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Proximity Sensors, Inductive Sensors, cylindrical



Properties

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

Your Benefit

- Specially optimized for welding applications

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
Operating voltage	10 ... 30 V DC	
Reverse polarity protection	✓	
Operating current	0 ... 100 mA	
Short-circuit protection	pulsing	
Indication of the switching state	LED, yellow	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)	
Housing material	brass, PTFE coated	
Protection degree	IP67	

Model Number

		NBB1,5-8GM40-E2-C-V3	NBB1,5-8GM30-E2-C-V1	NBN3-8GM30-E2-C-V1
Rated operating distance	1.5 mm	●	●	
	3 mm			●
Installation	flush	●	●	
	non-flush			●
Switching frequency	0 ... 1800 Hz	●	●	
	0 ... 50 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.			

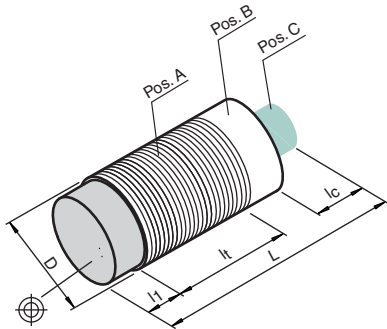
Dimensions

Length L [mm]		50	60	60
Diameter D [mm]		8	8/12	8/12
Thread length l _t [mm]		47	30	31
Cap length l ₁ [mm]		0	0	4
Connector area l _c [mm]		3	6	6
LED position	Pos.	A	B	B

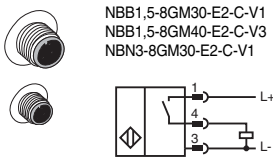
Accessories

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

V3-WM	Female connector, M8, 3-pin, field attachable
BF 8	Mounting flange, 8 mm
V1-G-BK	4-pin, M12 female field-attachable connector
V3-GM-2M-PUR	Cable socket, M8, 3-pin, PUR cable
V1-W-BK	4-pin, M12 female field-attachable connector
V3-WM-2M-PUR	Cable socket, M8, 3-pin, PUR cable
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V3-GM	Female connector, M8, 3-pin, field attachable
EXG-08	Quick mounting bracket with dead stop



Electrical Connection



NBB1,5-8GM30-E2-C-V1
NBB1,5-8GM40-E2-C-V3
NBN3-8GM30-E2-C-V1

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)



Properties

- Ø12 mm housing
- 2 mm, flush and 4 mm non-flush mountable versions
- DC, 3-wire switching output
- Cable and connector versions

Your Benefit

- Specially optimized for welding applications

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
Operating voltage	10 ... 30 V DC	
Reverse polarity protection	✓	
Operating current	0 ... 200 mA	
Short-circuit protection	pulsing	
Indication of the switching state	LED, yellow	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)	
Housing material	brass, PTFE coated	
Protection degree	IP67	

Model Number

		NBN4-12GM50-E2-C	NBB2-12GM50-E2-C-V1	NBB2-12GM50-E2-C3-V1	NBN4-12GM50-E2-C-V1
Rated operating distance	2 mm	●	●	●	●
	4 mm	●	●	●	●
Installation	flush	●	●	●	●
	non-flush	●	●	●	●
Switching frequency	0 ... 1200 Hz	●	●	●	●
	0 ... 1500 Hz	●	●	●	●
Connection type	Device connector M12 x 1, 4-pin cable PVC, 2 m	●	●	●	●

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.				

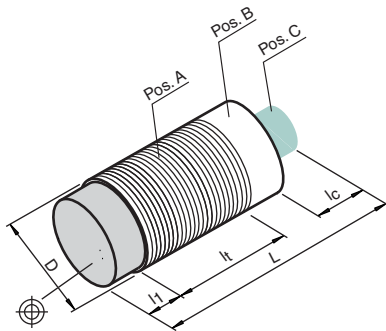
Dimensions

	50	65		
Length L [mm]				
Diameter D [mm]		12		
Thread length l _t [mm]	42	49	49	41
Cap length l ₁ [mm]	5	0	0	5
Connector area l _c [mm]	0	15	15	19
LED position		Pos. C		

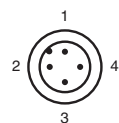
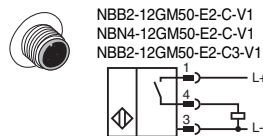
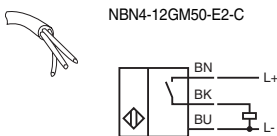
Accessories

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

V1-G-OR2M-POC	Female cordset, M12, 4-pin, TPE cable, welding-bead resistant
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
EXG-12	Quick mounting bracket with dead stop



Electrical Connection



Wire colors in accordance with EN 60947-5-2

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

Date of issue: 2015-04-08

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

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Proximity Sensors, Inductive Sensors, cylindrical



Technical Data

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

General Data

Operating voltage	10 ... 30 V DC
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	brass, PTFE coated
Protection degree	IP67
Connection type	Device connector M12 x 1 , 4-pin



Properties

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

Your Benefit

- Specially optimized for welding applications

Model Number

		NBB5-18GM50-E2-C-V1	NBB5-18GM50-E0-C-V1	NBB5-18GM50-E2-C3-V1	NBN8-18GM50-E2-C-V1
Rated operating distance	5 mm	●	●	●	
	8 mm				●
Installation	flush	●	●	●	
	non-flush				●
Switching element function	NPN NO		●		
	PNP NO	●		●	●
Switching frequency	0 ... 500 Hz	●	●	●	●
	0 ... 800 Hz				●
Operating current	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]	65		
Diameter D [mm]	18		
Thread length l _t [mm]	50	40	
Cap length l ₁ [mm]	0	10	
Connector area l _c [mm]	15		
LED position	Pos. C		

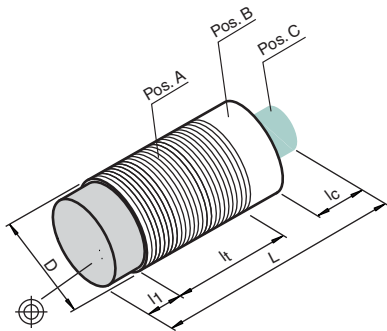
Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

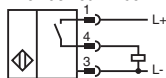
- V1-G-BK** 4-pin, M12 female field-attachable connector
- BF 18** Mounting flange, 18 mm
- V1-W-BK** 4-pin, M12 female field-attachable connector
- V1-G-OR2M-POC** Female cordset, M12, 4-pin, TPE cable, welding-bead resistant
- V1-G-2M-PUR** Cable socket, M12, 4-pin, PUR cable
- V1-W-2M-PUR** Cable socket, M12, 4-pin, PUR cable
- EXG-18** Quick mounting bracket with dead stop



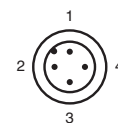
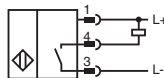
Electrical Connection



NBB5-18GM50-E2-C-V1
NBN8-18GM50-E2-C-V1
NBB5-18GM50-E2-C3-V1



NBB5-18GM50-E0-C-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

Installation	non-flush
Switching element function	PNP NO
Type of voltage	DC
Operating voltage	10 ... 30 V DC
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)
Housing material	brass, PTFE coated
Protection degree	IP67
Connection type	Device connector M12 x 1 , 4-pin



Properties

- Ø18 mm housing
- Up to 15 mm, flush and non-flush mountable versions
- DC, 3-wire switching output
- Connector versions

Your Benefit

- Specially optimized for welding applications

Model Number

Reduction factor 1				
Rated operating distance	8 mm	●	●	●
	12 mm	●		
	15 mm		●	
Switching frequency	0 ... 500 Hz	●		●
	0 ... 600 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.				

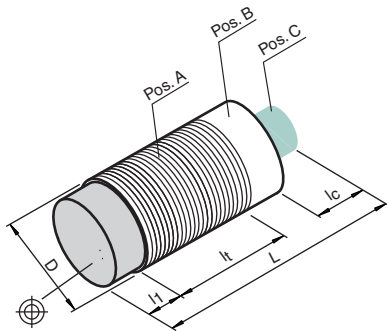
Dimensions

Length L [mm]	65
Diameter D [mm]	18
Thread length l_t [mm]	40
Cap length l_1 [mm]	10
Connector area l_c [mm]	15
LED position	Pos. C

Accessories

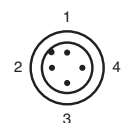
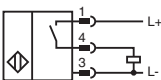
This and more accessories can be found in chapter 10
 See pages from 972 ... for cordsets See pages 1068 ... for mounting aids

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

NBN8-18GM50-E2-C-V1
 NRN12-18GM50-E2-C-V1
 NRN15-18GM50-E2-C-V1
 NRN8-18GM50-E2-C-V1



Wire colors in accordance with EN 60947-5-2

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

Date of issue 04/08/2015

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Properties

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

Your Benefit

- Specially optimized for welding applications

Technical Data

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

General Data

Operating voltage	10 ... 30 V DC
Reverse polarity protection	✓
Switching frequency	0 ... 10 Hz
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)
Housing material	brass, PTFE coated
Protection degree	IP67
Connection type	Device connector M12 x 1, 4-pin



Model Number

		NBB10-30GM50-E0-C-V1	NBB10-30GM50-E2-C-V1	NBB10-30GM50-E2-C3-V1	NBN15-30GM50-E2-C-V1
Rated operating distance	10 mm	●	●	●	
	15 mm				●
Installation	flush	●	●	●	
	non-flush				●
Switching element function	NPN	●			
	NO		●	●	●
	PNP				●
	NO				●

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		

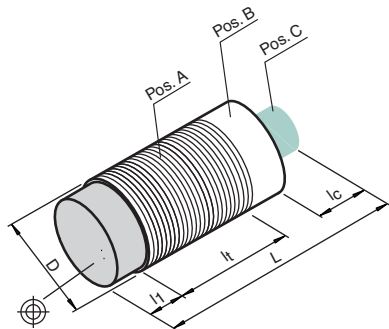
Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

See pages 1068 ... for mounting aids

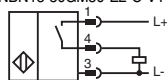
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-G-2M-PVC	Cable socket, M12, 4-pin, PVC cable
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-G-OR2M-POC	Female cordset, M12, 4-pin, TPE cable, welding-bead resistant
EXG-30	Quick mounting bracket with dead stop



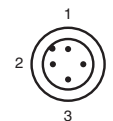
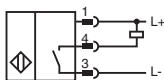
Electrical Connection



NBB10-30GM50-E2-C3-V1
NBB10-30GM50-E2-C-V1
NBN15-30GM50-E2-C-V1

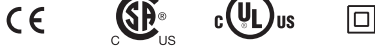


NBB10-30GM50-E0-C-V1



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

Reduction factor 1	✓
Switching element function	PNP NO
Operating voltage	10 ... 30 V DC
Reverse polarity protection	✓
Operating current	0 ... 200 mA
Short-circuit protection	pulsing
Indication of the switching state	Multihole-LED, yellow
Housing material	brass, PTFE coated
Protection degree	IP67
Connection type	Device connector M12 x 1, 4-pin



Properties

- Ø8 - 30 mm housing versions
- Up to 30 mm, flush, non-flush and virtually flush mountable versions
- DC, 3-wire switching output
- Connector version

Your Benefit

- Same sensing range for all metals
- Specially optimized for welding applications

Model Number

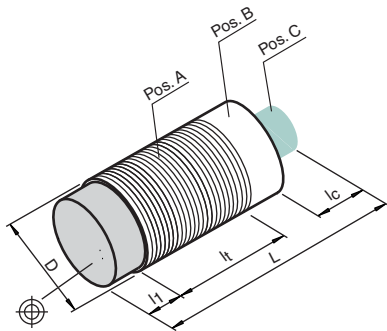
		NRB2-8GM40-E2-C-V1	NRN6-8GM40-E2-C-V1	NRB4-12GM40-E2-C-V1	NRN10-12GM40-E2-C-V1	NRB8-18GM40-E2-C-V1	NRB8-18GM50-E2-C-V1	NRB12-18GM40-E2-C-V1	NRN15-18GM50-E2-C-V1	NRB15-30GM50-E2-C-V1	NRN30-30GM50-E2-C-V1
Rated operating distance [mm]		2	6	4	10	8	8	12	15	15	30
Installation	flush	●		●		●	●			●	●
	non-flush		●		●				●		●
	virtually flush							●			
Switching frequency	0 ... 300 Hz										●
	0 ... 400 Hz										●
	0 ... 500 Hz								●		
	0 ... 600 Hz					●	●	●			
	0 ... 750 Hz									●	
	0 ... 1000 Hz					●					
	0 ... 2000 Hz				●						
	0 ... 2500 Hz		●								
Ambient temperature	0 ... 4000 Hz	●									
	-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]	65	65	55	55	55	65	55	65	65	65	
Diameter D [mm]	8/12	12	18	30							
Thread length l _t [mm]	40	35	39	31	40	50	40	40	50	32	
Cap length l ₁ [mm]	0	5	0	8	0	0	0	10	0	18	
Connector area l _c [mm]	6						15				
LED position	Pos. B						Pos. C				



Accessories

This and more accessories can be found in chapter 10

See pages from 972 ... for cordsets

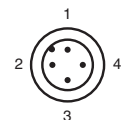
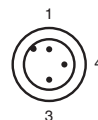
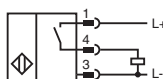
See pages 1068 ... for mounting aids

BF 8	Mounting flange, 8 mm
V1-G-BK	4-pin, M12 female field-attachable connector
BF 12	Mounting flange, 12 mm
BF 18	Mounting flange, 18 mm
BF 30	Mounting flange, 30 mm
V1-G-2M-PUR	Cable socket, M12, 4-pin, PUR cable
V1-W-2M-PUR	Cable socket, M12, 4-pin, PUR cable

Electrical Connection



- NRB2-8GM40-E2-C-V1
- NRN6-8GM40-E2-C-V1
- NRB4-12GM40-E2-C-V1
- NRN10-12GM40-E2-C-V1
- NRB12-18GM40-E2-C-V1
- NRB8-18GM40-E2-C-V1
- NRB8-18GM50-E2-C-V1
- NRN15-18GM50-E2-C-V1
- NRB15-30GM50-E2-C-V1
- NRN30-30GM50-E2-C-V1



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)

Date of issue: 2015-04-08

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

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PEPPERL+FUCHS
SENSING YOUR NEEDS



Proximity Sensors, Inductive Sensors, cylindrical

Technical Data

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

General Data

metal face	✓
Installation	flush
Switching element function	PNP NO
Type of voltage	DC
Operating voltage	10 ... 30 V DC
Reverse polarity protection	✓
Switching frequency	0 ... 5 Hz
Short-circuit protection	pulsing
Housing material	Xylan coated - Stainless steel 1.4305 / AISI 303
Connection type	Device connector M12 x 1 , 4-pin



Properties

- Ø8 - 30 mm housing versions
- Up to 15 mm, flush mountable versions
- DC, 3-wire switching output
- Connector versions

Your Benefit

- Increased resistance to environmental influences due to self-contained metal sleeve
- Specially optimized for welding applications

Model Number

		NMB3-8GM50-E2-C-V1	NMB5-12GM65-E2-C-V1	NMB10-18GM65-E2-C-V1	NMB15-30GM65-E2-C-V1
Rated operating distance	3 mm	●			
	5 mm		●		
	10 mm			●	
	15 mm				●
Operating current	0 ... 100 mA	●			
	0 ... 200 mA		●	●	●
Operating voltage display	LED, green		●	●	●
Indication of the switching state	LED, red	●			
	Multihole-LED, yellow		●	●	●
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)		●	●	●
	-25 ... 75 °C (-13 ... 167 °F)	●			
Protection degree	IP67	●			
	IP67 / IP68 / IP69K - cordset dependent according to cable Standard		●	●	●

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.				

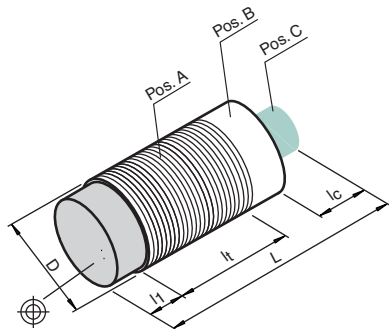
Dimensions

	50	65	65	65
Length L [mm]	50	65	65	65
Diameter D [mm]	8 / 12	12	18	30
Thread length l _t [mm]	25	42	39.5	37.5
Cap length l ₁ [mm]	0	2	2.5	2.5
Connector area l _c [mm]	6	19	15	15
LED position	Pos.:	A	C	C

Accessories

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

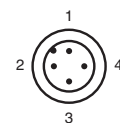
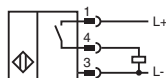
V1-G-OR2M-POC	Female cordset, M12, 4-pin, TPE cable, welding-bead resistant
AB-12	Mounting aid
AB-18	Mounting aid
EXG-08	Quick mounting bracket with dead stop



Electrical Connection



NMB3-8GM50-E2-C-V1
NMB5-12GM65-E2-C-V1
NMB10-18GM65-E2-C-V1
NMB15-30GM65-E2-C-V1



Wire colors in accordance with EN 60947-5-2

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