

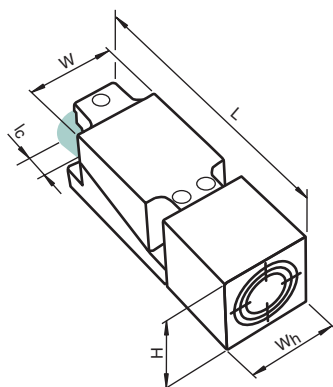


Properties

- Flexible **VariKont** housing
- 20 mm, flush and 40 mm, non-flush mountable versions
- DC, 2-wire switching output
- Terminal compartment

Your Benefit

- All-around visible status display
- Sensor head can be aligned in 5 different positions



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Switching element function	DC	NO/NC
Operating voltage	5 ... 60 V DC	
Reverse polarity protection	tolerant	
Operating current	2 ... 200 mA	
Short-circuit protection	pulsing	
Indication of the switching state	2 LED, yellow	
Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)	
Housing material	PA/metal with epoxy powder coating	
Protection degree	IP68 / IP69K	
Connection type	screw terminals	



Model Number

green = preferred type

		NBB20-U1-Z2	NBN40-U1-Z2	NBB20-U4-Z2	NBN40-U4-Z2
Rated operating distance	20 mm	●		●	
	40 mm		●		●
Installation	flush	●		●	
	non-flush		●		●
Switching frequency	0 ... 100 Hz		●		●
	0 ... 250 Hz	●		●	
Housing base	plastic	●	●		
	metal			●	●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●
CCC approval	Certified by China Compulsory Certification (CCC)	●	●	●	●

Dimensions

Length L [mm]	118
Width W [mm]	40
Head width W _h [mm]	40
Height H [mm]	40
Connector area l _c [mm]	0 (M20 x 1.5) 0 (1/2" NPT)

Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

V1-M20-80

Receptacles, M12/M20; plastic version

MHW 01

Modular mounting bracket

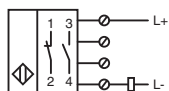
MH 04-2681F

Mounting aid for VariKont, +U1+ and +U9*

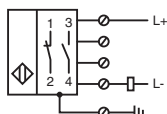
Electrical Connection



NBB20-U1-Z2
NBN40-U1-Z2



NBB20-U4-Z2
NBN40-U4-Z2





Properties

- Flexible **VariKont** housing
- 20 mm, flush mountable
- DC, 3-wire switching output
- Terminal compartment

Your Benefit

- All-around visible status display
- Sensor head can be aligned in 5 different positions

Further Products

In this series, we offer additionally:

NBB20-U4-E2-C-V1

Technical data like NBB20-U4-E2-C but:
Connection type: Device connector M12 x 1, 4-pin

Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Rated operating distance	20 mm
Installation	flush
Operating voltage	10 ... 30 V DC
Reverse polarity protection	✓
Operating current	0 ... 200 mA
Short-circuit protection	pulsing
Operating voltage display	LED, green
Indication of the switching state	LED, yellow
Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
Housing material	PA/metal with epoxy powder coating
Protection degree	IP68 / IP69K
Connection type	screw terminals



Model Number

green = preferred type

			NBB20-U1-E0	NBB20-U1-E1	NBB20-U1-E2	NBB20-U1-E2-C	NBB20-U1-E3	NBB20-U2-E0	NBB20-U2-E2	NBB20-U4-E0	NBB20-U4-E2	NBB20-U4-E2-C	NBB20-U10-E2
Weld-immune					✓							✓	
Switching element function	NPN	NO	●					●		●			
	NPN	NC		●									
	PNP	NO			●	●			●		●	●	●
	PNP	NC					●						
No-load supply current	≤ 10 mA												
	≤ 20 mA		●	●	●	●	●	●	●	●	●	●	●
Switching frequency	0 ... 150 Hz		●	●	●	●		●	●	●	●	●	●
	0 ... 5 Hz					●						●	
Housing base	plastic		●	●	●	●	●	●	●	●	●	●	●
	metal												

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●	●	●	●	●	●
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.												

Dimensions

Length L [mm]	118
Width W [mm]	40
Head width W _h [mm]	40
Height H [mm]	40
Connector area l _c [mm]	0 (M20 x 1,5) 0 (1/2" NPT) 20

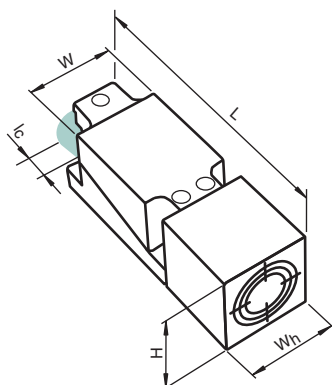
Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

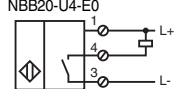
V1-M20-80	Receptacles, M12/M20; plastic version
MHW 01	Modular mounting bracket
V1-G-BK	4-pin, M12 female field-attachable connector
MH 04-2681F	Mounting aid for VariKont, +U1+ and +U9*
V1-W-BK	4-pin, M12 female field-attachable connector
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable



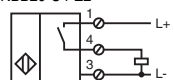
Electrical Connection



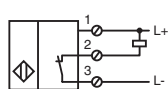
NBB20-U1-E0
NBB20-U2-E0
NBB20-U4-E0



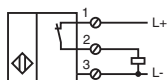
NBB20-U1-E2
NBB20-U1-E2-C
NBB20-U10-E2
NBB20-U2-E2
NBB20-U4-E2-C
NBB20-U4-E2



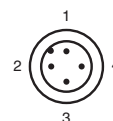
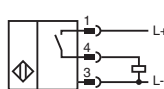
NBB20-U1-E1



NBB20-U1-E3



NBB20-U4-E2-C-V1



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

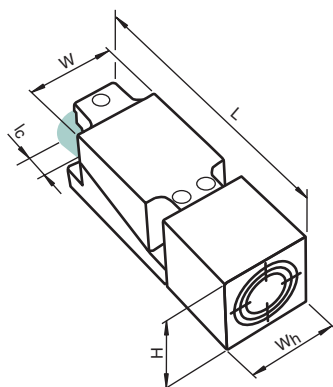


Properties

- Flexible *VariKont* housing
- 20 mm, flush mountable
- DC, 4-wire switching output
- Terminal compartment

Your Benefit

- All-around visible status display
- Sensor head can be aligned in 5 different positions



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

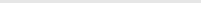
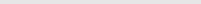
Rated operating distance	20 mm
Installation	flush
Operating voltage	10 ... 30 V DC
No-load supply current	≤ 20 mA
Reverse polarity protection	
Operating current	0 ... 200 mA
Short-circuit protection	pulsing
Operating voltage display	LED, green
Indication of the switching state	LED, yellow
Protection degree	IP68 / IP69K
Connection type	screw terminals



Model Number

	green = preferred type	NB1	NB2	NB3	NB4	NB5	NB6	NB7	NB8	NB9	NB10	NB11	NB12
Switching element function	NPN NO/NC PNP NO/NC	●	●	■	●	■	●	●	■	●	■	■	■
Switching frequency	0 ... 150 Hz 0 ... 300 Hz	●	■	●	■	■	●	■	■	■	■	■	■
Ambient temperature	-25 ... 100 °C (-13 ... 212 °F) -25 ... 85 °C (-13 ... 185 °F)	■	●	■	■	■	■	■	■	■	■	■	■
Housing material	PA / LCP PA/metal with epoxy powder coating	■	■	■	■	■	■	■	■	■	■	■	■
Housing base	plastic metal	●	●	●	●	●	●	●	■	■	■	■	■

Approvals and Certificates

UL approval	cULus Listed, General Purpose	
CSA approval	cCSAus Listed, General Purpose	
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.	

Dimensions

Length L [mm]	118		
Width W [mm]	40		
Head width W _H [mm]	40		
Height H [mm]	40		
Connector area I _c [mm]	0 (M20 x 1.5)	0 (1/2" NPT)	20

Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

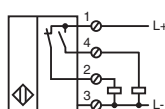
See pages 1068 ... for mounting aids

V1-M20-80	Receptacles, M12/M20; plastic version
MHW 01	Modular mounting bracket
MH 04-2681F	Mounting aid for VariKont. +U1+ and +U9*

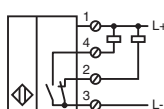
Electrical Connection



NBB20-U1-A2
NBB20-U1-A2-T
NBB20-U10-A2
NBB20-U2-A2
NBB20-U2-A2-T
NBB20-U4-A2
NBB20-U4-A2-T



NBB20-U1-A0
NBB20-U1-A0-T
NBB20-U2-A0
NBB20-U4-A0
NBB20-U4-A0-T



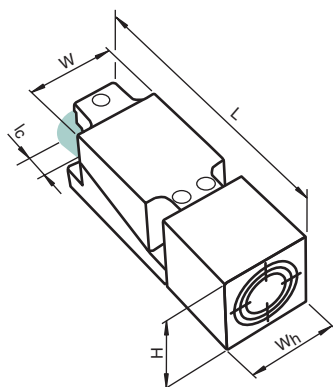


Properties

- Flexible **VariKont** housing
- 40 mm, non-flush mountable
- DC, 4-wire switching output
- Terminal compartment

Your Benefit

- All-around visible status display
- Sensor head can be aligned in 5 different positions



Technical Data

For detailed data and product description refer to the data sheets at www.pepperl-fuchs.com

General Data

Rated operating distance	40 mm
Installation	non-flush
Operating voltage	10 ... 30 V DC
No-load supply current	≤ 20 mA
Reverse polarity protection	✓
Operating current	0 ... 200 mA
Short-circuit protection	pulsing
Operating voltage display	LED, green
Indication of the switching state	LED, yellow
Protection degree	IP68 / IP69K
Connection type	screw terminals



Model Number

		green = preferred type	NBN40-U1-A0	NBN40-U1-A2	NBN40-U1-A2-T	NBN40-U2-A2	NBN40-U2-A2-T	NBN40-U4-A2
Switching element function	NPN	NO/NC	●	●	●	●	●	●
	PNP	NO/NC		●	●	●	●	●
Switching frequency	0 ... 150 Hz		●	●	●	●	●	●
	0 ... 250 Hz				●		●	
Ambient temperature	-25 ... 100 °C (-13 ... 212 °F)		●	●	●	●	●	●
	-25 ... 85 °C (-13 ... 185 °F)				●		●	
Housing material	PA / LCP				●		●	
	PA/metal with epoxy powder coating		●	●		●		●
Housing base	plastic		●	●	●	●	●	●
	metal							●

Approvals and Certificates

UL approval	cULus Listed, General Purpose	●	●	●	●	●	●	●
CSA approval	cCSAus Listed, General Purpose	●	●	●	●	●	●	●
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.							

Dimensions

Length L [mm]	118
Width W [mm]	40
Head width W _h [mm]	40
Height H [mm]	40
Connector area I _c [mm]	0 (M20 x 1,5) 0 (1/2" NPT)

Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

MH 04-2681F

Mounting aid for VariKont, +U1+ and +U9*

V1-M20-80

Receptacles, M12/M20; plastic version

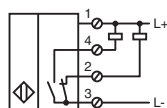
MHW 01

Modular mounting bracket

Electrical Connection



NBN40-U1-A0



NBN40-U1-A2
NBN40-U1-A2-T
NBN40-U2-A2
NBN40-U2-A2-T
NBN40-U4-A2

