



Sn = 2 mm

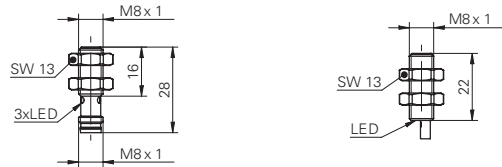
W I R E

- Shortest version with M8 x 1 connector
- High switching frequency
- Robust metal housing

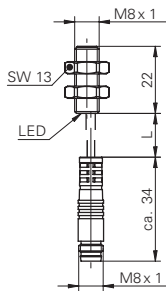


general data	
mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
electrical data	
switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes
mechanical data	
type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm
cable	
housing length	22 mm
flylead connector M8	
housing length	22 mm
connector M8	
housing length	28 mm
ambient conditions	
operating temperature	-25 ... +75 °C
protection class	IP 67
accessories	
connectors	ESG 32S, ESW 31S

dimension drawings

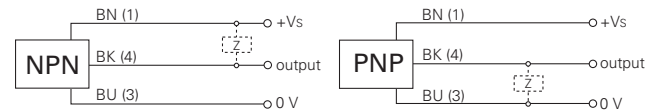


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 08N1713/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 08N1713/L	cable	NPN make function (NO)	LED red
IFRM 08N17A5/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 08N3713/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 08N3713/L	cable	NPN break function (NC)	LED red
IFRM 08N37A5/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 08P1713/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 08P1713/L	cable	PNP make function (NO)	LED red
IFRM 08P17A5/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 08P3713/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 08P3713/L	cable	PNP break function (NC)	LED red
IFRM 08P37A5/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 2 mm

W I R E

- Robust metal housing
- High switching frequency



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr

electrical data

switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm

cable

housing length	30 mm
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flylead connector M8

housing length	30 mm
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connector M8

housing length	36 mm
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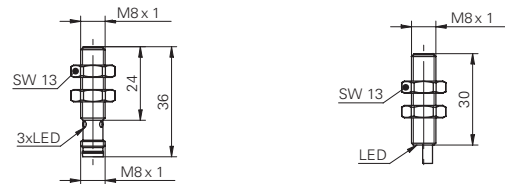
ambient conditions

operating temperature	-25 ... +75 °C
protection class	IP 67

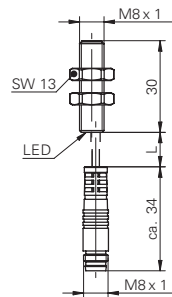
accessories

connectors	ESG 32S, ESW 31S
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dimension drawings

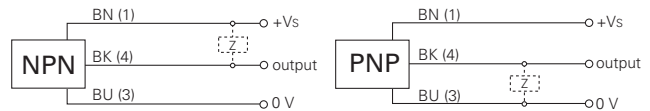


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 08N1701/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 08N1701/L	cable	NPN make function (NO)	LED red
IFRM 08N17A3/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 08N3701/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 08N3701/L	cable	NPN break function (NC)	LED red
IFRM 08N37A3/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 08P1701/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 08P1701/L	cable	PNP make function (NO)	LED red
IFRM 08P17A3/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 08P3701/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 08P3701/L	cable	PNP break function (NC)	LED red
IFRM 08P37A3/S35L	connector M8	PNP break function (NC)	3 port LED red

IFRM 08 Sn = 2 mm

Inductive sensors 3-wire digital output



Sn = 2 mm

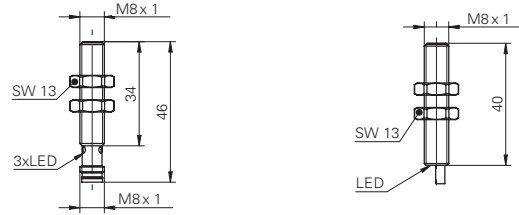
WIRE

- Robust metal housing
- High switching frequency

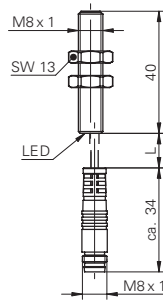


general data	
mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
electrical data	
switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes
mechanical data	
type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm
cable	
housing length	40 mm
flylead connector M8	
housing length	40 mm
connector M8	
housing length	46 mm
ambient conditions	
operating temperature	-25 ... +75 °C
protection class	IP 67
accessories	
connectors	ESG 32S, ESW 31S

dimension drawings

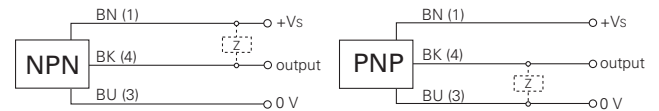


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 08N17A1/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 08N17A1/L	cable	NPN make function (NO)	LED red
IFRM 08N17A1/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 08N37A1/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 08N37A1/L	cable	NPN break function (NC)	LED red
IFRM 08N37A1/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 08P17A1/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 08P17A1/L	cable	PNP make function (NO)	LED red
IFRM 08P17A1/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 08P37A1/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 08P37A1/L	cable	PNP break function (NC)	LED red
IFRM 08P37A1/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 2 mm

W I R E

- Robust metal housing
- High switching frequency



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr

electrical data

switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm

cable

housing length	50 mm
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flylead connector M8

housing length	50 mm
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connector M8

housing length	56 mm
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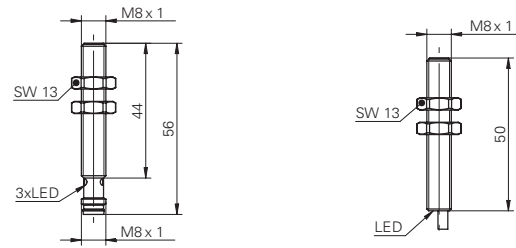
ambient conditions

operating temperature	-25 ... +75 °C
protection class	IP 67

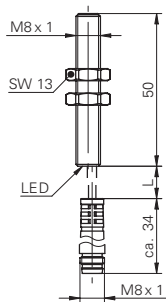
accessories

connectors	ESG 32S, ESW 31S
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dimension drawings

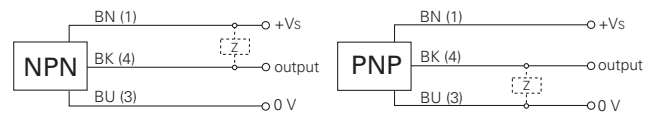


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 08N17A4/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 08N17A4/L	cable	NPN make function (NO)	LED red
IFRM 08N17A4/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 08N37A4/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 08N37A4/L	cable	NPN break function (NC)	LED red
IFRM 08N37A4/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 08P17A4/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 08P17A4/L	cable	PNP make function (NO)	LED red
IFRM 08P17A4/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 08P37A4/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 08P37A4/L	cable	PNP break function (NC)	LED red
IFRM 08P37A4/S35L	connector M8	PNP break function (NC)	3 port LED red

IFRM 08 Sn = 2 mm

Inductive sensors 3-wire digital output



Sn = 3 mm

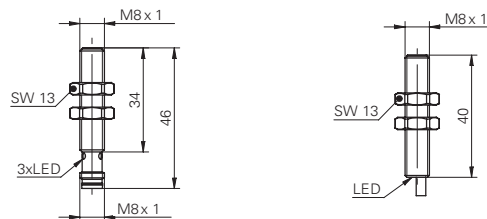
W I R E

- Version with extended Sn *GammaProx*
- Quasi shielded mounting
- Robust metal housing

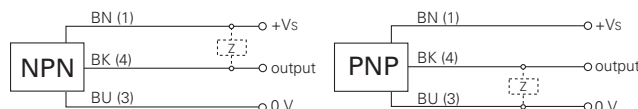


general data	
mounting type	quasi shielded
special type	enhanced distance (<i>GammaProx</i>)
nominal sensing distance Sn	3 mm
hysteresis	2 ... 25 % of Sr
electrical data	
switching frequency	< 1 kHz
voltage supply range +Vs	12 ... 30 VDC
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes
mechanical data	
type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm
cable	
housing length	40 mm
connector M8	
housing length	46 mm
ambient conditions	
operating temperature	-25 ... +75 °C
protection class	IP 67
accessories	
connectors	ESG 32S, ESW 31S
remarks	
For correct installation refer to chapter 1 "mounting instructions"	

dimension drawings



connection diagrams



order reference	connection types	output circuit	output indicator	current consumption max.
IFRM 08N17G1/L	cable	NPN make function (NO)	LED red	12 mA
IFRM 08N17G1/S35L	connector M8	NPN make function (NO)	3 port LED red	18 mA
IFRM 08N37G1/L	cable	NPN break function (NC)	LED red	12 mA
IFRM 08N37G1/S35L	connector M8	NPN break function (NC)	3 port LED red	18 mA
IFRM 08P17G1/L	cable	PNP make function (NO)	LED red	12 mA
IFRM 08P17G1/S35L	connector M8	PNP make function (NO)	3 port LED red	18 mA
IFRM 08P37G1/L	cable	PNP break function (NC)	LED red	12 mA
IFRM 08P37G1/S35L	connector M8	PNP break function (NC)	3 port LED red	18 mA



Sn = 6 mm

W I R E

- Version with extended Sn *GammaProx*
- Non shielded mounting
- Robust metal housing



general data

mounting type	unshielded
special type	enhanced distance (<i>GammaProx</i>)
nominal sensing distance Sn	6 mm
hysteresis	2 ... 25 % of Sr

electrical data

switching frequency	< 400 Hz
voltage supply range +Vs	12 ... 30 VDC
current consumption max.	18 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm

cable

housing length	40 mm
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connector M8

housing length	46 mm
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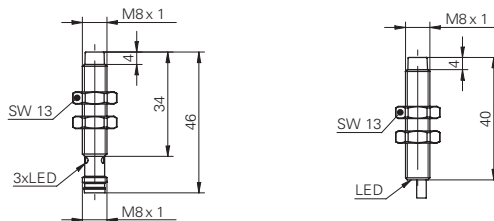
ambient conditions

operating temperature	0 ... +60 °C
protection class	IP 67

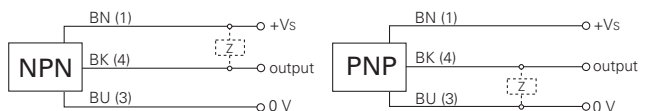
accessories

connectors	ESG 32S, ESW 31S
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dimension drawings



connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 08N13G1/L	cable	NPN make function (NO)	LED red
IFRM 08N13G1/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 08N33G1/L	cable	NPN break function (NC)	LED red
IFRM 08N33G1/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 08P13G1/L	cable	PNP make function (NO)	LED red
IFRM 08P13G1/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 08P33G1/L	cable	PNP break function (NC)	LED red
IFRM 08P33G1/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 2 mm

W I R E

- Robust metal housing
- High switching frequency
- M12 x 1 quick disconnect



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
output indicator	4 port LED red

electrical data

switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	cylindrical threaded
material (sensing face)	PBT
housing material	stainless steel
dimension	8 mm
housing length	50 mm
connection types	connector M12

ambient conditions

operating temperature	-25 ... +75 °C
protection class	IP 67

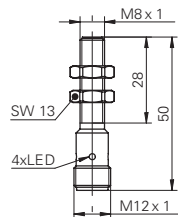
accessories

connectors	ESG 34S, ESW 33S
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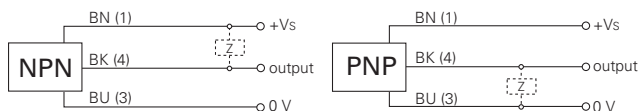
order reference output circuit

IFRM 08N1703/S14L	NPN make function (NO)
IFRM 08N3703/S14L	NPN break function (NC)
IFRM 08P1703/S14L	PNP make function (NO)
IFRM 08P3703/S14L	PNP break function (NC)

dimension drawing



connection diagrams



IFRM 08 Sn = 2 mm

Inductive sensors 3-wire digital output



Sn = 2 mm / 4 mm

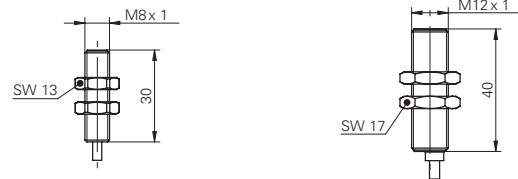
W I R E

- With integral electronics up to 100°C
- Teflon cable

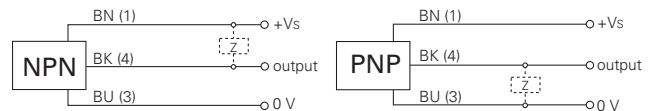


general data	
mounting type	shielded
special type	high temperature
hysteresis	3 ... 20 % of Sr
electrical data	
voltage supply range +Vs	12 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 3 VDC
output current	< 50 mA
short circuit protection	yes
reverse polarity protection	yes
mechanical data	
type	cylindrical threaded
connection types	cable
ambient conditions	
operating temperature	-25 ... +100 °C
protection class	IP 67

dimension drawings



connection diagrams



order reference	nominal sensing distance Sn	switching frequency	output circuit	dimension	housing material	housing length
IFRM 08N1707	2 mm	< 5 kHz	NPN make function (NO)	8 mm	stainless steel	30 mm
IFRM 08P1707	2 mm	< 5 kHz	PNP make function (NO)	8 mm	stainless steel	30 mm
IFRM 12N1707	4 mm	< 2 kHz	NPN make function (NO)	12 mm	brass nickel plated	40 mm
IFRM 12P1707	4 mm	< 2 kHz	PNP make function (NO)	12 mm	brass nickel plated	40 mm

IFRM 08 / IFRM 12 Sn = 2 mm / 4 mm

High temperature sensors up to +100 °C



Sn = 1,5 mm / 2 mm

- Shielded and unshielded versions
- High switching frequency



electrical data

switching frequency	< 5 kHz
normal operating voltage	8,2 VDC
voltage supply range +Vs	5 ... 30 VDC
current consumption undamped	> 4 mA
current consumption damped	< 1 mA
current consumption max.	10 mA
residual ripple	< 10% Vs

mechanical data

type	cylindrical threaded
housing material	brass nickel plated
dimension	8 mm
connection types	cable

ambient conditions

operating temperature	-25 ... +75 °C
protection class	IP 67

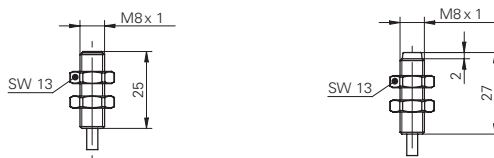
safe maximum values

EC-type-examination Certificate	PTB 03 ATEX 2146
marking	II 1G EEx ia IIC T5/6
current Ii	< 37 mA
voltage Ui	< 13,5 VDC
power Pi	< 0,125 W
internal capacitance Ci	< 50 nF
internal inductance Li	< 0,2 mH
operating temperature Ta (temp. class T5)	-20 ... +60 °C
operating temperature Ta (temp. class T6)	-20 ... +40 °C

remarks

available with connector S35

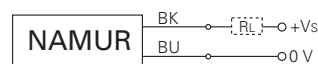
dimension drawings



shielded

unshielded

connection diagram



operating data according to EN 50227

+Vs = 8,2 V
 RL = 1 kΩ
 T = 20 °C
 Sn at 1,8 mA

for applications in hazardous areas

order reference	nominal sensing distance Sn	mounting type	housing length
IFRM 08X9103	2 mm	unshielded	27 mm
IFRM 08X9503	1,5 mm	shielded	25 mm

Inductive NAMUR sensors IFRM 08X Sn = 1,5 mm / 2 mm