SUNS® International, LLC

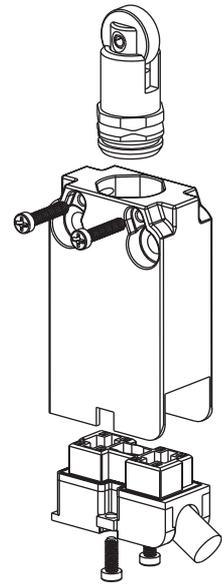## Compact Safety Limit Switches (Modular Design, Metal body, IP67)
SM31 SERIES (20mm) and SM32 SERIES (25mm)
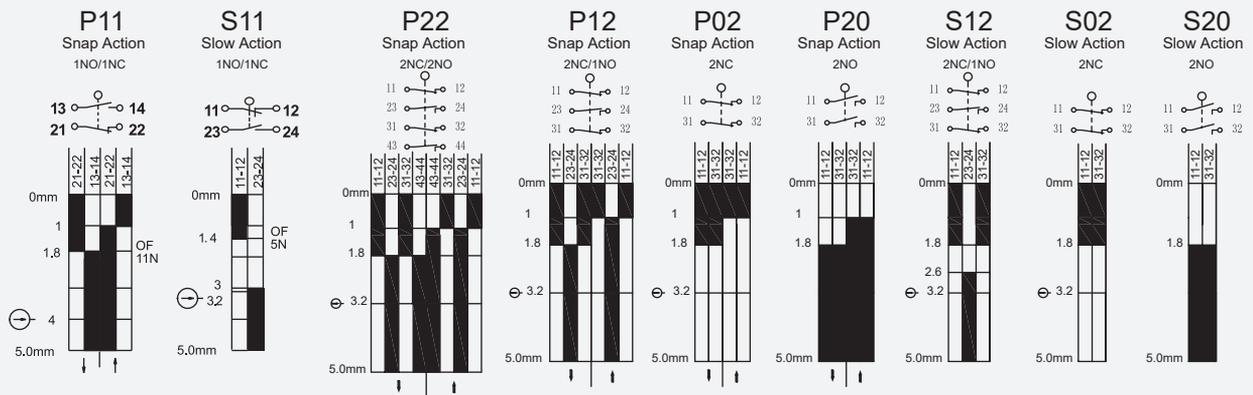
Selection Guide:

| SM3 | 1 | - | P | | 11 | - | 12 | H | - | A | | 2 |

Housing

| 20mm mounting | 1 |
| 25mm mounting | 2 |

| P | Snap Action |
| S | Slow Action |

11	1NO/1NC
12	1NO/2NC
20	2NO
21	2NO/1NC
22	2NO/2NC
02	2NC

Head Style

| Blank | Standard head |
| H | Horizontal head |

A	Cable side exit
B	Cable bottom exit
Q1	M12 connector side exit 4 pin
Q2DT	DT connector bottom exit 4 pin
Q3	M12 connector bottom exit 5 pin

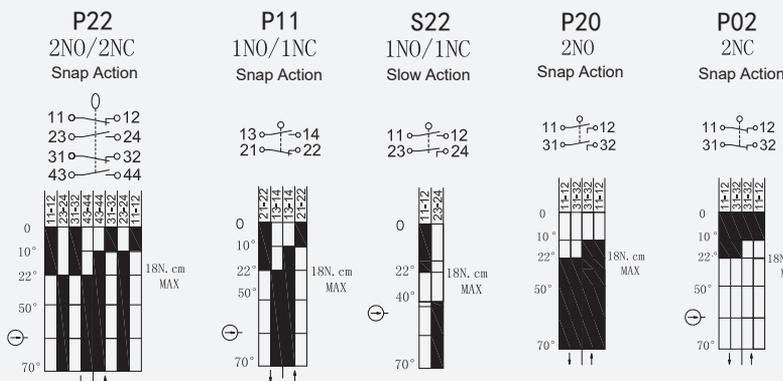| 2 | 2 meters cable |

Specification

Operating Speed	0.05mm-2m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 30 ops/min
Insulation Resistance	>100M⊠@500V DC
Contact Resistance	<25m⊠ (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:

P11 Snap Action 1NO/1NC · S11 Slow Action 1NO/1NC · P22 Snap Action 2NC/2NO · P12 Snap Action 2NC/1NO · P02 Snap Action 2NC · P20 Snap Action 2NO · S12 Slow Action 2NC/1NO · S02 Slow Action 2NC · S20 Slow Action 2NO

Rotary Style:

P22 2NO/2NC Snap Action · P11 1NO/1NC Snap Action · S22 1NO/1NC Slow Action · P20 2NO Snap Action · P02 2NC Snap Action

Spring Coil Style:

P11 1NO/1NC Snap Action · S11 1NO/1NC Slow Action

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

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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

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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)
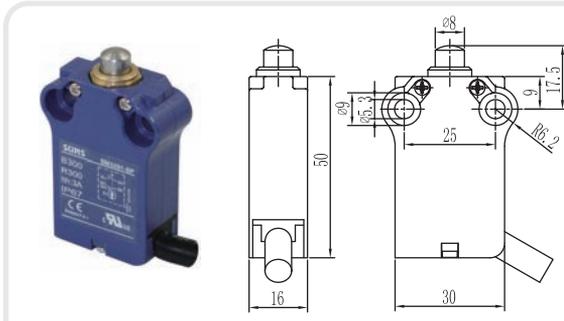
Order Code	Contact block		
SM32P11-01	SP	snap action	1NO+1NC
SM32S11-01	SL	slow action	1NO+1NC BBM
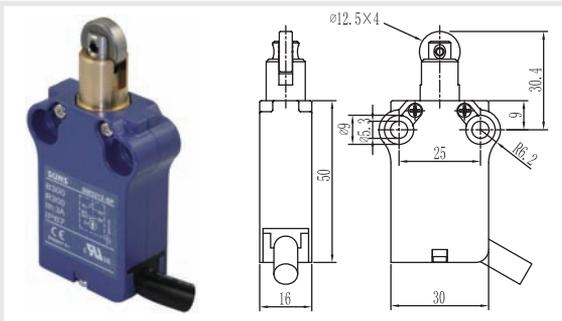
Order Code	Contact block		
SM32P11-12	SP	snap action	1NO+1NC
SM32S11-12	SL	slow action	1NO+1NC BBM
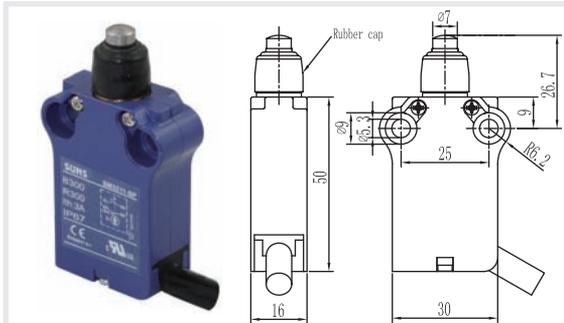
Order Code	Contact block		
SM32P11-11	SP	snap action	1NO+1NC
SM32S11-11	SL	slow action	1NO+1NC BBM
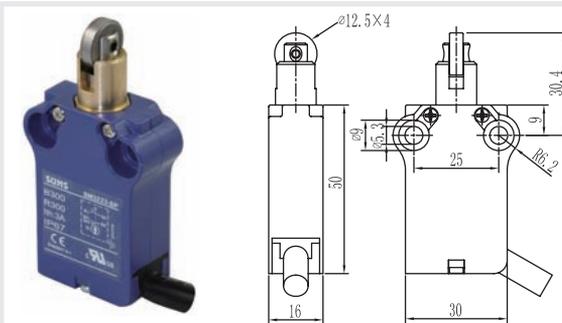
Order Code	Contact block		
SM32P11-22	SP	snap action	1NO+1NC
SM32S11-22	SL	slow action	1NO+1NC BBM
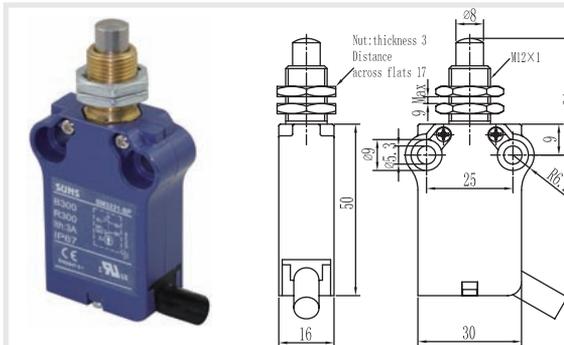
Order Code	Contact block		
SM32P11-21	SP	snap action	1NO+1NC
SM32S11-21	SL	slow action	1NO+1NC BBM
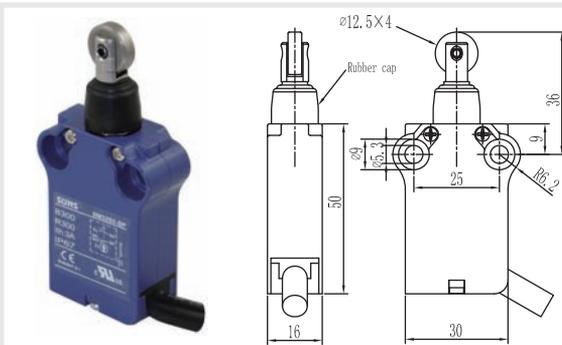
Order Code	Contact block		
SM32P11-02	SP	snap action	1NO+1NC
SM32S11-02	SL	slow action	1NO+1NC BBM
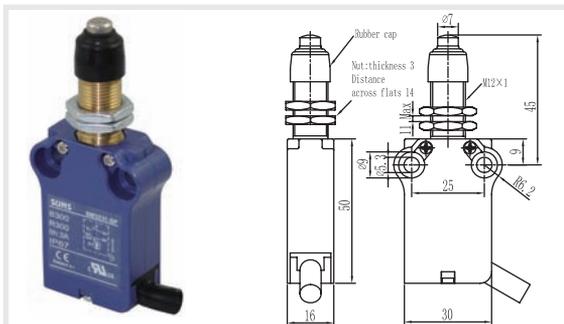
Order Code	Contact block		
SM32P11-31	SP	snap action	1NO+1NC
SM32S11-31	SL	slow action	1NO+1NC BBM
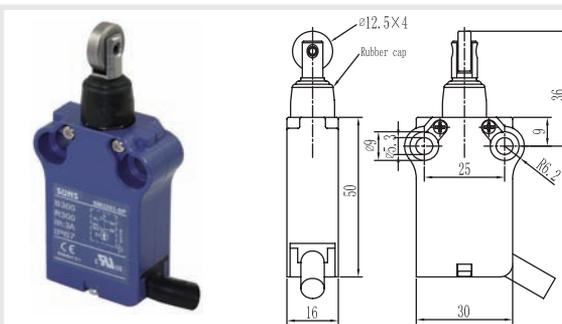
Order Code	Contact block		
SM32P11-03	SP	snap action	1NO+1NC
SM32S11-03	SL	slow action	1NO+1NC BBM

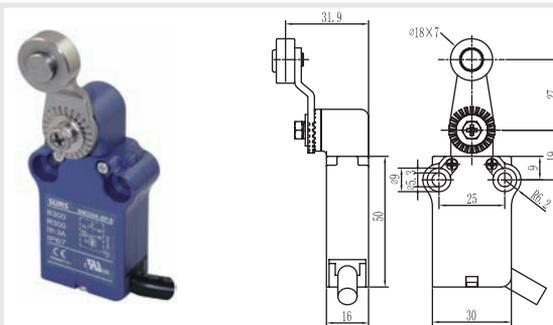Compact Safety Limit Switches (Modular Design, IP67, 25mm)
SM32 SERIES (25mm)
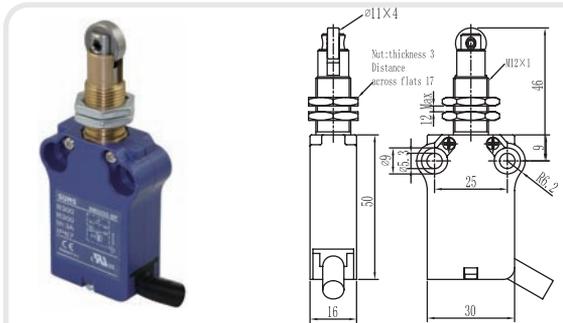
Order Code		Contact block	
SM32P11-32	SP → snap action	1NO+1NC	
SM32S11-32	SL → slow action	1NO+1NC	BBM
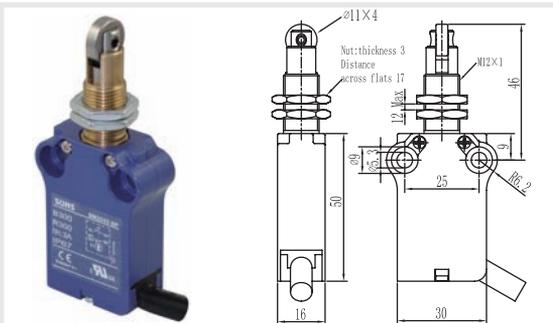
Order Code		Contact block	
SM32P11-42	SP → snap action	1NO+1NC	
SM32S11-42	SL → slow action	1NO+1NC	BBM
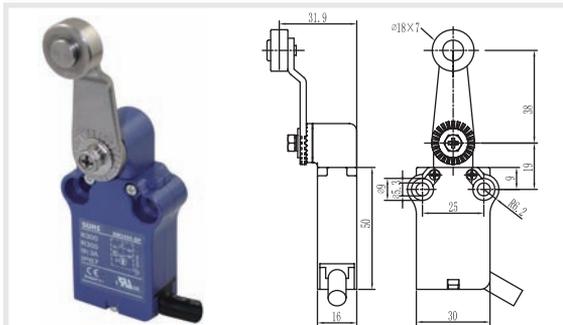
Order Code		Contact block	
SM32P11-04	SP → snap action	1NO+1NC	
SM32S11-04	SL → slow action	1NO+1NC	BBM

Order Code		Contact block	
SM32P11-04S	SP → snap action	1NO+1NC	
SM32S11-04S	SL → slow action	1NO+1NC	BBM
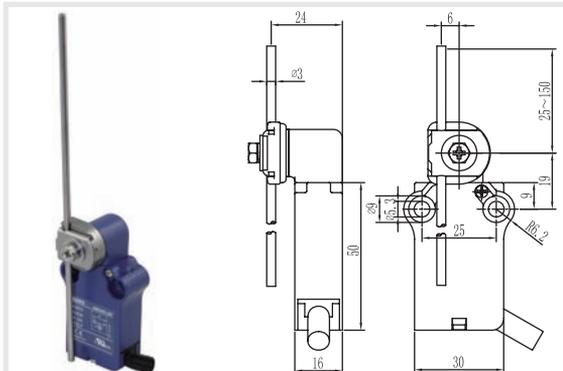
Order Code		Contact block	
SM32P11-07	SP → snap action	1NO+1NC	
SM32S11-07	SL → slow action	1NO+1NC	BBM
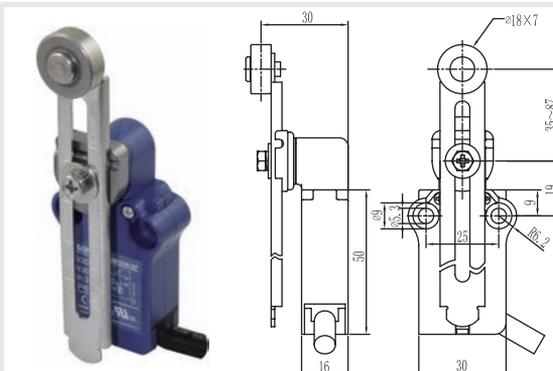
Order Code		Contact block	
SM32P11-08	SP → snap action	1NO+1NC	
SM32S11-08	SL → slow action	1NO+1NC	BBM
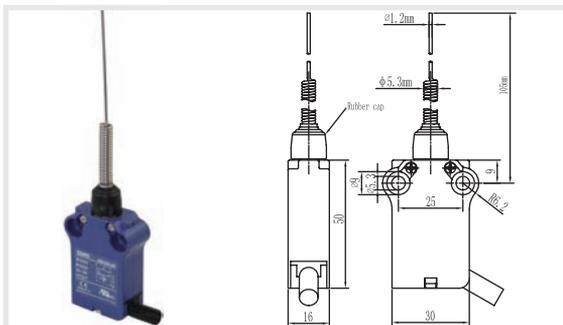
Order Code			
SM32P11-69	SP snap action	1NO+1NC	
SM32S11-69	SL slow action	1NO+1NC	BBM
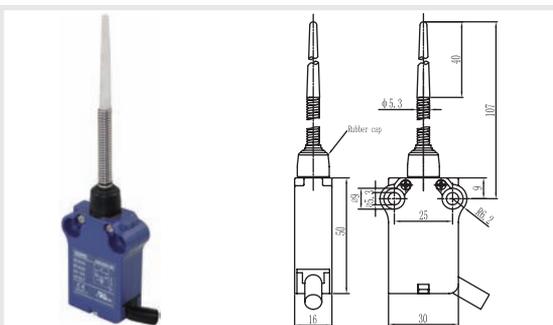
Order Code			
SM32P11-66	SP snap action	1NO+1NC	
SM32S11-66	SL slow action	1NO+1NC	BBM

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

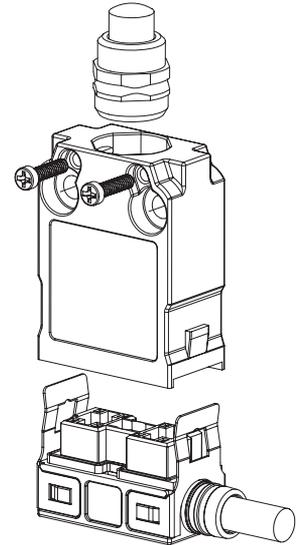| Order Code		Contact block	
SM32P11-11 G	SP	→ snap action	1NO+1NC
SM32S11-11 G	SL	→ slow action	1NO+1NC BBM

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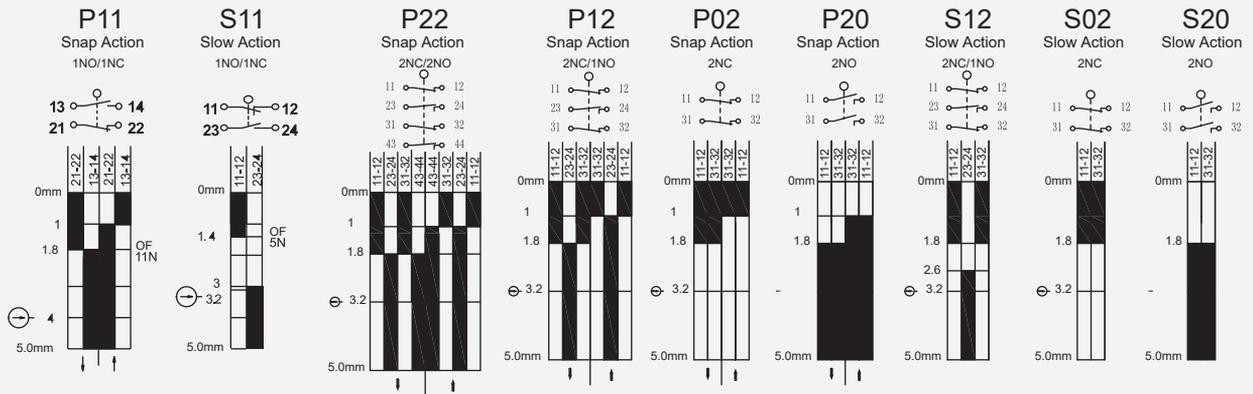### SM31N SERIES (20mm) and SM32N SERIES (25mm)

Selection Guide:

| SM3 | 1 | N | - | P | 11 | - | 12 | H | - | A | 2 |

Housing	
20mm mounting	1
25mm mounting	2

P	Snap Action
S	Slow Action

11	1NO/1NC
12	1NO/2NC
20	2NO
21	2NO/1NC
22	2NO/2NC
02	2NC

Head Style

Blank	
H	Horizontal head

A	Cable side exit
B	Cable bottom exit
Q1	M12 connector side exit 4 pin
Q2DP	DP connector bottom exit 4 pin
Q3	M12 connector bottom exit 5 pin

2	2 meters cable

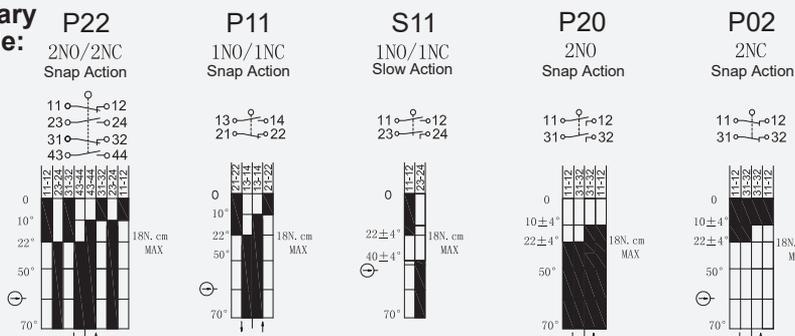### Specification

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:

P11	S11	P22	P12	P02	P20	S12	S02	S20
Snap Action	Slow Action	Snap Action	Snap Action	Snap Action	Snap Action	Slow Action	Slow Action	Slow Action
1NO/1NC	1NO/1NC	2NC/2NO	2NC/1NO	2NC	2NO	2NC/1NO	2NC	2NO

Rotary Style:

P22	P11	S11	P20	P02
2NO/2NC	1NO/1NC	1NO/1NC	2NO	2NC
Snap Action	Snap Action	Slow Action	Snap Action	Snap Action

Spring Coil Style:

P11	S11
1NO/1NC	1NO/1NC
Snap Action	Slow Action

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

Order Code	Contact block		
SM31NP11-01	SP	snap action	1NO+1NC
SM31NS11-01	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
SM31NP11-12	SP	snap action	1NO+1NC
SM31NS11-12	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
SM31NP11-11	SP	snap action	1NO+1NC
SM31NS11-11	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
SM31NP11-22	SP	snap action	1NO+1NC
SM31NS11-22	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
SM31NP11-21	SP	snap action	1NO+1NC
SM31NS11-21	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
SM31NP11-02	SP	snap action	1NO+1NC
SM31NS11-02	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
SM31NP11-31	SP	snap action	1NO+1NC
SM31NS11-31	SL	slow action	1NO+1NC BBM

Order Code	Contact block		
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
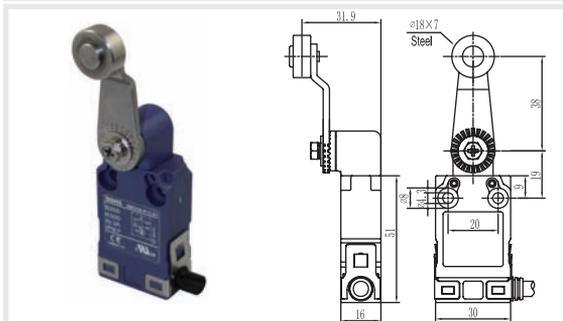
Compact Safety Limit Switches(Fiber Reinforced Plastic, IP67, 20mm)
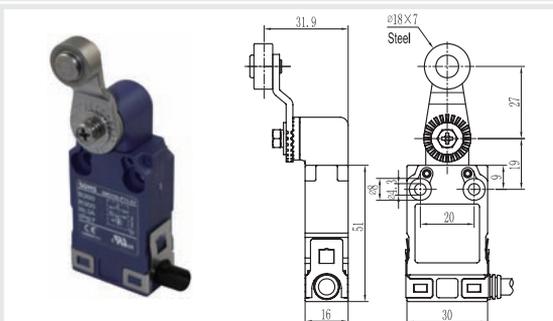## SM31N SERIES (20mm)
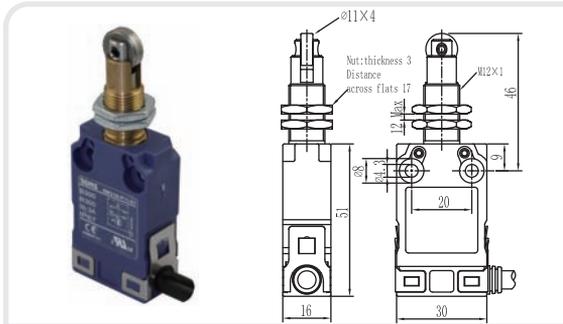
Order Code	Contact block				Order Code	Contact block			
SM31NP11-32	SP	→	snap action	1NO+1NC	SM31NP11-42	SP	→	snap action	1NO+1NC
SM31NS11-32	SL	→	slow action	1NO+1NC BBM	SM31NS11-42	SL	→	slow action	1NO+1NC BBM

Order Code	Contact block				Order Code	Contact block			
SM31NP11-04	SP	→	snap action	1NO+1NC	SM31NP11-04-S	SP	→	snap action	1NO+1NC
SM31NS11-04	SL	→	slow action	1NO+1NC BBM	SM31NS11-04-S	SL	→	slow action	1NO+1NC BBM
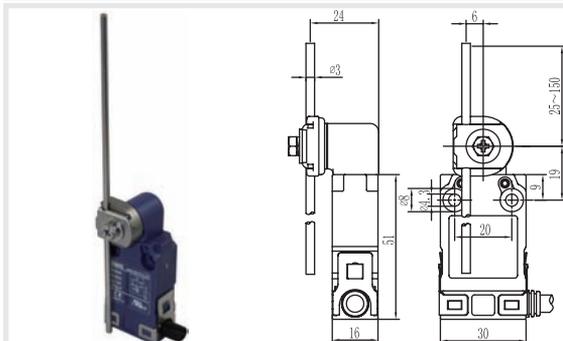
Order Code	Contact block				Order Code	Contact block			
SM31NP11-07	SP	→	snap action	1NO+1NC	SM31NP11-08	SP	→	snap action	1NO+1NC
SM31NS11-07	SL	→	slow action	1NO+1NC BBM	SM31NS11-08	SL	→	slow action	1NO+1NC BBM
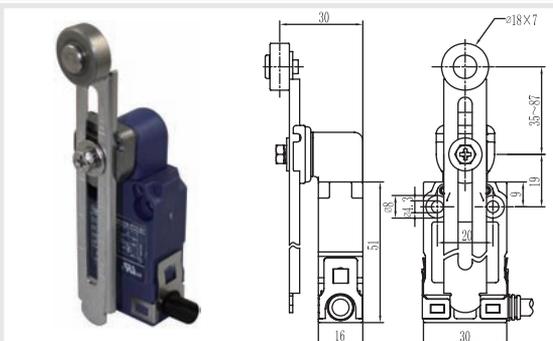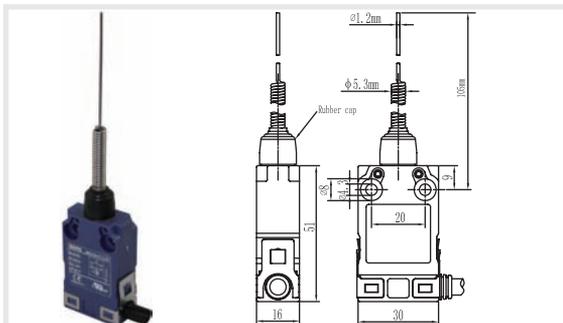
Order Code					Order Code				
SM31NP11-69	SP		snap action	1NO+1NC	SM31NP11-66	SP		snap action	1NO+1NC
SM31NS11-69	SL		slow action	1NO+1NC BBM	SM31NS11-66	SL		slow action	1NO+1NC BBM

* 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		Contact block		
SM31NP11-62	SP	⊕	snap action	1NO+1NC
SM31NS11-62	SL	⊕	slow action	1NO+1NC BBM

Order Code		Contact block		
SM31NP11-63	SP	⊕	snap action	1NO+1NC
SM31NS11-63	SL	⊕	slow action	1NO+1NC BBM

Order Code		Contact block		
SM31NP11-72	SP	⊕	snap action	1NO+1NC
SM31NS11-72	SL	⊕	slow action	1NO+1NC BBM

Order Code		Contact block		
SM31NP11-73	SP	⊕	snap action	1NO+1NC
SM31NS11-73	SL	⊕	slow action	1NO+1NC BBM

Order Code		Contact block		
SM31NP11-11 G	SP	⊕	snap action	1NO+1NC
SM31NS11-11 G	SL	⊕	slow action	1NO+1NC BBM

Also available in bottom cable exit

Order Code		Contact block		
	SP	⊕	snap action	1NO+1NC
	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

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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

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

Order Code		Contact block	
SM32NP11-32	SP	→ snap action	1NO+1NC
SM32NS11-32	SL	→ slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-42	SP	→ snap action	1NO+1NC
SM32NS11-42	SL	→ slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-04	SP	→ snap action	1NO+1NC
SM32NS11-04	SL	→ slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-04S	SP	→ snap action	1NO+1NC
SM32NS11-04S	SL	→ slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-07	SP	→ snap action	1NO+1NC
SM32NS11-07	SL	→ slow action	1NO+1NC BBM

Order Code		Contact block	
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

http://www.suns-usa.com

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

Order Code		Contact block	
SM32NP11-62	SP	snap action	1NO+1NC
SM32NS11-62	SL	slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-63	SP	snap action	1NO+1NC
SM32NS11-63	SL	slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-72	SP	snap action	1NO+1NC
SM32NS11-72	SL	slow action	1NO+1NC BBM

Order Code		Contact block	
SM32NP11-73	SP	snap action	1NO+1NC
SM32NS11-73	SL	slow action	1NO+1NC BBM

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

Also available in side cable exit

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

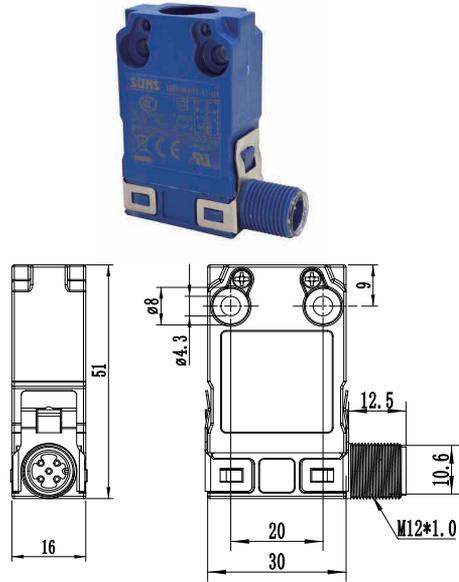* suffix:-A for side exit,-B for Bottom exit and one-digit number for length of the wire (meter).Eg :-B2

COMPACT LIMIT SWITCHES (Metal Body, IP67 Water-Proof)
SM31 SERIES (20mm) and SM32 SERIES (25mm)
SM31N SERIES (20mm) and SM32N SERIES (25mm)
Basic Body dimension:

Suffix: -Q1 (cable side exit) For SM31 and SM32
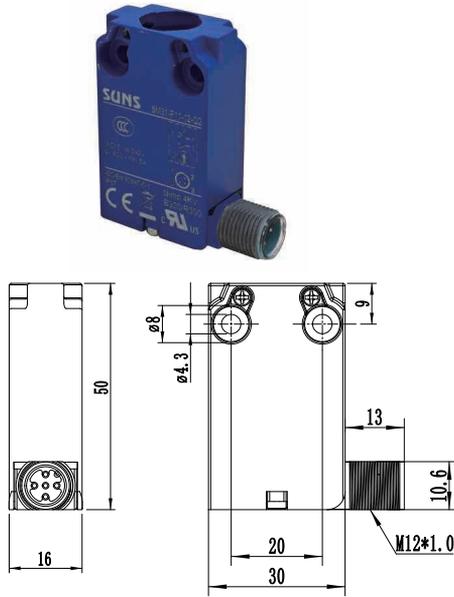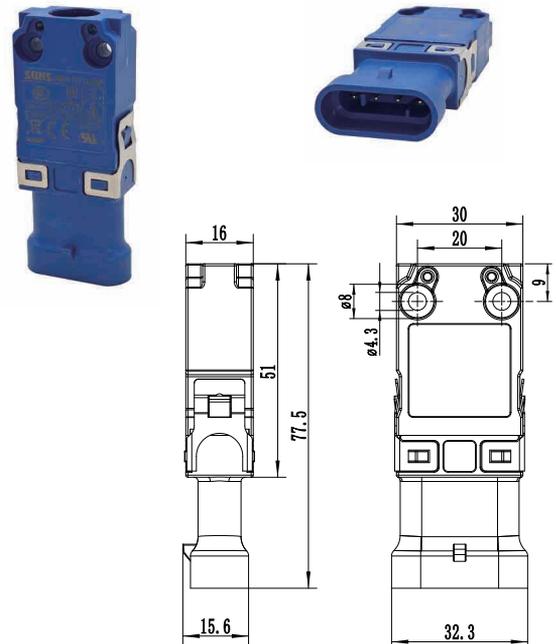

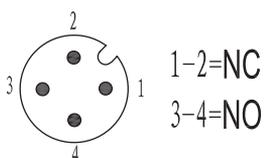Suffix: -Q1 (cable side exit) For SM31N and SM32N

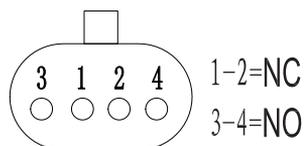Suffix: -Q2DT (cable side exit) For SM31

Suffix: -Q2DP (cable bottom exit) For SM31N

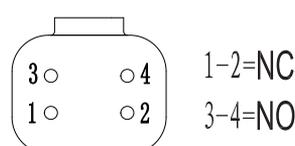Q1: 4 pin M12

1-2=NC
3-4=NO

Q2DP: 4 pin

3 1 2 4

1-2=NC
3-4=NO

Q2DT: 4 pin

3 4
1 2

1-2=NC
3-4=NO

Q3: 5 pin M12

1-2=NC
3-4=NO
5=⏚