

► up to 3-fold norm sensing range

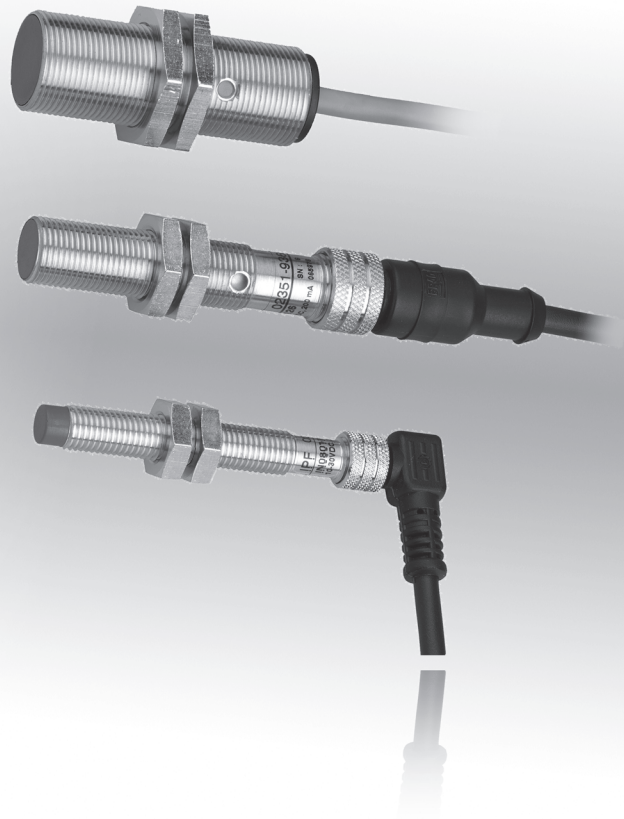
plus-series

inductive sensors plus-series

design	sensing range sn [mm]									flush	semi-flush	non-flush	length [mm]	pnp	npn	10 ... 30V DC	cable	M8-connector	M12-connector	page
	1	1.5	3	6	10	12	20	22	40											
Ø3mm	X									X			22	X		X	X	X		4
M4x0.5	X									X			22	X		X	X	X		4
Ø4mm		X								X			25 ... 38	X		X	X	X		5
M5x0.5		X								X			20 ... 38	X		X	X	X		5
Ø6.5mm			X								X		45 ... 66	X		X	X	X	X	6
M8x1			X								X		45 ... 66	X	X	X	X	X	X	7
M8x1				X								X	45 ... 66	X	X	X	X	X	X	8
M12x1				X							X		50 ... 60	X	X	X	X		X	9
M12x1					X							X	50 ... 60	X	X	X	X		X	9
M18x1						X					X		50 ... 63.5	X	X	X	X		X	10
M18x1							X					X	50 ... 63.5	X	X	X	X		X	10
M30x1.5								X			X		60 ... 73.5	X	X	X	X		X	11
M30x1.5									X			X	60 ... 73.5	X	X	X	X		X	11

fitting conditions, response curve	12-13
wiring diagram, connection accessories	14
mounting accessories	15

design	Ø3mm M4x0.5 Ø4mm M5x0.5 Ø6.5mm M8x1 M12x1 M18x1 M30x1.5	
flush	sensing range	1 to 1.5mm
semi-flush	sensing range	3 to 22mm
non-flush	sensing range	6 to 40mm



- ✓ metal sleeve stainless steel or chrome-plated brass
- ✓ LED-display
- ✓ integrated amplifier
- ✓ short-circuit and reverse polarity protection
- ✓ threaded devices according to EURONORM
- ✓ high sampling frequency and sensing ranges
- ✓ connection with cable or M8- / M12-connector

**up to 3-fold norm sensing range
robust metal housing**



description

ipf electronic's plus series inductive proximity switches are characterized by long sensing ranges. The devices work in a way which is similar to conventional proximity switches. However the oscillator and the downstream signal evaluation unit are configured differently, whereby significantly better stability is achieved in terms of temperature. This enables the switch-point to be rescheduled so that longer sensing ranges are achieved.

Plus series devices are preferably put to use in applications where a long sensing range has to be achieved, but the space does not allow for a correspondingly large standard device. Further fields of application can be found where the limited sensing range of standard sensors do not guarantee reliable operation, e.g. when detecting sheet metal parts with

large mechanical tolerances.

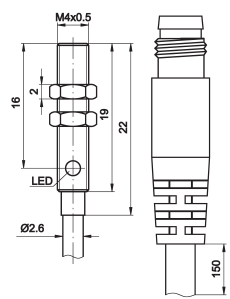
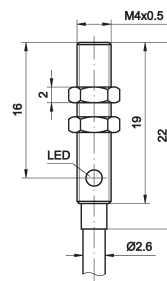
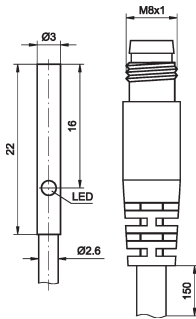
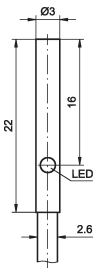
For attaining the maximum sensing range, attention should be paid concerning the size of the object (norm target) and the kind of surface (level surface). For the reliable operation of the devices, it is essential that the fitting conditions on the following pages are adhered to.

application examples

- ▶ checking the die cutting of different sized metal parts using different sensing ranges
- ▶ integration, even in machine parts
- ▶ detection of objects through the walls of non-metallic containers and tubes

sensing range	1mm	1mm	1mm	1mm
version	Ø3mm	Ø3mm	M4x0.5	M4x0.5
mounting	flush	flush	flush	flush
connection	2m PUR cable	M8-cable connector	2m PUR cable	M8-cable connector
article-no.	IBR30106	IBR30176	IB040106	IB040176
output signal	pnp, no	pnp, no	pnp, no	pnp, no
article-no.	IBR30206	*	*	*
output signal	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	*	*
output signal	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output signal	npn, nc	npn, nc	npn, nc	npn, nc

* on request



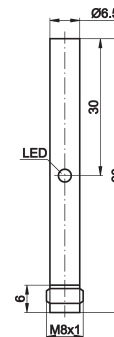
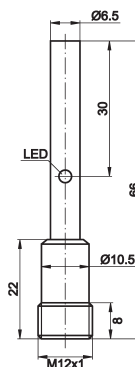
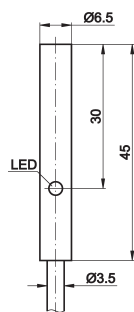
TECHNICAL DATA

sensing range (Sn)	1mm	1mm	1mm	1mm
output signal	see above	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	100mA	100mA	100mA	100mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
norm target	3x3x1mm, FE360	3x3x1mm, FE360	4x4x1mm, FE360	4x4x1mm, FE360
hysteresis (of Sr) typical	< 10%	< 10%	< 10%	< 10%
repeat accuracy (of Sr)	0.02mm	0.02mm	0.02mm	0.02mm
correction factors (steel / st. steel)	1.0 / 0.8	1.0 / 0.8	1.0 / 0.8	1.0 / 0.8
correction factors (Al / Cu / brass)	0.5 / 0.45 / 0.6	0.5 / 0.45 / 0.6	0.5 / 0.45 / 0.6	0.5 / 0.45 / 0.6
sampling frequency	3kHz	3kHz	3kHz	3kHz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	Ø3mm	Ø3mm	M4x0.5	M4x0.5
housing material	stainless steel	stainless steel	stainless steel	stainless steel
length (thread/complete)	- / 22mm	- / 22mm	16mm / 22mm	16mm / 22mm
temperature range	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	2m PUR cable	M8-cable connector 3-pin	2m PUR cable	M8-cable connector 3-pin
connection accessories	-	e.g. VK200075 , 2m	-	e.g. VK200075 , 2m
mounting accessories (see page 15)	-	-	quick clip AY000044	quick clip AY000044

sensing range	1.5mm	1.5mm	1.5mm	1.5mm
version	Ø4mm	Ø4mm	M5x0.5	M5x0.5
mounting	flush	flush	flush	flush
connection	2m PVC cable	M8-connector	2m PVC cable	M8-connector
article-no.	IBR40106	IBR40176	IB050106	IB050176
output signal	pnp, no	pnp, no	pnp, no	pnp, no
article-no.	IBR40206	*	IB050206	IB050276
output signal	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	*	*
output signal	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output signal	npn, nc	npn, nc	npn, nc	npn, nc
* on request				
TECHNICAL DATA				
sensing range (S _n)	1.5mm	1.5mm	1.5mm	1.5mm
output signal	see above	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
norm target	4.5x4.5x1mm, FE360	4.5x4.5x1mm, FE360	5x5x1mm, FE360	5x5x1mm, FE360
hysteresis (of S _r) typical	< 10%	< 10%	< 10%	< 10%
repeat accuracy (of S _r)	0.03mm	0.03mm	0.03mm	0.03mm
correction factors (steel / st. steel)	1.0 / 0.75	1.0 / 0.75	1.0 / 0.75	1.0 / 0.75
correction factors (Al / Cu / brass)	0.4 / 0.4 / 0.5	0.4 / 0.4 / 0.5	0.4 / 0.4 / 0.5	0.4 / 0.4 / 0.5
sampling frequency	3kHz	3kHz	3kHz	3kHz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	Ø4mm	Ø4mm	M5x0.5	M5x0.5
housing material	1.4305	1.4305	1.4305	1.4305
length (thread/complete)	- / 25mm	- / 38mm	20mm / 25mm	23mm / 38mm
temperature range	-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	M8-connector, 3-pin	2m PVC cable	M8-connector, 3-pin
connection accessories	-	e.g. VK200071 , 2m	-	e.g. VK200071 , 2m
mounting accessories (see page 15)	quick clip AY000044	quick clip AY000044	quick clip AY000045	quick clip AY000045

sensing range	3mm	3mm	3mm
version	Ø6.5mm	Ø6.5mm	Ø6.5mm
mounting	semi-flush	semi-flush	semi-flush
connection	2m PVC cable	M12-connector	M8-connector
article-no.	IB060106	IB060126	IB060176
output signal	pnp, no	pnp, no	pnp, no
article-no.	*	*	IB060276
output signal	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	*
output signal	npn, no	npn, no	npn, no
article-no.	*	*	*
output signal	npn, nc	npn, nc	npn, nc

* on request



TECHNICAL DATA

sensing range (Sn)	3mm	3mm	3mm
output signal	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
norm target	9x9x1mm, FE360	9x9x1mm, FE360	9x9x1mm, FE360
hysteresis (of Sr) typical	< 10%	< 10%	< 10%
repeat accuracy (of Sr)	0.15mm	0.15mm	0.15mm
correction factors (steel / st. steel)	1.0 / 0.67	1.0 / 0.67	1.0 / 0.67
correction factors (Al / Cu / brass)	0.26 / 0.18 / 0.35	0.26 / 0.18 / 0.35	0.26 / 0.18 / 0.35
sampling frequency	1kHz	1kHz	1kHz
status display	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
design	Ø6.5mm	Ø6.5mm	Ø6.5mm
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass
length (thread/complete)	- / 45mm	- / 66mm	- / 60mm
temperature range	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67
connection	2m PVC cable	M12-connector, 3-pin	M8-connector, 3-pin
connection accessories	-	e.g. VK200021 , 2m	e.g. VK200071 , 2m
mounting accessories (see p. 15)	quick clip AY000046	quick clip AY000046	quick clip AY000046

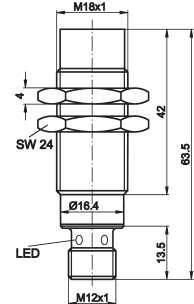
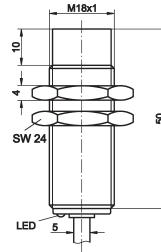
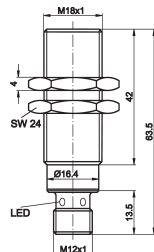
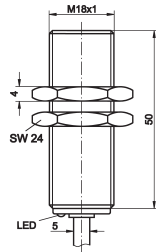
sensing range	3mm	3mm	3mm
version	M8x1	M8x1	M8x1
mounting	semi-flush	semi-flush	semi-flush
connection	2m PVC cable	M12-connector	M8-connector
article-no.	IB080106	IB080126	IB080176
output signal	pnp, no	pnp, no	pnp, no
article-no.	IB080206	IB080226	IB080276
output signal	pnp, nc	pnp, nc	pnp, nc
article-no.	IB081106	*	IB081176
output signal	npn, no	npn, no	npn, no
article-no.	*	*	*
output signal	npn, nc	npn, nc	npn, nc
* on request			
TECHNICAL DATA			
sensing range (Sn)	3mm	3mm	3mm
output signal	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
norm target	9x9x1mm, FE360	9x9x1mm, FE360	9x9x1mm, FE360
hysteresis (of Sr) typical	< 10%	< 10%	< 10%
repeat accuracy (of Sr)	0.15mm	0.15mm	0.15mm
correction factors (steel / st. steel)	1.0 / 0.77	1.0 / 0.77	1.0 / 0.77
correction factors (Al / Cu / brass)	0.36 / 0.27 / 0.45	0.36 / 0.27 / 0.45	0.36 / 0.27 / 0.45
sampling frequency	1kHz	1kHz	1kHz
status display	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
design	M8x1	M8x1	M8x1
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass
length (thread/complete)	45mm / 45mm	44mm / 66mm	47.5mm / 60mm
temperature range	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67
connection	2m PVC cable	M12-connector, 3-pin	M8-connector, 3-pin
connection accessories	-	e.g. VK200021 , 2m	e.g. VK200071 , 2m
mounting accessories (see page 15)	quick clip AY000047 universal mounting AY000089	quick clip AY000047 universal mounting AY000089	quick clip AY000047 universal mounting AY000089

sensing range	6mm	6mm	6mm
version	M8x1	M8x1	M8x1
mounting	non-flush	non-flush	non-flush
connection	2m PVC cable	M12-connector	M8-connector
article-no.	IN080106	IN080126	IN080176
output signal	pnp, no	pnp, no	pnp, no
article-no.	IN080206	IN080226	IN080276
output signal	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	IN081176
output signal	npn, no	npn, no	npn, no
article-no.	*	*	*
output signal	npn, nc	npn, nc	npn, nc
* on request			
TECHNICAL DATA			
sensing range (Sn)	6mm	6mm	6mm
output signal	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
norm target	18x18x1mm, FE360	18x18x1mm, FE360	18x18x1mm, FE360
hysteresis (of Sr) typical	< 10%	< 10%	< 10%
repeat accuracy (of Sr)	0.3mm	0.3mm	0.3mm
correction factors (steel / st. steel)	1.0 / 0.75	1.0 / 0.75	1.0 / 0.75
correction factors (Al / Cu / brass)	0.49 / 0.44 / 0.55	0.49 / 0.44 / 0.55	0.49 / 0.44 / 0.55
sampling frequency	500Hz	500Hz	500Hz
status display	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
design	M8x1	M8x1	M8x1
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass
length (thread/complete)	41mm / 45mm	40mm / 66mm	43.5mm / 60mm
temperature range	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
system of protection (EN 60529)	IP67	IP67	IP67
connection	2m PVC cable	M12-connector, 3-pin	M8-connector, 3-pin
connection accessories	-	e.g. VK200021 , 2m	e.g. VK200071 , 2m
mounting accessories (see page 15)	quick clip AY000047 universal mounting AY000089	quick clip AY000047 universal mounting AY000089	quick clip AY000047 universal mounting AY000089

sensing range	6mm	6mm	10mm	10mm
version	M12x1	M12x1	M12x1	M12x1
mounting	semi-flush	semi-flush	non-flush	non-flush
connection	2m PVC cable	M12-connector	2m PVC cable	M12-connector
article-no.	IB120106	IB120126	IN120106	IN120126
output signal	pnp, no	pnp, no	pnp, no	pnp, no
article-no.	*	IB120226	IN120206	IN120226
output signal	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	*	IB121126	*	IN121126
output signal	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output signal	npn, nc	npn, nc	npn, nc	npn, nc
* on request				
TECHNICAL DATA				
sensing range (Sn)	6mm	6mm	10mm	10mm
output signal	see above	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
norm target	18x18x1mm, FE360	18x18x1mm, FE360	30x30x1mm, FE360	30x30x1mm, FE360
hysteresis (of Sr) typical	< 10%	< 10%	< 10%	< 10%
repeat accuracy (of Sr)	0.3mm	0.3mm	0.3mm	0.3mm
correction factors (steel / st. steel)	1.0 / 0.47	1.0 / 0.47	1.0 / 0.74	1.0 / 0.74
correction factors (Al / Cu / brass)	0.28 / 0.2 / 0.35	0.28 / 0.2 / 0.35	0.46 / 0.41 / 0.52	0.46 / 0.41 / 0.52
sampling frequency	800Hz	800Hz	400Hz	400Hz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	M12x1	M12x1	M12x1	M12x1
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass	chrome-plated brass
length (thread/complete)	50mm / 50mm	40mm / 60mm	50mm / 50mm	34mm / 60mm
temperature range	-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	M12-connector, 3-pin	2m PUR cable	M12-connector, 3-pin
connection accessories	-	e.g. VK200021 , 2m	-	e.g. VK200021 , 2m
mounting accessories (see page 15)	quick clip AY000049 universal mounting AY000090	quick clip AY000049 universal mounting AY000090	quick clip AY000049 universal mounting AY000090	quick clip AY000049 universal mounting AY000090

sensing range	12mm	12mm	20mm	20mm
version	M18x1	M18x1	M18x1	M18x1
mounting	semi-flush	semi-flush	non-flush	non-flush
connection	2m PVC cable	M12-connector	2m PVC cable	M12-connector
article-no.	IB180106	IB180126	IN180106	IN180126
output signal	pnp, no	pnp, no	pnp, no	pnp, no
article-no.	IB180206	IB180226	IN180206	IN180226
output signal	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	*	IB181126	IN181106	IN181126
output signal	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output signal	npn, nc	npn, nc	npn, nc	npn, nc

* on request



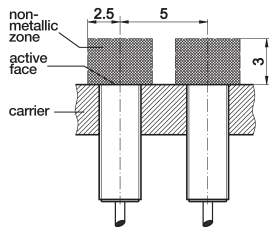
TECHNICAL DATA

sensing range (Sn)	12mm	12mm	20mm	20mm
output signal	see above	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
norm target	36x36x1mm, FE360	36x36x1mm, FE360	60x60x1mm, FE360	60x60x1mm, FE360
hysteresis (of Sr) typical	< 10%	< 10%	< 10%	< 10%
repeat accuracy (of Sr)	0.6mm	0.6mm	1mm	1mm
correction factors (steel / st. steel)	1.0 / 0.63	1.0 / 0.63	1.0 / 0.66	1.0 / 0.66
correction factors (Al / Cu / brass)	0.26 / 0.2 / 0.33	0.26 / 0.2 / 0.33	0.4 / 0.35 / 0.45	0.4 / 0.35 / 0.45
sampling frequency	500Hz	500Hz	200Hz	200Hz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	M18x1	M18x1	M18x1	M18x1
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass	chrome-plated brass
length (thread/complete)	50mm / 50mm	42mm / 63.5mm	40mm / 50mm	32mm / 63.5
temperature range	-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	M12-connector, 3-pin	2m PVC cable	M12-connector, 3-pin
connection accessories	-	e.g. VK200021 , 2m	-	e.g. VK200021 , 2m
mounting accessories (see page 15)	quick clip AY000051 universal mounting AY000091	quick clip AY000051 universal mounting AY000091	quick clip AY000051 universal mounting AY000091	quick clip AY000051 universal mounting AY000091

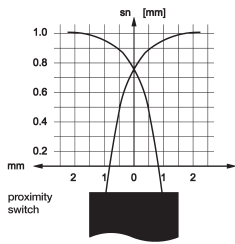
sensing range	22mm	22mm	40mm	40mm
version	M30x1.5	M30x1.5	M30x1.5	M30x1.5
mounting	semi-flush	semi-flush	non-flush	non-flush
connection	2m PVC cable	M12-connector	2m PVC cable	M12-connector
article-no.	IB300106	IB300126	IN300106	IN300126
output signal	pnp, no	pnp, no	pnp, no	pnp, no
article-no.	*	IB300226	*	IN300226
output signal	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	IB301106	IB301126	*	IN301126
output signal	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output signal	npn, nc	npn, nc	npn, nc	npn, nc
* on request				
TECHNICAL DATA				
sensing range (S _n)	22mm	22mm	40mm	40mm
output signal	see above	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	100mA	100mA	100mA	100mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
norm target	66x66x1mm, FE360	66x66x1mm, FE360	120x120x1mm, FE360	120x120x1mm, FE360
hysteresis (of S _r) typical	< 10%	< 10%	< 10%	< 10%
repeat accuracy (of S _r)	1.1mm	1.1mm	2mm	2mm
correction factors (steel / st. steel)	1.0 / 0.66	1.0 / 0.66	1.0 / 0.78	1.0 / 0.78
correction factors (Al / Cu / brass)	0.4 / 0.35 / 0.45	0.4 / 0.35 / 0.45	0.42 / 0.37 / 0.47	0.42 / 0.37 / 0.47
sampling frequency	200Hz	200Hz	100Hz	100Hz
status display	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	M30x1.5	M30x1.5	M30x1.5	M30x1.5
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass	chrome-plated brass
length (thread/complete)	60mm / 60mm	52mm / 73.5mm	50mm / 60mm	42mm / 73.5mm
temperature range	-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	M12-connector, 3-pin	2m PVC cable	M12-connector, 3-pin
connection accessories	-	e.g. VK200021 , 2m	-	e.g. VK200021 , 2m
mounting accessories (see page 15)	quick clip AY000061	quick clip AY000061	quick clip AY000061	quick clip AY000061

IBR301X6, IB0401X0

flush mounting

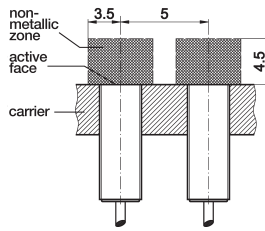


response curve

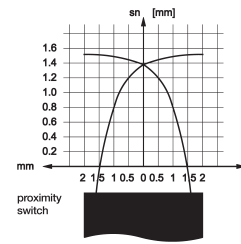


IBR401X6

flush mounting



response curve

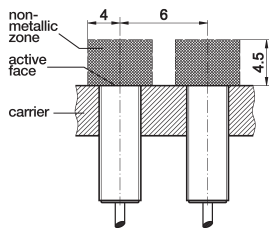


correction factors

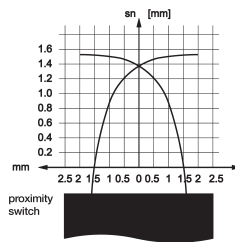
steel (1.0037)	1.0	steel (1.0037)	1.0
stainless steel	0.8	stainless steel	0.75
aluminium	0.5	aluminium	0.4
copper	0.45	copper	0.4
brass	0.6	brass	0.5

IB0501X6

flush mounting

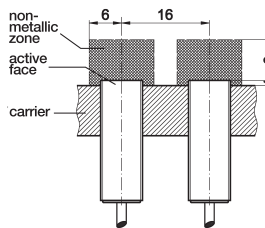


response curve

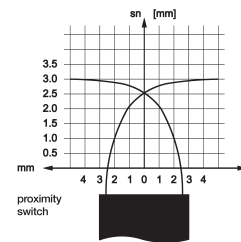


IB0601X6

flush mounting



response curve

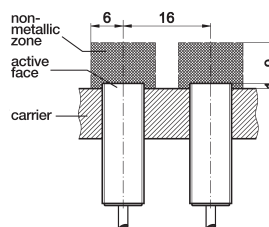


correction factors

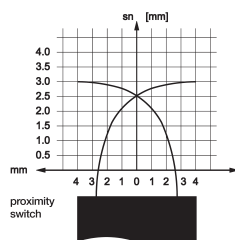
steel (1.0037)	1.0	steel (1.0037)	1.0
stainless steel	0.75	stainless steel	0.67
aluminium	0.4	aluminium	0.26
copper	0.4	copper	0.18
brass	0.5	brass	0.35

IB0801X6

flush mounting

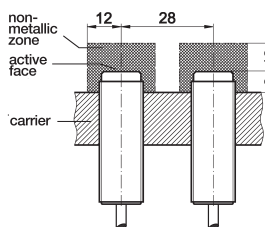


response curve

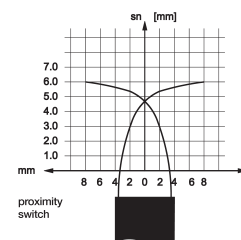


IN0801X6

non-flush mounting



response curve

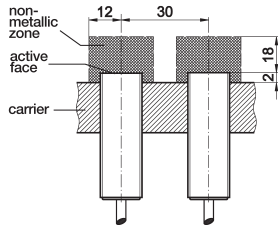


correction factors

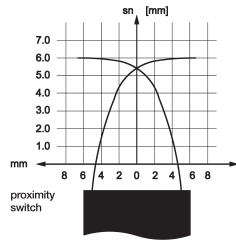
steel (1.0037)	1.0	steel (1.0037)	1.0
stainless steel	0.77	stainless steel	0.75
aluminium	0.36	aluminium	0.49
copper	0.27	copper	0.44
brass	0.45	brass	0.55

IB1201X6

semi-flush mounting

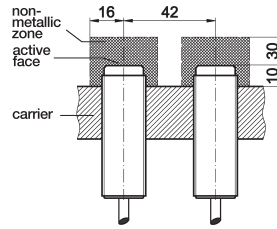


response curve

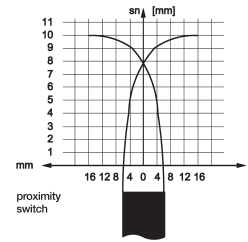


IN1201X6

non-flush mounting



response curve

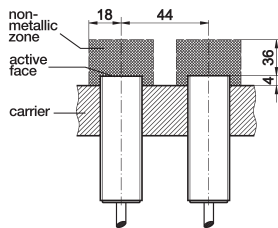


correction factors

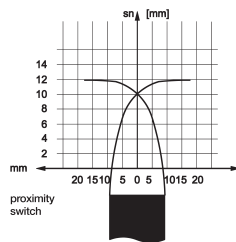
steel (1.0037)	1.0	steel (1.0037)	1.0
stainless steel	0.70	stainless steel	0.74
aluminium	0.30	aluminium	0.46
copper	0.25	copper	0.41
brass	0.40	brass	0.52

IB1801X6

semi-flush mounting

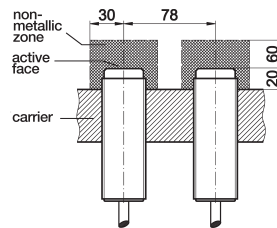


response curve

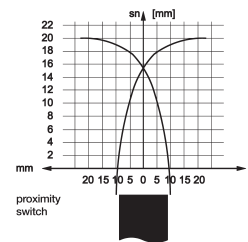


IN1801X6

non-flush mounting



response curve

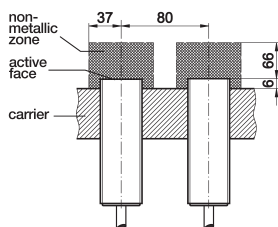


correction factors

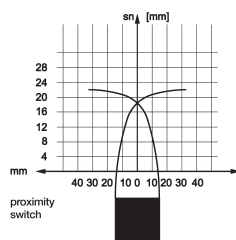
steel (1.0037)	1.0	steel (1.0037)	1.0
stainless steel	0.63	stainless steel	0.66
aluminium	0.26	aluminium	0.4
copper	0.2	copper	0.35
brass	0.33	brass	0.45

IB3001X6

semi-flush mounting

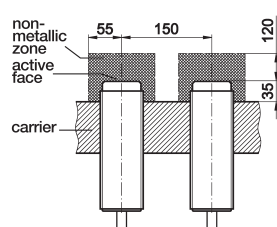


response curve

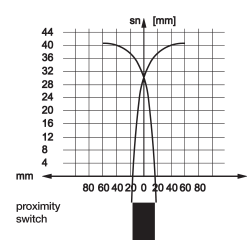


IN3001X6

non-flush mounting



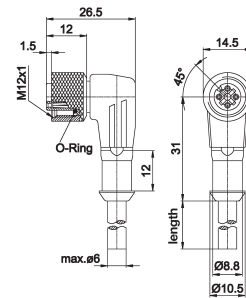
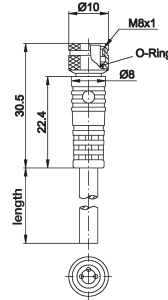
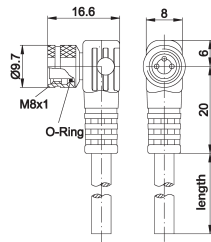
response curve



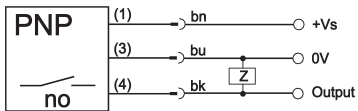
correction factors

steel (1.0037)	1.0	steel (1.0037)	1.0
stainless steel	0.66	stainless steel	0.78
aluminium	0.40	aluminium	0.42
copper	0.35	copper	0.37
brass	0.45	brass	0.47

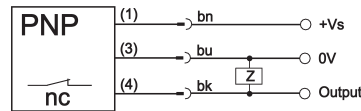
cable socket:	M8, angular	M8, straight	M12, angular
number of pins (assigned):	3-pin	3-pin	4-pin
article-no.	VK200071	VK200075	VK200321
length	2m	2m	2m
article-no.	VK500071	VK500075	VK500321
length	5m	5m	5m
article-no.	VKA00071	VKA00075	VKA00321
length	10m	10m	10m



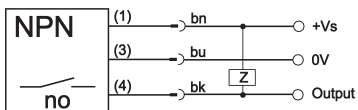
switching output pnp, no



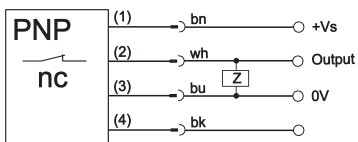
pnp, nc



switching output npn, no



The switching output of devices with M12-connector and break-contact function (nc) is connected with PIN2. Therefore a 4-wire cable socket (e.g. **VK200321**) must be used. The connection takes place by the white wire.



wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk = black (4)

We will be pleased to supply the matching mounting accessory for your devices. Please refer to the list in catalog chapter "accessories" under "fixing material" or "quick clips".

ARTICLE-NO.	DESCRIPTION	MATERIAL
AY000088	base module *	flanges: stainless steel, ball pin: steel zinced
AY000089	fastening-parts kit for sensors M8x1	stainless steel
AY000090	fastening-parts kit for sensors M12x1	stainless steel
AY000091	fastening-parts kit for sensors M18x1	stainless steel

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

ARTICLE-NO.	DESCRIPTION	SENSOR-DIAMETER	MATERIAL
			ARTICLE / SCREWS
AY000044	quick clip	4mm	PA6 / galvanized steel
AY000045	quick clip	5mm	PA6 / galvanized steel
AY000046	quick clip	6.5mm	PA6 / galvanized steel
AY000047	quick clip	8mm	PA6 / galvanized steel
AY000048	quick clip with permanent stop	8mm	PA6 / galvanized steel
AY000049	quick clip	12mm	PA6 / galvanized steel
AY000050	quick clip with permanent stop	12mm	PA6 / galvanized steel
AY000051	quick clip	18mm	PA6 / galvanized steel
AY000052	quick clip with permanent stop	18mm	PA6 / galvanized steel
AY000061	quick clip	30mm	PA6 / galvanized steel
AY000062	quick clip with permanent stop	30mm	PA6 / galvanized steel
AY000053	straight base for quick clip	12mm, 18mm	PA6 / galvanized steel
AY000054	angular base for quick clip	12mm, 18mm	PA6 / galvanized steel
AY000055	quick clip identification labels	12 ... 30mm	plastic / -
AY000057	box set with selection of quick clips	4 ... 18mm	plastic / -

The list of articles contains the standard versions only. Kindly request the availability of other output- and connection functions.

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.

1200 increased sensing ranges

notes

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