



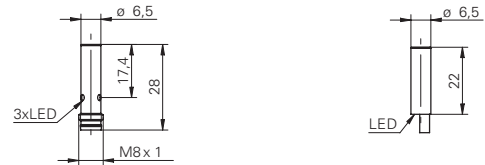
Sn = 2 mm

WIRE

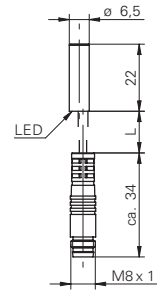
- Robust metal housing
- Shortest version with M8 x 1 connector
- High switching frequency

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 smooth
material (sensing face)	PBT
housing material	stainless steel
dimension	6,5 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	
support	Nr. 109474
clamping nut	Nr. 117742
connectors	ESG 32S, ESW 31S

dimension drawings

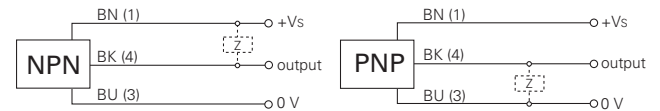


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 06N1713/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 06N1713/L	cable	NPN make function (NO)	LED red
IFRM 06N17A5/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 06N3713/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 06N3713/L	cable	NPN break function (NC)	LED red
IFRM 06N37A5/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 06P1713/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 06P1713/L	cable	PNP make function (NO)	LED red
IFRM 06P17A5/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 06P3713/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 06P3713/L	cable	PNP break function (NC)	LED red
IFRM 06P37A5/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 2 mm

W I R E

- Robust metal housing
- High switching frequency
- Mounting with special support



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 smooth
material (sensing face)	PBT
housing material	stainless steel
dimension	6,5 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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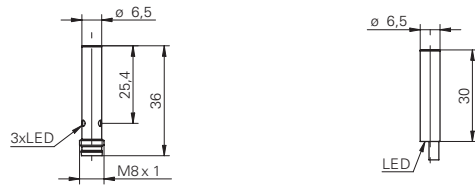
ambient conditions

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

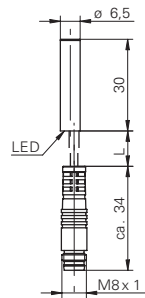
accessories

support	Nr. 109474
clamping nut	Nr. 117742
connectors	ESG 32S, ESW 31S

dimension drawings

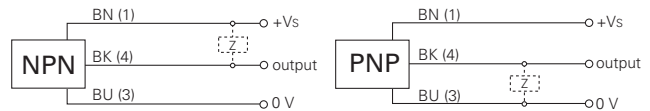


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 06N1701/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 06N1701/L	cable	NPN make function (NO)	LED red
IFRM 06N17A3/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 06N3701/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 06N3701/L	cable	NPN break function (NC)	LED red
IFRM 06N37A3/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 06P1701/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 06P1701/L	cable	PNP make function (NO)	LED red
IFRM 06P17A3/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 06P3701/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 06P3701/L	cable	PNP break function (NC)	LED red
IFRM 06P37A3/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 2 mm

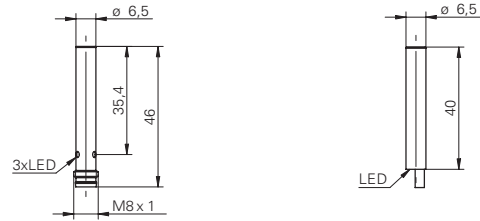
W I R E

- Robust metal housing
- High switching frequency
- Mounting with special support

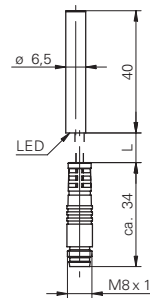


general data	
mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
electrical data	
switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes
mechanical data	
type	cylindrical smooth
material (sensing face)	PBT
housing material	stainless steel
dimension	6,5 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	
support	Nr. 109474
clamping nut	Nr. 117742
connectors	ESG 32S, ESW 31S

dimension drawings

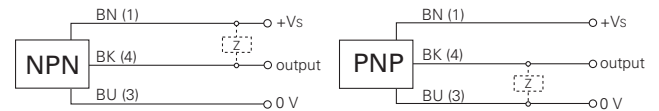


flylead connector version



standard cable length 200 mm

connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 06N17A1/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 06N17A1/L	cable	NPN make function (NO)	LED red
IFRM 06N17A1/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 06N37A1/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 06N37A1/L	cable	NPN break function (NC)	LED red
IFRM 06N37A1/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 06P17A1/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 06P17A1/L	cable	PNP make function (NO)	LED red
IFRM 06P17A1/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 06P37A1/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 06P37A1/L	cable	PNP break function (NC)	LED red
IFRM 06P37A1/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 2 mm

W I R E

- Long, robust steel housings
- Cable and connector versions
- Mounting with special support



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 smooth
material (sensing face)	PBT
housing material	stainless steel
dimension	6,5 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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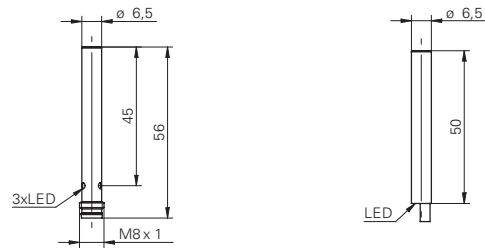
ambient conditions

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

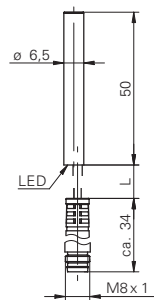
accessories

support	Nr. 109474
clamping nut	Nr. 117742
connectors	ESG 32S, ESW 31S

dimension drawings

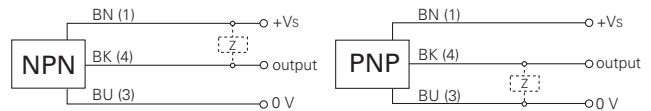


flylead connector version



standard cable length 200 mm

connection diagrams



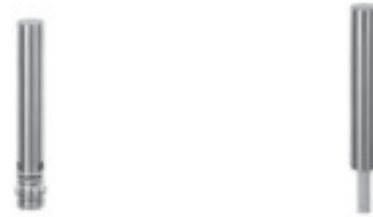
order reference	connection types	output circuit	output indicator
IFRM 06N17A4/KS35L	flylead connector M8	NPN make function (NO)	LED red
IFRM 06N17A4/L	cable	NPN make function (NO)	LED red
IFRM 06N17A4/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 06N37A4/KS35L	flylead connector M8	NPN break function (NC)	LED red
IFRM 06N37A4/L	cable	NPN break function (NC)	LED red
IFRM 06N37A4/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 06P17A4/KS35L	flylead connector M8	PNP make function (NO)	LED red
IFRM 06P17A4/L	cable	PNP make function (NO)	LED red
IFRM 06P17A4/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 06P37A4/KS35L	flylead connector M8	PNP break function (NC)	LED red
IFRM 06P37A4/L	cable	PNP break function (NC)	LED red
IFRM 06P37A4/S35L	connector M8	PNP break function (NC)	3 port LED red



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

electrical data

switching frequency	< 1 kHz
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 smooth
material (sensing face)	PBT
housing material	stainless steel
dimension	6,5 mm

cable

housing length	40 mm
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connector M8

housing length	46 mm
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ambient conditions

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

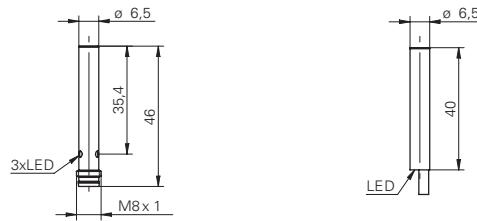
accessories

support	Nr. 109474
clamping nut	Nr. 117742
connectors	ESG 32S, ESW 31S

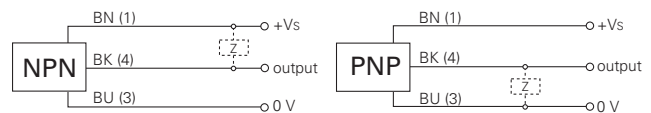
remarks

For correct installation refer to chapter 1 "mounting instructions"

dimension drawings



connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 06N17G1/L	cable	NPN make function (NO)	LED red
IFRM 06N17G1/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 06N37G1/L	cable	NPN break function (NC)	LED red
IFRM 06N37G1/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 06P17G1/L	cable	PNP make function (NO)	LED red
IFRM 06P17G1/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 06P37G1/L	cable	PNP break function (NC)	LED red
IFRM 06P37G1/S35L	connector M8	PNP break function (NC)	3 port LED red



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 smooth
material (sensing face)	PBT
housing material	stainless steel
dimension	6,5 mm

cable

housing length	40 mm
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connector M8

housing length	46 mm
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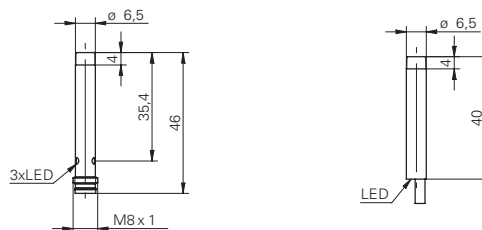
ambient conditions

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

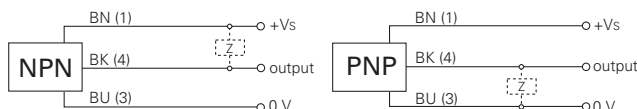
accessories

support	Nr. 109474
clamping nut	Nr. 117742
connectors	ESG 32S, ESW 31S

dimension drawings



connection diagrams



order reference	connection types	output circuit	output indicator
IFRM 06N13G1/L	cable	NPN make function (NO)	LED red
IFRM 06N13G1/S35L	connector M8	NPN make function (NO)	3 port LED red
IFRM 06N33G1/L	cable	NPN break function (NC)	LED red
IFRM 06N33G1/S35L	connector M8	NPN break function (NC)	3 port LED red
IFRM 06P13G1/L	cable	PNP make function (NO)	LED red
IFRM 06P13G1/S35L	connector M8	PNP make function (NO)	3 port LED red
IFRM 06P33G1/L	cable	PNP break function (NC)	LED red
IFRM 06P33G1/S35L	connector M8	PNP break function (NC)	3 port LED red



Sn = 1,5 mm

- High switching frequency



general data

mounting type	shielded
nominal sensing distance Sn	1,5 mm

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 smooth
housing material	brass nickel plated
dimension	6,5 mm
housing length	25 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

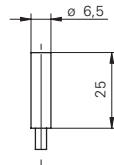
accessories

support	Nr. 109474
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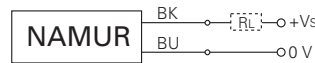
order reference

IFRM 06X9503

dimension drawing



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