



Sensor de segurança com relé integrado 117

O sensor de segurança com relé integrado modelo 117K serve para monitoramento de abertura/fechamento de portas de proteção. A combinação de sensor de segurança e eletrônica de controle de segurança (relé) em uma única carcaça proporciona economia de espaço de montagem, uma vez que nenhum dispositivo de controle de segurança adicional é necessário no painel de controle da máquina. Este sensor é ideal para aplicação em máquinas de pequeno porte.

Especificação Técnica

- Tensão de alimentação: 24 V AC/DC e 230 V AC
- Sinal de saída à cabo e conector M12
- LED para simples diagnóstico e controle de contato

Desenho técnico

IMAGE 1/3

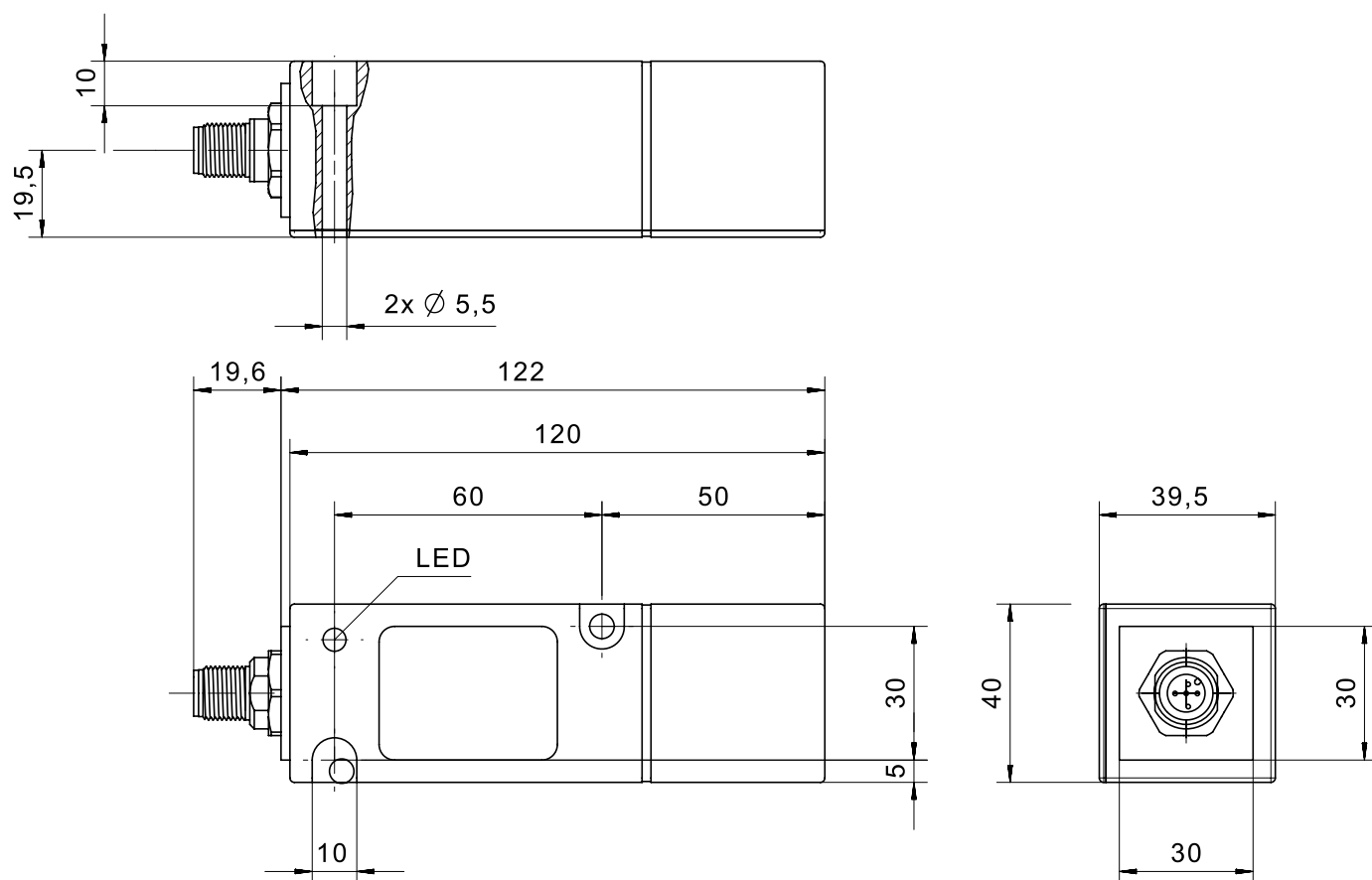
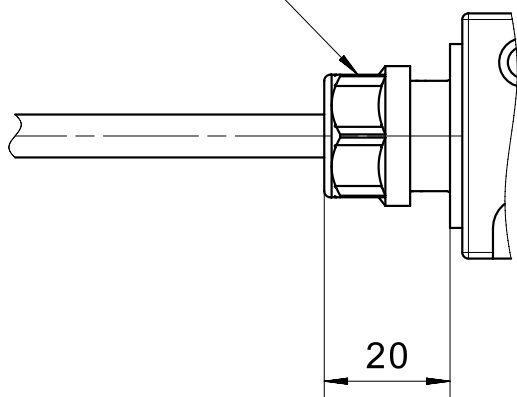


IMAGE 2/3

cable gland



male M12

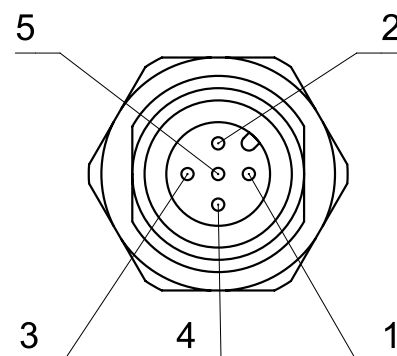
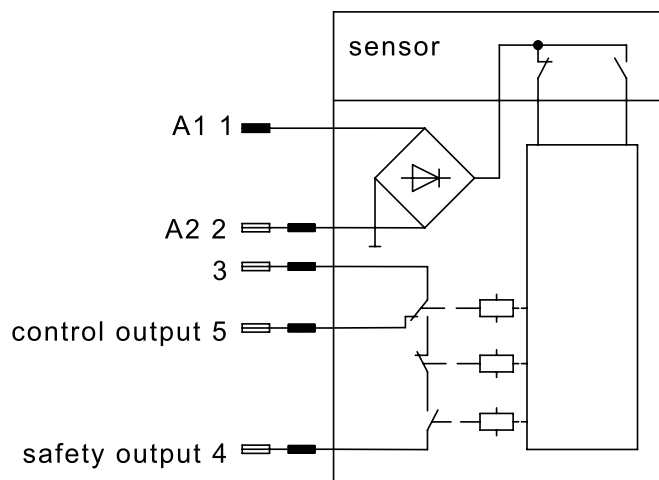
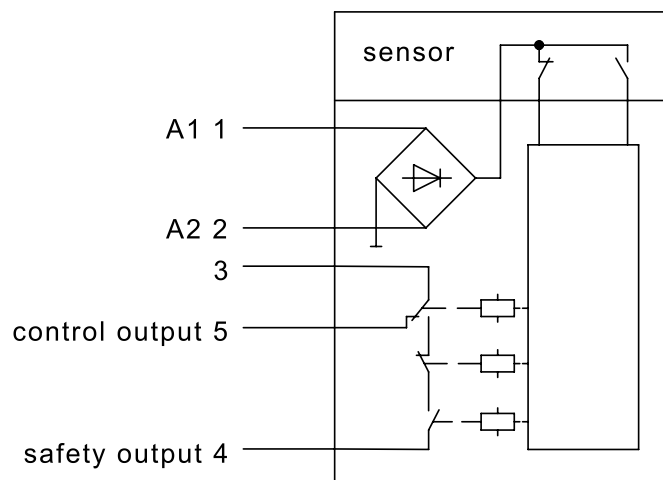
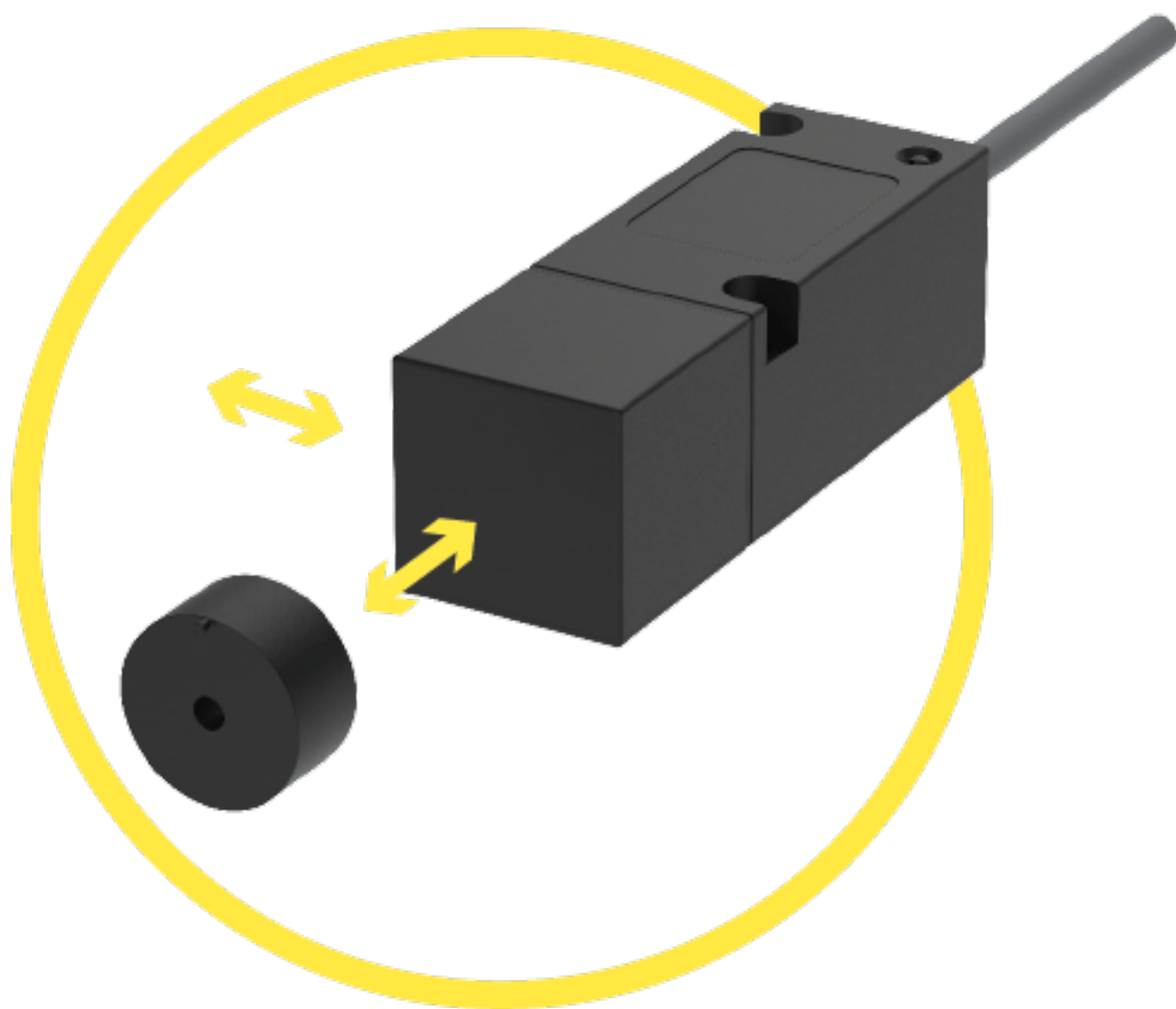


IMAGE 3/3



Product options

IMAGE 1/3



Variants for front and side actuation. Operating distance (Sao) from 7 to 10 mm Assured switch-off distance (Sar) from 18 to 21 mm.

IMAGE 2/3

ORDERING KEY

| | 117411E1 | 117411H1 | 117414E1 | 117511E1 | 117511H1 | 117514E1 |
|---|----------|----------|----------|----------|----------|----------|
| Cubic plastic housing | X | X | X | X | X | X |
| M12x1 connector, 5-pin, plastic | - | - | - | - | - | - |
| Connection cable 1m* | X | X | X | X | X | X |
| S0 safety output, single-channel | X | X | X | X | X | X |
| N.C. control output (changeover contact with S0) | X | X | X | X | X | X |
| Operating voltage 230 V AC | - | - | X | - | - | X |
| Operating voltage 24 V AC/DC | X | X | - | X | X | - |
| Actuation direction lateral right | X | X | X | - | - | - |
| Actuation direction lateral left | - | - | - | X | X | X |
| Actuation direction front | - | - | - | - | - | - |
| Actuation direction top | - | - | - | - | - | - |
| PLd (EN ISO 13849-1) | X | - | X | X | - | X |
| PLe (EN ISO 13849-1) | - | X | - | - | X | - |

| | 117611H1 | 117614E1 | 117711E1 | 117711H1 | 117714E1 |
|---|----------|----------|----------|----------|----------|
| Cubic plastic housing | X | X | X | X | X |
| M12x1 connector, 5-pin, plastic | - | - | - | - | - |
| Connection cable 1m* | X | X | X | X | X |
| S0 safety output, single-channel | X | X | X | X | X |
| N.C. control output (changeover contact with S0) | X | X | X | X | X |
| Operating voltage 230 V AC | - | X | - | - | X |
| Operating voltage 24 V AC/DC | X | - | X | X | - |
| Actuation direction lateral right | - | - | - | - | - |
| Actuation direction lateral left | - | - | - | - | - |
| Actuation direction front | X | X | - | - | - |
| Actuation direction top | - | - | X | X | X |
| PLd (EN ISO 13849-1) | - | X | X | - | X |
| PLe (EN ISO 13849-1) | X | - | - | X | - |

IMAGE 3/3

MATCHING ACTUATORS

| Actuators | 117... | | |
|----------------------|---------------|----------|----------|
| | $S_{0_{min}}$ | S_{ao} | S_{ar} |
| 304 200 00 | 0.5 | 2.5 | 18.5 |
| 304 200 00 V | 0.5 | 2.5 | 18.5 |
| 304 200 00 H | 0.5 | 2.5 | 18.5 |
| 304 200 00 S | 0.5 | 6 | 23.5 |
| 304 200 00 VS | 0.5 | 6 | 23.5 |
| 304 200 00 SH | 0.5 | 6 | 23.5 |
| 304 271 02 | 0.5 | 3 | 21 |
| 304 271 80 | 0.5 | 5 | 21.5 |
| 304 271 82 | 0.5 | 9 | 30 |

$S_{0_{min}}$ = minimum switching distance (mm), S_{ao} = operating distance (mm), S_{ar} = assured switch-off distance (mm)

Características do artigo

| Attribute | 117511E1 | 117511H1 | 117514E1 | 117611H1 | 117614E1 | 117711E1 ▶ |
|--|---------------|----------|----------|-----------|----------|------------|
| Max. switching voltage at safety output | 30 V DC | | | | | |
| Max. switching voltage at control output | 30 V DC | | | | | |
| Max. switching voltage at safety output | 250 V AC | | | | | |
| Max. switching voltage at control output | 250 V AC | | | | | |
| Max. switching current at safety output | 3 A | | | | | |
| Max. switching current at control output | 3 A | | | | | |
| Max. switching power at safety output | 90 W | | | | | |
| Max. switching power at control output | 90 W | | | | | |
| Max. switching power at safety output | 750 VA | | | | | |
| Max. switching power at control output | 750 VA | | | | | |
| Assured switching distance (Sao) | 3 mm | | | | | |
| Assured switch-off distance (Sar) | 21 mm | | | | | |
| Minimum switching distance (S0 min) | 0.5 mm | | | | | |
| Number of relay safety outputs | 1 | | | | | |
| Number of relay control outputs | 1 | | | | | |
| Stop category 0 (STO) nach IEC 61800-5-2 | yes | | | | | |
| Stop category 1 (SS1) nach IEC 61800-5-2 | no | | | | | |
| EDM/start input | no | | | | | |
| Utilization category | AC-15 / DC-13 | | | | | |
| Operating voltage min. | 21.6 V DC | – | – | 21.6 V DC | – | 21.6 V DC |
| Operating voltage max. | 26.4 V DC | – | – | 26.4 V DC | – | 26.4 V DC |
| Operating voltage min. | 21.6 V AC | 207 V AC | 207 V AC | 21.6 V AC | 207 V AC | 21.6 V AC |

Características do artigo

| Attribute | 117511E1 | 117511H1 | 117514E1 | 117611H1 | 117614E1 | 117711E1 ▶ |
|--|-----------------|----------|----------|-----------|----------|------------|
| Operating voltage max. | 26.4 V AC | | 253 V AC | 26.4 V AC | 253 V AC | 26.4 V AC |
| Current consumption | 60 mA | 100 mA | | | | 60 mA |
| Power consumption | 1.5 W | 2.4 W | – | 2.4 W | – | 1.5 W |
| Power consumption | 1.5 VA | 2.4 VA | 23 VA | 2.4 VA | 23 VA | 1.5 VA |
| LED display | single-coloured | | | | | |
| Switching principle | magnetic | | | | | |
| Technology | Reed | | | | | |
| Min. switching voltage at safety output | 5 V DC | 10 V DC | 5 V DC | 10 V DC | 5 V DC | |
| Min. switching voltage at control output | 12 V DC | 10 V DC | 12 V DC | 10 V DC | 12 V DC | |
| Min. switching voltage at safety output | – | 10 V AC | – | 10 V AC | – | |
| Min. switching voltage at control output | 12 V AC | 10 V AC | 12 V AC | 10 V AC | 12 V AC | |
| Min. switching current at safety output | 0.1 A | 0.01 A | 0.1 A | 0.01 A | 0.1 A | |
| Min. switching current at control output | 0.01 A | | | | | |
| Min. switching power at safety output | 0.5 W | 3 W | 0.5 W | 3 W | 0.5 W | |
| Min. switching power at control output | 0.12 W | 3 W | 0.12 W | 3 W | 0.12 W | |
| Min. switching power at safety output | – | 3 VA | – | 3 VA | – | |
| Min. switching power at control output | 0.12 VA | 3 VA | 0.12 VA | 3 VA | 0.12 VA | |
| Readiness delay (tv) | 350 ms | | | | | |
| Max no operating cycles at 0.5A switching current (ohmic load) | 1000000 | 700000 | 1000000 | 700000 | 1000000 | |
| Max no operating cycles at 2.5A switching current (ohmic load) | 230000 | 25000 | 230000 | 25000 | 230000 | |
| Overvoltage category | III | | | | | |
| Pollution degree | 2 | | | | | |
| Protection class | III | | | | | |

Características do artigo

| Attribute | 117511E1 | 117511H1 | 117514E1 | 117611H1 | 117614E1 | 117711E1 ▶ |
|---|-------------------|----------|----------|----------|----------|------------|
| Fuse operating voltage | 0,5A fast | | | | | |
| Fuse safety output | 3A fast | | | | | |
| Fuse control output | 3A fast | | | | | |
| Actuation | left side | | | front | | top |
| PL acc. to EN ISO 13849-1 | d | e | d | e | d | |
| Category acc. to EN ISO 13849-1 | 3 | 4 | 3 | 4 | 3 | |
| Coding acc. to EN ISO 14119 | Low | | | | | |
| Type acc. to EN ISO 14119 | 4 | | | | | |
| Mission time in years | 20 a | | | | | |
| Housing design | rectangular | | | | | |
| Dimensions | 120 x 40 x 40 mm | | | | | |
| Operating speed max. | 0.1 m/min | | | | | |
| Actuation frequency | 18000 1/h | | | | | |
| Free zone | 25 mm | | | | | |
| Minimum installation distance (between two sensors) | 50 mm | | | | | |
| cannot be mounted flush | yes | | | | | |
| Housing material | PBT | | | | | |
| Cable material | TPE | | | | | |
| Housing colour | schwarz | | | | | |
| Protection class | IP67 DIN EN 60529 | | | | | |
| Protection class, connector | - | | | | | |
| Operating temperature min. | -25 °C | | | | | |
| Max. operating temperature | 55 °C | | | | | |
| Min. cable temperature range, moving | -25 °C | | | | | |
| Max. cable temperature range, moving | 55 °C | | | | | |
| Min. cable temperature range, fixed installation | -25 °C | | | | | |
| Max. cable temperature range, fixed installation | 55 °C | | | | | |
| Min. storage temperature | -25 °C | | | | | |

Características do artigo

| Attribute | 117511E1 | 117511H1 | 117514E1 | 117611H1 | 117614E1 | 117711E1 ▶ |
|------------------------------------|----------------------------------|----------|----------|----------|----------|------------|
| Max. storage temperature | 55 °C | | | | | |
| Shock resistance (Norm) | 30 g / 11 ms | | | | | |
| Continuous shock resistance (Norm) | 10 g / 16 ms | | | | | |
| Vibration resistance (Norm) | 10 ... 55 Hz | | | | | |
| Relative humidity | 5 - 85 % | | | | | |
| Air pressure | 860 - 1060 hPa | | | | | |
| Delta tmax | 0.5 °C/min | | | | | |
| Mounting type | screwed | | | | | |
| Weight | 500 g | | | | | |
| Possible actuators | 30427102 | | | | | |
| Cable length | 1 m | | | | | |
| Number of strands | 5 | | | | | |
| Wire cross section | 0.75 mm² | | | | | |
| Connector type | - | | | | | |
| Cable colour | silbergrau | | | | | |
| Certified in accordance with | EN ISO 13849-1 UL 508 / CSA 22.2 | | | | | |
| CE label | yes | | | | | |

Características do artigo

| Attribute | 117711H1 | 117714E1 | 117531H1 | 117611E1 | 117631H1 |
|--|---------------|----------|-----------|----------|----------|
| Max. switching voltage at safety output | 30 V DC | | | | |
| Max. switching voltage at control output | 30 V DC | | | | |
| Max. switching voltage at safety output | 250 V AC | | 30 V AC | 250 V AC | 30 V AC |
| Max. switching voltage at control output | 250 V AC | | 30 V AC | 250 V AC | 30 V AC |
| Max. switching current at safety output | 3 A | | | | |
| Max. switching current at control output | 3 A | | | | |
| Max. switching power at safety output | 90 W | | | | |
| Max. switching power at control output | 90 W | | | | |
| Max. switching power at safety output | 750 VA | | 90 VA | 750 VA | 90 VA |
| Max. switching power at control output | 750 VA | | 90 VA | 750 VA | 90 VA |
| Assured switching distance (Sao) | 3 mm | | | | |
| Assured switch-off distance (Sar) | 21 mm | | | | |
| Minimum switching distance (S0 min) | 0.5 mm | | | | |
| Number of relay safety outputs | 1 | | | | |
| Number of relay control outputs | 1 | | | | |
| Stop category 0 (STO) nach IEC 61800-5-2 | yes | | | | |
| Stop category 1 (SS1) nach IEC 61800-5-2 | no | | | | |
| EDM/start input | no | | | | |
| Utilization category | AC-15 / DC-13 | | | | |
| Operating voltage min. | 21.6 V DC | - | 21.6 V DC | | |
| Operating voltage max. | 26.4 V DC | - | 26.4 V DC | | |
| Operating voltage min. | 21.6 V AC | 207 V AC | 21.6 V AC | | |
| Operating voltage max. | 26.4 V AC | 253 V AC | 26.4 V AC | | |

Características do artigo

| Attribute | 117711H1 | 117714E1 | 117531H1 | 117611E1 | 117631H1 |
|--|-----------------|----------|----------|----------|----------|
| Current consumption | 100 mA | | | 60 mA | 100 mA |
| Power consumption | 2.4 W | - | 2.4 W | 1.5 W | 2.4 W |
| Power consumption | 2.4 VA | 23 VA | 2.4 VA | 1.5 VA | 2.4 VA |
| LED display | single-coloured | | | | |
| Switching principle | magnetic | | | | |
| Technology | Reed | | | | |
| Min. switching voltage at safety output | 10 V DC | 5 V DC | 10 V DC | 5 V DC | 10 V DC |
| Min. switching voltage at control output | 10 V DC | 12 V DC | 10 V DC | 12 V DC | 10 V DC |
| Min. switching voltage at safety output | 10 V AC | - | 10 V AC | - | 10 V AC |
| Min. switching voltage at control output | 10 V AC | 12 V AC | 10 V AC | 12 V AC | 10 V AC |
| Min. switching current at safety output | 0.01 A | 0.1 A | 0.01 A | 0.1 A | 0.01 A |
| Min. switching current at control output | 0.01 A | | | | |
| Min. switching power at safety output | 3 W | 0.5 W | 3 W | 0.5 W | 3 W |
| Min. switching power at control output | 3 W | 0.12 W | 3 W | 0.12 W | 3 W |
| Min. switching power at safety output | 3 VA | - | 3 VA | - | 3 VA |
| Min. switching power at control output | 3 VA | 0.12 VA | 3 VA | 0.12 VA | 3 VA |
| Readiness delay (tv) | 350 ms | | | | |
| Max no operating cycles at 0.5A switching current (ohmic load) | 700000 | 1000000 | 700000 | 1000000 | 700000 |
| Max no operating cycles at 2.5A switching current (ohmic load) | 25000 | 230000 | 25000 | 230000 | 25000 |
| Overvoltage category | III | | | | |
| Pollution degree | 2 | | | | |
| Protection class | III | | | | |
| Fuse operating voltage | 0,5A fast | | | | |
| Fuse safety output | 3A fast | | | | |
| Fuse control output | 3A fast | | | | |

Características do artigo

| Attribute | 117711H1 | 117714E1 | 117531H1 | 117611E1 | 117631H1 |
|---|-------------------|----------|-------------------|----------|-------------------|
| Actuation | top | | left side | front | |
| PL acc. to EN ISO 13849-1 | e | d | e | d | e |
| Category acc. to EN ISO 13849-1 | 4 | 3 | 4 | 3 | 4 |
| Coding acc. to EN ISO 14119 | Low | | | | |
| Type acc. to EN ISO 14119 | 4 | | | | |
| Mission time in years | 20 a | | | | |
| Housing design | rectangular | | | | |
| Dimensions | 120 x 40 x 40 mm | | | | |
| Operating speed max. | 0.1 m/min | | | | |
| Actuation frequency | 18000 1/h | | | | |
| Free zone | 25 mm | | | | |
| Minimum installation distance (between two sensors) | 50 mm | | | | |
| cannot be mounted flush | yes | | | | |
| Housing material | PBT | | | | |
| Cable material | TPE | | - | TPE | - |
| Housing colour | schwarz | | | | |
| Protection class | IP67 DIN EN 60529 | | | | |
| Protection class, connector | - | | IP67 DIN EN 60529 | - | IP67 DIN EN 60529 |
| Operating temperature min. | -25 °C | | | | |
| Max. operating temperature | 55 °C | | | | |
| Min. cable temperature range, moving | -25 °C | | - | -25 °C | - |
| Max. cable temperature range, moving | 55 °C | | - | 55 °C | - |
| Min. cable temperature range, fixed installation | -25 °C | | - | -25 °C | - |
| Max. cable temperature range, fixed installation | 55 °C | | - | 55 °C | - |
| Min. storage temperature | -25 °C | | | | |
| Max. storage temperature | 55 °C | | | | |
| Shock resistance (Norm) | 30 g / 11 ms | | | | |
| Continuous shock resistance (Norm) | 10 g / 16 ms | | | | |

Características do artigo

| Attribute | 117711H1 | 117714E1 | 117531H1 | 117611E1 | 117631H1 |
|------------------------------|----------------------------------|-----------------|----------|------------|-----------------|
| Vibration resistance (Norm) | 10 ... 55 Hz | | | | |
| Relative humidity | 5 - 85 % | | | | |
| Air pressure | 860 - 1060 hPa | | | | |
| Delta tmax | 0.5 °C/min | | | | |
| Mounting type | screwed | | | | |
| Weight | 500 g | | | | |
| Possible actuators | 30427102 | | | | |
| Cable length | 1 m | - | - | 1 m | - |
| Number of strands | 5 | - | - | 5 | - |
| Wire cross section | 0.75 mm² | - | - | 0.75 mm² | - |
| Connector type | - | M12x1 - 5 polig | - | - | M12x1 - 5 polig |
| Cable colour | silbergrau | - | - | silbergrau | - |
| Certified in accordance with | EN ISO 13849-1 UL 508 / CSA 22.2 | | | | |
| CE label | yes | | | | |