



element14

EN - For pricing and availability in your local country please visit one of the below links:

DE - Informationen zu Preisen und Verfügbarkeit in Ihrem Land erhalten Sie über die unten aufgeführten Links:

FR - Pour connaître les tarifs et la disponibilité dans votre pays, cliquez sur l'un des liens suivants:

[NZ1HS-2131-M](#)

EN

This Datasheet is presented by
the manufacturer

DE

Dieses Datenblatt wird vom
Hersteller bereitgestellt

FR

Cette fiche technique est
présentée par le fabricant

Position switch NZ.WO with domed plunger



- ▶ Version B according to EN 50041 (hardened)
- ▶ LED optional
- ▶ Plug connector optional



Approach direction



Horizontal and vertical

LED function display (optional)

A function display is available for the following voltage ranges:

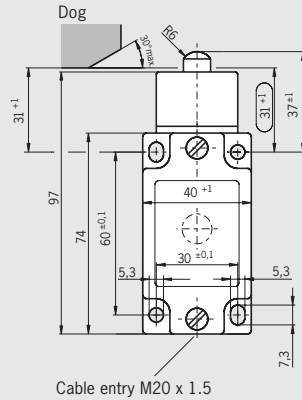
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 110 V ±15% red
- ▶ AC 230 V ±15% red

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC ⊖ + 1 NO
- ▶ **528H** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **538H** Slow-action switching element
2 NC ⊖
- ▶ **2121H** Slow-action switching element
4 NC ⊖
- ▶ **2131H** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC ⊖ + 2 NO

Cable entry M20 x 1.5

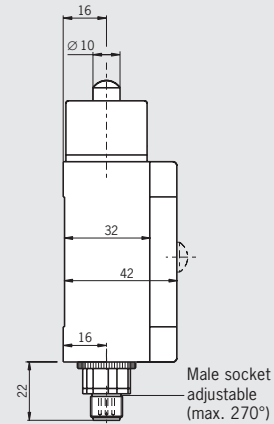
Dimension drawings



For cable glands see page 132

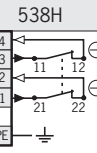
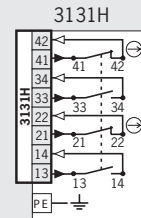
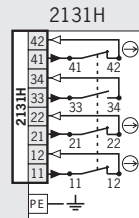
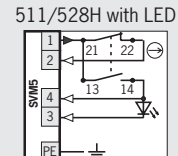
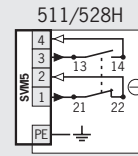
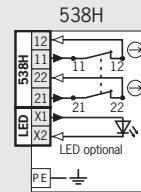
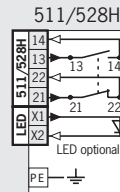
Plug connector SVM5

M12 plug, 5-pin



For mating connectors see page 132

Wiring diagrams Switch not actuated



Ordering table

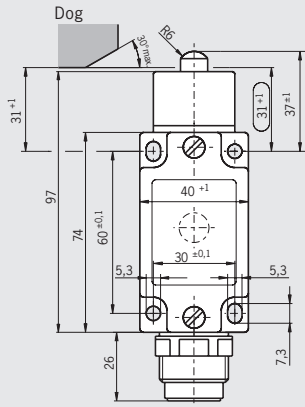
| Series | Connection | Actuator | Switching element | Function display | | | | |
|--------|-------------------------------|-------------------------|---|-------------------------------------|---|---|---|---|
| | | | | Without LED | 12-60 V red LED | 110 V red LED | 230 V red LED | 12-60 V yellow LED |
| NZ | 1 Cable entry M20 x 1.5 | WO Domed plunger | 511 ¹⁾ 1 NC ⊖ + 1 NO | 088611 ¹⁾ NZ1WO-511-M | 089057 ¹⁾ NZ1WO-511L060-M | 089059 ¹⁾ NZ1WO-511L110-M | 089060 ¹⁾ NZ1WO-511L220-M | 089058 ¹⁾ NZ1WO-511L060GE-M |
| | | | 528H 1 NC ⊖ + 1 NO | 089624 NZ1WO-528-M | 089078 NZ1WO-528L060-M | On request | On request | On request |
| | | | 538H 2 NC ⊖ | 090878 NZ1WO-538-M | 089076 NZ1WO-538L060-M | On request | On request | On request |
| | | | 2131H 3 NC ⊖ + 1 NO | 089629 NZ1WO-2131-M | - | - | - | - |
| | | | 3131H 2 NC ⊖ + 2 NO | 089626 NZ1WO-3131-M | - | - | - | - |
| | | | 2 Plug connector SVM5 (M12 plug) | WO Domed plunger | 511 ¹⁾ 1 NC ⊖ + 1 NO | 089014 ¹⁾ NZ2WO-511SVM5 | On request | - |
| | 528H 1 NC ⊖ + 1 NO | 090923 NZ2WO-528SVM5 | On request | | - | - | On request | |
| | 538H 2 NC ⊖ | 090924 NZ2WO-538SVM5 | On request | | - | - | On request | |

1) No BG approval for switching element 511



Plug connector SR6 6-pin + PE

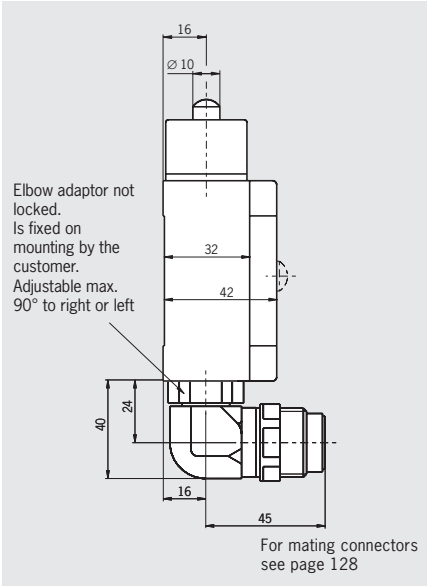
Dimension drawings



For mating connectors see page 128



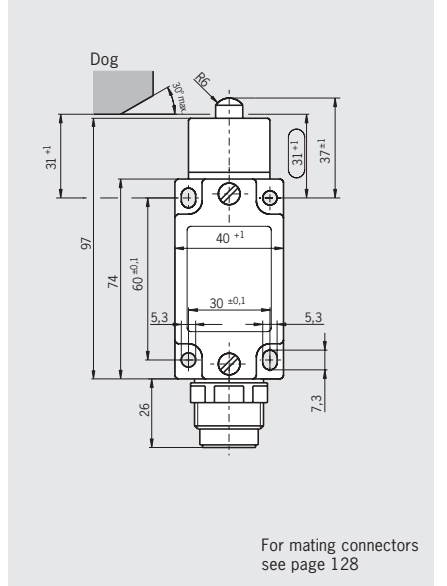
Plug connector SR6 angled 6-pin + PE



For mating connectors see page 128

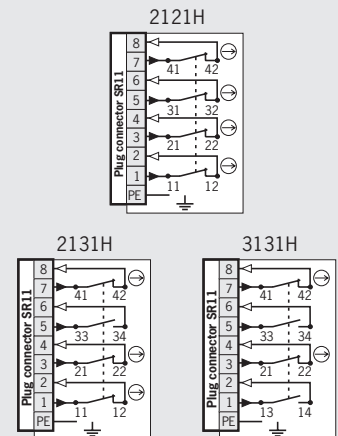
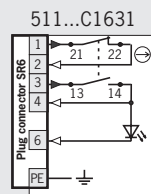
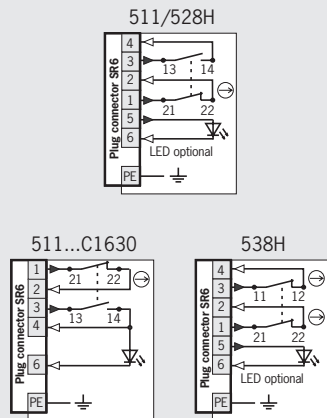


Plug connector SR11 11-pin + PE



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | |
|--------|---------------------|-----------------------------------|------------------------------------|-----------------------------|-----------------------------------|---------------------------------------|--|
| | | | | | Without LED | 12-60 V red LED | 12-60 V yellow LED |
| NZ | WO Domed plunger | 2 Plug connector SR6 | 511 ¹⁾ 1 NC ⊖ + 1 NO | C1630 Alternative wiring | 090909 ¹⁾ NZ2WO-511 | 091280 ¹⁾ NZ2WO-511L060 | On request |
| | | | 511 ¹⁾ 1 NC ⊖ + 1 NO | | On request | On request | 059481 ¹⁾ NZ2WO-511L060C1630 |
| | | | 528H 1 NC ⊖ + 1 NO | | 090910 NZ2WO-528 | 091279 NZ2WO-528L060 | On request |
| | | | 538H 2 NC ⊖ | | 090911 NZ2WO-538 | 087558 NZ2WO-538L060 | On request |
| | | 2 Plug connector SR6 angled | 511 ¹⁾ 1 NC ⊖ + 1 NO | C1631 Alternative wiring | On request | On request | 059482 ¹⁾ NZ2WO-511L060C1631 |
| | | 2 Plug connector SR11 | 2121H 4 NC ⊖ | | 090976 NZ2WO-2121 | - | - |
| | | | 2131H 3 NC ⊖ + 1 NO | | 090912 NZ2WO-2131 | - | - |
| | | | 3131H 2 NC ⊖ + 2 NO | 090913 NZ2WO-3131 | - | - | |

1) No BG approval for switching element 511

For safety precautions see page 196
For technical data see page 163



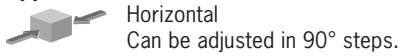
Position switch NZ.RK with roller plunger



- ▶ Steel roller Ø 8 mm
- ▶ LED optional
- ▶ Plug connector optional
- ▶ Bearing optional



Approach direction



LED function display (optional)

A function display is available for the following voltage ranges:

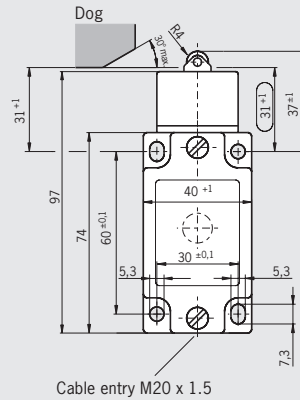
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 110 V ±15% red
- ▶ AC 230 V ±15% red

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC ⊖ + 1 NO
- ▶ **528H** Slow-action switching element
1 NC ⊖ + 1 NO
- ▶ **538H** Slow-action switching element
2 NC ⊖
- ▶ **2131H** Slow-action switching element
3 NC ⊖ + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC ⊖ + 2 NO

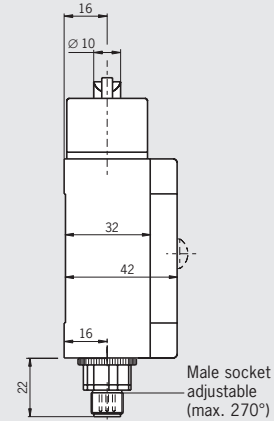
Cable entry M20 x 1.5

Dimension drawings

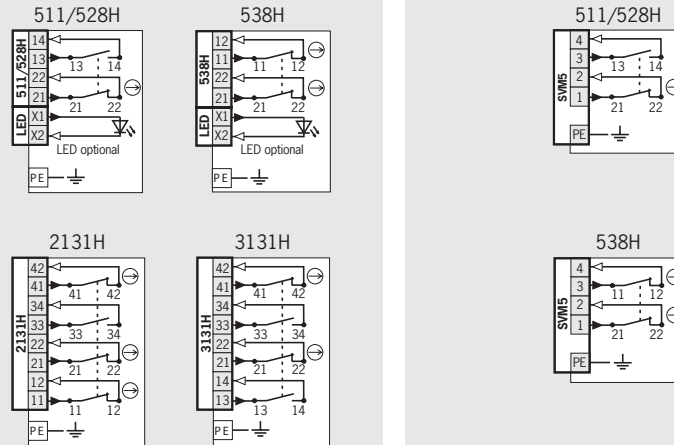


Plug connector SVM5

M12 plug, 5-pin



Wiring diagrams Switch not actuated



Ordering table

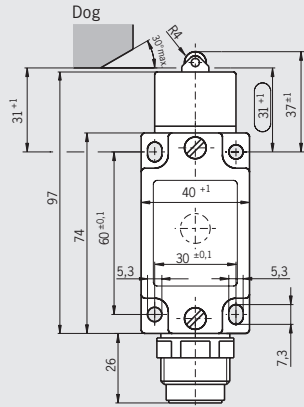
| Series | Actuator | Connection | Switching element | Version | Function display | | | |
|--------|-----------------------|-------------------------|------------------------------------|-----------------------|---------------------------------------|---|---|----------------------------------|
| | | | | | Without LED | 12-60 V red LED | 110 V red LED | 12-60 V yellow LED |
| NZ | RK | Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC ⊖ + 1 NO | C1912 With bearing | 088608 ¹⁾ NZ1RK-511-M | 090354 ¹⁾ NZ1RK-511L060-M | 090355 ¹⁾ NZ1RK-511L220-M | On request |
| | | | 528H 1 NC ⊖ + 1 NO | | 090905 NZ1RK-528-M | 090358 NZ1RK-528L060-M | On request | On request |
| | | | 528H 1 NC ⊖ + 1 NO | | 090572 NZ1RK-528-MC1912 | On request | On request | 086408 NZ1RK-528L060GE-MC1912 |
| | | | 538H 2 NC ⊖ | | 090906 NZ1RK-538-M | On request | On request | On request |
| | | | 2131H 3 NC ⊖ + 1 NO | | 090907 NZ1RK-2131-M | - | - | - |
| | | | 3131H 2 NC ⊖ + 2 NO | | 090908 NZ1RK-3131-M | - | - | - |
| | | | 511 ¹⁾ 1 NC ⊖ + 1 NO | | 089007 ¹⁾ NZ2RK-511SVM5 | On request | - | On request |
| | 528H 1 NC ⊖ + 1 NO | 090930 NZ2RK-528SVM5 | On request | - | On request | | | |
| | 538H 2 NC ⊖ | 089018 NZ2RK-538SVM5 | On request | - | On request | | | |

1) No BG approval for switching element 511



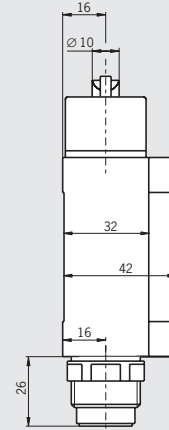
Plug connector SR6 6-pin + PE

Dimension drawings



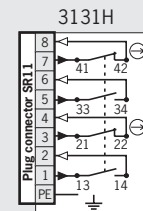
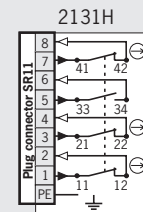
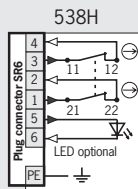
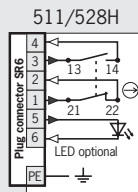
For mating connectors see page 128

Plug connector SR11 11-pin + PE



For mating connectors see page 128

Wiring diagrams Switch not actuated

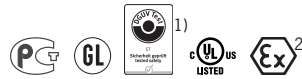


Ordering table

| Series | Actuator | Connection | Switching element | Function display | | |
|--------|----------------------|--------------------------------|--|-----------------------------------|-------------------------|---------------------------------------|
| | | | | Without LED | 12-60 V red LED | 110 V red LED |
| NZ | RK Roller plunger | 2 Plug connector SR6 | 511 ¹⁾ 1 NC \ominus + 1 NO | 090016 ¹⁾ NZ2RK-511 | On request | 088180 ¹⁾ NZ2RK-511L110 |
| | | | 528H 1 NC \ominus + 1 NO | 090919 NZ2RK-528 | 091292 NZ2RK-528L060 | On request |
| | | | 538H 2 NC \ominus | 090920 NZ2RK-538 | On request | On request |
| | | 2 Plug connector SR11 | 2131H 3 NC \ominus + 1 NO | 090921 NZ2RK-2131 | - | - |
| | | | 3131H 2 NC \ominus + 2 NO | 090922 NZ2RK-3131 | - | - |

1) No BG approval for switching element 511

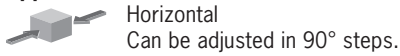
Position switch NZ.RS with roller plunger



- ▶ **Version C** according to EN 50041 (steel roller \varnothing 12 mm)
- ▶ **LED optional**
- ▶ **Plug connector optional**



Approach direction



LED function display (optional)

A function display is available for the following voltage ranges:

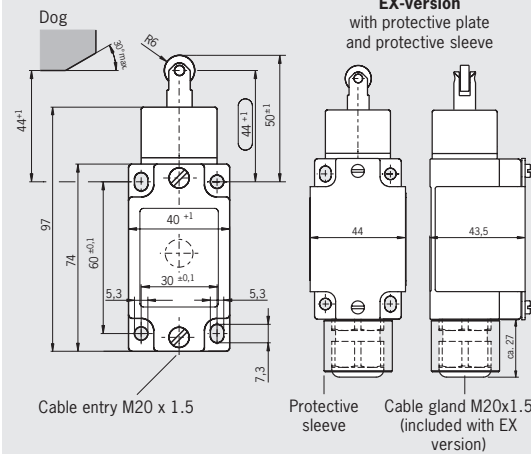
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 110 V \pm 15% red
- ▶ AC 230 V \pm 15% red

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2121H** Slow-action switching element
4 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

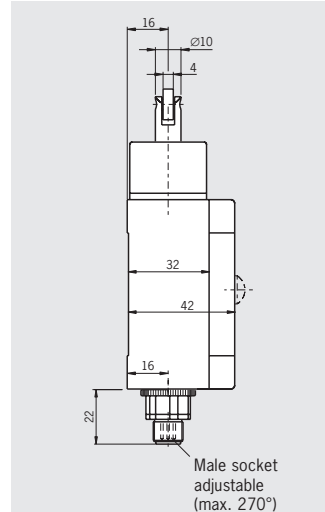
Cable entry M20 x 1.5

Dimension drawings



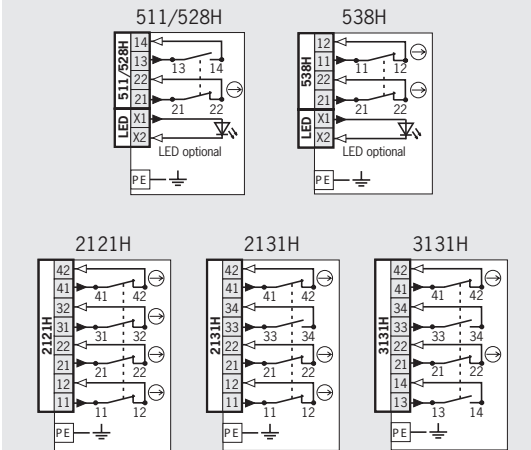
For cable glands see page 132

Plug connector SVM5 M12 plug, 5-pin



For mating connectors see page 132

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | | |
|-----------------------|--------------------------------------|--|-----------------------|---------|----------------------|----------------------|----------------------|----------------------|
| | | | | | Without LED | 12-60 V red LED | 110 V red LED | 12-60 V yellow LED |
| NZ | RS | Cable entry M20 x 1.5 Roller plunger | 511 ¹⁾ | | 079960 ¹⁾ | 089053 ¹⁾ | 089055 ¹⁾ | 086528 ¹⁾ |
| | | | 1 NC \ominus + 1 NO | | NZ1RS-511-M | NZ1RS-511L060-M | NZ1RS-511L220-M | NZ1RS-511L060GE-M |
| | | | 528H | | 089627 | 086413 | 091291 | On request |
| | | | 1 NC \ominus + 1 NO | | NZ1RS-528-M | NZ1RS-528L060-M | NZ1RS-528L220-M | |
| | | | 538H | | 090936 | 090555 | On request | 090424 |
| | | | 2 NC \ominus | | NZ1RS-538-M | NZ1RS-538L060-M | | NZ1RS-538L060GE-M |
| | | | 2121H | | 087595 | - | - | - |
| | | | 4 NC \ominus | | NZ1RS-2121-M | | | |
| | | | 2131H | | 089633 | - | - | - |
| | | | 3 NC \ominus + 1 NO | | NZ1RS-2131-M | | | |
| 3131H | | 089631 | - | - | - | | | |
| 2 NC \ominus + 2 NO | | NZ1RS-3131-M | | | | | | |
| 3131H | | 094169 ²⁾ | - | - | - | | | |
| 2 NC \ominus + 2 NO | ATEX incl. cable gland | NZ1RS-3131-M-EX | | | | | | |
| 2 | Plug connector SVM5 (M12 plug) | | 511 ¹⁾ | | 090027 ¹⁾ | On request | - | 098651 ¹⁾ |
| | | | 1 NC \ominus + 1 NO | | NZ2RS-511SVM5 | | NZ2RS-511SVM5L060GE | |
| | | | 528H | | 090963 | On request | - | On request |
| | | | 1 NC \ominus + 1 NO | | NZ2RS-528SVM5 | | | |
| 538H | | 090964 | On request | - | On request | | | |
| 2 NC \ominus | | NZ2RS-538SVM5 | | | | | | |

1) No BG approval for switching element 511

2) II 3 G Ex nC IIB T5 X (reduced resistance to impact acc. to EN 61241-1; max. 4 J) / Ex II 3 D Ex tD A22 T90°C X (reduced resistance to impact acc. to EN 61241-1; max. 4 J)



Plug connector SR6
6-pin + PE



Plug connector SR6 angled
6-pin + PE

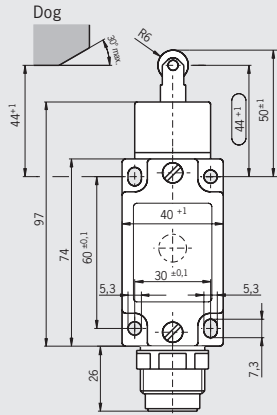


Plug connector MR9
8-pin + PE

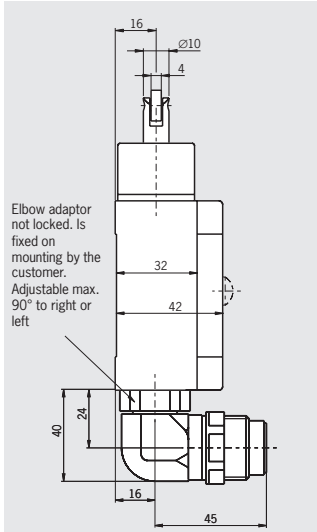


Plug connector SR11
11-pin + PE

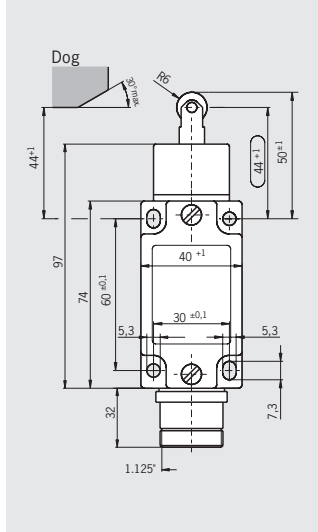
Dimension drawings



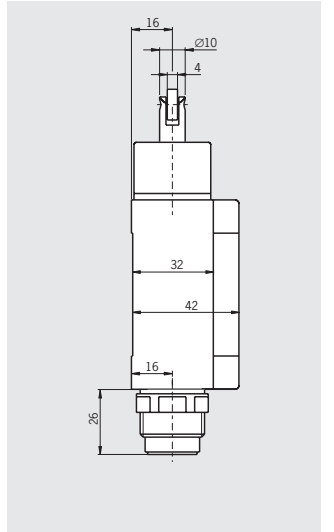
For mating connectors see page 128



For mating connectors see page 128

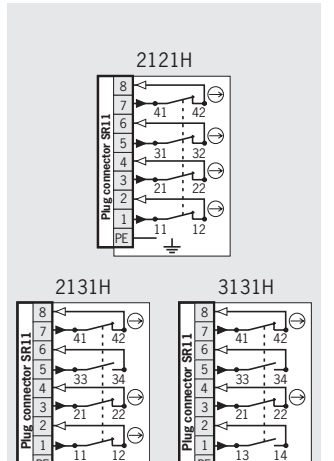
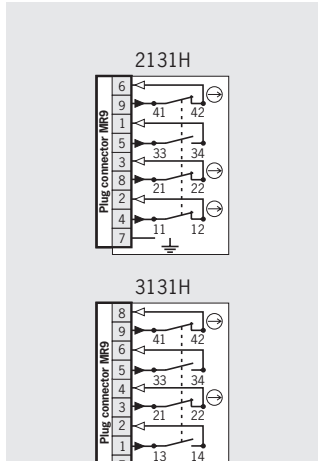
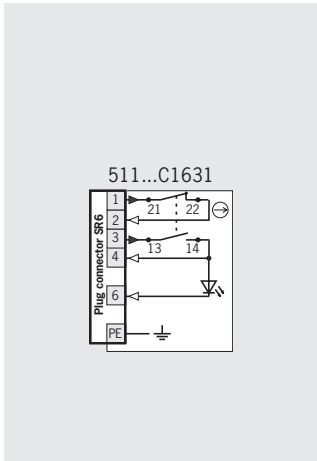
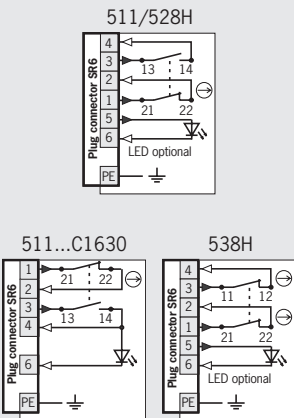


For mating connectors see page 131



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | | | |
|--------|---------------------|--------------------|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | | | | Without LED | 12-60 V red LED | 110 V red LED | 12-60 V yellow LED | |
| NZ | RS | Plug connector SR6 | 511 ¹⁾ | C1630 | 090024 ¹⁾ | 090147 ¹⁾ | 091302 ¹⁾ | 089622 ¹⁾ | |
| | | | 1 NC ⊖ + 1 NO | | NZ2RS-511 | NZ2RS-511L060 | NZ2RS-511L110 | NZ2RS-511L060GE | |
| | | | 511 ¹⁾ | | Alternative wiring | On request | On request | On request | 082400 ¹⁾ |
| | | | 1 NC ⊖ + 1 NO | | | | | NZ2RS-511L060C1630 | |
| | | 2 | 528H | 1 NC ⊖ + 1 NO | C1630 | 090950 | 088197 | On request | On request |
| | | | | | | NZ2RS-528 | NZ2RS-528L060 | On request | On request |
| | | 2 | 538H | 2 NC ⊖ | C1630 | 090951 | 090952 | On request | On request |
| | | | | | | NZ2RS-538 | NZ2RS-538L060 | On request | On request |
| | | 2 | Plug connector SR6 angled | 1 NC ⊖ + 1 NO | C1631 | On request | On request | On request | 079350 ¹⁾ |
| | | | | | | Alternative wiring | | | NZ2RS-511L060C1631 |
| | | | | | | | | | |
| 1...9C | Plug connector | 3 NC ⊖ + 1 NO | C1631 | 077362 ³⁾ | - | - | - | | |
| | | | | NZ1RS-2131-9C-GMMF | | | | | |
| | | | | 087074 | - | - | - | | |
| 2 | Plug connector MR9 | 2 NC ⊖ + 2 NO | C1631 | 090974 | - | - | - | | |
| | | | | NZ2RS-2121 | | | | | |
| 2 | Plug connector SR11 | 4 NC ⊖ | C1631 | 090149 | - | - | - | | |
| | | | | NZ2RS-2131 | | | | | |
| | | | | 090954 | - | - | - | | |
| 2 | Plug connector SR11 | 3 NC ⊖ + 1 NO | C1631 | NZ2RS-3131 | - | - | - | | |
| | | | | | | | | | |
| 2 | Plug connector SR11 | 2 NC ⊖ + 2 NO | C1631 | NZ2RS-3131 | - | - | - | | |
| | | | | | | | | | |

1) No BG approval for switching element 511

3) No UL approval for safety switch 077 362



Position switch NZ.RG with roller plunger



- ▶ **Version C** according to EN 50041 (plastic roller \varnothing 12 mm)
- ▶ **LED optional**
- ▶ **Plug connector optional**



Approach direction



Horizontal
Can be adjusted in 90° steps.

LED function display (optional)

A function display is available for the following voltage ranges:

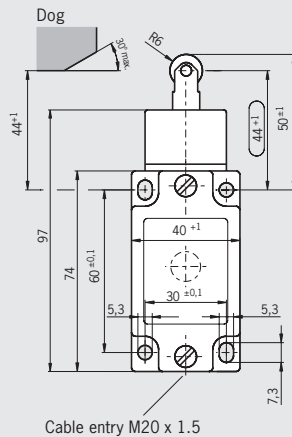
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 230 V \pm 15% red

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

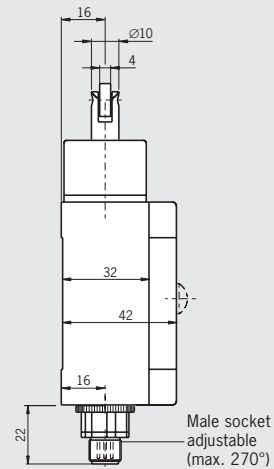
Dimension drawings



For cable glands see page 132

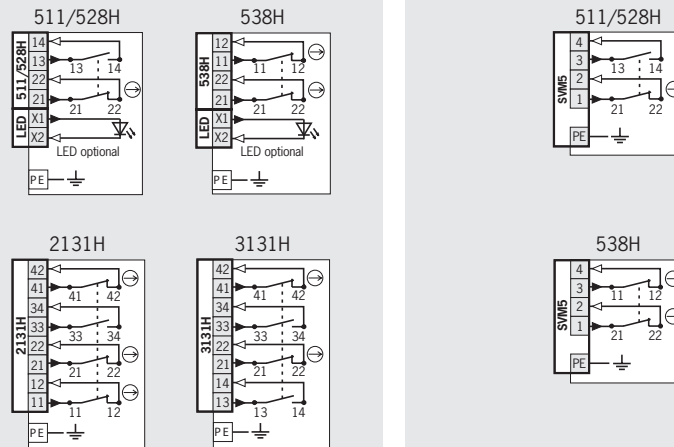
Plug connector SVM5

M12 plug, 5-pin



For mating connectors see page 132

Wiring diagrams Switch not actuated



Ordering table

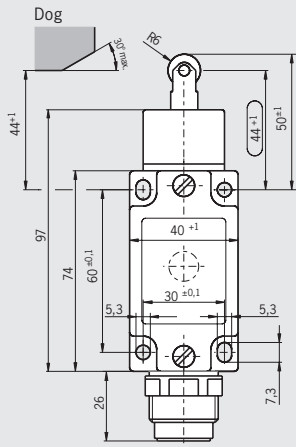
| Series | Actuator | Connection | Switching element | Function display | | |
|--------|----------|--------------------------------------|--|---------------------------------------|---|---|
| | | | | Without LED | 12-60 V red LED | 230 V red LED |
| NZ | RG | Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | 088605 ¹⁾ NZ1RG-511-M | 089052 ¹⁾ NZ1RG-511L060-M | 089054 ¹⁾ NZ1RG-511L220-M |
| | | | 528H 1 NC \ominus + 1 NO | 090932 NZ1RG-528-M | 090008 NZ1RG-528L060-M | On request |
| | | | 538H 2 NC \ominus | 090933 NZ1RG-538-M | 090009 NZ1RG-538L060-M | On request |
| | | | 2131H 3 NC \ominus + 1 NO | 090934 NZ1RG-2131-M | - | - |
| | | | 3131H 2 NC \ominus + 2 NO | 090935 NZ1RG-3131-M | - | - |
| | | | 511 ¹⁾ 1 NC \ominus + 1 NO | 090026 ¹⁾ NZ2RG-511SVM5 | On request | - |
| | | Plug connector SVM5 (M12 plug) | 528H 1 NC \ominus + 1 NO | 090961 NZ2RG-528SVM5 | On request | - |
| | | | 538H 2 NC \ominus | 090962 NZ2RG-538SVM5 | On request | - |

1) No BG approval for switching element 511



Plug connector SR6 6-pin + PE

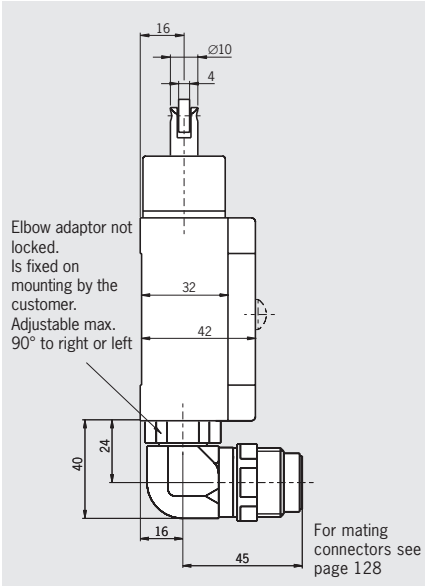
Dimension drawings



For mating connectors see page 128



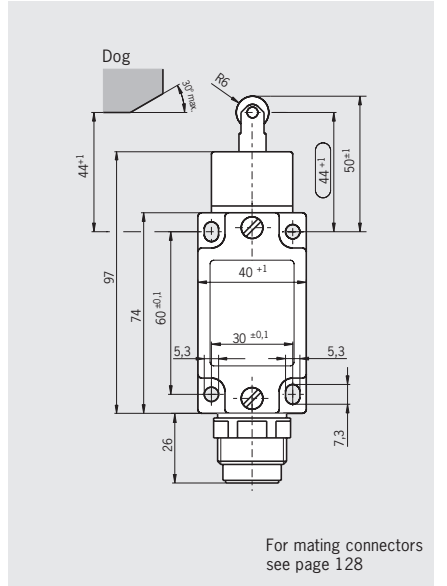
Plug connector SR6 angled 6-pin + PE



For mating connectors see page 128

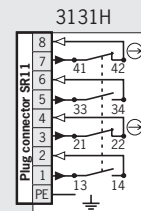
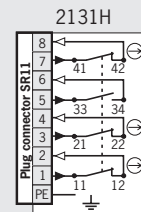
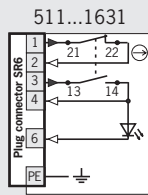
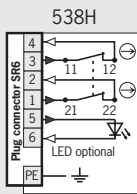
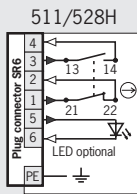


Plug connector SR11 11-pin + PE



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | |
|--------|----------------------|---|--|--------------------------------|-----------------------------------|--|--------------------|
| | | | | | Without LED | 12-60 V red LED | 12-60 V yellow LED |
| NZ | RG Roller plunger | 2 Plug connector SR6 | 511 ¹⁾ 1 NC \ominus + 1 NO | C1631 Alternative wiring | 090032 ¹⁾ NZ2RG-511 | 091284 ¹⁾ NZ2RG-511L060 | On request |
| | | | 528H 1 NC \ominus + 1 NO | | 090943 NZ2RG-528 | 090944 NZ2RG-528L060 | On request |
| | | | 538H 2 NC \ominus | | 090945 NZ2RG-538 | 090946 NZ2RG-538L060 | On request |
| | | 2 Plug connector SR6 angled | 511 ¹⁾ 1 NC \ominus + 1 NO | On request | On request | 074562 ¹⁾ NZ2RG-511L060C1631 | |
| | | | 2131H 3 NC \ominus + 1 NO | 090947 NZ2RG-2131 | | | |
| | | | | 3131H 2 NC \ominus + 2 NO | 090948 NZ2RG-3131 | | |

1) No BG approval for switching element 511



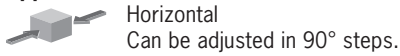
Position switch NZ.RL with roller plunger



- ▶ Steel roller \varnothing 18 mm
- ▶ With ball bearing \varnothing 16 mm optional
- ▶ LED optional
- ▶ Plug connector optional



Approach direction



LED function display (optional)

A function display is available for the following voltage ranges:

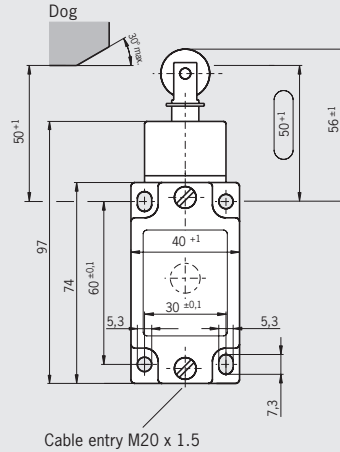
- ▶ AC/DC 12-60 V red
- ▶ AC 110 V $\pm 15\%$ red
- ▶ AC 230 V $\pm 15\%$ red

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2121H** Slow-action switching element
4 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

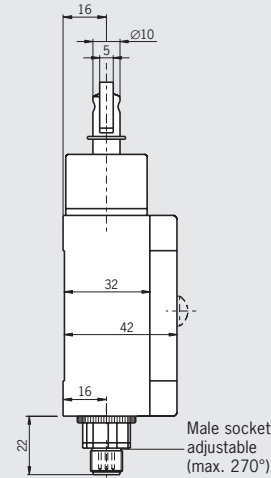
Dimension drawings



For cable glands see page 132

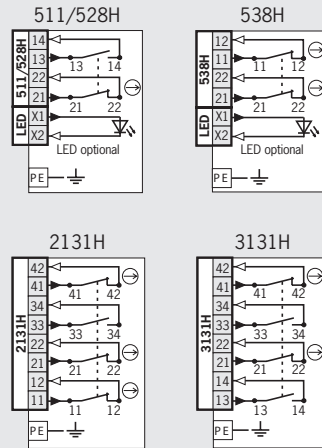
Plug connector SVM5

M12 plug, 5-pin



For mating connectors see page 132

Wiring diagrams Switch not actuated



Ordering table

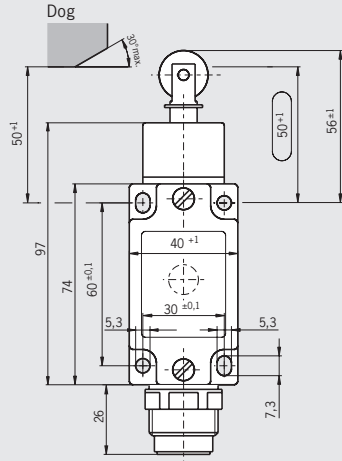
| Series | Actuator | Connection | Switching element | Function display | | | |
|--------|--|--------------------------|---|--|--|--|--|
| | | | | Without LED | 12-60 V red LED | 110 V red LED | 230 V red LED |
| NZ | RL | Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | 088614 ¹⁾ NZ1RL-511-M | 088996 ¹⁾ NZ1RL-511L060-M | 089080 ¹⁾ NZ1RL-511L110-M | 089079 ¹⁾ NZ1RL-511L220-M |
| | | | 528H 1 NC \ominus + 1 NO | 090937 NZ1RL-528-M | 090938 NZ1RL-528L060-M | On request | 089084 NZ1RL-528L220-M |
| | | | 538H 2 NC \ominus | 090939 NZ1RL-538-M | 090940 NZ1RL-538L060-M | On request | On request |
| | | | 2131H 3 NC \ominus + 1 NO | 090941 NZ1RL-2131-M | - | - | - |
| | | | 3131H 2 NC \ominus + 2 NO | 090942 NZ1RL-3131-M | - | - | - |
| | | | 511 ¹⁾ 1 NC \ominus + 1 NO | 090028 ¹⁾ NZ2RL-511SVM5 | On request | - | - |
| | 2 Plug connector SVM5 (M12 plug) | | | | | | |

1) No BG approval for switching element 511



Plug connector SR6 6-pin + PE

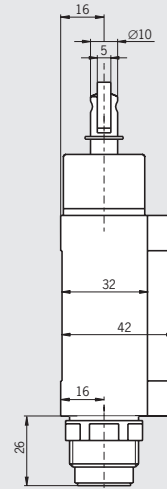
Dimension drawings



For mating connectors see page 128

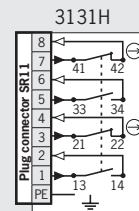
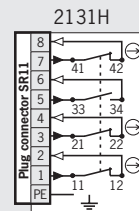
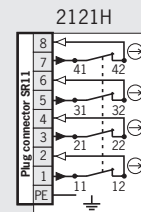
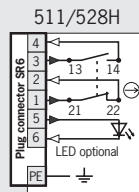
Plug connector SR11 11-pin + PE

Note:
 Roller diameter 16 mm on version with ball bearing (C1831)



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

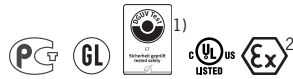
| Series | Actuator | Connection | Switching element | Version | Function display | |
|--------|----------------------|--------------------------|------------------------------------|-----------------------|-----------------------------------|---------------------------------------|
| | | | | | Without LED | 12-60 V red LED |
| NZ | RL Roller plunger | 2 Plug connector SR6 | 511 ¹⁾ 1 NC ⊖ + 1 NO | | 090025 ¹⁾ NZ2RL-511 | 090955 ¹⁾ NZ2RL-511L060 |
| | | | 528H 1 NC ⊖ + 1 NO | | 090956 NZ2RL-528 | 091282 NZ2RL-528L060 |
| | | | 538H 2 NC ⊖ | | 090957 NZ2RL-538 | 091278 NZ2RL-538L060 |
| | | 2 Plug connector SR11 | 2121H 4 NC ⊖ | | 090975 NZ2RL-2121 | - |
| | | | 2121H 4 NC ⊖ | C1831 Ball bearing | 095806 NZ2RL-2121C1831 | - |
| | | | 2131H 3 NC ⊖ + 1 NO | | 090958 NZ2RL-2131 | - |
| | | | 3131H 2 NC ⊖ + 2 NO | | 090959 NZ2RL-3131 | - |

1) No BG approval for switching element 511

For safety precautions see page 196
For technical data see page 163



Position switch NZ.HS with roller lever arm



- ▶ Version A according to EN 50041 (steel roller $\varnothing 18$)
- ▶ LED optional
- ▶ Plug connector optional



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

Right, left or both sides (see page 9).

LED function display (optional)

A function display is available for the following voltage ranges:

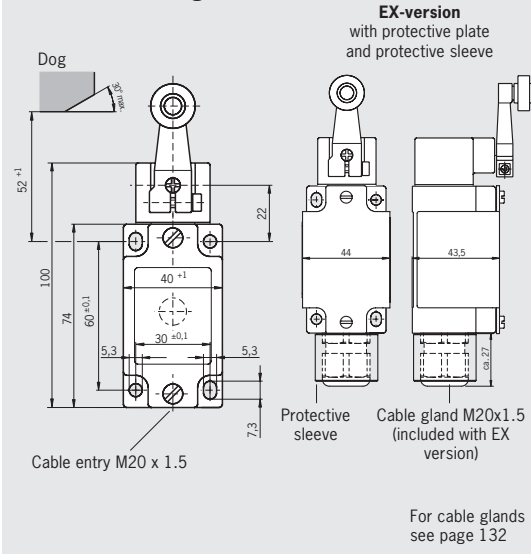
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 110 V $\pm 15\%$ red
- ▶ AC 230 V $\pm 15\%$ red

Switching elements (see also page 13/14)

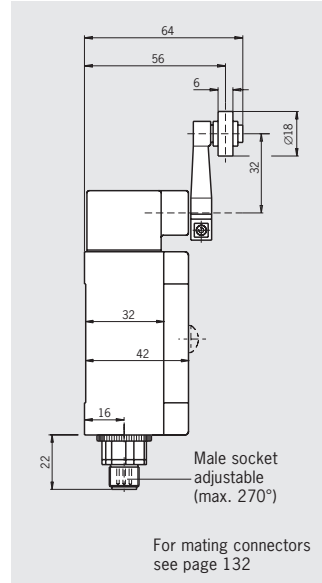
- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2121H** Slow-action switching element
4 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

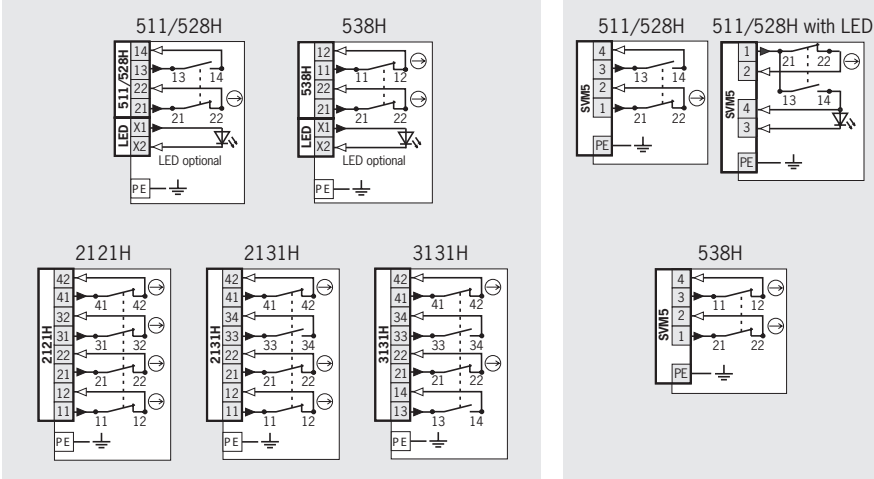
Dimension drawings



Plug connector SVM5 M12 plug, 5-pin



Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | | | | |
|--------|-----------------|-------------------------------|--|---|--|---|---|---|---|---|
| | | | | | Without LED | 12-60 V red LED | 110 V red LED | 230 V red LED | 12-60 V yellow LED | |
| NZ | HS Lever arm | 1 Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | | 079953 ¹⁾ NZ1HS-511-M | 090035 ¹⁾ NZ1HS-511L060-M | 090036 ¹⁾ NZ1HS-511L110-M | 090037 ¹⁾ NZ1HS-511L220-M | 090038 ¹⁾ NZ1HS-511L060GE-M | |
| | | | 528H 1 NC \ominus + 1 NO | | 090970 NZ1HS-528-M | 090971 NZ1HS-528L060-M | 090050 NZ1HS-528L110-M | 090052 NZ1HS-528L220-M | 090049 NZ1HS-528L060GE-M | |
| | | | 538H 2 NC \ominus | | 090972 NZ1HS-538-M | 090760 NZ1HS-538L060-M | On request | On request | On request | |
| | | | 2121H 4 NC \ominus | | 090254 NZ1HS-2121-M | - | - | - | - | |
| | | | 2131H 3 NC \ominus + 1 NO | | 090973 NZ1HS-2131-M | - | - | - | - | |
| | | | 3131H 2 NC \ominus + 2 NO | | 090747 NZ1HS-3131-M | - | - | - | - | |
| | | | 3131H 2 NC \ominus + 2 NO | ATEX incl. cable gland | 094167 ²⁾ NZ1HS-3131-M-EX | - | - | - | - | |
| | | | 2 | 2 Plug connector SVM5 (M12 plug) | 511 ¹⁾ 1 NC \ominus + 1 NO | | 090867 ¹⁾ NZ2HS-511SVM5 | On request | - | - |
| | | 528H 1 NC \ominus + 1 NO | | | 090868 NZ2HS-528SVM5 | On request | - | - | On request | |
| | | 538H 2 NC \ominus | | | 090869 NZ2HS-538SVM5 | On request | - | - | On request | |

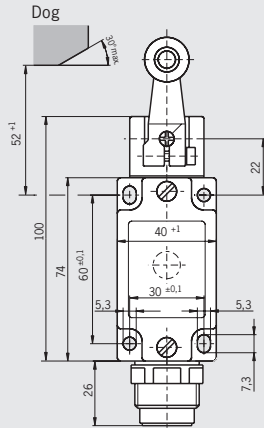
1) No BG approval for switching element 511

2) Ex II 3 G Ex nC IIB T5 X (reduced resistance to impact acc. to EN 61241-1; max. 4 J) / Ex II 3 D Ex tD A22 T90°C X (reduced resistance to impact acc. to EN 61241-1; max. 4 J)



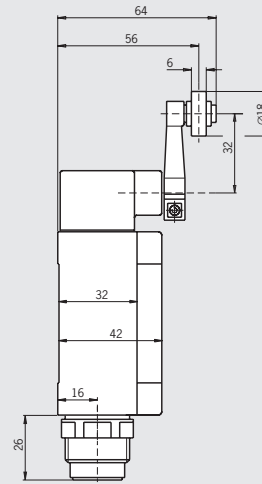
Plug connector SR6 6-pin + PE

Dimension drawings



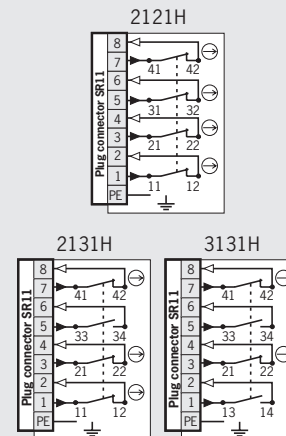
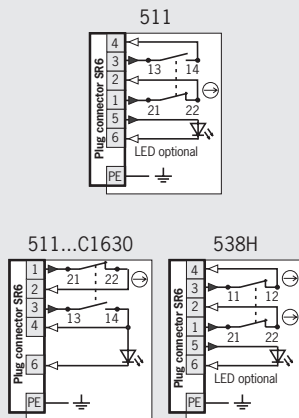
For mating connectors see page 128

Plug connector SR11 11-pin + PE



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | |
|--------|-----------------------------|----------------------------|------------------------------------|-----------------------------|-----------------------------------|---------------------------------------|--|
| | | | | | Without LED | 12-60 V red LED | 12-60 V yellow LED |
| NZ | HS Lever arm | 2 Plug connector SR6 | 511 ¹⁾ 1 NC ⊖ + 1 NO | C1630 Alternative wiring | 089093 ¹⁾ NZ2HS-511 | 089094 ¹⁾ NZ2HS-511L060 | 090697 ¹⁾ NZ2HS-511L060GE |
| | | | 511 ¹⁾ 1 NC ⊖ + 1 NO | | On request | On request | 078473 ¹⁾ NZ2HS-511L060C1630 |
| | | | 528H 1 NC ⊖ + 1 NO | | 090852 NZ2HS-528 | 088196 NZ2HS-528L060 | On request |
| | | | 538H 2 NC ⊖ | | 090853 NZ2HS-538 | 090854 NZ2HS-538L060 | On request |
| | 2 Plug connector SR11 | 2121H 4 NC ⊖ | 091264 NZ2HS-2121 | - | - | | |
| | | 2131H 3 NC ⊖ + 1 NO | 090146 NZ2HS-2131 | - | - | | |
| | | 3131H 2 NC ⊖ + 2 NO | 090856 NZ2HS-3131 | - | - | | |

1) No BG approval for switching element 511

Please turn over

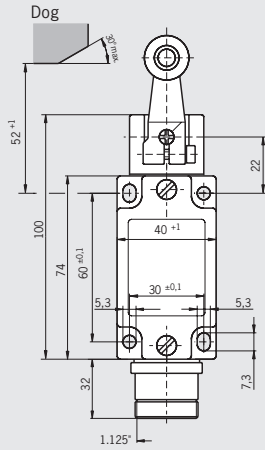
For safety precautions see page 196
For technical data see page 163





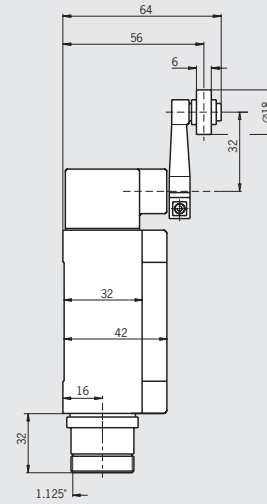
Plug connector MR8 7-pin + PE

Dimension drawings



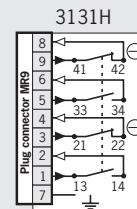
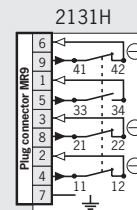
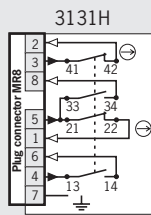
For mating connectors see page 131

Plug connector MR9 8-pin + PE



For mating connectors see page 131

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection element | Switching Without LED | Function display | |
|--------|-----------------|---------------------------------|--------------------------------|--|--------------------|
| | | | | 12-60 V red LED | 12-60 V yellow LED |
| NZ | HS Lever arm | 1...8C Plug connector MR8 | 3131H 2 NC \ominus + 2 NO | 086574 NZ1HS-3131-8C-Ford / PT60577-101K01 | - |
| | | 1...9C Plug connector MR9 | 2131H 3 NC \ominus + 1 NO | 077391 ³⁾ NZ1HS-2131-9C-GMMF | - |
| | | | 3131H 2 NC \ominus + 2 NO | 073508 NZ1HS-3131-9C-GMMF | - |

3) No UL approval for safety switch 077 391

Position switch NZ.HB with roller lever arm

- ▶ Version A according to EN 50041 (plastic roller $\varnothing 18$)
- ▶ LED optional
- ▶ Plug connector optional



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

Right, left or both sides (see page 9).

LED function display (optional)

A function display is available for the following voltage ranges:

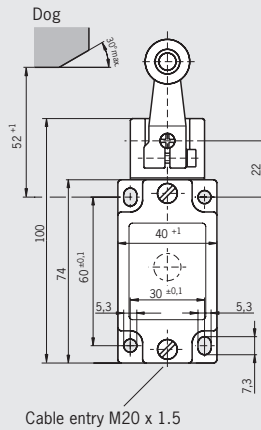
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 230 V $\pm 15\%$ red

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

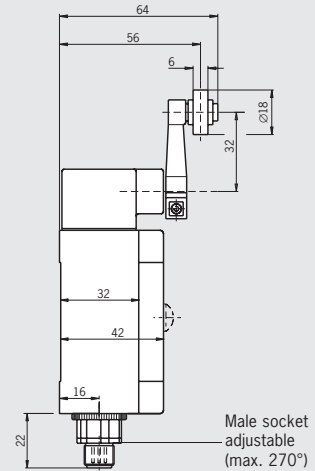
Cable entry M20 x 1.5

Dimension drawings



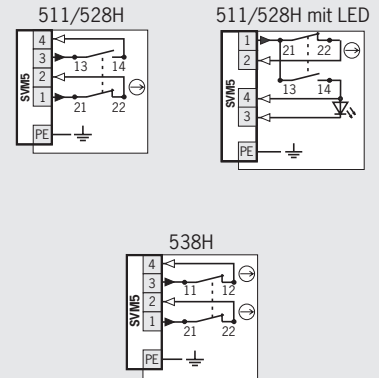
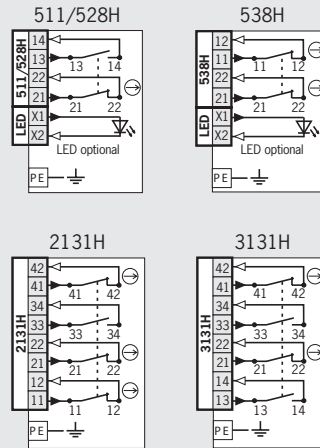
For cable glands see page 132

Plug connector SVM5 M12 plug, 5-pin



For mating connectors see page 132

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Function display | | | |
|--------|--------------------|---|---|--|--|--|--|
| | | | | Without LED | 12-60 V red LED | 230 V red LED | 12-60 V yellow LED |
| NZ | HB Lever arm | 1 Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | 079952 ¹⁾ NZ1HB-511-M | 090039 ¹⁾ NZ1HB-511L060-M | 090040 ¹⁾ NZ1HB-511L220-M | 086525 ¹⁾ NZ1HB-511L060GE-M |
| | | | 528H 1 NC \ominus + 1 NO | 088199 NZ1HB-528-M | 090965 NZ1HB-528L060-M | 090051 NZ1HB-528L220-M | 086527 NZ1HB-528L060GE-M |
| | | | 538H 2 NC \ominus | 090966 NZ1HB-538-M | 090967 NZ1HB-538L060-M | On request | On request |
| | | | 2131H 3 NC \ominus + 1 NO | 090968 NZ1HB-2131-M | - | - | - |
| | | | 3131H 2 NC \ominus + 2 NO | 090969 NZ1HB-3131-M | - | - | - |
| | | | 511 ¹⁾ 1 NC \ominus + 1 NO | 090861 ¹⁾ NZ2HB-511SVM5 | On request | - | 098649 ¹⁾ NZ2HB-511SVM5L060GE |
| | | 2 Plug connector SVM5 (M12 plug) | 528H 1 NC \ominus + 1 NO | 090864 NZ2HB-528SVM5 | On request | - | On request |
| | | | 538H 2 NC \ominus | 090862 NZ2HB-538SVM5 | On request | - | On request |

1) No BG approval for switching element 511

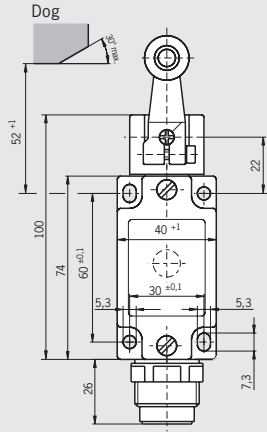
Please turn over

For safety precautions see page 196
For technical data see page 163



Plug connector SR6 6-pin + PE

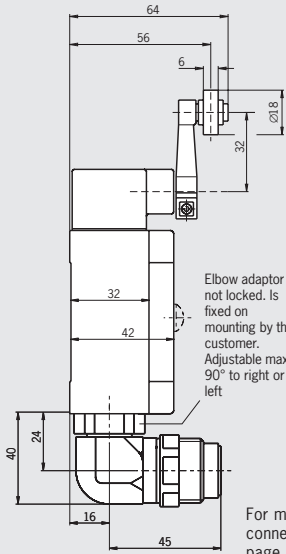
Dimension drawings



For mating connectors see page 128



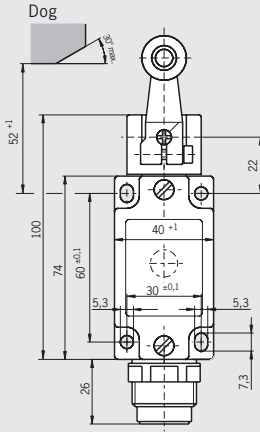
Plug connector SR6 angled 6-pin + PE



For mating connectors see page 128

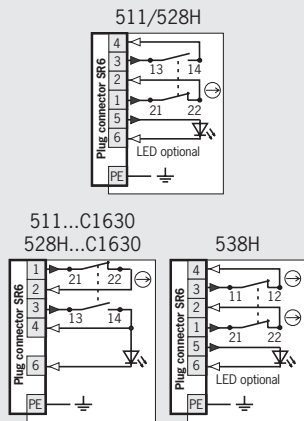


Plug connector SR11 11-pin + PE



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | | | | |
|--------|-----------------|-----------------------------------|------------------------------------|-----------------------------|-----------------------------------|---------------------------------------|-------------------------|--|---|
| | | | | | Without LED | 12-60 V red LED | 230 V red LED | 12-60 V yellow LED | |
| NZ | HB Lever arm | 2 Plug connector SR6 | 511 ¹⁾ 1 NC ⊖ + 1 NO | | 089091 ¹⁾ NZ2HB-511 | 089092 ¹⁾ NZ2HB-511L060 | On request | 090719 ¹⁾ NZ2HB-511L060GE | |
| | | | 511 ¹⁾ 1 NC ⊖ + 1 NO | C1630 Alternative wiring | On request | On request | On request | 054121 ¹⁾ NZ2HB-511L060C1630 | |
| | | | 528H 1 NC ⊖ + 1 NO | | 090845 NZ2HB-528 | 090846 NZ2HB-528L060 | 091281 NZ2HB-528L220 | 091301 NZ2HB-528L060GE | |
| | | | 528H 1 NC ⊖ + 1 NO | C1630 Alternative wiring | On request | On request | On request | 091346 NZ2HB-528L060C1630 | |
| | | | 538H 2 NC ⊖ | | 090847 NZ2HB-538 | 090848 NZ2HB-538L060 | On request | On request | |
| | | | 511 ¹⁾ 1 NC ⊖ + 1 NO | C1631 Alternative wiring | On request | On request | On request | 054122 ¹⁾ NZ2HB-511L060C1631 | |
| | | 2 Plug connector SR6 angled | 528H 1 NC ⊖ + 1 NO | C1631 Alternative wiring | On request | On request | On request | 091347 NZ2HB-528L060C1631 | |
| | | | 2 Plug connector SR11 | 2131H 3 NC ⊖ + 1 NO | | 090136 NZ2HB-2131 | - | - | - |
| | | | | 3131H | | 090137 NZ2HB-3131 | - | - | - |
| | | | | 2 NC ⊖ + 2 NO | | | | | |

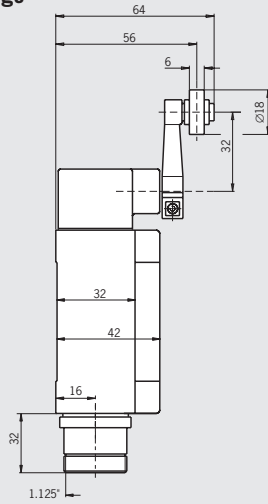
1) No BG approval for switching element 511



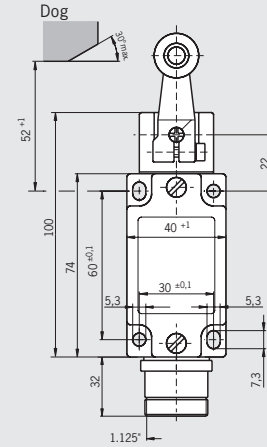
Plug connector MR9 8-pin + PE

Plug connector MR10 9-pin + PE

Dimension drawings

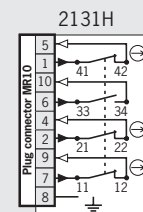
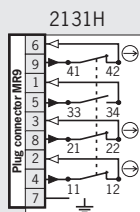


For mating connectors see page 131



For mating connectors see page 131

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Function display | | | |
|--------|-----------------|-----------------------------------|--------------------------------|------------------------------|-----------------|---------------|--------------------|
| | | | | Without LED | 12-60 V red LED | 230 V red LED | 12-60 V yellow LED |
| NZ | HB Lever arm | 1...9C Plug connector MR9 | 2131H 3 NC \ominus + 1 NO | 077390 NZ1HB-2131-9C-GMMF | - | - | - |
| | | 1...10C Plug connector MR10 | 2131H 3 NC \ominus + 1 NO | 095898 NZ1HB-2131-10C-FW | - | - | - |

For safety precautions see page 196
For technical data see page 163

Position switch NZ.PS with adjustable lever arm



- ▶ Steel roller $\varnothing 18$
- ▶ LED optional
- ▶ Plug connector optional



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

Right, left or both sides (see page 9).

Lever arm adjustment

Lever arm length can be adjusted from 28 mm to 78 mm in steps of 12.5 mm.

LED function display (optional)

A function display is available for the following voltage ranges:

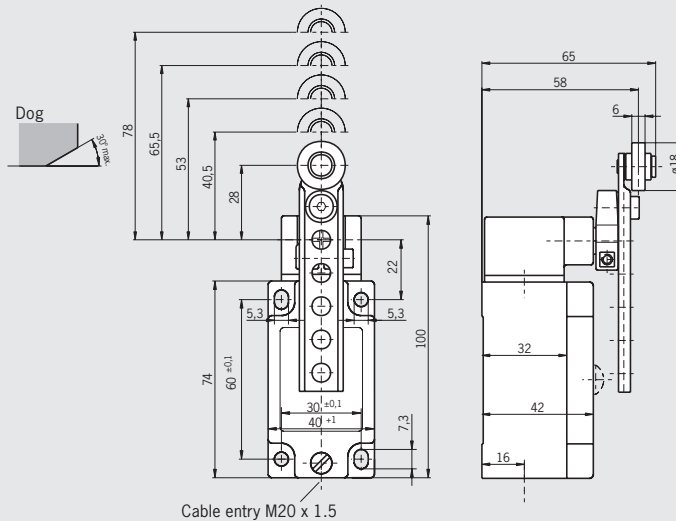
- ▶ AC/DC 12-60 V red or yellow
- ▶ AC 230 V $\pm 15\%$ red

Switching elements (see also page 13/14)

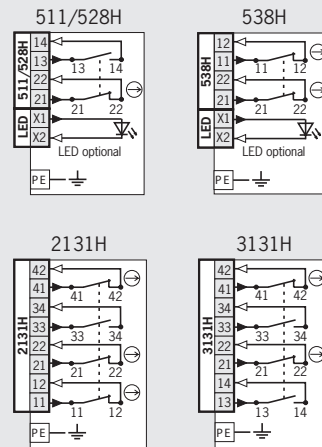
- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2121H** Slow-action switching element
4 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

Cable entry M20 x 1.5

Dimension drawings



Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Function display | | | |
|--------|----------------------------|-------------------------------|---|--|----------------------------------|----------------------------------|------------------------------------|
| | | | | Without LED | 12-60 V red LED | 230 V red LED | 230 V yellow LED |
| NZ | PS Adjustable lever arm | 1 Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | 088613 ¹⁾ NZ1PS-511-M | On request | On request | On request |
| | | | 528H 1 NC \ominus + 1 NO | 090874 NZ1PS-528-M | 090430 NZ1PS-528L060-M | 093521 NZ1PS-528L220-M | 093523 NZ1PS-528L220GE-M |
| | | | 538H 2 NC \ominus | 090875 NZ1PS-538-M | On request | On request | On request |
| | | | 2131H 3 NC \ominus + 1 NO | 090876 NZ1PS-2131-M | - | - | - |
| | | | 3131H 2 NC \ominus + 2 NO | 090877 NZ1PS-3131-M | - | - | - |
| | | | | | | | |

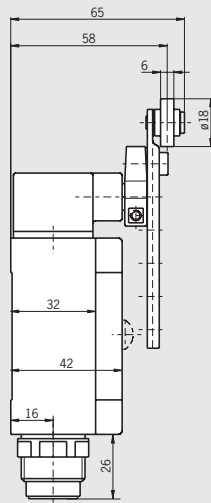
1) No BG approval for switching element 511



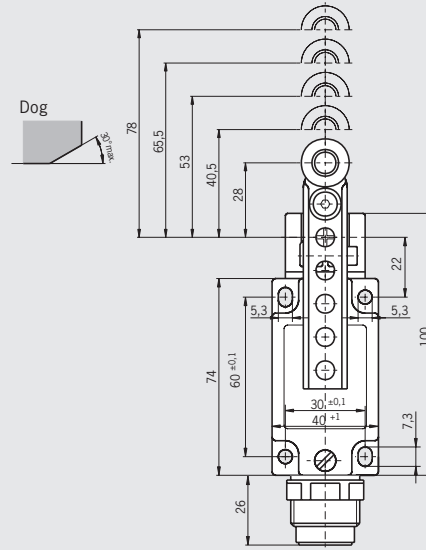
Plug connector SR6 6-pin + PE

Plug connector SR11 11-pin + PE

Dimension drawings

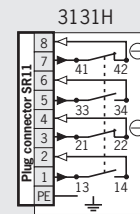
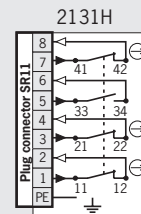
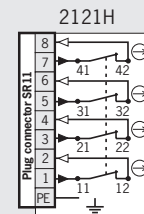
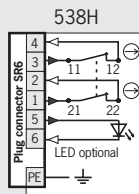
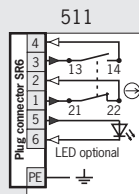


For mating connectors see page 128



For mating connectors see page 128

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Function display | |
|--------|--|--------------------------------|------------------------------------|-----------------------------------|---------------------------------------|
| | | | | Without LED | 12-60 V red LED |
| NZ | PS Adjustable lever arm steel roller | 2 Plug connector SR6 | 511 ¹⁾ 1 NC ⊖ + 1 NO | 093112 ¹⁾ NZ2PS-511 | 090152 ¹⁾ NZ2PS-511L060 |
| | | | 538H 2 NC ⊖ | On request | 091632 NZ2PS-538L060 |
| | | 2 Plug connector SR11 | 2121H 4 NC ⊖ | 091268 NZ2PS-2121 | - |
| | | | 2131H 3 NC ⊖ + 1 NO | 090151 NZ2PS-2131 | - |
| | | | 3131H 2 NC ⊖ + 2 NO | 090150 NZ2PS-3131 | - |

1) No BG approval for switching element 511

Position switch NZ.PB with adjustable lever arm



▶ Plastic roller $\varnothing 18$



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

Right, left or both sides (see page 9).

Lever arm adjustment

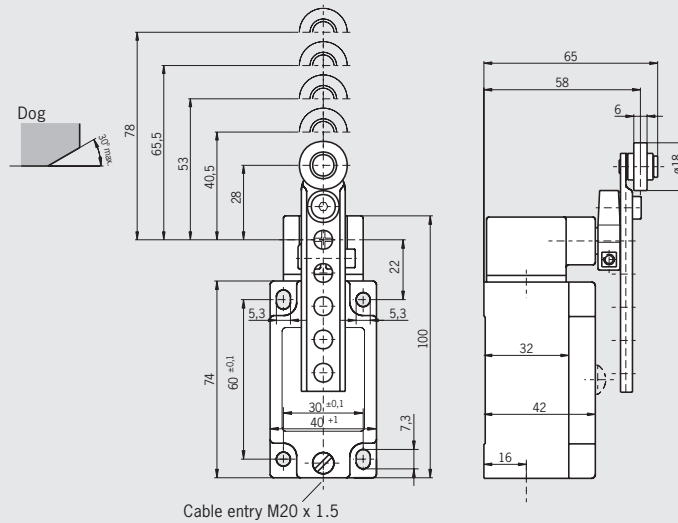
Lever arm length can be adjusted from 28 mm to 78 mm in steps of 12.5 mm.

Switching elements (see also page 13/14)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus
- ▶ **2131H** Slow-action switching element
3 NC \ominus + 1 NO
- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

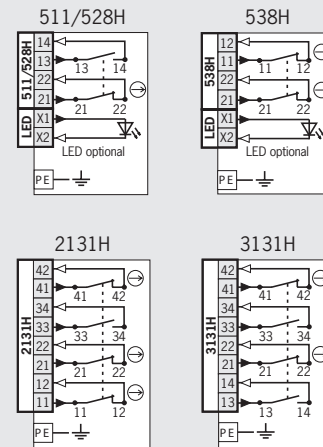
Cable entry M20 x 1.5

Dimension drawings



For cable glands see page 132

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Function display | |
|--------|----------------------------|-------------------------------|---|-----------------------------|--------------|
| | | | | Without LED | |
| NZ | PB Adjustable lever arm | 1 Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | 088618 ¹⁾ | NZ1PB-511-M |
| | | | 528H 1 NC \ominus + 1 NO | 090870 | NZ1PB-528-M |
| | | | 538H 2 NC \ominus | 090871 | NZ1PB-538-M |
| | | | 2131H 3 NC \ominus + 1 NO | 090872 | NZ1PB-2131-M |
| | | | 3131H 2 NC \ominus + 2 NO | 090873 | NZ1PB-3131-M |

1) No BG approval for switching element 511

Position switch NZ.RS.C1588 with roller plunger



- ▶ **Version C** according to EN 50041 (steel roller \varnothing 12 mm)
- ▶ **Exterior bellows** (material: CR rubber)



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Exterior bellows

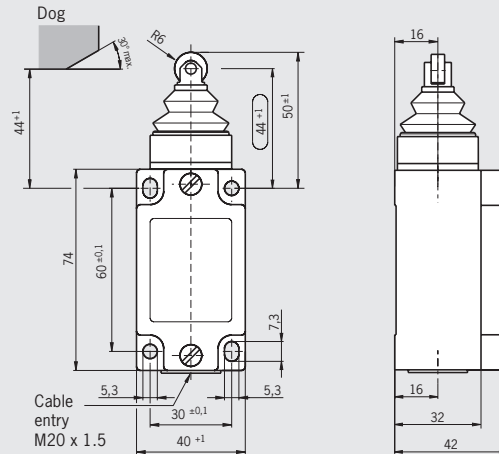
Protection against heavy soiling (dust) and aggressive coolants.

Switching elements (see also page 13)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO

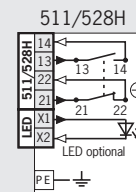
Cable entry M20 x 1.5

Dimension drawings



For cable glands see page 132

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display |
|--------|----------------------|-------------------------------|-------------------|--------------------------------------|--|
| | | | | | Without LED |
| NZ | RS Roller plunger | 1 Cable entry M20 x 1.5 | 511 ¹⁾ | C1588 Exterior bellows, red cover | 091352 ¹⁾ NZ1RS-511-MC1588 |
| | | | 528H | C1588 Exterior bellows, red cover | 091339 NZ1RS-528-MC1588 |

1) No BG approval for switching element 511

Position switch NZ.HB.C569 with roller lever arm



- ▶ Large plastic roller \varnothing 30 mm
- ▶ LED optional



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

Right, left or both sides (see page 9).

LED function display (optional)

A function display is available for the following voltage ranges:

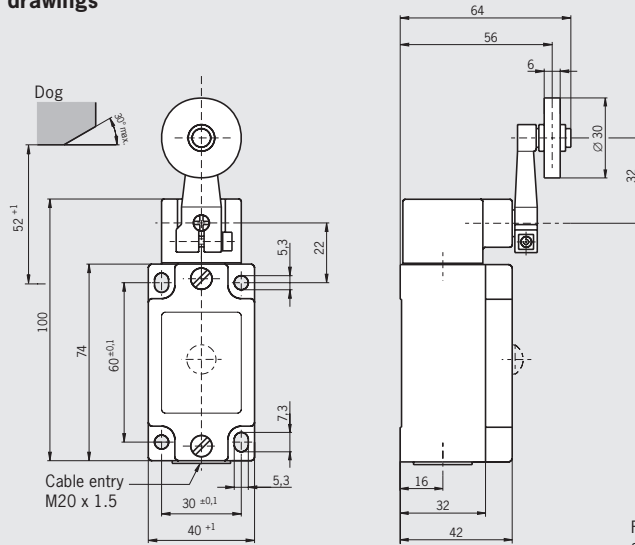
- ▶ AC/DC 12-60 V red

Switching elements (see also page 13)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO
- ▶ **528H** Slow-action switching element
1 NC \ominus + 1 NO
- ▶ **538H** Slow-action switching element
2 NC \ominus

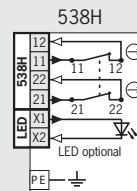
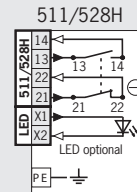
Cable entry M20 x 1.5

Dimension drawings



For cable glands see page 132

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display | |
|--------|-----------------|-------------------------------|---|---|--|--|
| | | | | | Without LED | 12-60 V red LED |
| NZ | HB Lever arm | 1 Cable entry M20 x 1.5 | 511 ¹⁾ 1 NC \ominus + 1 NO | C569 Large plastic roller \varnothing 30 mm | 079965 ¹⁾ NZ1HB-511-MC569 | 091091 ¹⁾ NZ1HB-511L060-MC569 |
| | | | 528H 1 NC \ominus + 1 NO | C569 Large plastic roller \varnothing 30 mm | 079946 NZ1HB-528-MC569 | 091330 NZ1HB-528L060-MC569 |
| | | | 538H 2 NC \ominus | C569 Large plastic roller \varnothing 30 mm | 079999 NZ1HB-538-MC569 | On request |

1) No BG approval for switching element 511

Position switch NZ.HS.C1779 with roller lever arm



- ▶ Steel roller \varnothing 18 mm
- ▶ Roller mounted on inside of lever



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

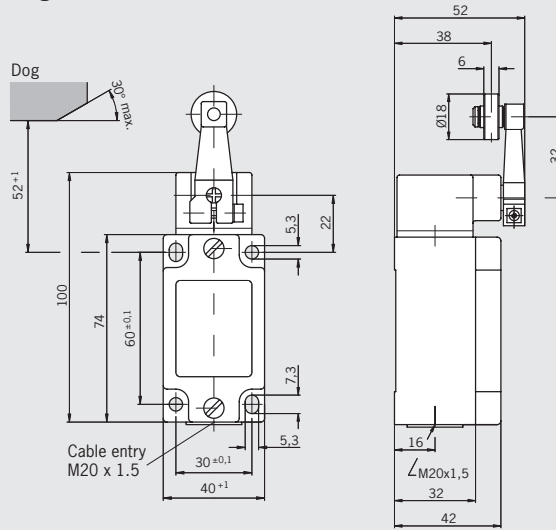
Right, left or both sides (see page 9).

Switching elements (see also page 14)

- ▶ **3131H** Slow-action switching element
2 NC \ominus + 2 NO

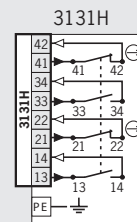
Cable entry M20 x 1.5

Dimension drawings



For cable glands see page 132

Wiring diagrams Switch not actuated



Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display |
|--------|--------------------|----------------------------------|--------------------------------|--|-----------------------------|
| | | | | | Without LED |
| NZ | HS Lever arm | 1 Cable entry M20 x 1.5 | 3131H 2 NC \ominus + 2 NO | C1779 Roller mounted on inside of lever | 079996 NZ1HS-3131-MC1779 |

Position switch NZ.HS.C1883 with roller lever arm



- ▶ Steel roller \varnothing 19 mm
- ▶ With ball bearing
- ▶ LED on request



Approach direction



Horizontal
Switch head and lever arm can be adjusted in 90° steps.

Switching direction

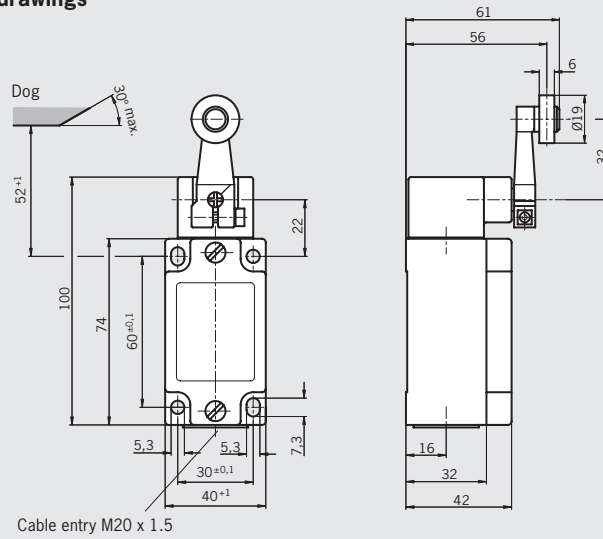
Right, left or both sides (see page 9).

Switching elements (see also page 13)

- ▶ **511** Snap-action switching element
1 NC \ominus + 1 NO

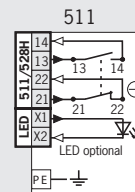
Cable entry M20 x 1.5

Dimension drawings



For cable glands see page 132

Wiring diagrams Switch not actuated

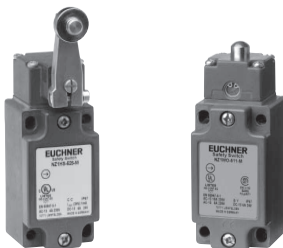


Ordering table

| Series | Actuator | Connection | Switching element | Version | Function display |
|--------|-----------------|-------------------------------|------------------------------|----------------------------|----------------------------|
| | | | | | Without LED |
| NZ | HS Lever arm | 1 Cable entry M20 x 1.5 | 511 1 NC \ominus + 1 NO | C1833 With ball bearing | 091312 NZ1HS-511-MC1833 |

Position switch NZ...

The technical data on switches and switching elements apply to all connections. Further technical data are given for the connection selected.



Reliability values acc. to EN ISO 13849-1

| Parameter | Value | Unit |
|------------------|--------------------------------------|------|
| B _{10d} | 2 x 10 ⁷ operating cycles | |

| Switch | | | | | | | Unit | |
|---|---------------------------------------|-----------|-----------|-----------|-------------------|-----------|-----------|-------|
| Parameter | Value | | | | | | Unit | |
| Housing material | Anodized die-cast alloy | | | | | | | |
| Mechanical life | 30 x 10 ⁶ operating cycles | | | | | | | |
| Ambient temperature | - 25 ... + 80 | | | | | | °C | |
| Weight | Approx. 0.3 | | | | | | kg | |
| Approach speed, min. | 0.1 | | | | | | m/min | |
| Approach speed max. ¹⁾ depending on actuator | HB | HS | PB | PS | RG, RL, RS | RK | WO | |
| | 300 | 60 | 120 | 30 | 20 | 50 | 10 | m/min |
| Actuating force, min. | 15 | | | | | | N | |

| Switching element | | | | Unit |
|--|-------------------------------|-------------------------------|-----------------------------|-----------------------------|
| Parameter | Value | | | Unit |
| Switching principle | Snap-action switching element | Slow-action switching element | | |
| Switching elements with 2 switching elements | 511 1 NC + 1 NO | 528H 1 NC + 1 NO | 538H 2 NC | |
| Switching elements with 4 switching elements | - | 2121H 4 NC | 2131H 3 NC + 1 NO | 3131H 2 NC + 2 NO |
| Min. switching current at 24 V DC | 10 | 1 | | mA |
| Switching current max. | 6 | 4 | | A |
| Contact closing time | < 4 | - | | ms |
| Contact bounce time | < 3 | - | | ms |
| Rated impulse withstand voltage U _{imp} | 2.5 | | | kV |
| Contact material | Silver alloy, gold flashed | | | |

| Connection, cable entry M20 x 1.5 | | | Unit |
|--|-------------------------------|--|---|
| Parameter | Value | | Unit |
| Connection | Screw terminal | | |
| Version | M20 x 1.5 | | |
| Conductor cross-section max. | Per wire 1.5 mm ² | | |
| Degree of protection according to IEC 60529 | IP 67 | | |
| Rated insulation voltage U _i | 250 | | V AC/DC |
| Switching element | Snap-action switching element | Slow-action switching element | |
| | 511 | 528H, 538H, 2121H, 2131H, 3131H | |
| Conventional thermal current I _{th} | 6 | 4 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | 6 | 4 | A gG |
| Utilization category to IEC 60947-5-1 | AC-12 | I _e 10 A U _e 230 V | - |
| | AC-15 | I _e 6 A U _e 230 V | I _e 4 A U _e 230 V |
| | DC-13 | I _e 6 A U _e 24 V | I _e 4 A U _e 24 V |

1) The approach speed given applies in conjunction with EUCHNER trip dogs at an approach angle of 30°. At a smaller approach angle this approach speed can be exceeded.

| Connection, plug connector SVM 5 (M12) | | | |
|--|-------|---|---------|
| Parameter | | Value | Unit |
| Connection | | Plug connector | |
| Version | | M12 (4-pin + PE), male socket adjustable (max. 270°) for elbow connector | |
| Degree of protection according to IEC 60529 | | IP 67 ²⁾ | |
| Rated insulation voltage U _i | | 30 | V AC/DC |
| Switching element | | Snap-action switching element 511 , Slow-action switching element 528H, 538H | |
| Conventional thermal current I _{th} | | 4 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | | 4 | A gG |
| Utilization category to IEC 60947-5-1 | AC-15 | I _e 4 A U _e 30 V | |
| | DC-13 | I _e 4 A U _e 24 V | |

| Connection, plug connector SR6 | | | |
|--|-------|---|---------|
| Parameter | | Value | Unit |
| Connection | | Plug connector according to DIN 43651 | |
| Version | | SR6 (6-pin + PE) | |
| Degree of protection according to IEC 60529 | | IP 65 ²⁾ | |
| Rated insulation voltage U _i | | 250 | V AC/DC |
| Switching element | | Snap-action switching element 511 Slow-action switching element 528H, 538H | |
| Conventional thermal current I _{th} | | 6 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | | 6 | A gG |
| Utilization category to IEC 60947-5-1 | AC-15 | I _e 6 A U _e 230 V | |
| | DC-13 | I _e 6 A U _e 24 V | |

| Connection, plug connector MR8 | | | |
|--|------|--|---------|
| Parameter | | Value | Unit |
| Connection | | Plug connector | |
| Version | | MR8 (7-pin + PE) | |
| Degree of protection according to IEC 60529 | | IP 65 ²⁾ | |
| Rated insulation voltage U _i | | 250 | V AC/DC |
| Switching element | | Slow-action switching element 3131H | |
| Conventional thermal current I _{th} | | 4 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | | 4 | A gG |
| Utilization category to IEC 60947-5-1 | AC15 | I _e 4 A U _e 230 V | |
| | DC13 | I _e 4 A U _e 24 V | |

| Connection, plug connector MR9 | | | |
|--|------|---|---------|
| Parameter | | Value | Unit |
| Connection | | Plug connector | |
| Version | | MR9 (8-pin + PE) | |
| Degree of protection according to IEC 60529 | | IP 65 ²⁾ | |
| Rated insulation voltage U _i | | 250 | V AC/DC |
| Switching element | | Slow-action switching element 2131H, 3131H | |
| Conventional thermal current I _{th} | | 4 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | | 4 | A gG |
| Utilization category to IEC 60947-5-1 | AC15 | I _e 4 A U _e 230 V | |
| | DC13 | I _e 4 A U _e 24 V | |

| Connection, plug connector MR10 | | | |
|--|------|---|---------|
| Parameter | | Value | Unit |
| Connection | | Plug connector | |
| Version | | MR10 (9-pin + PE) | |
| Degree of protection according to IEC 60529 | | IP 65 ²⁾ | |
| Rated insulation voltage U _i | | 250 | V AC/DC |
| Conventional thermal current I _{th} | | 4 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | | 4 | A gG |
| Utilization category to IEC 60947-5-1 | AC15 | I _e 4 A U _e 230 V | |
| | DC13 | I _e 4 A U _e 24 V | |

2) Screwed tight with the related plug connector (see page 128 and 131)

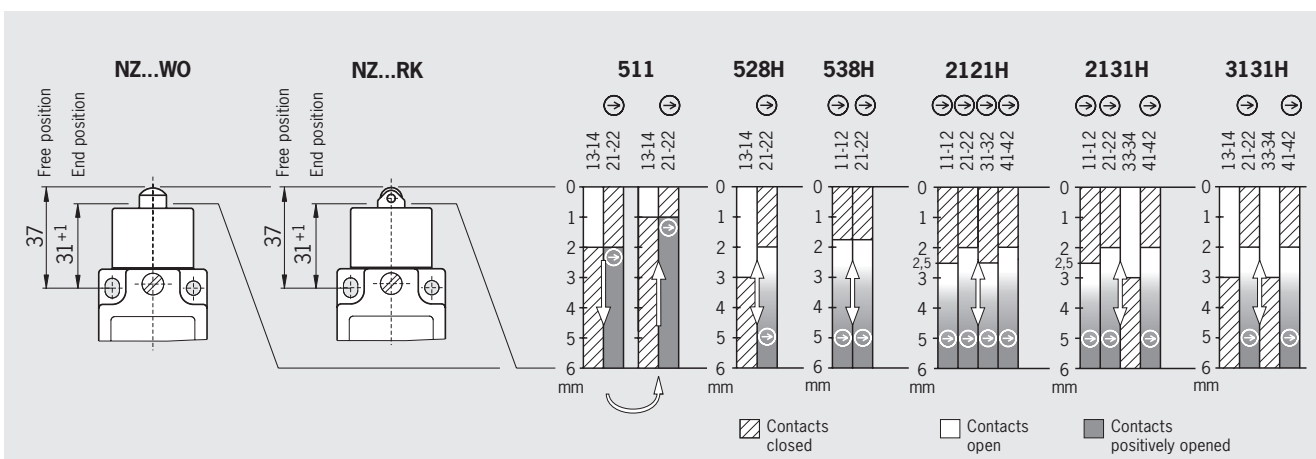
Connection, plug connector SR11



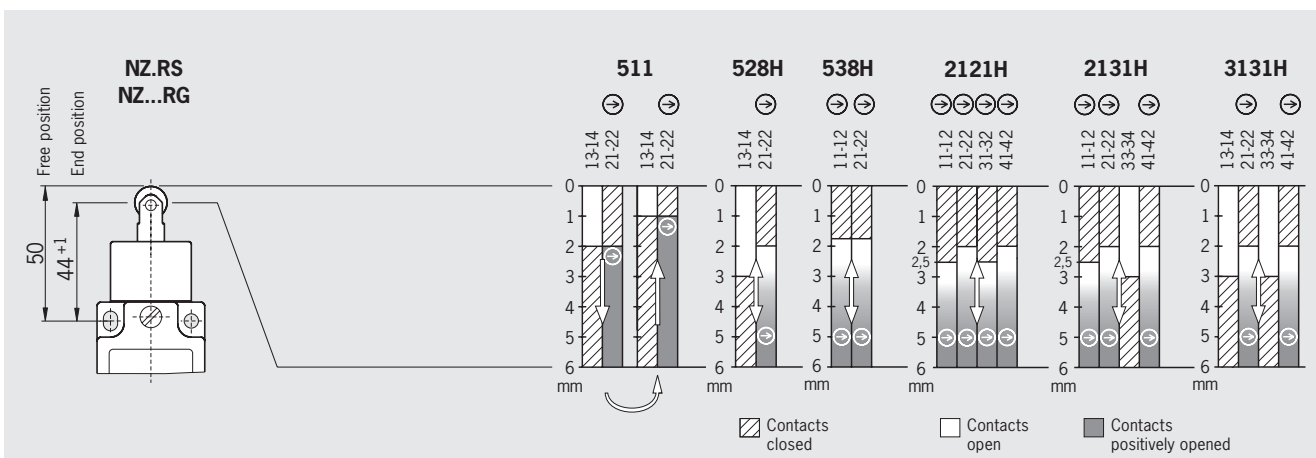
| Parameter | | Value | Unit |
|--|------|---|---------|
| Connection | | Plug connector | |
| Version | | SR11 (11-pin + PE) | |
| Degree of protection according to IEC 60529 | | IP 65 ²⁾ | |
| Rated insulation voltage U _i | | 50 | V AC/DC |
| Switching element | | Slow-action switching element 2121H, 2131H, 3131H | |
| Conventional thermal current I _{th} | | 4 | A |
| Short circuit protection according to IEC 60269-1 (control circuit fuse) | | 4 | A gG |
| Utilization category to IEC 60947-5-1 | AC15 | I _e 4 A U _e 50 V | |
| | DC13 | I _e 4 A U _e 24 V | |

2) Screwed tight with the related plug connector (see page 128)

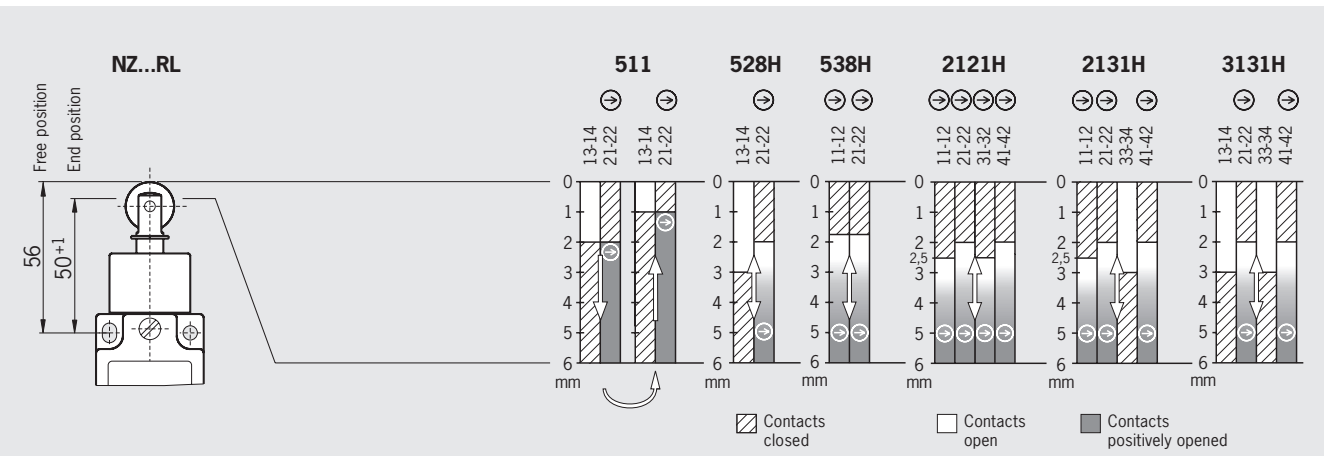
Travel diagram NZ.WO/NZ.RK



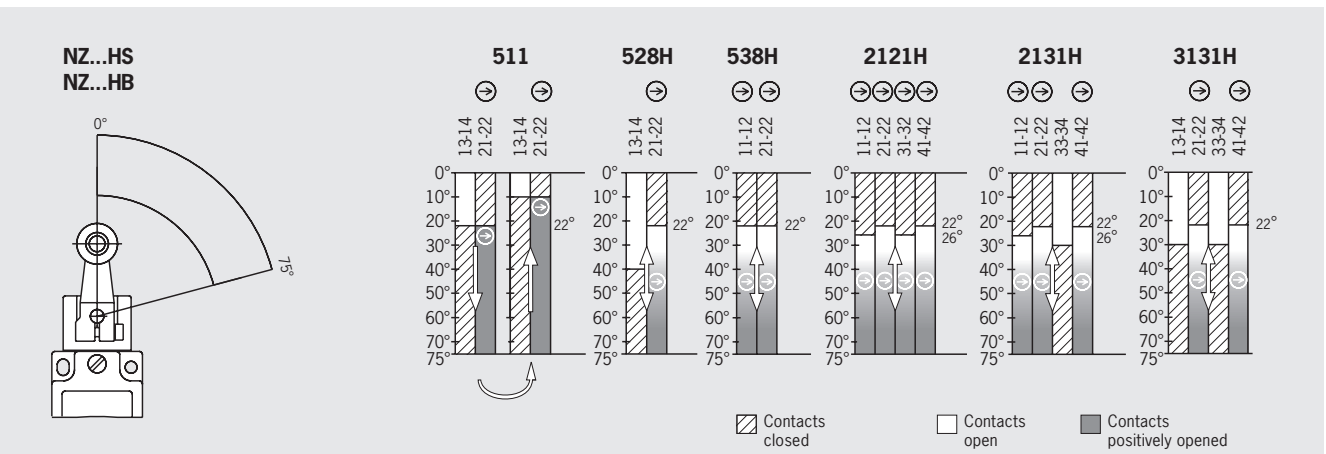
Travel diagram NZ.RS/NZ.RG



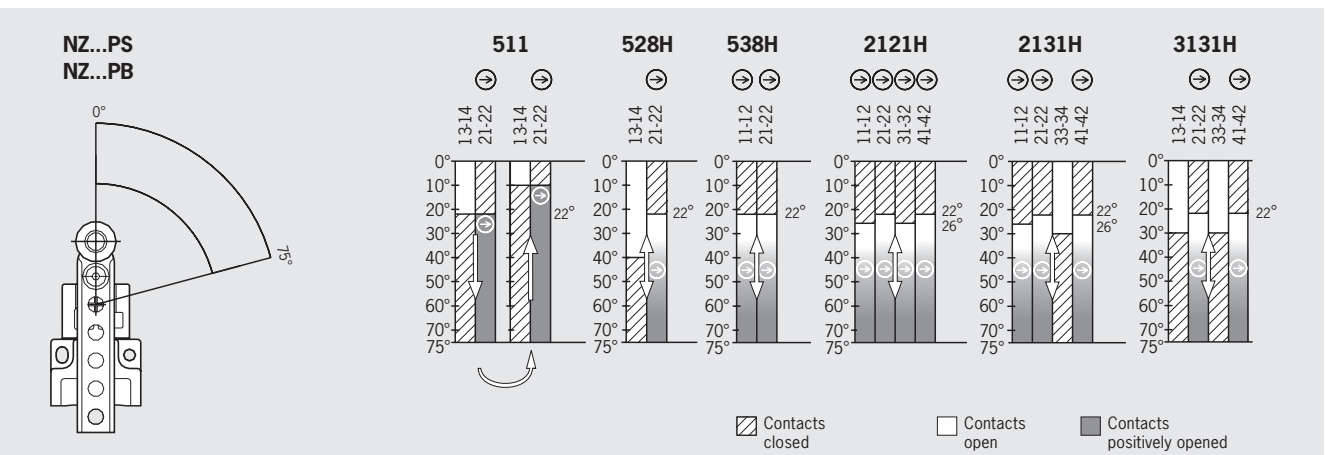
Travel diagram NZ.RL



Travel diagram NZ.HS/NZ.HB



Travel diagram NZ.PS/NZ.PB





element14

EN - For pricing and availability in your local country please visit one of the below links:

DE - Informationen zu Preisen und Verfügbarkeit in Ihrem Land erhalten Sie über die unten aufgeführten Links:

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[NZ1HS-2131-M](#)

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