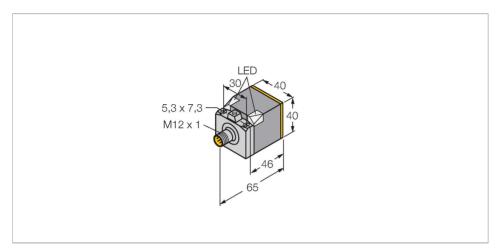


BI20U-CK40-AP6X2-H1141 W/BS2.0 Inductive Sensor – With Extended Switching Distance





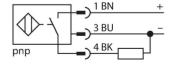
| ID | Туре | BI20U-CK40-AP6X2-H1141 W/BS2.0 |
|---|---|--------------------------------|
| Rated switching distance 20 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data Operating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | ID | 1627286 |
| Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data Operating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | General data | |
| Secured operating distance ≤ $(0.81 \times Sn)$ mm Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ $10 \% U_{Bmax}$ DC rated operating current I _e ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Rated switching distance | 20 mm |
| Repeat accuracy ≤ 2 % of full scale Hysteresis 315 % Electrical data 0 perating voltage U_B 1030 VDC Ripple U_{as} ≤ 10 % U_{Bmax} DC rated operating current I_a ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_a ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Mounting conditions | Flush |
| Hysteresis 315 % Electrical data 1030 VDC Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_e ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Secured operating distance | ≤ (0.81 × Sn) mm |
| Electrical data Operating voltage U_B 1030 VDC Ripple U_{SS} $\leq 10 \% U_{Bmax}$ DC rated operating current I_S $\leq 200 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_S $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection yes/Complete | Repeat accuracy | ≤ 2 % of full scale |
| Operating voltage U_B 1030 VDC Ripple U_{as} ≤ 10 % U_{Bmax} DC rated operating current I_a ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_a ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Hysteresis | 315 % |
| Ripple U _{ss} $≤ 10 \% U_{Bmax}$ DC rated operating current I _e $≤ 200 \text{ mA}$ No-load current $≤ 15 \text{ mA}$ Residual current $≤ 0.1 \text{ mA}$ Isolation test voltage $≤ 0.5 \text{ kV}$ Short-circuit protection $≤ 0.5 \text{ kV}$ Voltage drop at I _e $≤ 1.8 \text{ V}$ Wire break/reverse polarity protection $≤ 1.8 \text{ V}$ | Electrical data | |
| DC rated operating current I₀ ≤ 200 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Operating voltage U _B | 1030 VDC |
| No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Ripple U _{ss} | ≤ 10 % U _{Bmax} |
| Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | DC rated operating current I _e | ≤ 200 mA |
| Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | No-load current | ≤ 15 mA |
| Short-circuit protection yes/Cyclic Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Residual current | ≤ 0.1 mA |
| Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete | Isolation test voltage | 0.5 kV |
| Wire break/reverse polarity protection yes/Complete | Short-circuit protection | yes/Cyclic |
| | Voltage drop at I _e | ≤ 1.8 V |
| Output function 3-wire, NO contact, PNP | Wire break/reverse polarity protection | yes/Complete |
| | Output function | 3-wire, NO contact, PNP |
| DC field stability 300 mT | DC field stability | 300 mT |
| AC field stability 300 mT _{ss} | AC field stability | 300 mT _{ss} |
| Insulation class | Insulation class | |
| Switching frequency 0.25 kHz | Switching frequency | 0.25 kHz |



Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Plastic, PBT-GF30-V0
- High luminance corner LEDs
- Optimum view on supply voltage and switching state from any position
- Factor 1 for all metals
- ■Protection class IP68
- Resistant to magnetic fields
- ■Large coverage
- High switching frequency
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- ■M12 x 1 male connector

Wiring diagram





Functional principle



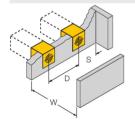
Technical data

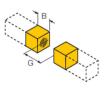
| Mechanical data | |
|---|--|
| Design | Rectangular, CK40 |
| Dimensions | 65 x 40 x 40 mm |
| | variable orientation of active face in 5 directions |
| Housing material | Plastic, PBT-GF20-V0, Black |
| Active area material | Plastic, PA12-GF30, yellow |
| Electrical connection | Connector, M12 × 1 |
| Environmental conditions | |
| | |
| Ambient temperature | -30+85 °C |
| Ambient temperature Vibration resistance | -30+85 °C 55 Hz (1 mm) |
| | |
| Vibration resistance | 55 Hz (1 mm) |
| Vibration resistance Shock resistance | 55 Hz (1 mm) 30 g (11 ms) |
| Vibration resistance Shock resistance Protection class | 55 Hz (1 mm) 30 g (11 ms) IP68 874 years acc. to SN 29500 (Ed. 99) 40 |
| Vibration resistance Shock resistance Protection class MTTF | 55 Hz (1 mm) 30 g (11 ms) IP68 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Vibration resistance Shock resistance Protection class MTTF Power-on indication | 55 Hz (1 mm) 30 g (11 ms) IP68 874 years acc. to SN 29500 (Ed. 99) 40 °C 2 × LEDs, Green |

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox+ sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Mounting instructions

Mounting instructions/Description



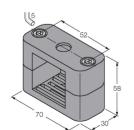


| Distance D | 3 x B |
|---------------------|---------|
| Distance W | 3 x Sn |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Width active area B | 40 mm |

Accessories

BSS-CP40

6901318



Mounting clamp for rectangular housings 40 x 40 mm; material: Polypropylene