

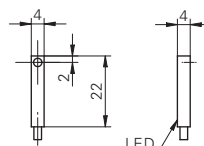


Sn = 0,8 mm

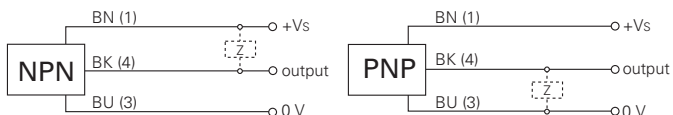
- smallest rectangular housing
- stainless steel housing



dimension drawing



connection diagrams



general data

mounting type	shielded
nominal sensing distance Sn	0,8 mm
hysteresis	2 ... 20 % of Sr
output indicator	LED red (backside)

electrical data

switching frequency	< 3 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 100 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
material (sensing face)	EP
housing material	stainless steel
dimension	4 mm
housing length	22 mm
connection types	cable, 2 m

ambient conditions

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

order reference

output circuit

IFFM 04N1501/O1L	NPN make function (NO)
IFFM 04N3501/O1L	NPN break function (NC)
IFFM 04P1501/O1L	PNP make function (NO)
IFFM 04P3501/O1L	PNP break function (NC)

IFFM 04 Sn = 0,8 mm

Inductive sensors 3-wire digital output



Sn = 1 mm

- miniature connector M5 x 0,5
- smallest rectangular housing with connector



general data

mounting type	shielded
nominal sensing distance Sn	1 mm
hysteresis	2 ... 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	< 100 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
material (sensing face)	LCP
housing material	brass nickel plated
dimension	6 mm

cable, 2 m

housing length	20 mm
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connector M5

housing length	24 mm
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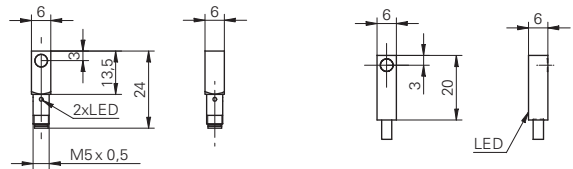
ambient conditions

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

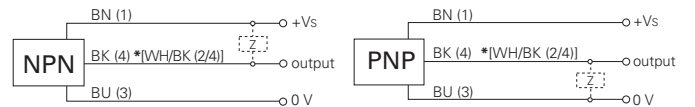
accessories

connectors	ESG 05, ESW 05
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dimension drawings



connection diagrams



* .../S05L pin 2 & 4 electrically connected

order reference	connection types	output circuit	output indicator
IFFM 06N15A3/O1L	cable, 2 m	NPN make function (NO)	LED red (backside)
IFFM 06N15A3/O1S05L	connector M5	NPN make function (NO)	2 port LED red
IFFM 06N35A3/O1L	cable, 2 m	NPN break function (NC)	LED red (backside)
IFFM 06N35A3/O1S05L	connector M5	NPN break function (NC)	2 port LED red
IFFM 06P15A3/O1L	cable, 2 m	PNP make function (NO)	LED red (backside)
IFFM 06P15A3/O1S05L	connector M5	PNP make function (NO)	2 port LED red
IFFM 06P35A3/O1L	cable, 2 m	PNP break function (NC)	LED red (backside)
IFFM 06P35A3/O1S05L	connector M5	PNP break function (NC)	2 port LED red



Sn = 1 mm

- standard cable version
- high switching frequency

general data

mounting type	shielded
nominal sensing distance Sn	1 mm
hysteresis	2 ... 20 % of Sr
output indicator	LED red (backside)

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	< 100 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
material (sensing face)	LCP
housing material	brass nickel plated
dimension	6 mm
housing length	30 mm
connection types	cable, 2 m

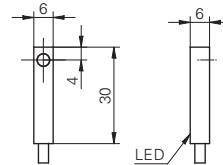
ambient conditions

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

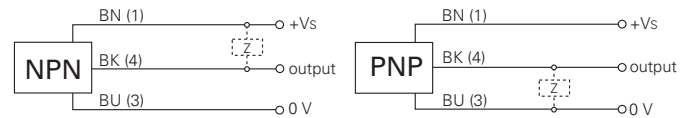
order reference	output circuit
IFFM 06N15A1/O1L	NPN make function (NO)
IFFM 06N35A1/O1L	NPN break function (NC)
IFFM 06P15A1/O1L	PNP make function (NO)
IFFM 06P35A1/O1L	PNP break function (NC)



dimension drawing



connection diagrams



IFFM 06 Sn = 1 mm Inductive sensors 3-wire digital output



Sn = 2 mm

- shortest rectangular design with M8 x 1 connector
- cable and connector versions
- high switching frequency



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
output indicator	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	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	8 mm

cable, 2 m

housing length	20 mm
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connector M8

housing length	27 mm
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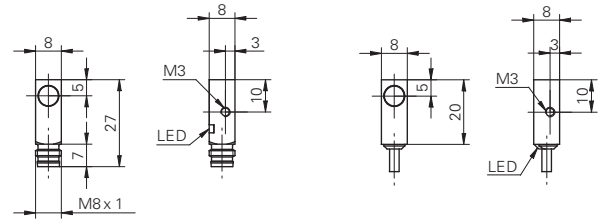
ambient conditions

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

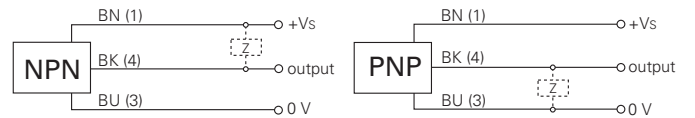
accessories

connectors	ESG 32S, ESW 31S
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dimension drawings



connection diagrams



order reference	connection types	output circuit
IFFM 08N1703/O1L	cable, 2 m	NPN make function (NO)
IFFM 08N17A5/O1S35L	connector M8	NPN make function (NO)
IFFM 08N3703/O1L	cable, 2 m	NPN break function (NC)
IFFM 08N37A5/O1S35L	connector M8	NPN break function (NC)
IFFM 08P1703/O1L	cable, 2 m	PNP make function (NO)
IFFM 08P17A5/O1S35L	connector M8	PNP make function (NO)
IFFM 08P3703/O1L	cable, 2 m	PNP break function (NC)
IFFM 08P37A5/O1S35L	connector M8	PNP break function (NC)



Sn = 2 mm

W I R E

- high switching frequency
- cable and connector versions



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
output indicator	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	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	8 mm

cable, 2 m

housing length	28,5 mm
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connector M8

housing length	35,5 mm
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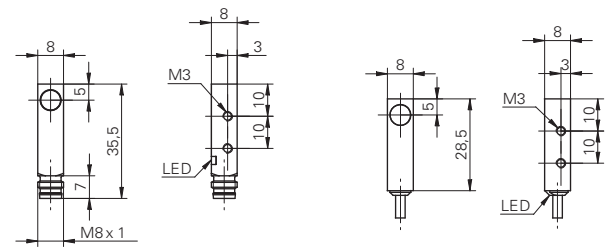
ambient conditions

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

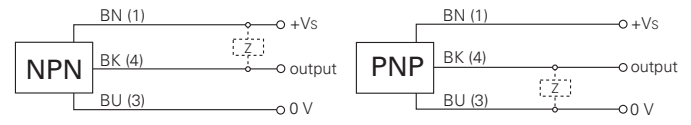
accessories

connectors	ESG 32S, ESW 31S
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dimension drawings



connection diagrams



order reference	connection types	output circuit
IFFM 08N1702/O1L	cable, 2 m	NPN make function (NO)
IFFM 08N17A3/O1S35L	connector M8	NPN make function (NO)
IFFM 08N3702/O1L	cable, 2 m	NPN break function (NC)
IFFM 08N37A3/O1S35L	connector M8	NPN break function (NC)
IFFM 08P1702/O1L	cable, 2 m	PNP make function (NO)
IFFM 08P17A3/O1S35L	connector M8	PNP make function (NO)
IFFM 08P3702/O1L	cable, 2 m	PNP break function (NC)
IFFM 08P37A3/O1S35L	connector M8	PNP break function (NC)

IFFM 08 Sn = 2 mm Inductive sensors 3-wire digital output



Sn = 2 mm

- high switching frequency
- cable and connector versions



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 20 % of Sr
output indicator	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	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	8 mm

cable, 2 m

housing length	38,5 mm
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connector M8

housing length	45,5 mm
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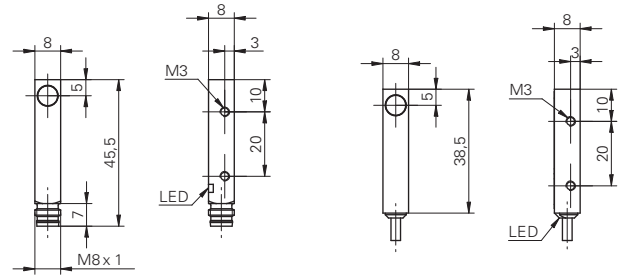
ambient conditions

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

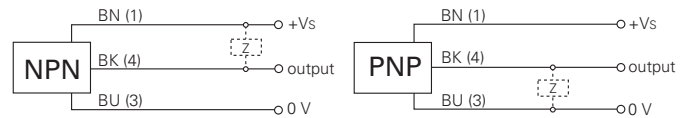
accessories

connectors	ESG 32S, ESW 31S
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dimension drawings



connection diagrams



order reference	connection types	output circuit
IFFM 08N1701/O1L	cable, 2 m	NPN make function (NO)
IFFM 08N17A1/O1S35L	connector M8	NPN make function (NO)
IFFM 08N3701/O1L	cable, 2 m	NPN break function (NC)
IFFM 08N37A1/O1S35L	connector M8	NPN break function (NC)
IFFM 08P1701/O1L	cable, 2 m	PNP make function (NO)
IFFM 08P17A1/O1S35L	connector M8	PNP make function (NO)
IFFM 08P3701/O1L	cable, 2 m	PNP break function (NC)
IFFM 08P37A1/O1S35L	connector M8	PNP break function (NC)



Sn = 2 mm

W I R E

- extra flat version
- through bore for M3 screw
- robust metal housing



general data	
mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	2 ... 20 % of Sr
output indicator	LED red

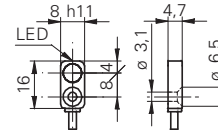
electrical data	
switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 2 VDC
output current	< 100 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data	
type	rectangular
material (sensing face)	PBT
housing material	die-cast zinc nickel plated
dimension	8 mm
housing length	16 mm

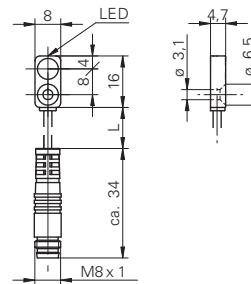
ambient conditions	
operating temperature	-25 ... +75 °C
protection class	IP 67

accessories	
connectors	ESG 32S, ESW 31S

dimension drawing

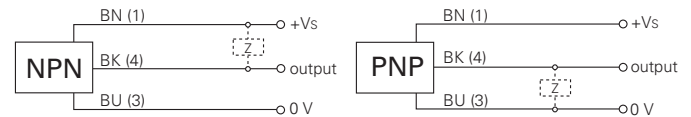


flylead connector version



standard cable length 200 mm (L)

connection diagrams



order reference	connection types	output circuit
IFFM 08N17A6/KS35L	flylead connector M8	NPN make function (NO)
IFFM 08N17A6/L	cable, 2 m	NPN make function (NO)
IFFM 08N37A6/KS35L	flylead connector M8	NPN break function (NC)
IFFM 08N37A6/L	cable, 2 m	NPN break function (NC)
IFFM 08P17A6/KS35L	flylead connector M8	PNP make function (NO)
IFFM 08P17A6/L	cable, 2 m	PNP make function (NO)
IFFM 08P37A6/KS35L	flylead connector M8	PNP break function (NC)
IFFM 08P37A6/L	cable, 2 m	PNP break function (NC)

IFFM 08 Sn = 2 mm Inductive sensors 3-wire digital output



Sn = 2 mm

- high switching frequency
- miniature connector M5 x 0,5



general data

mounting type	shielded
nominal sensing distance Sn	2 mm
hysteresis	3 ... 25 % of Sr

electrical data

switching frequency	< 5 kHz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	12 mA
voltage drop Vd	< 3 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	8 mm
connection types	connector M5

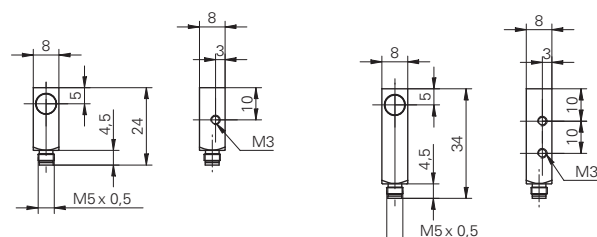
ambient conditions

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

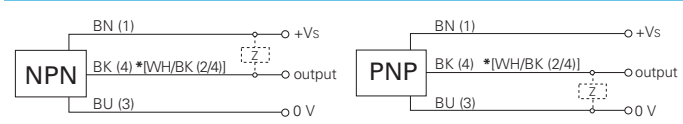
accessories

connectors	ESG 05, ESW 05
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dimension drawings



connection diagrams



* .../S05L pin 2 & 4 electrically connected

order reference	output circuit	housing length
IFFM 08N17A3/O1S05	NPN make function (NO)	34 mm
IFFM 08N17A5/O1S05	NPN make function (NO)	24 mm
IFFM 08N37A3/O1S05	NPN break function (NC)	34 mm
IFFM 08N37A5/O1S05	NPN break function (NC)	24 mm
IFFM 08P17A3/O1S05	PNP make function (NO)	34 mm
IFFM 08P17A5/O1S05	PNP make function (NO)	24 mm
IFFM 08P37A3/O1S05	PNP break function (NC)	34 mm
IFFM 08P37A5/O1S05	PNP break function (NC)	24 mm

IFFM 08 Sn = 2 mm

Inductive sensors 3-wire digital output



Sn = 4 mm

- extra flat version
- miniature connector M5 x 0,5



general data

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

electrical data

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

mechanical data

type	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	12 mm
housing length	23,5 mm
connection types	connector M5

ambient conditions

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

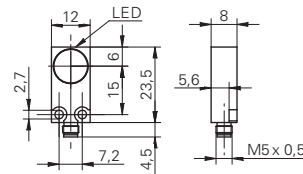
accessories

connectors	ESG 05, ESW 05
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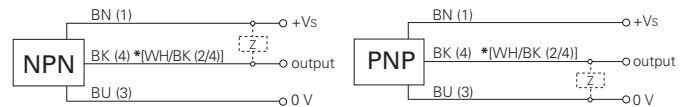
order reference **output circuit**

IFFM 12N17A3/S05L	NPN make function (NO)
IFFM 12N37A3/S05L	NPN break function (NC)
IFFM 12P17A3/S05L	PNP make function (NO)
IFFM 12P37A3/S05L	PNP break function (NC)

dimension drawing



connection diagrams



* .../S05L pin 2 & 4 electrically connected



Sn = 5 mm

W I R E

- voltage supply range +Vs 10 ... 50 VDC
- extra flat version
- 4 port LED

general data

mounting type	shielded
nominal sensing distance Sn	5 mm
hysteresis	3 ... 20 % of Sr
output indicator	4 port LED red

electrical data

switching frequency	< 1 kHz
voltage supply range +Vs	10 ... 50 VDC
current consumption max.	10 mA
voltage drop Vd	< 3 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	20 mm
housing length	32 mm
connection types	connector M8

ambient conditions

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

accessories

connectors	ESG 32S, ESW 31S
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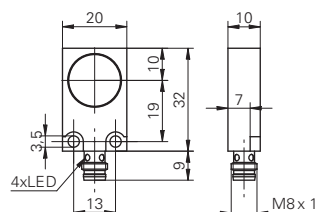
order reference

output circuit

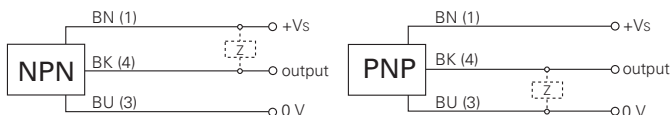
IFFM 20N1501/S35L	NPN make function (NO)
IFFM 20N3501/S35L	NPN break function (NC)
IFFM 20P1501/S35L	PNP make function (NO)
IFFM 20P3501/S35L	PNP break function (NC)



dimension drawing



connection diagrams



IFFM 20 Sn = 5 mm

Inductive sensors 3-wire digital output



Sn = 8 mm

- increased sensing distance
- extra flat version



general data

mounting type	shielded
nominal sensing distance Sn	8 mm
hysteresis	3 ... 20 % of Sr
output indicator	LED red

electrical data

switching frequency	< 500 Hz
voltage supply range +Vs	10 ... 30 VDC
current consumption max.	10 mA
voltage drop Vd	< 2 VDC
output current	< 200 mA
short circuit protection	yes
reverse polarity protection	yes

mechanical data

type	rectangular
material (sensing face)	PBT
housing material	brass nickel plated
dimension	20 mm
housing length	32 mm
connection types	connector M8

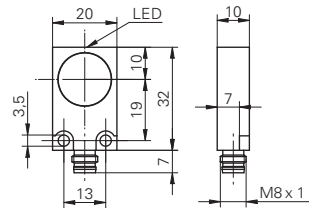
ambient conditions

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

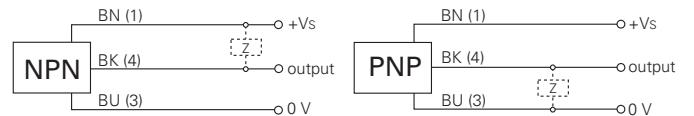
accessories

connectors	ESG 32S, ESW 31S
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dimension drawing








connection diagrams



order reference **output circuit**

IFFM 20N17A3/S35L	NPN make function (NO)
IFFM 20N37A3/S35L	NPN break function (NC)
IFFM 20P17A3/S35L	PNP make function (NO)
IFFM 20P37A3/S35L	PNP break function (NC)

product family	IZRM 18 / IZRM 30	ILFK 12	IARM 08 / IARM 12	IHTP 2000	IFFM360
					
2 adjustable switching points	■				
dynamical operation				■	■
high temperature proof				■	
inductive code reader		■			
with banking screw			■		
shielded	■	■	■	■	
unshielded		■			
nominal sensing distance Sn		2 mm 4 mm	0,4 mm 1,2 mm		70 mm
operating range	2 ... 5 mm 5 ... 10 mm			0 ... 1 mm (Measuring distance)	
housing length	111 mm 114 mm	38 mm 79 mm	50,5 mm 56 mm	63 mm	360 mm 205 mm
NPN	■		■		
PNP	■	■	■		■
cable		■		■	
screw connections	■				
connector M8			■		
connector M12					
brass nickel plated / PBT / PC	■				■
PA 6		■			
Titan TiAl6V4					
steel / hardened steel			■		
IP 64					■
IP 65	■				
IP 67		■	■		
IP 68				■	
Page	131	133	134	135	136



Sn = 70 mm

- large sensing distance and detection area
- sensing distance set by Teach-in
- for the detection of dynamic targets



technical data

nominal sensing distance Sn	70 mm
real sensing distance Sr	set by Teach-in
voltage supply range +Vs	12 ... 30 VDC
output current	< 200 mA
output circuit	PNP normally open (NO)
current consumption max.	200 mA
voltage drop Vd	< 3 VDC

ambient available

operating temperature	+5 ... +50 °C
protection class	IP 64

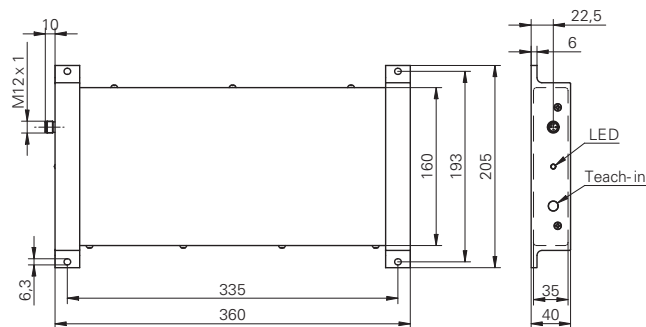
remarks

material of sensor housing: aluminum and black PET

order reference

IFFM360P13G1/S14L

dimension drawing



IFFM360P13G1/S14L Sn = 70 mm

Inductive area sensor