

Miniature Contact Switches

Compact / NO (Normally Open)

■ Features: O.D. is M5 or Ø5, overall length is 17mm, (Regular) Miniature Contact Switches. For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

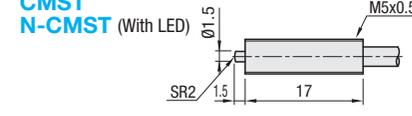
Compact



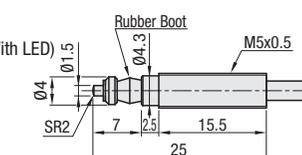
RoHS

Bolt

Regular (IP40)
CMST
N-CMST (With LED)

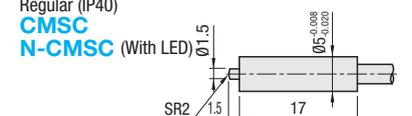


Water-Proof (IP67)
CMSTW
N-CMSTW (With LED)

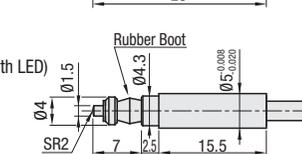


Standard

Regular (IP40)
CMSC
N-CMSC (With LED)



Water-Proof (IP67)
CMSCW
N-CMSCW (With LED)



Contact Part	Main Body	Cable	Accessory
Material	Hardness	Material	
SUS420	45HRC	SUS303	Cable 2m, Ø3 Oil-resistant, Min. Bending Radius R7 Hex Nut 2 pcs. (Thickness 2.4, Hex Socket 7)

Bolt

Part Number	Stroke	Operating Point	Contact Force N	Contact Logic	Unit Price 1 ~ 10 pc(s).	
					CMST, CMSTW	N-CMST, N-CMSTW
Regular (IP40) CMST N-CMST	1.5	No Pre-Travel (Repeatability 0.003)	0.5N	NC (Normally Closed)		
Water-Proof (IP67) CMSTW N-CMSTW			0.8N			

For orders larger than indicated quantity, please check with WOS.

Standard

Part Number	Stroke	Operating Point	Contact Force N	Contact Logic	Unit Price 1 ~ 10 pc(s).	
					CMSC, CMSCW	N-CMSC, N-CMSCW
Regular (IP40) CMSC N-CMSC	1.5	No Pre-Travel (Repeatability 0.003)	0.5N	NC (Normally Closed)		
Water-Proof (IP67) CMSCW N-CMSCW			0.8N			

For orders larger than indicated quantity, please check with WOS.

Ordering Example
Part Number
CMST

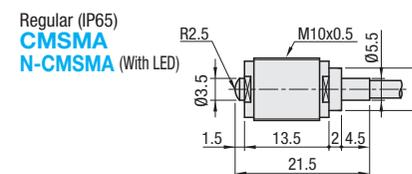
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NO (Normally Open)

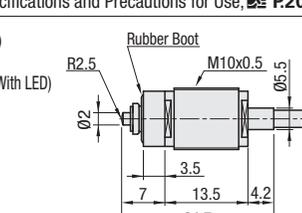


RoHS

Regular (IP65)
CMSMA
N-CMSMA (With LED)



Water-Proof (IP67)
CMSMWA
N-CMSMWA (With LED)



Contact Part	Main Body	Cable	Accessory
Material	Hardness	Material	
SUS	50HRC	SUS303	Cable 2m, Ø3 Oil-resistant, Min. Bending Radius R7 Wrench Hex Nut (Thickness 3, Hex Socket 13)

NO (Normally Open)

Part Number	Stroke	Operating Point	Contact Force N	Contact Logic	Unit Price 1 ~ 10 pc(s).	
					CMSMA, CMSMWA	N-CMSMA, N-CMSMWA
Regular (IP65) CMSMA N-CMSMA	1.5	0.3 from Tip (Repeatability 0.003)	1N	NO (Normally Open)		
Water-Proof (IP67) CMSMWA N-CMSMWA						

For orders larger than indicated quantity, please check with WOS.

Ordering Example
Part Number
CMSMA

High Accuracy Positioning Switches

Bolt / Tip Shape Selectable / Flat

Do not use in environments where coolant or dust from machining may fall on the product. The silicon (rubber) boots may be damaged. For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

Bolt (IP67)

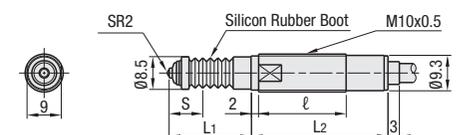
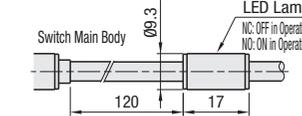


RoHS

3mm Stroke
10mm Stroke

MSTK
MSTKL

N-MSTK-D
N-MSTKL-D (With LED)

Contact Part	Main Body	Cable	Accessory
Material	Hardness	Material	
Carbide	1300~1600HV	SUS303	Cable 3m, 2-Conductors Ø5, Oil Resistant Min. Bending Radius R7 Hex Nut 2 pcs. (Thickness 3, Hex Socket 13)

Part Number	Contact Logic	Stroke S	Operating Point	Repeatability	Contact Force N	L1	L2	ℓ	MSTK•MSTKL		N-MSTK(L)-D	
									Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
MSTK N-MSTK-D	NC	3	No Pre-Travel	0.0005	1	15	23.2	18.2				
	NO		0.2									
MSTKL N-MSTKL-D	NC	10	No Pre-Travel			26	40	23				

For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

Shape Selectable (IP67)

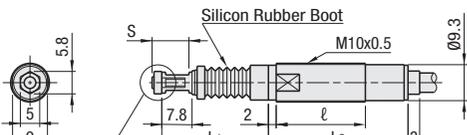
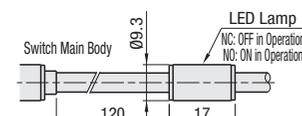


RoHS

3mm Stroke
10mm Stroke

MSTA
MSTAL

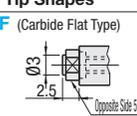
N-MSTA-D
N-MSTAL-D (With LED)

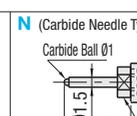
Contact Part	Main Body	Cable	Accessory
Material	Hardness	Material	
Carbide	1300~1600HV	SUS303	Cable 3m, 2-Conductors Ø5, Oil Resistant Min. Bending Radius R7 Hex Nut 2 pcs. (Thickness 3, Hex Socket 13)

Tip Shape Selection

F (Carbide Flat Type)



N (Carbide Needle Type)



For orders larger than indicated quantity, please check with WOS.

Part Number	Contact Logic	Stroke S	Operating Point	Repeatability	Contact Force N	L1	L2	ℓ	MSTA(L)		N-MSTA(L)-D	
									Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
MSTA N-MSTA-D	NC	3	No Pre-Travel	0.0005	1	20.5	23.2	18.2				
	NO		0.2									
MSTAL N-MSTAL-D	NC	10	No Pre-Travel			31.5	40	23				

For orders larger than indicated quantity, please check with WOS.

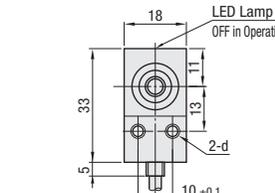
For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

Flat (IP67)

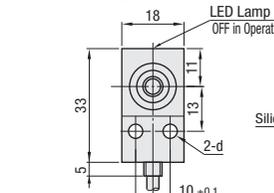


RoHS

MSTTNA-A



MSTTNA-B



Contact Part	Main Body	Cable
Material	Hardness	Material
Carbide	1300~1600HV	Aluminum
		Clear Anodize

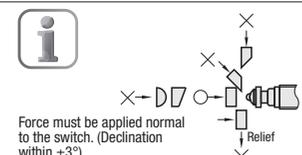
For orders larger than indicated quantity, please check with WOS.

Part Number	Contact Logic	Stroke S	Operating Point	Contact Force N	d	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
MSTTNA-A MSTTNA-B	NC	3	No Pre-Travel (Repeatability 0.0005)	1.5	M4 Ø4.6		

For orders larger than indicated quantity, please check with WOS.

Ordering Example

MSTK - NC
N-MSTA-DF - NC
MSTTNA-A - NC



Force must be applied normal to the switch. (Declination within ±3°)

Contact Switches with Stoppers

Bolt

For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

Bolt (IP40)

RoHS

The cartridge (back side) can be removed.

Force must be applied normal to the switch. (Declination within ±3°)

MSTB-S
MSTBS

(M6)

Stroke 0.7

N-MSTB-SD (With LED)
N-MSTBS-D (With LED)

(M6)

Stroke 0.7

(M8, 10)

Stroke 0.7

(M8, 10)

Stroke 0.7

Tip of Contact	Stopper	Main Body	Cable	Accessory
M Material H Hardness	M Material H Hardness	M Material		
SUS420 45~50HRC	SUS420 45~50HRC	SUS416F	Cable 2m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs.* Toothed Washer 1 pc.

* Coarse JIS3 Class, Fine M6: Thickness 3.2, Hex Socket 8, Fine M8 Thickness 3.2 (Ø1.0, Thickness 3) Hex Socket 10, Fine M12 Thickness 4.5 Hex Socket 17

Part Number	MxP	Stroke	Operating Point	Contact Force	Allowable Static Load	Contact Logic	B	MSTB-S, MSTBS		N-MSTB-SD, N-MSTBS-D	
								Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTB-S	6	6x1.0 (Coarse)	Approximately 0.3 from stopper surface (repeatability 0.01)	2N	5000N	NC (Normally Closed)	5	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20
N-MSTB-SD											
MSTBS	6	6x1.0 (Coarse)	Approximately 0.3 from stopper surface (repeatability 0.01)	2N	5000N	NO (Normally Open)	7	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20
N-MSTBS-D											
								8	8x1.25 (Coarse)	7	1 ~ 9 pc(s).
	10	10x1.5 (Coarse)	8	1 ~ 9 pc(s).	10~20						

Ordering Example **Part Number**
MSTB-S6

Contact Switches with Stoppers

Hex Head / One-Signal (Deceleration)

For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

Hex Head (IP40)

RoHS

The cartridge (back side) can be removed.

Force must be applied normal to the switch. (Declination within ±3°)

MSTBE

(M6)

Stroke 0.7

N-MSTBE-D (With LED)

(M6)

Stroke 0.7

(M8)

Stroke 0.7

(M8)

Stroke 0.7

Tip of Contact	Stopper	Main Body	Cable	Accessory
M Material H Hardness	M Material H Hardness	M Material		
SUS420 45~50HRC	SUS420 45~50HRC	SUS303	Cable 2m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs.* Toothed Washer 1 pc.

* Coarse JIS3 Class, Fine M8 Thickness 3.2 Hex Socket 10, Fine M12 Thickness 4.5 Hex Socket 17

Part Number	MxP	Stroke	Operating Point	Contact Force	Allowable Static Load	Max. Impact Energy	Contact Logic	B	(C)	MSTBE		N-MSTBE-D	
										Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTBE	6	6x1.0 (Coarse)	Approximately 0.3 from stopper surface (repeatability 0.01)	2N	5000N	0.4J	NO (Normally Open)	10	11.5	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20
N-MSTBE-D													
	8	8x1.25 (Coarse)	13	15	1 ~ 9 pc(s).	10~20							

For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

One-Signal (Deceleration) (IP40)

RoHS

Force must be applied normal to the switch. (Declination within ±1°)

N-MSTBG (With LED)

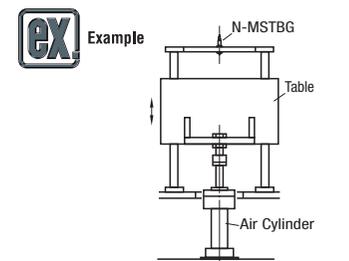
Stroke S

Tip of Contact	Stopper	Main Body	Cable	Accessory
M Material H Hardness	M Material H Hardness	M Material		
SUS420 45~50HRC	SUS420 45~50HRC	SUS416F	Cable 2m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs.* Toothed Washer 1 pc.

* Coarse JIS3 Class, Thickness 4.5 Hex Socket 17

Part Number	MxP	Stroke S	Operating Point	Repeatability	Contact Force	Allowable Static Load	Max. Impact Energy	Contact Logic	B	Unit Price	Volume Discount Rate	
N-MSTBG	6	6x1 (Coarse)	2.5	0.3 ~ 0.4 from Tip	0.01	1N	5000N	0.4J	NO (Normally Open)	5	1 ~ 9 pc(s).	10~20

Ordering Example **Part Number**
MSTBE-6
N-MSTBG6



Contact Switches with Stoppers

Bolt

For Mechanical / Electrical Specifications and Precautions for Use, P2095

Bolt (IP40)

RoHS

The cartridge (back side) can be removed.
Force must be applied normal to the switch. (Declination within ±3°)

MSTB-B
MSTB

(M6)

N-MSTB-BD (With LED)
N-MSTB-D (With LED)

(M8, 10, 12)

Tip of Contact	Stopper	Main Body	Cable	Accessory
M Material H Hardness	M Material H Hardness	M Material		
SUS420 45~50HRC	SUS420 45~50HRC	SUS416F	Cable 2m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs.* Toothed Washer 1 pc.

* Coarse JIS3 Class, Fine M6: Thickness 3.2, Hex Socket 8, Fine M8 Thickness 3.2 (Ø1.0, Thickness 3) Hex Socket 10, Fine M12 Thickness 4.5 Hex Socket 17

Part Number	Type	No.	MxP	Stroke	Operating Point	Contact Force	Allowable Static Load	Max. Impact Energy	Contact Logic	B	C	MSTB-B, MSTB		N-MSTB-BD, N-MSTB-D									
												Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate								
MSTB-B N-MSTB-BD		6	6x1.0 (Coarse)	0.7±0.2	Center Vicinity (Repeatability 0.01)	1N	5000N	0.4J	NO (Normally Closed)	5	11.5	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20								
	6S	6x0.75 (Fine)																					
MSTB N-MSTB-D		6	6x1.0 (Coarse)																				
	6S	6x0.75 (Fine)																					
	8	8x1.25 (Coarse)																					
	8S	8x0.75 (Fine)																					
	8K	8x1.0 (Fine)																					
	10	10x1.5 (Coarse)																					
	12K	12x1.0 (Fine)																					

Ordering Example
Part Number
MSTB-B6

Contact Switches with Stoppers

Hex Head / One-Signal (Deceleration)

For Mechanical / Electrical Specifications and Precautions for Use, P2095

Hex Head (IP40)

RoHS

The cartridge (back side) can be removed.
Force must be applied normal to the switch. (Declination within ±3°)

MSTBB

(M6)

N-MSTBB-D (With LED)

(M8)

Tip of Contact	Stopper	Main Body	Cable	Accessory
M Material H Hardness	M Material H Hardness	M Material		
SUS420 45~50HRC	SUS420 45~50HRC	SUS303	Cable 2m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs.* Toothed Washer 1 pc.

* Coarse JIS3 Class, Fine M8 Thickness 3.2 Hex Socket 10, Fine M12 Thickness 4.5 Hex Socket 17

Part Number	Type	No.	MxP	Stroke	Operating Point	Contact Force	Allowable Static Load	Max. Impact Energy	Contact Logic	B	C	MSTBB		N-MSTBB-D	
												Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTBB N-MSTBB-D		6	6x1.0 (Coarse)	0.7±0.2	Center Vicinity (Repeatability 0.01)	1N	5000N	0.4J	NO (Normally Open)	10	15	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20
	8	8x1.25 (Coarse)													
	8K	8x1.0 (Fine)													

For Mechanical / Electrical Specifications and Precautions for Use, P2095

One-Signal (Deceleration) (IP40)

RoHS

Force must be applied normal to the switch. (Declination within ±1°)

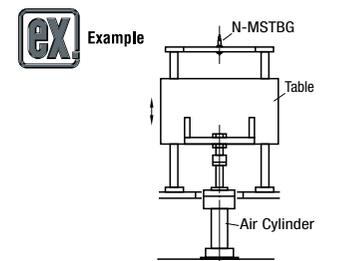
N-MSTBG (With LED)

Tip of Contact	Stopper	Main Body	Cable	Accessory
M Material H Hardness	M Material H Hardness	M Material		
SUS420 45~50HRC	SUS420 45~50HRC	SUS416F	Cable 2m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs.* Toothed Washer 1 pc.

* Coarse JIS3 Class, Thickness 4.5 Hex Socket 17

Part Number	Type	No.	MxP	Stroke S	Operating Point	Repeatability	Contact Force	Allowable Static Load	Max. Impact Energy	Contact Logic	B	Unit Price	Volume Discount Rate
N-MSTBG		6	6x1 (Coarse)	2.5	0.3 ~ 0.4 from Tip	0.01	1N	5000N	0.4J	NO (Normally Open)	5	1 ~ 9 pc(s).	10~20

Ordering Example
Part Number
N-MSTBB-D6
N-MSTBG6



Positioning Switches - Non Contact Point

Overview

Do not use this product as a detection device for human body protection.
 (For human body protection, use products compliant with the local laws and regulations such as OSHA, ANSI and IEC.)

Positioning Switches - Non Contact Point

Bolt / Flat / 2-Signal

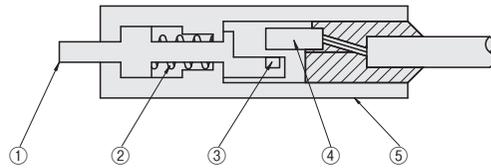
Features

- The contact type switch can detect objects in given positions regardless of material and color.
- Non contact structure utilizing the magnet detection IC (Hall effect element).
- Able to detect with low contact force.

Basic Structure

When the contact shaft strokes, the magnet moves and the hall effect element outputs a signal.

- ① Contact Part
- ② Spring
- ③ Magnet
- ④ Hall Effect Element IC
- ⑤ Housing



Specifications

Stroke	1.5/3/6
Repeatability	0.02 or less
Contact Logic	NO (Normally Open)
Hysteresis	0.1 or less
Service Life*	10 million times or more
Frequency Response	1msec. or less
Output	NPN Open Collector Without LED: Max. 15mA With LED: Max. 12mA

Ratings and Environmental Resistance

Power Supply Voltage	DC5~24V
Current Consumption	10mA or less
Operating Temperature	0~60°C
Dielectric Strength	10MQ (DC250V Based on Megohm-meter)
Withstand Voltage	AC500V 50/60Hz, 1 min. between each Terminal and Case
Vibration Resistance	10 ~ 55Hz, Full Wave Amplitude 1.5mm in Respective X, Y, Z Direction

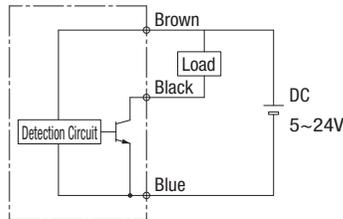
* Subject to the following conditions

Endurance Test Conditions

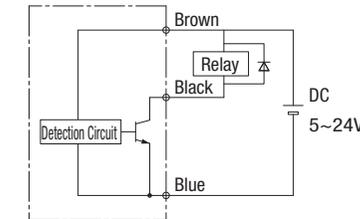
Operating Temperature	25°C
Vibration	Not provided
Contact Angle	Vertical (without Declination)
Operation Frequency	1 time/sec.

Schematics

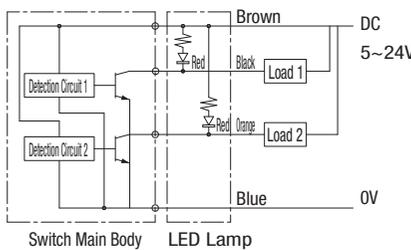
(Connected with Sequencer, etc.)



(Connected with Relay, etc.)



(2-Signal)

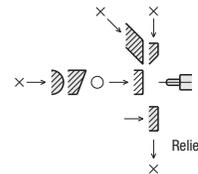


Precautions for Use

Although the switches are intended to be trouble-free, incorporate a redundant safety measure such as a duplex circuit to avoid a serious accident or spread of damage caused by a malfunction or failure of the switch.

Design Precautions

- Contact Angle**
 - The object contact angle to the switch should be within $\pm 2^\circ$.
- Stroke**
 - Do not force the contacts beyond the end of the stroke. Provide a stopper if necessary.
 - Do not apply any force that will cause rotation of the contact.
- Effects of Magnetic Field**
 - Do not use the switch in a strong magnetic field. A magnetic field over 1000 gauss will cause the switch to malfunction.



Cautions on Installation

- Cable Failure at Inlet**
 - Do not apply excessive stress to the cable inlet of the switch case. The solders of cable could be damaged resulting in signal output failures.
 - If the cable is not fixed, fasten at appropriate midway points to avoid strains on cable inlet.
- Nut Tightening Torque**
 - Tighten M6 under 1N·m. Tighten M8 and M14 under 2.7N·m.

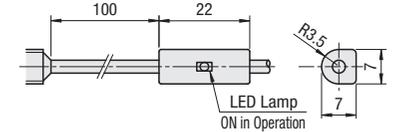
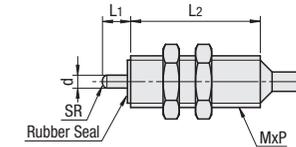
Wiring Precautions

- Reverse polarity connection prohibited**
 - Connect the wires correctly in accordance with the circuit diagram. Never connect the power supply in reversed polarity.
- Driving Relays**
 - When a relay (under 12 mA) is driven, connect a reversed diode in parallel.

Bolt (IP67)



MSNCB MSNCBD (With LED) **MSNC MSNCD (With LED)**



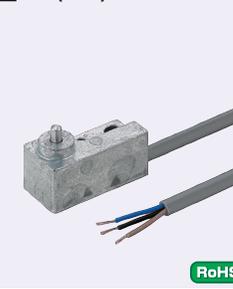
Material		Cable	Accessory
Contact Part	Thread		
SUS303	SUS303	Cable 1m, 3-Conductors Ø2.8, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs. (M6 Thickness 2, Hex Resistant Min. Socket 7, M8 Thickness 2.5, Hex Socket 10)

Bolt

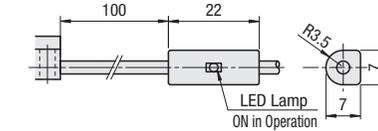
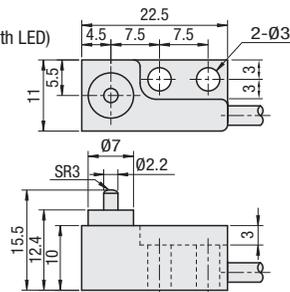
Part Number	MxP (Fine)	Operating Point	Contact Force N	L1	L2	d	SR	Mass (g)	MSNCB, MSNC		MSNCBD, MSNCD	
									Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSNCB MSNCBD	1.2	0.5 from Tip (Repeatability 0.02)	0.3	2.4	18.5	1.4	1	14	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20
MSNC MSNCD	1.5		0.4	4	20	2	2.5	15				
	3		0.7	5	30	2.6	3	22				

For orders larger than indicated quantity, please check with WOS.

Flat (IP65)



MSNCF MSNCFD (With LED)



Material		Cable
Contact Part	Case	
SUS303	Zinc Alloy	Cable 1m, 3-Conductors Ø2.8, Oil Resistant Min. Bending Radius R7

Flat

Part Number	Stroke	Operating Point	Contact Force N	Mass (g)	MSNCF		MSNCFD	
					Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSNCF MSNCFD	3	0.5 from Tip (Repeatability 0.02)	0.5	17	1 ~ 9 pc(s).	10~20	1 ~ 9 pc(s).	10~20

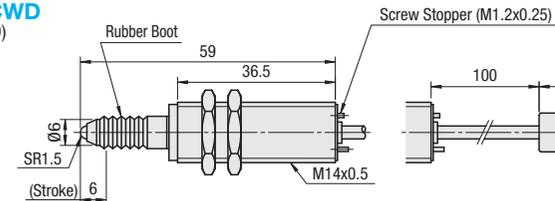
For orders larger than indicated quantity, please check with WOS.

Features: Operating point can be freely selected within setting range by turning adjusting screw with a precision flathead screwdriver (1.6mm in edge width).

2-Signal (IP65)



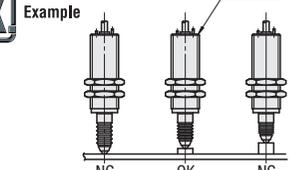
MSNCWD (With LED)



Material		Cable	Accessory
Contact Part	Thread		
SUS303	SUS303	Cable 1m, 4-Conductors - Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs. (Thickness 3, Hex Socket 17)

2-Signal

Part Number	Stroke	Contact Force N	Setting Range	Mass (g)	Unit Price	Volume Discount Rate	Example
MSNCWD	2	6	0.5	1.5	0.5 ~ 4 (Repeatability 0.02)	60	NG OK NG



For orders larger than indicated quantity, please check with WOS.

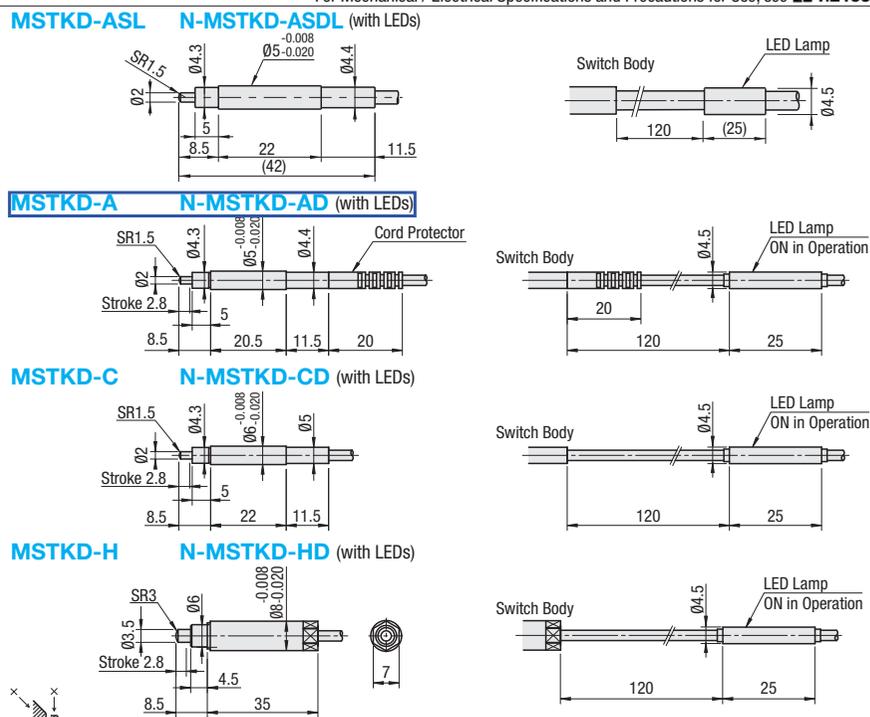


Ordering Example
Part Number
MSNC1.5

Positioning Switches

Standard, L-Shaped

For Mechanical / Electrical Specifications and Precautions for Use, see P2159.

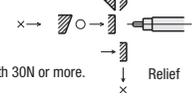


⚠ Straightly hold a detected object against the tip of switch. (Declination within ±3°)

⚠ Use under DC24V/10mA or less.

• Use within the contact ratings.

• Do not pull or twist the cable with 30N or more.

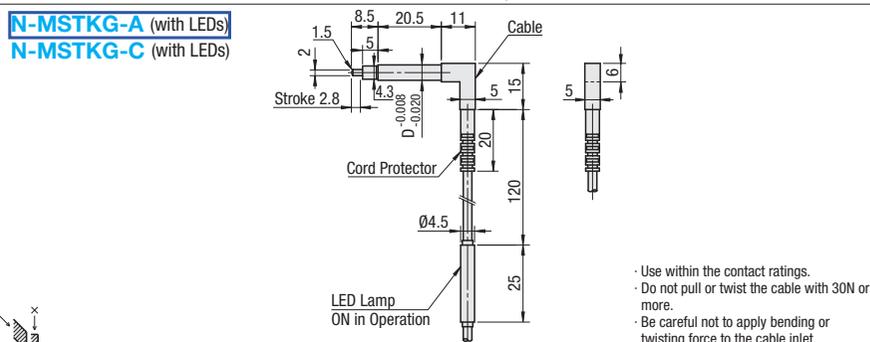
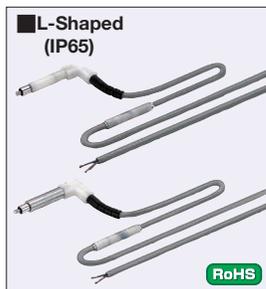


Type	Contact Part	Main Body	Cable
	Material Hardness	Material	
MSTKD-A N-MSTKD-AD	SUS420	ABS Resin	2-Conductor Cable 3m, Ø3, Oil Resistant
MSTKD-ASL N-MSTKD-ASDL	SUS420	SUS303	2-Conductor Cable 3m, Ø3, Oil Resistant
MSTKD-C N-MSTKD-CD	SUS420	SUS303	2-Conductor Cable 3m, Ø3, Oil Resistant
MSTKD-H N-MSTKD-HD	SUS420	SUS303	2-Conductor Cable 3m, Ø3, Oil Resistant

Part Number	Stroke	Operating Point	Contact Force N	Contact Logic	MSTKD-ASL, A, C, H		N-MSTKD-ASDL, AD, CD, HD	
					Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTKD-ASL N-MSTKD-ASDL	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	1-9 pc(s)	10-20	1-9 pc(s)	10-20
MSTKD-A N-MSTKD-AD								
MSTKD-C N-MSTKD-CD								
MSTKD-H N-MSTKD-HD								

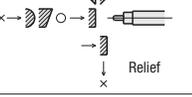
For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, see P2159.



⚠ Straightly hold a detected object against the tip of switch. (Declination within ±3°)

⚠ Use under DC24V/10mA or less.

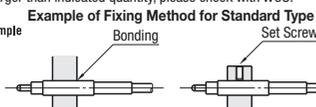


Type	Contact Part	Main Body	Cable
	Material Hardness	Material	
N-MSTKG-A	SUS420	ABS Resin	2-Conductor Cable 3m, Ø3, Oil Resistant
N-MSTKG-C	SUS420	SUS303	2-Conductor Cable 3m, Ø3, Oil Resistant

- Use within the contact ratings.
- Do not pull or twist the cable with 30N or more.
- Be careful not to apply bending or twisting force to the cable inlet.

Part Number	D	Stroke	Operating Point	Contact Force N	Contact Logic	Unit Price	Volume Discount Rate
N-MSTKG-A	5	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	1-9 pc(s)	10-20
N-MSTKG-C	6						

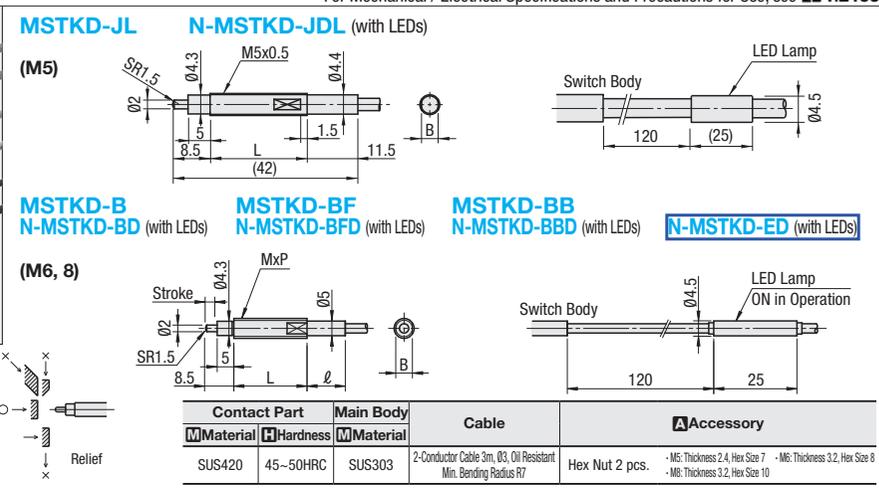
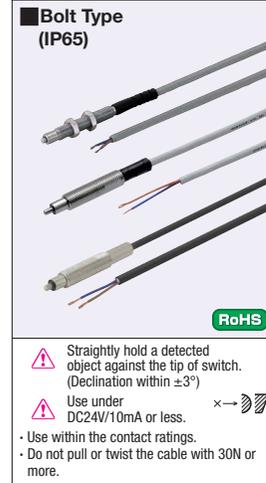
For orders larger than indicated quantity, please check with WOS.



Positioning Switches

Bolt Type / Bolt Type Long Stroke / L-Shaped Bolt

For Mechanical / Electrical Specifications and Precautions for Use, see P2159.



⚠ Straightly hold a detected object against the tip of switch. (Declination within ±3°)

⚠ Use under DC24V/10mA or less.

• Use within the contact ratings.

• Do not pull or twist the cable with 30N or more.

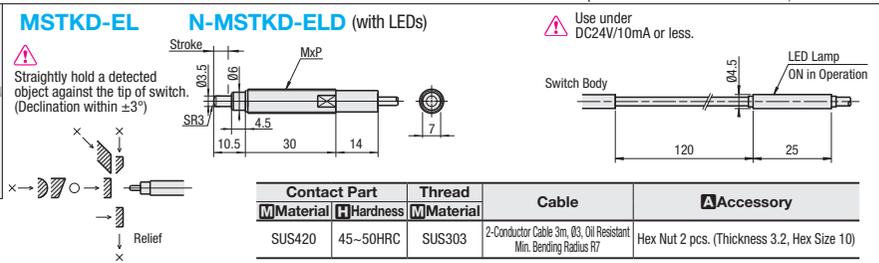


Contact Part	Main Body	Cable	Accessory
Material Hardness	Material		
SUS420	SUS303	2-Conductor Cable 3m, Ø3, Oil Resistant	Hex Nut 2 pcs.

Part Number	MxP (Fine)	Stroke	Operating Point	Contact Force N	Contact Logic	L	ℓ	B	MSTKD-JL, B, BF, BB		N-MSTKD-JDL, BD, BFD, BBD, ED	
									Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTKD-JL N-MSTKD-JDL	M5x0.5	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	22	-	4.4	1-9 pc(s)	10-20	1-9 pc(s)	10-20
MSTKD-B N-MSTKD-BD	M6x0.75								0.5	22	11.5	5
MSTKD-BF N-MSTKD-BFD												
MSTKD-BB N-MSTKD-BBD	M8x0.75								1	22	11.5	7

For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, see P2159.



⚠ Straightly hold a detected object against the tip of switch. (Declination within ±3°)

⚠ Use under DC24V/10mA or less.

• Use within the contact ratings.

• Do not pull or twist the cable with 30N or more.

• Do not pull or twist the cable with 30N or more.

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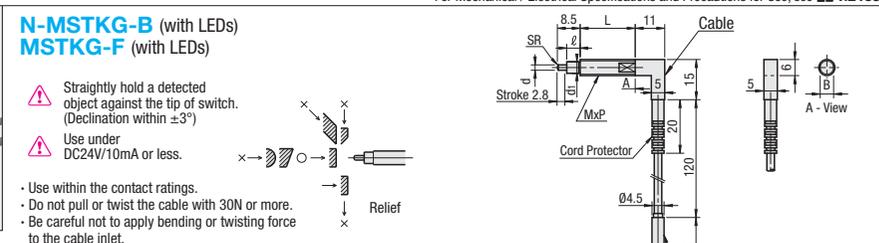
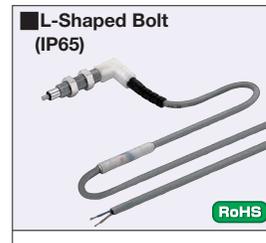
For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, see P2159.

Part Number	MxP (Fine)	Stroke	Operating Point	Contact Force N	Contact Logic	MSTKD-EL		N-MSTKD-ELD	
						Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTKD-EL N-MSTKD-ELD	8x0.75	5	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	1-9 pc(s)	10-19	1-9 pc(s)	10-20

For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, see P2159.



⚠ Straightly hold a detected object against the tip of switch. (Declination within ±3°)

⚠ Use under DC24V/10mA or less.

• Use within the contact ratings.

• Do not pull or twist the cable with 30N or more.

• Do not pull or twist the cable with 30N or more.

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• Do not pull or twist the cable with 30N or more.

Contact Part	Main Body	Cable	Accessory
Material Hardness	Material		
SUS420	SUS303	2-Conductor Cable 3m, Ø3, Oil Resistant	Hex Nut 2 pcs. (M6: Thickness 3.2, Hex Size 8; M8: Thickness 3.2, Hex Size 10)

Part Number	MxP (Fine)	Stroke	Operating Point	Contact Force N	Contact Logic	L	ℓ	d	d1	SR	B	Unit Price	
												1-9 pc(s)	10-20
N-MSTKG-B	M6x0.75	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	20.5	5	2	4.3	1.5	5	1-9 pc(s)	10-20
MSTKG-F	M8x0.75											1-9 pc(s)	10-20

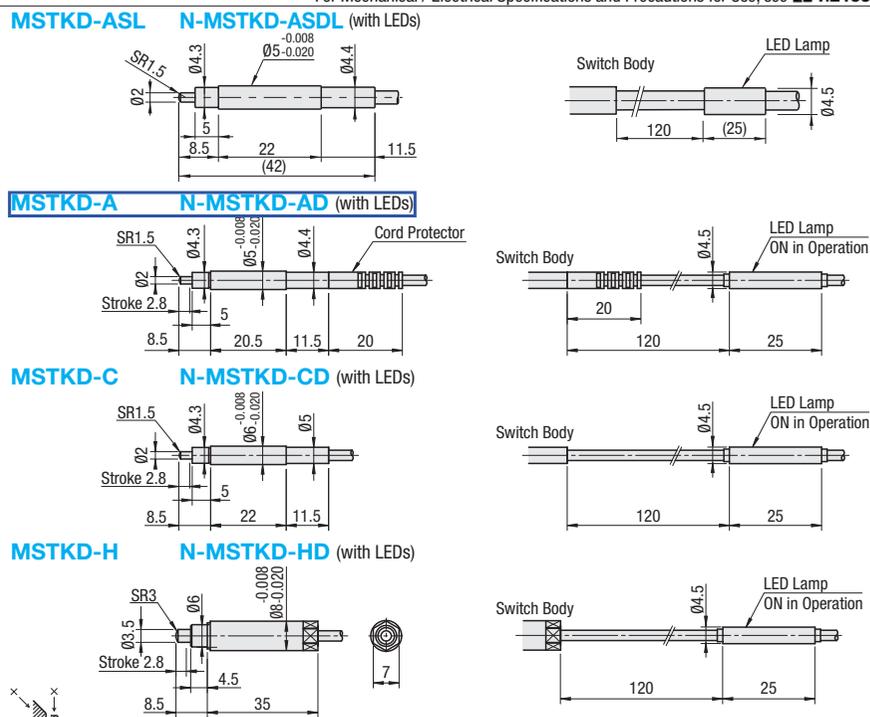
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Positioning Switches

Standard, L-Shaped

For Mechanical / Electrical Specifications and Precautions for Use, see **P2159**.



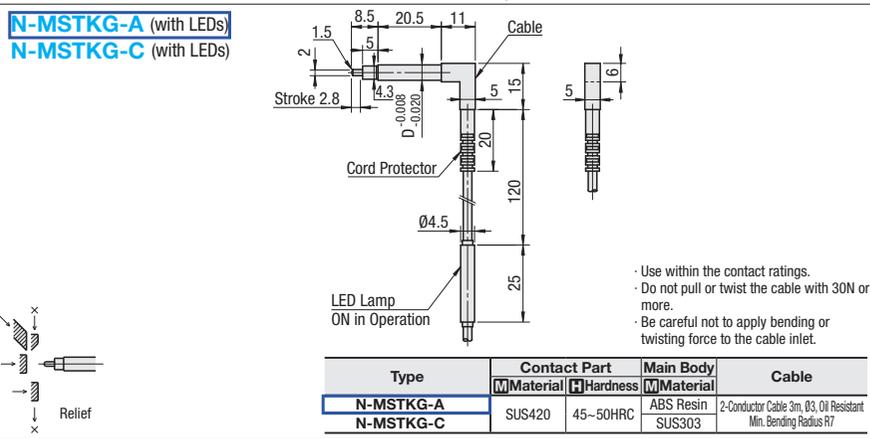
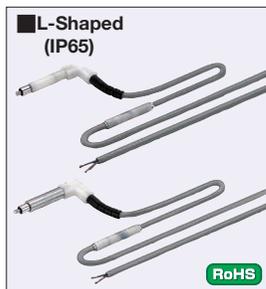
- ⚠ Straightly hold a detected object against the tip of switch. (Declination within $\pm 3^\circ$)
- ⚠ Use under DC24V/10mA or less.
- Use within the contact ratings.
- Do not pull or twist the cable with 30N or more.

Type	Contact Part	Main Body	Cable
	Material Hardness	Material	
MSTKD-A N-MSTKD-AD	SUS420	ABS Resin	2-Conductor Cable 3m, $\phi 3$, Oil Resistant
MSTKD-ASL N-MSTKD-ASDL	SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant
MSTKD-C N-MSTKD-CD	SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant
MSTKD-H N-MSTKD-HD	SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant

Part Number	Stroke	Operating Point	Contact Force N	Contact Logic	MSTKD-ASL, A, C, H		N-MSTKD-ASDL, AD, CD, HD	
					Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTKD-ASL N-MSTKD-ASDL	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	1-9 pc(s)	10-20	1-9 pc(s)	10-20
MSTKD-A N-MSTKD-AD								
MSTKD-C N-MSTKD-CD								
MSTKD-H N-MSTKD-HD								

For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, see **P2159**.

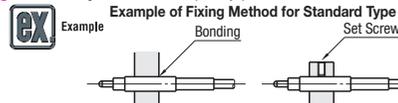
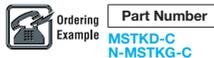


- ⚠ Straightly hold a detected object against the tip of switch. (Declination within $\pm 3^\circ$)
- ⚠ Use under DC24V/10mA or less.
- Use within the contact ratings.
- Do not pull or twist the cable with 30N or more.
- Be careful not to apply bending or twisting force to the cable inlet.

Type	Contact Part	Main Body	Cable
	Material Hardness	Material	
N-MSTKG-A	SUS420	ABS Resin	2-Conductor Cable 3m, $\phi 3$, Oil Resistant
N-MSTKG-C	SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant

Part Number	D	Stroke	Operating Point	Contact Force N	Contact Logic	Unit Price	Volume Discount Rate
N-MSTKG-A	5	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	1-9 pc(s)	10-20
N-MSTKG-C	6						

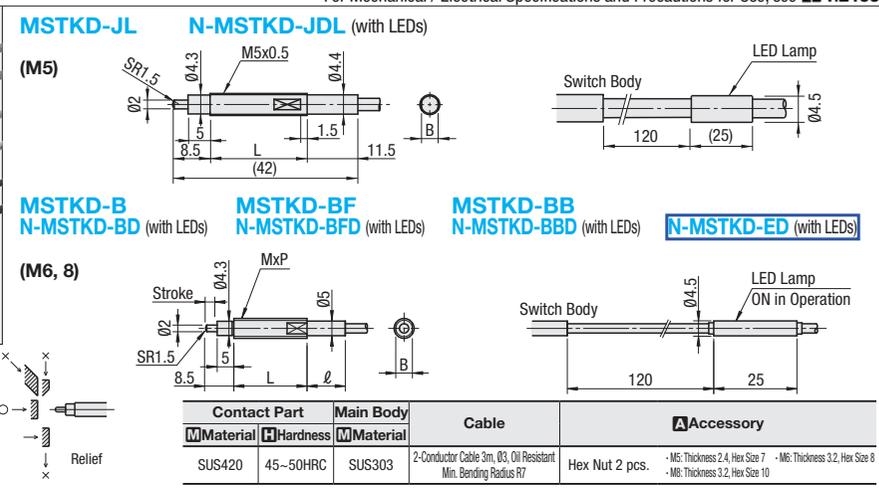
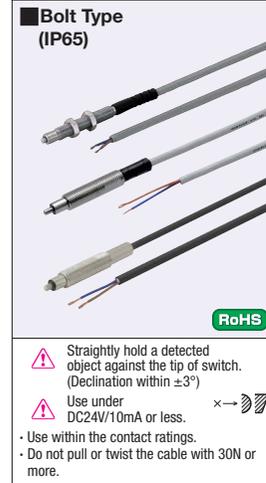
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Positioning Switches

Bolt Type / Bolt Type Long Stroke / L-Shaped Bolt

For Mechanical / Electrical Specifications and Precautions for Use, see **P2159**.



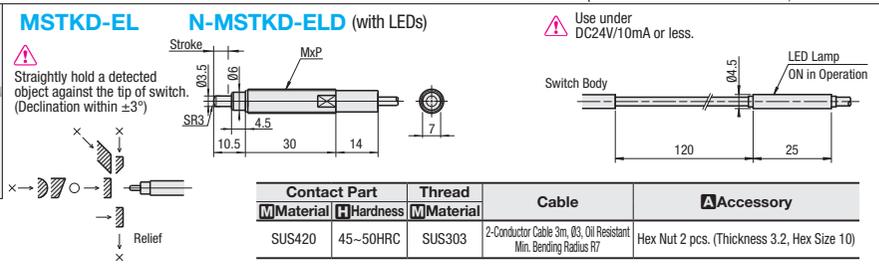
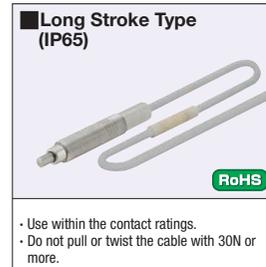
- ⚠ Straightly hold a detected object against the tip of switch. (Declination within $\pm 3^\circ$)
- ⚠ Use under DC24V/10mA or less.
- Use within the contact ratings.
- Do not pull or twist the cable with 30N or more.

Contact Part	Main Body	Cable	Accessory
Material Hardness	Material		
SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant	Hex Nut 2 pcs.

Part Number	MxP (Fine)	Stroke	Operating Point	Contact Force N	Contact Logic	L	l	B	MSTKD-JL, B, BF, BB		N-MSTKD-JDL, BD, BFD, BBD, ED		
									Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	
MSTKD-JL N-MSTKD-JDL	M5x0.5	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	22	-	4.4	1-9 pc(s)	10-20	1-9 pc(s)	10-20	
MSTKD-B N-MSTKD-BD	M6x0.75								22	11.5	5		
MSTKD-BF N-MSTKD-BFD												22	11.5
MSTKD-BB N-MSTKD-BBD													
N-MSTKD-ED	M8x0.75												

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For Mechanical / Electrical Specifications and Precautions for Use, see **P2159**.



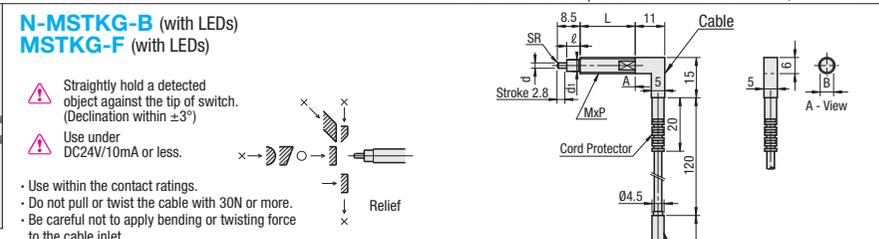
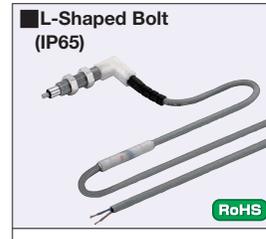
- ⚠ Straightly hold a detected object against the tip of switch. (Declination within $\pm 3^\circ$)
- ⚠ Use under DC24V/10mA or less.
- Use within the contact ratings.
- Do not pull or twist the cable with 30N or more.

Contact Part	Thread	Cable	Accessory
Material Hardness	Material		
SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant	Hex Nut 2 pcs. (Thickness 3.2, Hex Size 10)

Part Number	MxP (Fine)	Stroke	Operating Point	Contact Force N	Contact Logic	MSTKD-EL		N-MSTKD-ELD	
						Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTKD-EL N-MSTKD-ELD	8x0.75	5	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	1-9 pc(s)	10-19	1-9 pc(s)	10-20

For orders larger than indicated quantity, please check with WOS.

For Mechanical / Electrical Specifications and Precautions for Use, see **P2159**.



- ⚠ Straightly hold a detected object against the tip of switch. (Declination within $\pm 3^\circ$)
- ⚠ Use under DC24V/10mA or less.
- Use within the contact ratings.
- Do not pull or twist the cable with 30N or more.
- Be careful not to apply bending or twisting force to the cable inlet.

Contact Part	Main Body	Cable	Accessory
Material Hardness	Material		
SUS420	SUS303	2-Conductor Cable 3m, $\phi 3$, Oil Resistant	Hex Nut 2 pcs. (M6: Thickness 3.2, Hex Size 8; M8: Thickness 3.2, Hex Size 10)

Part Number	MxP (Fine)	Stroke	Operating Point	Contact Force N	Contact Logic	L	l	d	d1	SR	B	Unit Price	
												1-9 pc(s)	10-20
N-MSTKG-B	M6x0.75	2.8	0.3 from Tip (Repeatability 0.005)	1	NO (Normally Open)	20.5	5	2	4.3	1.5	5	1-9 pc(s)	10-20
MSTKG-F	M8x0.75											6	7

For orders larger than indicated quantity, please check with WOS.

