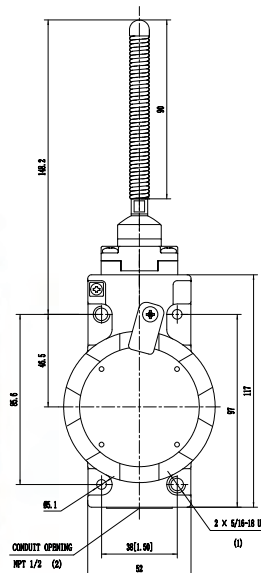
Order Code

HEX-1A-68: 1NO/1NC
HEX-2A-68: 2NO/2NC
HEX-3A-68: 2NO/2NC (2-stage)



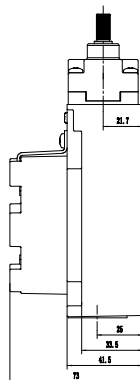
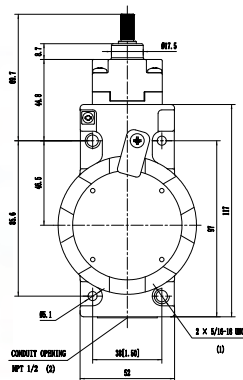
Order Code

HEX-1A-69: 1NO/1NC
HEX-2A-69: 2NO/2NC
HEX-3A-69: 2NO/2NC (2-stage)

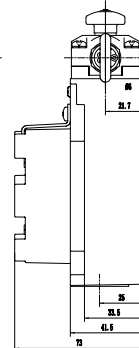
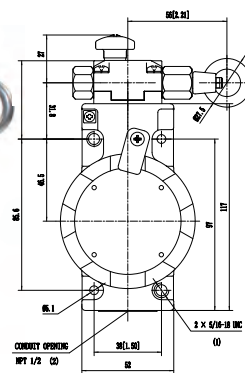


Order Code

HEX-1A-00: 1NO/1NC
HEX-2A-00: 2NO/2NC
HEX-3A-00: 2NO/2NC (2-stage)

[illegible]

A grey industrial pressure washer with a red label and a blue handle. The label features the 'SUNT' logo and technical specifications. A metal ring is attached to the side for hanging.



HEX-6A-70H:	3NO/1NC
HEX-7A-70H:	2NO/2NC
HEX-8A-70H:	1NO/3NC

HCX Series Heavy Duty Limit Switches for Hazardous Location (EEX)

Features

- Epoxy-coated aluminum body
- Weather-sealed for harsh environment
- Wide range of actuators available
- Pretravel, overtravel and actuating sequence field adjustable without tools

Specifications

Operating Speed	0.05mm-2m/sec
Service Life	Mechanically 10 millions (operations) Electrically 1 million (operations)
Operating Temperature	-28.9~+85°C (-20~185°F)
Vibration Resistance	25gn (10..150 Hz, 11ms) per IEC60068-2-6
Shock Resistance	60gn (9ms) per IEC 60068-2-27
Dielectric Strength	2200VAC for 1 minute
Degree of Protection	IP 67 NEMA Types 1, 3, 4, 4X 6, 6P, 13
NEMA7	CLASS I, DIV1 & DIV2 GROUPS B,C,D
NEMA9	CLASS II DIV1 & DIV2 GROUPS E,F,G
ATEX/IEC Ex	INMETRO (Gas) II 2 G; Exd IIC T6 INMETRO (Dust) II 2 D; Exd tD A21 T85°C

* Wider operating temperature models are available. Please contact us.

Electrical Ratings for HCX1

Operating voltage	Non-inductive load (A)				Inductive load (A)			
	Resistive load		Bulb load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	15	-	3	1.5	15	-	5	2.5
250 VAC	15	-	2.5	1.25	15	-	3	1.5
500 VAC	10	-	1.5	0.75	6	-	1.5	0.75
8 VDC	15	-	3	1.5	15	-	5	2.5
14 VDC	15	-	3	1.5	10	-	5	2.5
30 VDC	6	-	3	1.5	5	-	5	2.5
125 VDC	0.5	-	0.5	0.5	0.05	-	0.05	0.05
250 VDC	0.25	-	0.25	0.25	0.03	-	0.03	0.03
Inrush current	NC:30A max. NO:15A max				NC:30A approx. NO:15A max			

Electrical Ratings for HCX2

Operating voltage	Non-inductive load (A)				Inductive load (A)			
	Resistive load		Bulb load		Inductive load		Motor load	
	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	20	20	7.5	7.5	20	20	12.5	12.5
250 VAC	20	20	7.5	7.5	20	20	8.3	8.3
500 VAC	15	15	4	4	10	10	2	2
8 VDC	20	20	3	1.5	20	20	12.5	12.5
14 VDC	20	20	3	1.5	15	15	12.5	12.5
30 VDC	6	6	3	1.5	5	5	5	5
125 VDC	0.5	0.5	0.5	0.5	0.05	0.05	0.05	0.05
250 VDC	0.25	0.25	0.25	0.25	0.03	0.03	0.03	0.03
Inrush current	NC:75A max. NO:75A max				NC:75A approx. NO:75A max			

Electrical Ratings for HCXD

Rate Voltage			Non-inductive load (A)				Inductive load (A)			
			Resistive load		Bulb load		Inductive load		Motor load	
			NC	NO	NC	NO	NC	NO	NC	NO
Series connection	AC	125	10		4		6		5	
		250	10		2.5		6		3	
		30	10		4		6		6	
	DC	125	1		1		0.1		0.1	
		250	0.6		0.6		0.05		0.05	
		30	6		4		4		6	
Parallel connection	AC	125	6		3		4		4	
		250	6		2.5		4		2	
		30	6		4		4		6	
	DC	125	0.6		0.6		0.1		0.1	
		250	0.3		0.3		0.05		0.05	
		30	6		4		4		6	



HCX_1N
HCX_2N

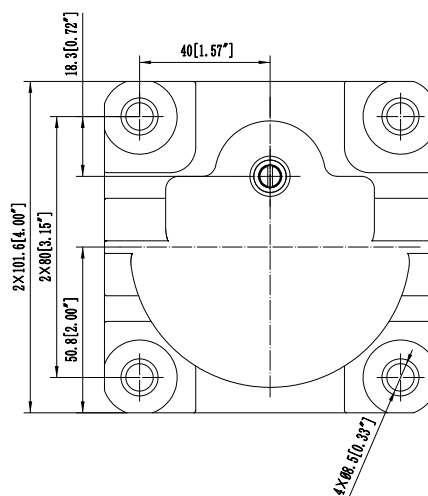
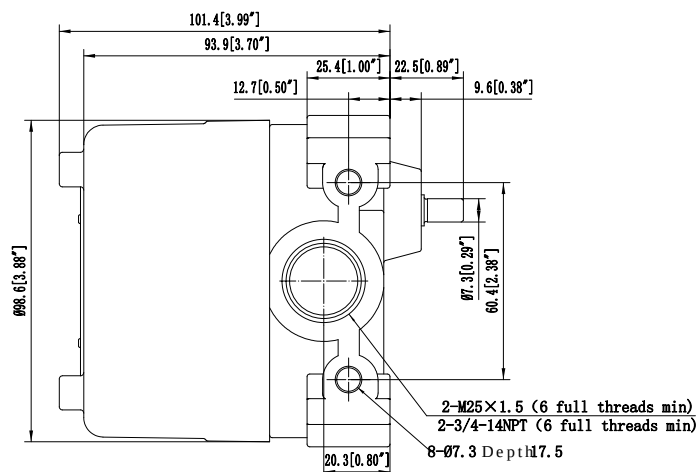


HCX_3N
HCX_4N

Selection Guide:

HCX	1	2 N	-	04	B	-	F	-	F
	Contact Block Type	# of Contact Block		Head Style	Applicable only to Lever Arms Style		Conduit Type	Mounting	Rubber Seal Type
	1: 15A SPDT (1NO/1NC) Snap action	1: One contact block			B: Standard		F: 3/4NPT	Blank: Non-threaded thru holes	Blank: Standard
	2: 20A SPDT (1NO/1NC) Snap action	2: Two contact blocks			N: Low torque		M: M25	A: Side mounting 5/16-8(8)	F: Fluorite Rubber
	D: 10A DPDT (2NO/2NC) Snap action	3: Three contact blocks			C: Maintained			B: Thru mounting, 3/8-24(4)	
	S: 15A DPDT (2NO/2NC) Hermetically sealed	4: Four contact blocks		2 digit or 2 digit + 1 letter	TB: Neutral position				

HCX Series Heavy Duty Limit Switches for Hazardous Location (EEX)

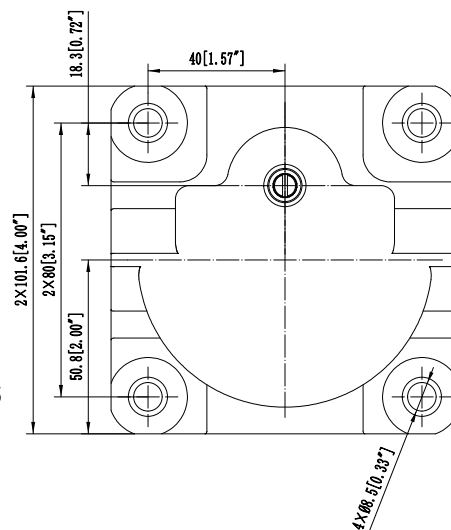
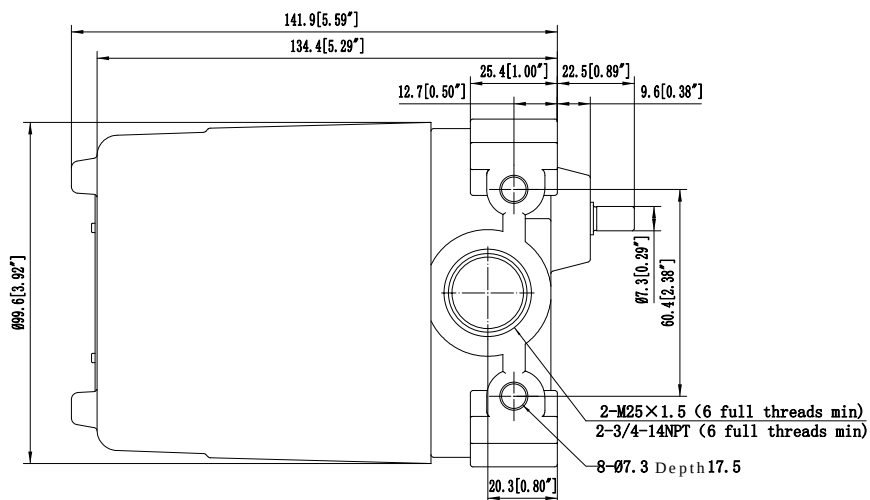


Order Code

HCX12N-04B: 2NO/2NC Standard
HCX12N-04N: 2NO/2NC Low Torque
HCX12N-04TB: 2NO/2NC Neutral Position

Operating Characteristics

Max. Pretravel: 15°
Max. Differential Travel: 10°
Min. Overtravel: 90°



Order Code

HCX14N-04B: 4NO/4NC Standard
HCX14N-04N: 4NO/4NC Low Torque
HCX14N-04TB: 4NO/4NC Neutral Position

Operating Characteristics

Max. Pretravel: 15°
Max. Differential Travel: 10°
Min. Overtravel: 90°

SUNS Product Overview

SNAP SWITCHES

Large assortment of snap switches with your choice of operating force, actuator, and electrical rating. Ratings include 10, 15, 20 and 25A, up to 600V and waterproof (IP67) available.



PUSHBUTTON SWITCHES

Full line of 16mm, 22mm and 30 mm NEMA style pushbutton switches. Available in both plastic and metal heads.



LIMIT SWITCHES

The widest range of limit switches with over 3,000+ models. Whether your application requires a standard IP65 or an explosions-proof NEMA style body we have your switch.



PENDANT AND CONTROL STATIONS

Pendant and control stations ideal for crane, lift, and various industrial applications. Customize your button configuration with maintained, interlock, or 2-speed features available.



SAFETY SWITCHES

Extensive offering of reliable safety switch models including key interlock, solenoid key interlock, cable-pull, hinge and remote reset.



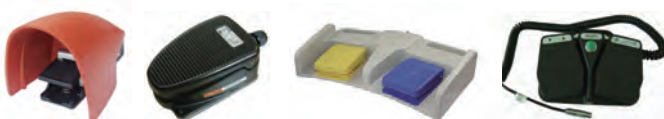
PROXIMITY/MAGNETIC SWITCHES

Inductive, capacitive and magnetic proximity sensors with various detection distances. NPN/ PNP, NC/NO, and AC/DC options available.



FOOT SWITCHES

The highest quality industrial and medical foot switch product for any application. Choose from various robust glass reinforced plastic or aluminum die cast bodies. USB and wireless (RF or bluetooth) versions also available.



AND MORE!

SUNS also offers following products: Terminal blocks, Indicator light, Signal lights, Tower Lights, Alarm bells



* All SUNS products are manufactured according to the highest manufacturing standards.

* All products are UL/CSA/CE Certified and are also RoHS, REACH compliant.

The SUNS logo is rendered in a bold, white, sans-serif typeface. A registered trademark symbol (®) is positioned at the top right of the letter 'S'. The logo is centered horizontally within the upper portion of the page.

SUNS[®]

The slogan 'The Right Switch For Your Applications' is written in a white, sans-serif font. It is positioned below the SUNS logo and is partially framed by a white geometric line that extends from the left edge of the page, slopes upwards, and then continues horizontally to the right edge.

The Right Switch For Your Applications