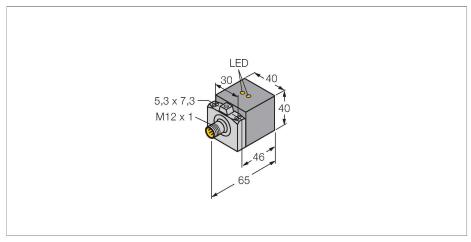


BI20U-CA40-AP6X2-H1141 Inductive Sensor



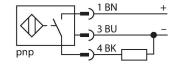
Technical data

ID	Туре	BI20U-CA40-AP6X2-H1141
Rated switching distance 20 mm Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U₂₃ DC rated operational current ≤ 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 breakage/Reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT AC field stability 300 mT Switching frequency 0.25 kHz Mechanical data	ID	1627200
Mounting conditions Flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage Operating voltage 1030 VDC Residual ripple ≤ 10 % U₂s DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	General data	
Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage Operating voltage 1030 VDC Residual ripple ≤ 10 % U₂, DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT₂s Insulation class □ Switching frequency 0.25 kHz Mechanical data	Rated switching distance	20 mm
Repeat accuracy ≤ 2 % of full scale Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 _s ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete 0utput function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT AC field stability 300 mT Insulation class □ Switching frequency 0.25 kHz Mechanical data	Mounting conditions	Flush
Temperature drift ≤ ±10 % Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 _s ≤ 1.8 V Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss} Insulation class Switching frequency 0.25 kHz Mechanical data	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis 315 % Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 breakage/Reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class Switching frequency 0.25 kHz Mechanical data	Repeat accuracy	≤ 2 % of full scale
Electrical data Operating voltage 1030 VDC Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 _s ≤ 1.8 V Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss} Insulation class Switching frequency 0.25 kHz Mechanical data	Temperature drift	≤ ±10 %
Operating voltage 1030 VDC Residual ripple ≤ 10 % U₅s DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT ss Insulation class □ Switching frequency 0.25 kHz Mechanical data	Hysteresis	315 %
Residual ripple ≤ 10 % U _{ss} DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mT _{ss} Insulation class □ Switching frequency 0.25 kHz Mechanical data	Electrical data	
DC rated operational current ≤ 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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	Operating voltage	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 breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	Residual ripple	≤ 10 % U _{ss}
Residual current ≤ 0.1 mA Isolation test voltage ≤ 0.5 kV Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	DC rated operational current	≤ 200 mA
Short-circuit protection Short-circuit pr	No-load current	15 mA
Short-circuit protection yes / Cyclic Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	Residual current	≤ 0.1 mA
Voltage drop at I₀ ≤ 1.8 V Wire breakage/Reverse polarity protection yes / Complete Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	Isolation test voltage	≤ 0.5 kV
Wire breakage/Reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class Switching frequency 0.25 kHz Mechanical data	Short-circuit protection	yes / Cyclic
tion Output function 3-wire, NO contact, PNP DC field stability 300 mT AC field stability 300 mTss Insulation class □ Switching frequency 0.25 kHz Mechanical data	Voltage drop at I _e	≤ 1.8 V
DC field stability AC field stability 300 mT 300 mTss Insulation class Switching frequency 0.25 kHz Mechanical data		yes / Complete
AC field stability 300 mT _{ss} Insulation class Switching frequency 0.25 kHz Mechanical data	Output function	3-wire, NO contact, PNP
Insulation class Switching frequency 0.25 kHz Mechanical data	DC field stability	300 mT
Switching frequency 0.25 kHz Mechanical data	AC field stability	300 mT _{ss}
Mechanical data	Insulation class	
***	Switching frequency	0.25 kHz
Design Rectangular, CA40	Mechanical data	
	Design	Rectangular, CA40

Features

- Rectangular, height 40 mm
- Variable orientation of active face in 5 directions
- Sensor housing GD-ALSI 12
- Active face PA6-GF30
- Factor 1 for all metals
- Resistant to magnetic fields
- High switching frequency
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- ■M12 x 1 male connector

Wiring diagram





Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferritecoreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

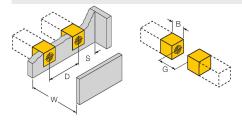
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Technical data

Dimensions	65 x 40 x 40 mm
	variable orientation of active face in 5 directions
Housing material	Metal, GD-AlSi 12
Active area material	Plastic, PA6-GF30, black
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	0+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	LED, Yellow
Included in delivery	BS1-CK40

Mounting instructions

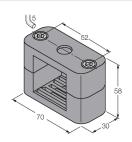
Mounting instructions/Description



Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn
Width active are B	a 40 mm

Accessories

BSS-CP40 6901318



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