



Technical Data

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

General Data

Switching element function	PNP	NO
Type of voltage	DC	
Operating voltage	10 ... 30 V	
No-load supply current	≤ 15 mA	
Reverse polarity protection	✓	
Operating current	0 ... 100 mA	
Short-circuit protection	pulsing	
Indication of the switching state	Multihole-LED, yellow	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)	
Housing material	Stainless steel 1.4305 / AISI 303	
Protection degree	IP67	
Connection type	Device connector M8 x 1, 3-pin	



Properties

- Ø6.5 mm housing
- 2 mm, flush mountable and 6 mm, non-flush mountable
- DC, 3-wire switching output
- Connector version

Your Benefit

- Same sensing range for all metals

Model Number

		NRB2-6,5S50-E2-V3	NRN6-6,5S50-E2-V3
Rated operating distance	2 mm	●	
	6 mm		●
Installation	flush	●	
	non-flush		●
Switching frequency	0 ... 1000 Hz	●	
	0 ... 400 Hz		●

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]	59	
Diameter D [mm]	6.5 / 8	
Thread length l _t [mm]	0	
Cap length l ₁ [mm]	0	5
Connector area l _c [mm]	6	
LED position	Pos. C	

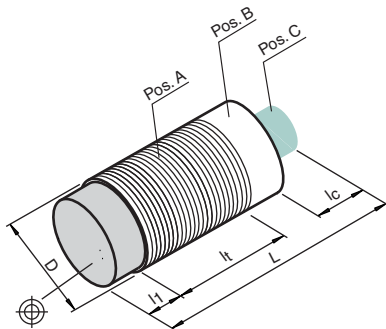
Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

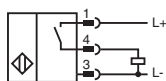
BF 6,5	Mounting flange, 6.5 mm
V3-WM	Female connector, M8, 3-pin, field attachable
V3-GM	Female connector, M8, 3-pin, field attachable
V3-WM-2M-PUR	Cable socket, M8, 3-pin, PUR cable
V3-GM-2M-PUR	Cable socket, M8, 3-pin, PUR cable



Electrical Connection



NRB2-6,5S50-E2-V3
NRN6-6,5S50-E2-V3



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
3	BU	(blue)
4	BK	(black)



Properties

- Ø8 mm housing
- 2 mm, flush mountable and 6 mm, non-flush mountable
- DC, 3-wire switching output
- Connector versions

Your Benefit

- Same sensing range for all metals

Technical Data

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General Data

Switching element function	PNP	NO
Type of voltage	DC	
Operating voltage	10 ... 30 V	
No-load supply current	≤ 15 mA	
Reverse polarity protection	✓	
Short-circuit protection	pulsing	
Indication of the switching state	Multihole-LED, yellow	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)	
Housing material	Stainless steel 1.4305 / AISI 303	
Protection degree	IP67	

Model Number

		NRB2-8GS50-E2-V3	NRN6-8GS50-E2-V3	NRB2-8GS40-E2-V1	NRN6-8GS40-E2-V1
Rated operating distance	2 mm	●	●	●	●
	6 mm				●
Installation	flush	●		●	
	non-flush		●		●
Operating current	0 ... 100 mA	●	●		
	0 ... 200 mA			●	●
Switching frequency	0 ... 4000 Hz			●	
	0 ... 2500 Hz				●
	0 ... 1000 Hz	●			
Connection type	Device connector M12 x 1 , 4-pin		●	●	●
	Device connector M8 x 1 , 3-pin	●	●		

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.				

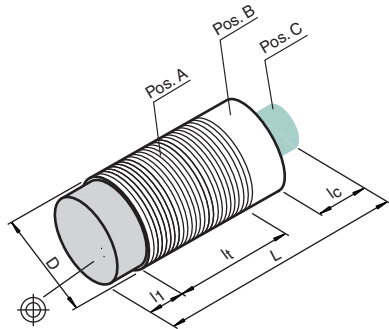
Dimensions

Length L [mm]	59		65	
Diameter D [mm]	8		8 / 12	
Thread length l _t [mm]	50	45	40	35
Cap length l ₁ [mm]	0	5	0	5
Connector area l _c [mm]	6			
LED position	Pos. C			

Accessories This and more accessories can be found in chapter 10

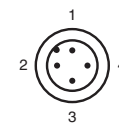
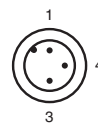
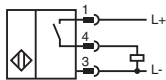
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

- BF 8** Mounting flange, 8 mm
- V1-G-BK** 4-pin, M12 female field-attachable connector
- V1-W-BK** 4-pin, M12 female field-attachable connector
- V3-WM** Female connector, M8, 3-pin, field attachable
- V1-G-2M-PUR** Cable socket, M12, 4-pin, PUR cable
- V3-GM** Female connector, M8, 3-pin, field attachable
- V1-W-2M-PUR** Cable socket, M12, 4-pin, PUR cable
- V3-WM-2M-PUR** Cable socket, M8, 3-pin, PUR cable
- V3-GM-2M-PUR** Cable socket, M8, 3-pin, PUR cable



Electrical Connection

- NRB2-8GS40-E2-V1
- NRB2-8GS50-E2-V3
- NRN6-8GS40-E2-V1
- NRN6-8GS50-E2-V3



Wire colors in accordance with EN 60947-5-2

- 1 | BN (brown)
- 3 | BU (blue)
- 4 | BK (black)

Wire colors in accordance with EN 60947-5-2

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



Technical Data

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

General Data

Type of voltage	DC
Operating voltage	10 ... 30 V
Operating current	0 ... 200 mA
Reverse polarity protection	✓
Short-circuit protection	pulsing
Indication of the switching state	Multihole-LED, yellow
Housing material	Stainless steel 1.4305 / AISI 303
Protection degree	IP67
Connection type	Device connector M12 x 1 , 4-pin



Properties

- Ø12 mm housing
- 4 mm, flush and 10 mm, non-flush mountable versions
- DC, 3-wire and 4-wire switching output versions
- Connector version

Your Benefit

- Same sensing range for all metals

Model Number

		NRB4-12GS40-E2-V1	NRB4-12GS40-A2-V1	NRN10-12GS40-E2-V1	NRN10-12GS40-A2-V1
Rated operating distance	4 mm	●	●		
	10 mm			●	●
Installation	flush	●	●		
	non-flush			●	●
Switching element function	PNP NO/NC		●		●
	PNP NO	●		●	●
No-load supply current	≤ 13 mA	●		●	
	≤ 15 mA		●		●
Switching frequency	0 ... 1000 Hz			●	●
	0 ... 2000 Hz	●	●		
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)	●	●		
	-25 ... 85 °C (-13 ... 185 °F)			●	●

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]		55	
Diameter D [mm]		12	
Thread length l _t [mm]		39	29
Cap length l ₁ [mm]		0	8
Connector area l _c [mm]			15
LED position			Pos. C

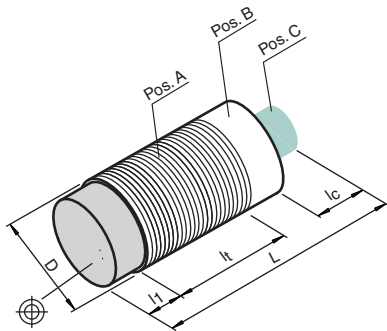
Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

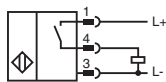
BF 12	Mounting flange, 12 mm
V1-G-BK	4-pin, M12 female field-attachable connector
V1-W-BK	4-pin, M12 female field-attachable connector
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable



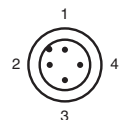
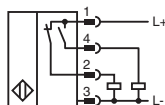
Electrical Connection



NRB4-12GS40-E2-V1
NRN10-12GS40-E2-V1



NRB4-12GS40-A2-V1
NRN10-12GS40-A2-V1



Wire colors in accordance with EN 60947-5-2

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

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

Courtesy of Steven Engineering, Inc - (800) 258-9200 - sales@steveng.com - www.stevengengineering.com



Technical Data

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

General Data

Type of voltage	DC
Operating voltage	10 ... 30 V
Reverse polarity protection	✓
Short-circuit protection	pulsing
Indication of the switching state	Multihole-LED, yellow
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Housing material	Stainless steel 1.4305 / AISI 303
Protection degree	IP67
Connection type	Device connector M12 x 1 , 4-pin

Properties

- Ø18 mm housing
- 8 mm flush, 12 mm virtually flush, and 15 mm non-flush mountable versions
- DC, 3-wire switching output
- Connector version

Your Benefit

- Same sensing range for all metals

Model Number

		NRB8-18GS40-E2-V1	NRB8-18GS50-E2-V1	NRB12-18GS40-E2-V1	NRN15-18GS40-E2-V1	NRN15-18GS50-E2-V1	NRN15-18GS50-E3-V1
Rated operating distance	8 mm	●	●				
	12 mm			●			
	15 mm				●	●	●
Installation	flush	●	●				
	non-flush				●	●	●
Switching element function	virtually flush			●			
	PNP NO	●	●	●	●	●	●
No-load supply current	PNP NC						●
	≤ 15 mA	●	●				●
Switching frequency	≤ 28 mA			●			
	0 ... 500 Hz	●	●	●	●	●	●
Operating current	0 ... 600 Hz						
	0 ... 100 mA	●	●	●	●	●	●
	0 ... 200 mA	●	●	●		●	●

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.						

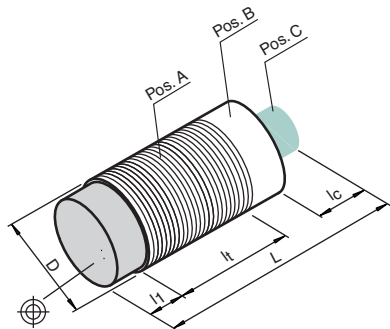
Dimensions

Length L [mm]	55	65	55	55	65	65
Diameter D [mm]	18					
Thread length l _t [mm]	40	50	40	30	40	40
Cap length l ₁ [mm]	0			10		
Connector area l _c [mm]	15					
LED position	Pos. C					

Accessories

This and more accessories can be found in chapter 10
See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

BF 18	Mounting flange, 18 mm
V1-G-BK	4-pin, M12 female field-attachable connector
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

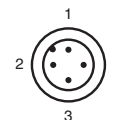
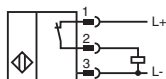
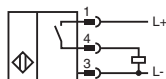


Electrical Connection



NRB12-18GS40-E2-V1
NRB8-18GS40-E2-V1
NRN15-18GS40-E2-V1
NRN15-18GS50-E2-V1
NRB8-18GS50-E2-V1

NRN15-18GS50-E3-V1



Wire colors in accordance with EN 60947-5-2

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



Technical Data

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

General Data

Type of voltage	DC
Operating voltage	10 ... 30 V
No-load supply current	≤ 15 mA
Reverse polarity protection	✓
Operating current	0 ... 200 mA
Short-circuit protection	pulsing
Indication of the switching state	Multihole-LED, yellow
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Protection degree	IP67
Connection type	Device connector M12 x 1, 4-pin



Properties

- Ø30 mm housing
- 15 mm flush and 30 mm non-flush mountable versions
- DC, 3-wire switching output
- Connector version

Your Benefit

- Same sensing range for all metals

Model Number

		NRB15-30GS50-E2-V1	NRB15-30GS50-E3-V1	NRN30-30GS50-E2-V1	NRN30-30GS50-E3-V1
Rated operating distance	15 mm	●	●		
	30 mm			●	●
Installation	flush	●	●		
	non-flush			●	●
Switching element function	PNP NO	●		●	
	PNP NC		●		●
Switching frequency	0 ... 300 Hz			●	●
	0 ... 750 Hz	●	●		
Housing material	stainless steel 1.4301			●	
	Stainless steel 1.4305 / AISI 303	●	●		●

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.				

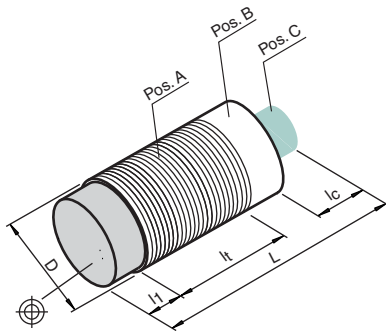
Dimensions

Length L [mm]		65	
Diameter D [mm]		30	
Thread length l _t [mm]		50	32
Cap length l ₁ [mm]		0	18
Connector area l _c [mm]			15
LED position			Pos. C

Accessories

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See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

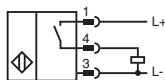
BF 30	Mounting flange, 30 mm
V1-G-BK	4-pin, M12 female field-attachable connector
V1-W-BK	4-pin, M12 female field-attachable connector
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable



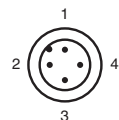
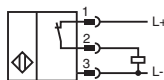
Electrical Connection



NRB15-30GS50-E2-V1
NRN30-30GS50-E2-V1



NRB15-30GS50-E3-V1
NRN30-30GS50-E3-V1



Wire colors in accordance with EN 60947-5-2

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