

Ex position switches with/without safety function

// Series Ex 13

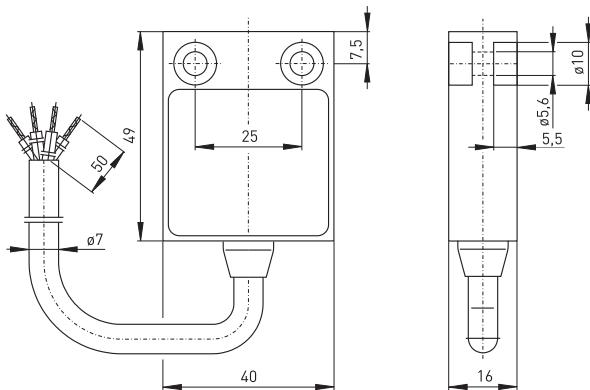
Features/Options

- Ex zone 1 and 21
- Thermoplastic enclosure
- Double insulated \square
- Slow action \ominus , type Zb
- Slow action with overlapping contacts available
- Suitable for in-line mounting
- With pre-wired cable, cable length 2 metres
- Special version only for dust Ex zone 22

// EX 13



148



Technical data

Standards	EN 60947-5-1; EN 60079-0, EN 60079-1, EN 60079-31; EN ISO 13849-1; EN ISO 14119
Enclosure	glass-fibre reinforced, shock-proof thermoplastic, self-extinguishing UL 94-V0
Switch type	type 1
Coding level	no coding
Degree of protection	IP 65 to IEC/EN 60529
Contact material	silver
Switching system	slow action, positive break NC contact \ominus
Switching elements	1 NC/1 NO contact, type Zb
Connection	cable H05VV-F, 4 x 0.75 mm ²
Cable length	2, 5 or 10 m
B_{10d} (10 % load)	2 million
T_M	max. 20 years
U_{imp}	4 kV
U_i	250 V
I_{the}	T6: 6 A; T5: 3 A
I_e/U_e	6 A/250 VAC; 0.25 A/230 VDC
Utilisation category	AC-15, DC-13
Max. fuse rating	6 A gG/gN fuse
Ambient temperature	T6: -20 °C ... +65 °C, T5: -20 °C ... +75 °C, +90 °C with max. 3 A
Mechanical life	> 1 million operations
Switching frequency	1800/h
Repeat accuracy	± 0.1 mm
Contact gap	max. 2 x 4 mm
Impact energy	max. 7 J
Ex marking	\ominus II 2G Ex d IIC T6/T5 Gb, II 2D Ex tb IIIC T80°C/T95°C Db IP65 IECEx Ex d IIC T6/T5 Gb, Ex tb IIIC T80°C/T95°C Db IP65
Approvals	PTB 03 ATEX 1068 X, IECEx PTB 06.0053 X

Type code

Ex 13 WR-V-S 10/1S-2m-3D

Equipment Categ.
3D, Staub-Ex
Zone 22
Cable length 2 m,
(5 m, 10 m)
Contact type 10/1S, (UE)
Cable entry on side
Mechanical latching
Actuator R (H, TK, D, etc. ...)
Collar
Series
Ex certified component

Ex position switches with/without safety function

// Series Ex 13, variants

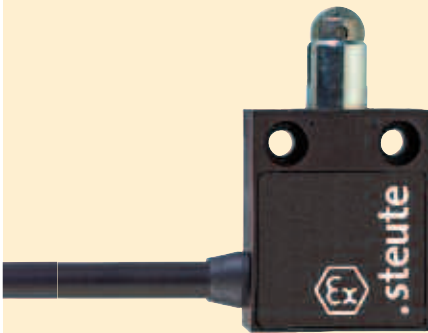
Features/Options

- Special cables possible on request
- Gold-plated contacts available on request
- Mechanical latching: locking by actuation, unlocking by pulling the unlocking button

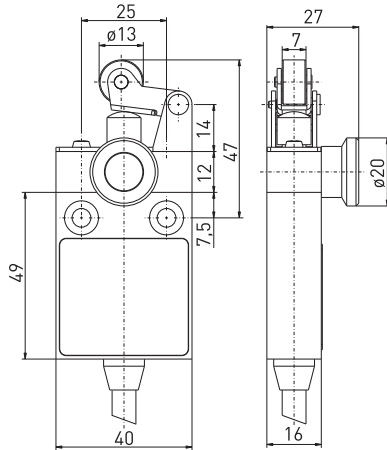
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 0°

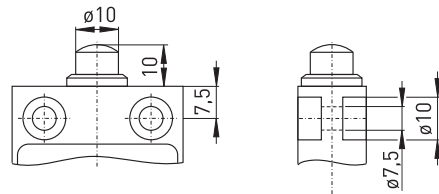
// Cable entry on side S



// Mechanical latching V



// Plunger



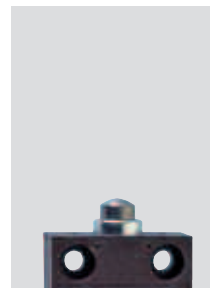
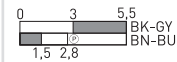
Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 10/1S-2m

1053444 ✓



Ex position switches with/without safety function

// Series Ex 13, actuators

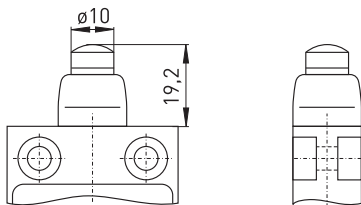
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 0°
- Collar to protect against the entry of foreign bodies

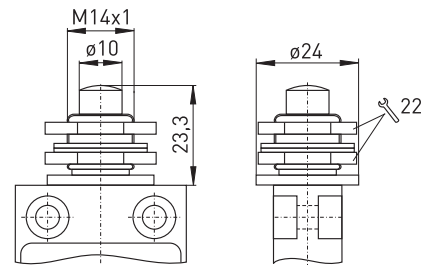
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 0°

// Plunger with collar W



// Plunger for front mounting F



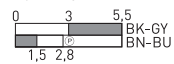
Contact variants: switch travel/contacts

Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

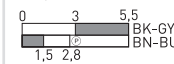
Ex 13 W 10/1S-2m
1044934



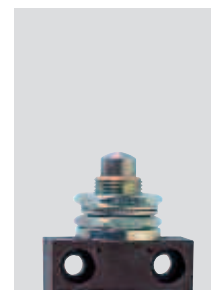
Slow action

1 NC/1 NO contact
Material number

Ex 13 F 10/1S-2m
1189142



✓ in stock



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Features/Options

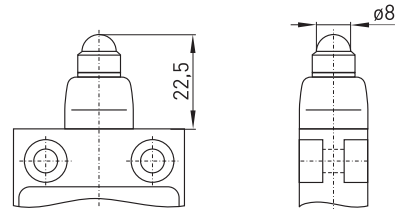
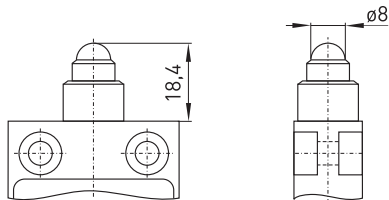
- Actuating speed 0.5 m/s with an actuating angle of 20°
- Can be actuated in line with or from side of switch axis
- Actuator head with captive stainless steel ball actuator
- Exact repeatability of switching point

Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 15°
- Can be actuated in line with or from side of switch axis
- Actuator head with captive stainless steel ball actuator
- Exact repeatability of switching point
- Collar to protect against the entry of foreign bodies

// Ball plunger KU

// Ball plunger with collar WKU



Contact variants: switch travel/contacts

Contact variants: switch travel/contacts

Slow action

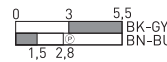
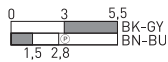
Slow action

1 NC/1 NO contact
Material number

Ex 13 KU 10/1S-2m
1170833

1 NC/1 NO contact
Material number

Ex 13 WKU 10/1S-2m
1189146



Ex position switches with/without safety function

// Series Ex 13, actuators

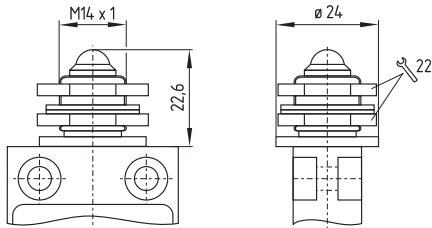
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 20°
- Can be actuated in line with or from side of switch axis
- Actuator head with captive stainless steel ball actuator
- Ball diameter: 8 mm
- Exact repeatability of switching point

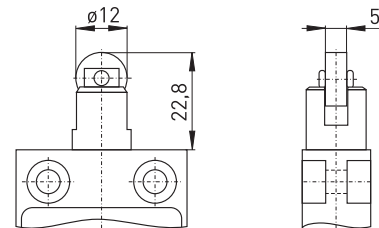
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 30°
- Metal roller
- Available with actuator repositioned by 90°

// Ball plunger for front mounting FKU



// Roller plunger R

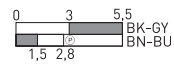


Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 FKU 10/1S-2m
1189147

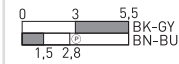


Contact variants: switch travel/contacts

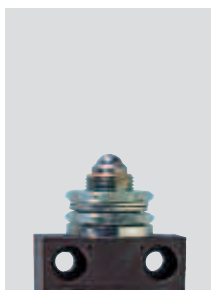
Slow action

1 NC/1 NO contact
Material number

Ex 13 R 10/1S-2m
1044995 ✓



✓ in stock



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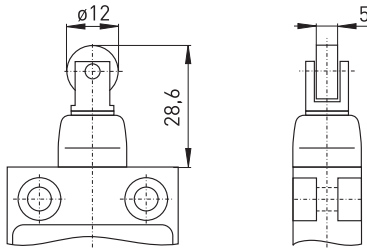
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 25°
- Metal roller
- Available with actuator repositioned by 90°
- Collar to protect against the entry of foreign bodies

Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 25°
- Metal roller
- Available with actuator repositioned by 90°

// Roller plunger with collar WR

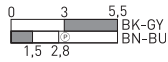


Contact variants: switch travel/contacts

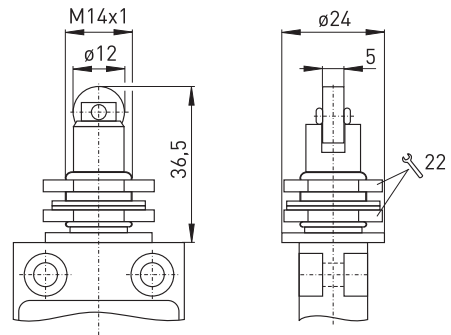
Slow action

1 NC/1 NO contact
Material number

Ex 13 WR 1Ö/1S-2m
1045061



// Roller plunger for front mounting FR

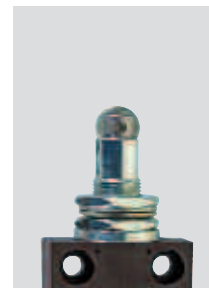
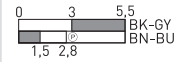


Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 FR 1Ö/1S-2m
1189148



Ex position switches with/without safety function

// Series Ex 13, actuators

Features/Options

- Actuating speed 0.5 m/s with an actuating angle of $\alpha = 40^\circ$ and $\beta = 25^\circ$
- Metal roller
- Available with actuator repositioned by 180°
- Collar to protect against the entry of foreign bodies
- With plastic roller available on request

Note

Actuation from the left should be avoided since this reduces the mechanical life of the position switch.

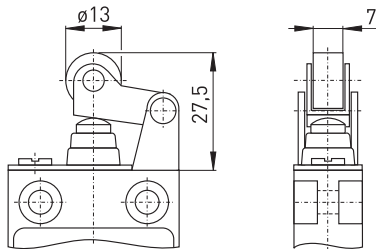
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of $\alpha = 40^\circ$ and $\beta = 25^\circ$
- Metal roller
- Available with actuator repositioned by 180°
- Collar to protect against the entry of foreign bodies
- With plastic roller available on request

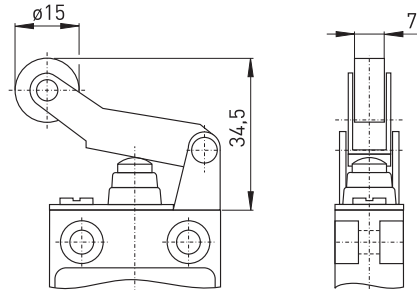
Note

Actuation from the left should be avoided since this reduces the mechanical life of the position switch.

// Roller lever with collar WH



// Long roller lever with collar WHL

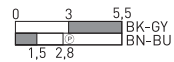


Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 WH 10/1S-2m
1045100 ✓

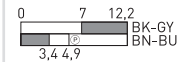


Contact variants: switch travel/contacts

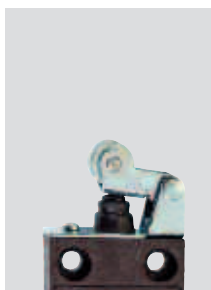
Slow action

1 NC/1 NO contact
Material number

Ex 13 WHL 10/1S-2m
1045126



✓ in stock



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Features/Options

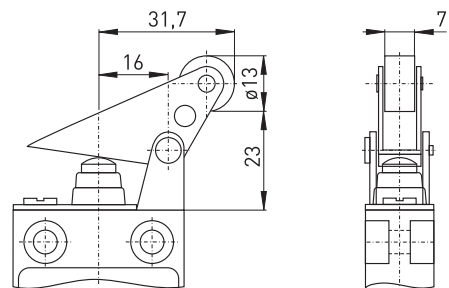
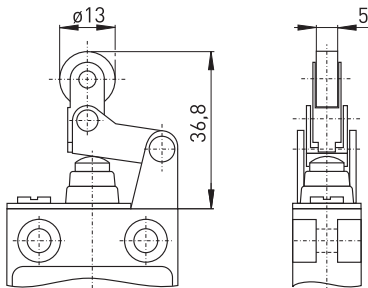
- Actuating speed 0.5 m/s with an actuating angle of $\alpha = 40^\circ$
- Actuation only possible from right-hand side
- Free movement of actuator from the other side
- Metal roller
- Available with actuator repositioned by 180°
- Collar to protect against the entry of foreign bodies
- With plastic roller available on request

Features/Options

- Actuating speed 0.5 m/s with an actuating angle of $\alpha = 30^\circ$
- Actuation parallel to switch from below
- Metal roller
- Available with actuator repositioned by 180°
- Collar to protect against the entry of foreign bodies
- With plastic roller available on request

// Rocking roller lever with collar WHK

// Parallel roller lever with collar WPH

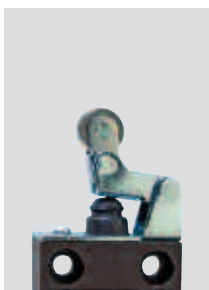


Contact variants: switch travel/contacts

Contact variants: switch travel/contacts

Slow action													
1 NC/1 NO contact	Ex 13 WHK 10/1S-2m												
Material number	1189153												
	<table border="1"> <tr> <td>0</td> <td>3,6</td> <td>6,3</td> <td>BK-GY</td> </tr> <tr> <td></td> <td></td> <td></td> <td>BN-BU</td> </tr> <tr> <td>1,6</td> <td></td> <td></td> <td></td> </tr> </table>	0	3,6	6,3	BK-GY				BN-BU	1,6			
0	3,6	6,3	BK-GY										
			BN-BU										
1,6													

Slow action													
1 NC/1 NO contact	Ex 13 WPH 10/1S-2m												
Material number	1189156												
	<table border="1"> <tr> <td>0</td> <td>3,2</td> <td>5,4</td> <td>-</td> </tr> <tr> <td></td> <td></td> <td></td> <td>BK-GY</td> </tr> <tr> <td>1,5</td> <td>3</td> <td></td> <td>BN-BU</td> </tr> </table>	0	3,2	5,4	-				BK-GY	1,5	3		BN-BU
0	3,2	5,4	-										
			BK-GY										
1,5	3		BN-BU										



Ex position switches with/without safety function

// Series Ex 13, actuators

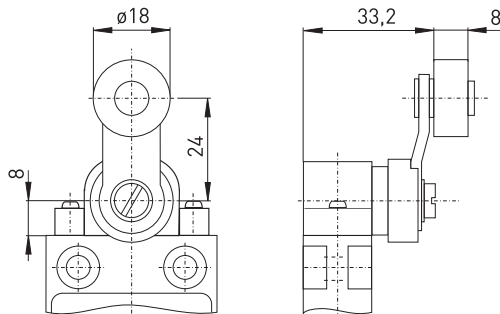
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 45°
- Wear-resistant thermoplastic roller
- Lever can be repositioned in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°
- With metal roller available on request

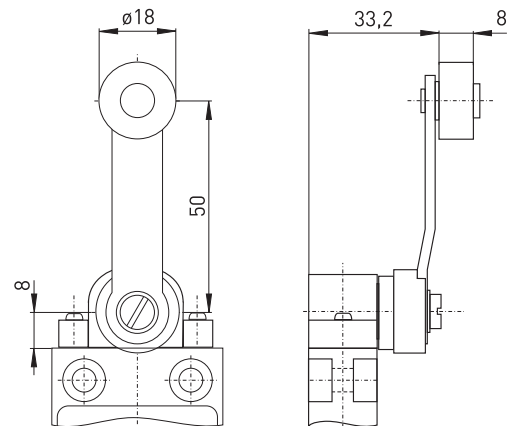
Features/Options

- Actuating speed 0.5 m/s with an actuating angle of 45°
- Wear-resistant thermoplastic roller
- Lever can be repositioned in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°
- With metal roller available on request

// Rocking roller lever D



// Long rocking roller lever DL

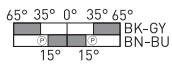


Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 D 10/1S-2m
1189157

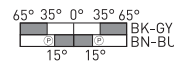


Contact variants: switch travel/contacts

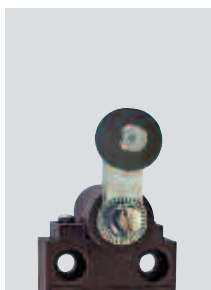
Slow action

1 NC/1 NO contact
Material number

Ex 13 DL 10/1S-2m
1189163



✓ in stock



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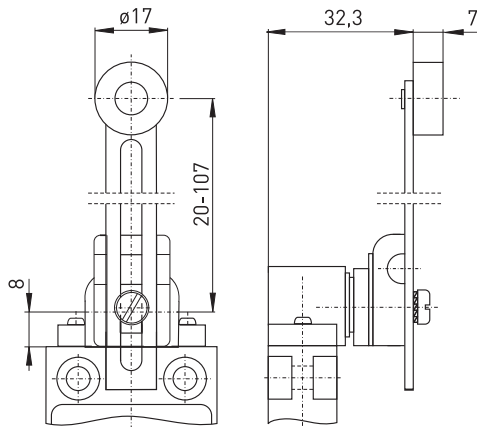
Features/Options

- No safety switch!
- Actuating speed 0.5 m/s with an actuating angle of 45°
- Wear-resistant thermoplastic roller
- Lever can be repositioned in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°
- With metal roller available on request

Features/Options

- No safety switch!
- Wear-resistant thermoplastic tip
- Lever can be repositioned in 10° steps clockwise or counter-clockwise
- Actuator can be repositioned by 180°

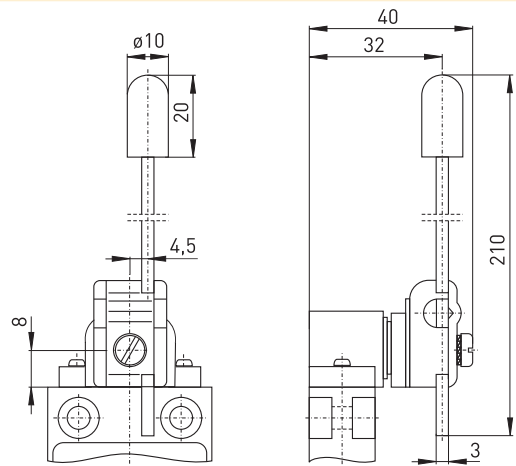
// Adjustable-length roller lever DS



Contact variants: switch travel/contacts

	Slow action
1 NC/1 NO contact	Ex 13 DS 10/1S-2m
Material number	1177362 ✓

// Wire roller lever DD



Contact variants: switch travel/contacts

	Slow action
1 NC/1 NO contact	Ex 13 DD 10/1S-2m
Material number	1177841



Ex position switches with/without safety function

// Series Ex 13, actuators

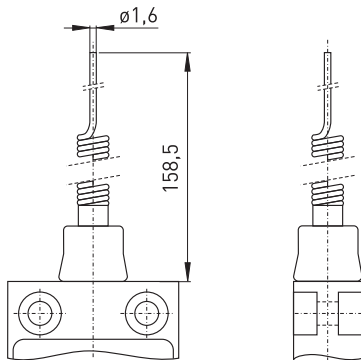
Features/Options

- No safety switch!
- Spring rod can be actuated from any direction
- Spring rod can be shortened 30 mm in actuating area
- Exact linear actuation not unnecessary
- Elasticity of spring allows for deflection above the max. switching angle of 18°

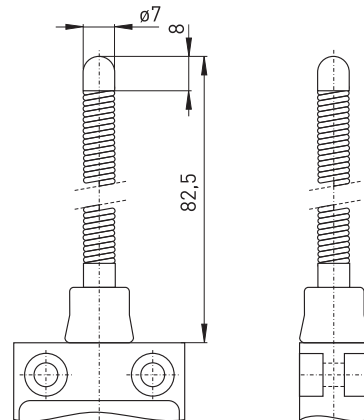
Features/Options

- No safety switch!
- With rounded steel tip
- Spring rod can be actuated from any direction
- Elasticity of spring allows for deflection above the max. switching angle of 18°

// Long spring rod TL



// Spring rod with rounded steel tip TF

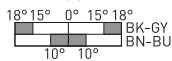


Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 TL 10°/15-2m
1189165

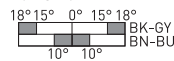


Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 TF 10°/15-2m
1045202 ✓



✓ in stock

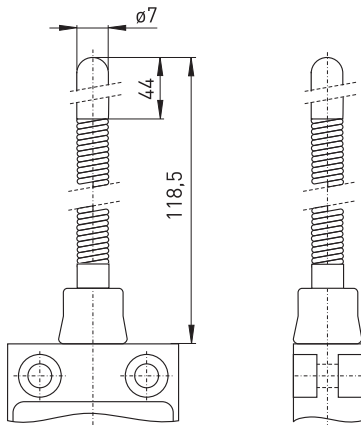


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Features/Options

- No safety switch!
- Wear-resistant plastic tip
- Spring rod can be actuated from any direction
- Elasticity of spring allows for deflection above the max. switching angle of 18°

// Spring rod with plastic tip TK



Contact variants: switch travel/contacts

Slow action

1 NC/1 NO contact
Material number

Ex 13 TK 10/1S-2m
1189166

