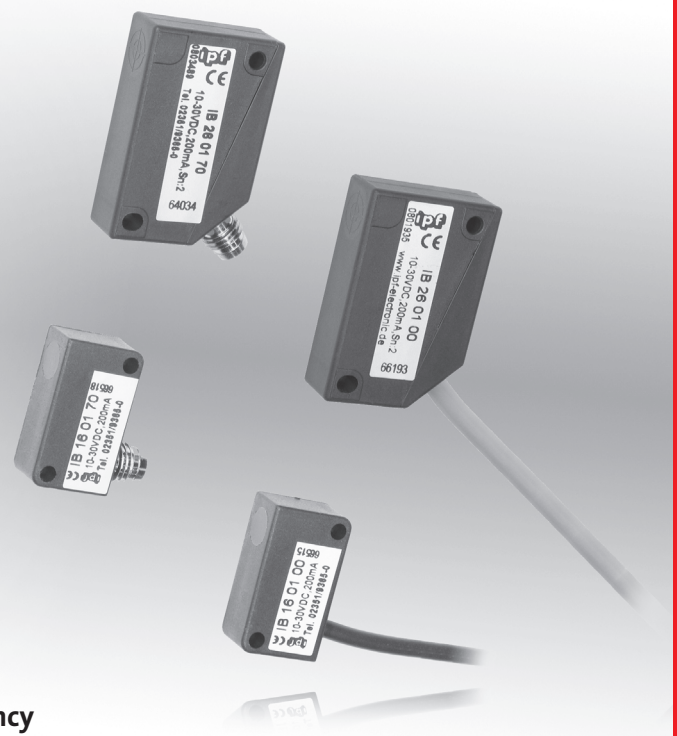
dimensions	**16 x 28 x 10mm** **16 x 28 x 10.4mm** **26 x 40 x 12mm**	
flush	sensing range	**2mm**
non-flush	sensing range	**4mm**



- ✓**short response time due to high sampling frequency**
- ✓**LED display for the switching status**
- ✓ **miniature design with integrated amplifier**
- ✓ **connection with cable or 3-pin M8-connector**

flush or non-flush mounting
several connection versions

description

The electronics relating to these sensors are cast into the square-shaped plastic housing and as such, they are protected from all kinds of vibrations.

Examples for the areas of application in which these inductive sensors are used include among others: machine engineering/ systems engineering, automotive industry, storage and conveyor technology, technology for the packaging industry, technology for the printing and paper industries, chemical engineering and process engineering.

An inductive sensor (proximity switch, position sensor, initiator) is a non-contact switch which reliably detects metallic objects. In the case of inductive sensors, a correction factor is stated which evaluates the reduction of the sensing range in relation to the different materials that the object is made from. This factor depends on the type, characteristics (internal structure), size and geometry of the material that the object to be detected is made from. The stated sensing range value relates to steel (factor 1 steel). In order to assess the approximate sensing range on materials which differ from this, the value has to be multiplied by the appropriate correction factor.

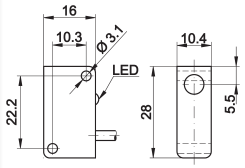
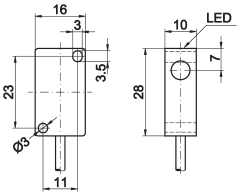
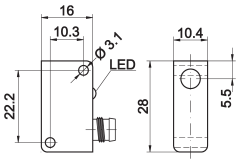
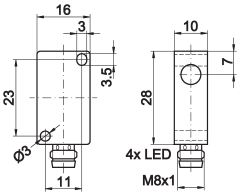
In order to ensure that the device runs reliably, it is essential that the fitting conditions on page 5 are adhered to. For realizing the maximum sensing range, care should be taken in relation to the size and characteristics of the object to be detected (standard target and/or flat surface).

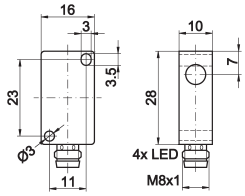
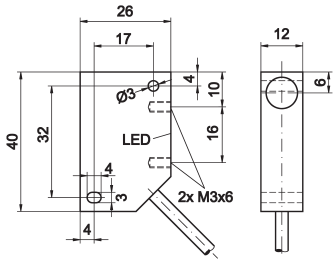
application examples

- checking the die cutting of different sized metal parts
- integration, even in machine parts with very limited space
- position switches related to supply technology
- detection of objects through the walls of non-metallic containers and tubes

inductive sensors

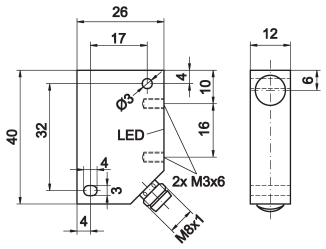
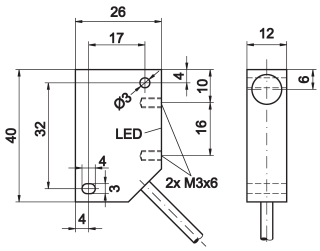
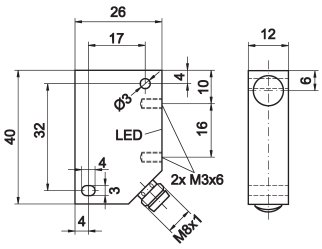
2400 norm sensing ranges

article-no.	IB160100	IB160105	IB160170	IB160175
sensing range	2.0mm	2.0mm	2.0mm	2.0mm
mounting	flush	flush	flush	flush
connection	2m PVC-cable lateral	2m PVC-cable straight	M8-connector lateral	M8-connector straight
				
TECHNICAL DATA				
sensing range (Sn)	2.0mm	2.0mm	2.0mm	2.0mm
mounting	flush	flush	flush	flush
output signal	pnp,no	pnp,no	pnp,no	pnp,no
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 11mA	≤ 13mA	≤ 11mA	≤ 13mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	1.6V DC	2.4V DC	1.6V DC	2.4V DC
norm trimming plate	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
hysteresis	5 ... 15% of Sn	5 ... 15% of Sn	5 ... 15% of Sn	5 ... 15% of Sn
sampling frequency	800Hz	1kHz	800Hz	1kHz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
dimensions	16x28x10.4mm	16x28x10mm	16x28x10.4mm	16x28x10mm
housing material	PA 6.6	PA 6.6	PA 6.6	PA 6.6
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	2m PVC-cable, 3-wire	2m PVC-cable, 3-wire	M8-connector, 3-pin	M8-connector, 3-pin
connection accessories	-	-	e.g. **VK200071**	e.g. **VK200071**
mounting accessories (uni-bracket)	**AY000118**	**AY000118**	**AY000118**	**AY000118**

article-no.	**IN160175**	**IB260100**
sensing range	**4.0mm**	**2.0mm**
mounting	**non-flush**	**flush**
connection	**M8-connector straight**	**2m PVC-cable diagonal**
		
TECHNICAL DATA		
sensing range (Sn)	4.0mm	2.0mm
mounting	flush	flush
output signal	pnp,no	pnp,no
operating voltage	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 13mA	≤ 13mA
output current (max. load)	200mA	200mA
voltage drop (max. load)	2.4V DC	2.4V DC
norm trimming plate	EN 60947-5-2	EN 60947-5-2
hysteresis	5 ... 15% of Sn	5 ... 15% of Sn
sampling frequency	800Hz	1kHz
status display	yellow LED	yellow LED
short-circuit protection	+	+
reverse polarity protection	+	+
dimensions	26x40x12mm	26x40x12mm
housing material	PA 6.6	PBT
operating temperature	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67
connection	M8-connector, 3-pin	2m PVC-cable, 3-wire
connection accessories	e.g. **VK200071**	-
mounting accessories (uni-bracket)	**AY000118**	**AY000118**

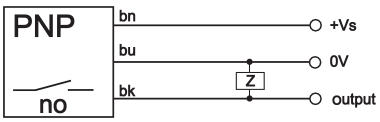
inductive sensors

2400 norm sensing ranges

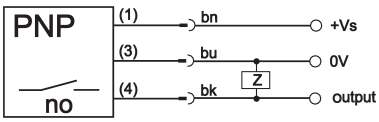
article-no.	**IB260170**	**IN260100**	**IN260170**
sensing range	**2.0mm**	**4.0mm**	**4.0mm**
mounting	**flush**	**non-flush**	**non-flush**
connection	**M8-connector diagonal**	**2m PVC-cable diagonal**	**M8-connector diagonal**
			
TECHNICAL DATA			
sensing range (Sn)	2.0mm	2.0mm	4.0mm
mounting	flush	non-flush	non-flush
output signal	pnp,no	pnp,no	pnp,no
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 13mA	≤ffi 13mA	≤ffi 13mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.4V DC	2.4V DC	2.4V DC
norm trimming plate	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
hysteresis	5 ... 15% of Sn	5 ... 15% of Sn	5 ... 15% of Sn
sampling frequency	1kHz	1kHz	1kHz
status display	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	26x40x12mm	26x40x12mm	26x40x12mm
housing material	PBT	PBT	PBT
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67
connection	M8-connector, 3-pin	2m PVC-cable, 3-wire	M8-connector, 3-pin
connection accessories	e.g. **VK200071**	-	e.g. **VK200071**
mounting accessories (uni-bracket)	**AY000118**	**AY000118**	**AY000118**

connection

cable device DC



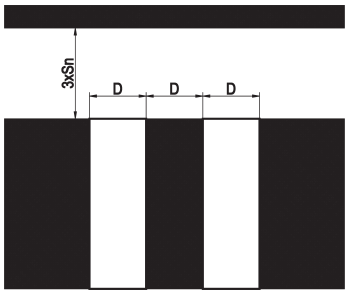
connector device



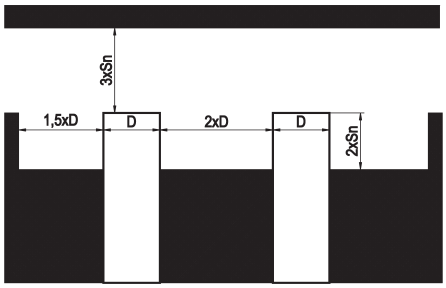
wire colors: bn = brown (1), bu = blue (3), bk = black (4)

mounting parameters

flush mounting



non-flush mounting



correction factors

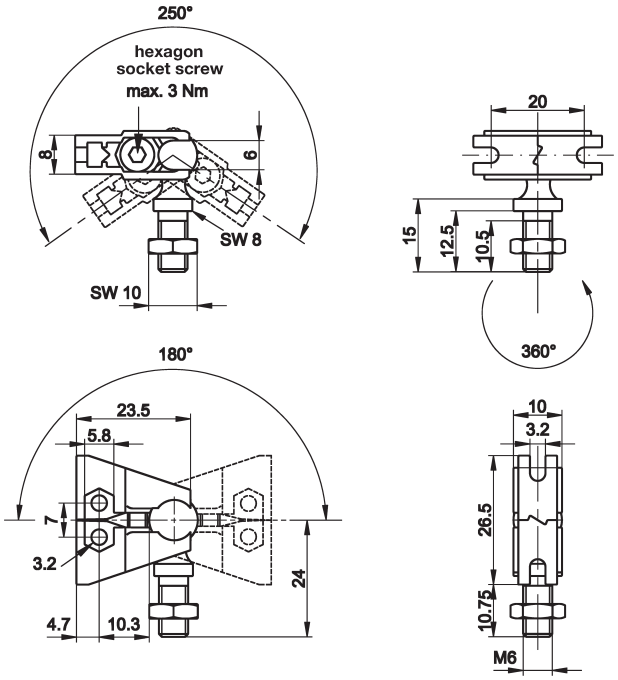
material	factor
stainless steel	approx. 0.7
brass (Ms)	approx. 0.4
aluminium (Al)	approx. 0.4
copper (Cu)	approx. 0.3

correction factors indicate the change relating to the sensing range if materials other than steel (1.0037) are used. The change in the sensing range depends on the type, characteristics (internal structure), size and the geometry relating to the material that is to be detected. In order to assess the approximate sensing range on the materials which differ from steel, the value for steel has to be multiplied by the appropriate correction factor.

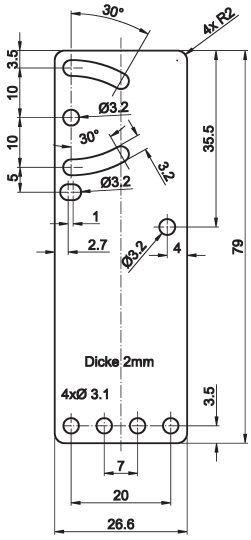
2400 norm sensing ranges

mounting accessories (Uni-bracket) AY000118

with base modul



...and fitting panel



ACCESSORIES

article-no.	description	notice
AY000088	base module *	flanges: stainless steel, ball pin: steel zinced
AY000118	fastening-parts kit for sensors Ix16, Ix26	stainless steel

* The base module **AY000088** is included in every fastening-parts kit.
Material of the screws and nuts: steel zinced

This data sheet contains the available standard versions only.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets - ipf-*SENSORFLEX*®" or search our Website for "VK".

Warning: Never use these devices in applications where the safety of a person depends on their functionality.

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Subject to alteration!
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