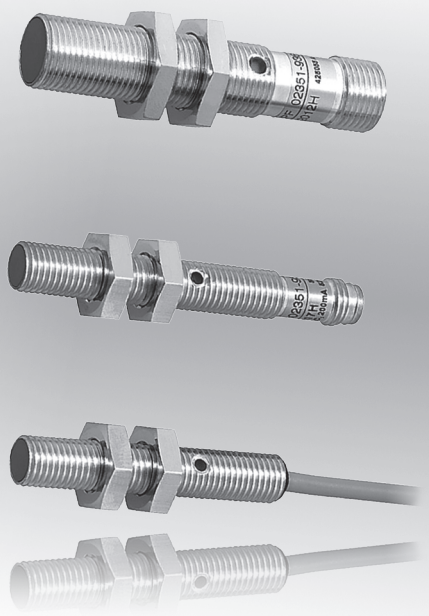
dimensions	**Ø 4mm** **M5 x 0.5** **M8 x 1** **M12 x 1**	
flush	switching distance	**2.5mm**
semi-flush	switching distance	**4 to 8mm**



- ✓ **increased switching distances**
- ✓ **stainless steel housing or chrome-plated brass**
- ✓ **integrated amplifier**
- ✓ **LED display for easy adjustment**
- ✓ **connection via cable, M8- or M12-connector**

super plus, up to 4-fold norm switching distance

description

ipf electronic's super plus series inductive proximity switches are characterized by very long switching distances. 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 in terms of temperature is achieved. This enables the switching point to be rescheduled so that way longer switching distances are achieved.

Super Plus series devices are preferably put to use in applications where a long switching distance 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 switching distance of standard sensors do not guarantee reliable operation, e.g. when detecting sheet metal parts with large mechanical tolerances.

The range of applications in which these inductive sensors can be used extends, for example, from machine/systems engineering, automotive industry, conveyor technology and packaging industry, technology for the printing/paper industries, chemical engineering and process engineering (as well as many others).

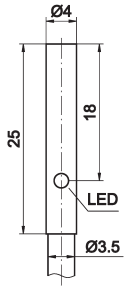
For attaining the maximum switching distance, attention should be paid concerning the size of the object (standard target) and the kind of surface (level surface). For reliable operation of the devices, it is essential that the installation conditions on this data sheet are adhered to.

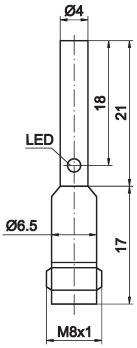
application examples

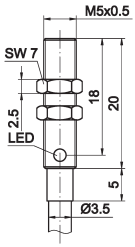
- integration in automation technology machine parts
- checking the presence of metal parts with various dimensions
- detecting object heights, e.g. metal parts on conveyor belts
- detection of objects through the walls of non-metallic containers and tubes

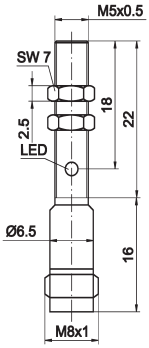
article-no.	IBR4010H	IBR4017H	IB05010H	IB05017H
switching distance (Sn)	2.5mm	2.5mm	2.5mm	2.5mm
output signal	pnp, no	pnp, no	pnp, no	pnp, no
mounting	flush	flush	flush	flush
connection	cable	M8-connector	cable	M8-connector
article-no.	*	*	*	*
output signal	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	*	*
output signal	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output signal	npn, nc	npn, nc	npn, nc	npn, nc

* on request





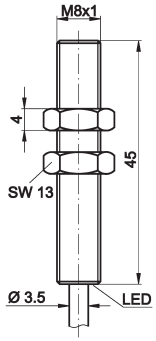


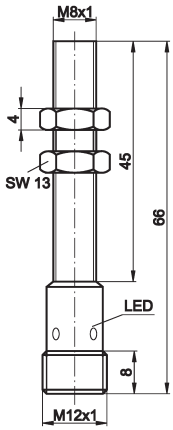


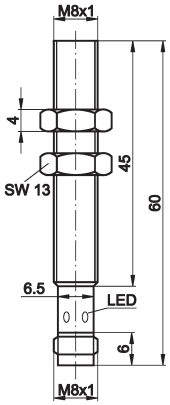
TECHNICAL DATA				
switching distance (Sn)	2.5mm	2.5mm	2.5mm	2.5mm
output signal	see above	see above	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
norm measuring plate	7.5x7.5x1mm	7.5x7.5x1mm	7.5x7.5x1mm	7.5x7.5x1mm
hysteresis	< 8%	< 8%	< 8%	< 8%
repeat accuracy	0.03mm	0.03mm	0.03mm	0.03mm
readiness delay	30ms	30ms	30ms	30ms
correction factor (St/Al/Ms)	1.0/0.28/0.36	1.0/0.28/0.36	1.0/0.33/0.42	1.0/0.33/0.42
correction factor (stainl. steel/Cu)	0.6/0.25	0.6/0.25	0.67/0.3	0.67/0.3
switching frequency	800Hz	800Hz	800Hz	800Hz
display (switching state)	yellow LED	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
dimensions	Ø 4mm	Ø 4mm	M5x0.5	M5x0.5
length (thread/complete)	-/25mm	-/38mm	20mm/25mm	22mm/38mm
housing material	stainless steel	stainless steel	stainless steel	
material (front cap)	Noryl	Noryl	Noryl	Noryl
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
degree of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	2m PVC-cable, 3-wire	M8-connector, 3-pin	2m PVC-cable, 3-wire	M8-connector, 3-pin
connection accessories	-	e.g. **VK200075**	-	e.g. **VK200075**
mounting accessories (clip)	**AY000044**	**AY000044**	**AY000045**	**AY000045**
mounting accessories (universal holder)	-	-	**AY000115**	**AY000115**

article-no.	**IB08010H**	**IB08012H**	**IB08017H**
switching distance (Sn)	**4mm**	**4mm**	**4mm**
output signal	**pnp, no**	**pnp, no**	**pnp, no**
mounting	**flush**	**flush**	**flush**
connection	**cable**	**M12-connector**	**M8-connector**
article-no.	*	*	*
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**





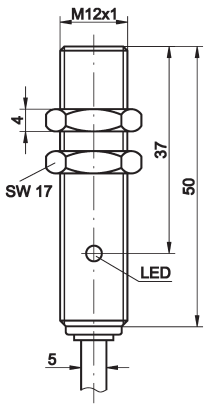


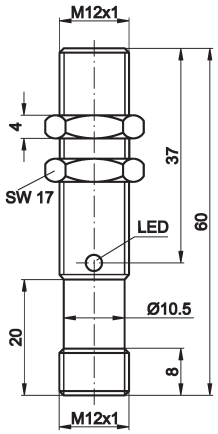
TECHNICAL DATA

switching distance (Sn)	4mm	4mm	4mm
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 measuring plate	16x16x1mm	16x16x1mm	16x16x1mm
hysteresis	< 10%	< 10%	< 10%
repeat accuracy	0.2mm	0.2mm	0.2mm
readiness delay	50ms	50ms	50ms
correction factor (St/Al/Ms)	1.0/0.25/0.35	1.0/0.25/0.35	1.0/0.25/0.35
correction factor (stainl. steel/Cu)	0.65/0.22	0.65/0.22	0.65/0.22
switching frequency	500Hz	500Hz	500Hz
display (switching state)	yellow LED	yellow LED	yellow LED
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	M8x1	M8x1	M8x1
length (thread/complete)	45mm/45mm	44mm/66mm	45mm/60mm
housing material	chrome-plated brass	chrome-plated brass	chrome-plated brass
material (front cap)	PBTP	PBTP	PBTP
operating temperature	-25 ... +70°C	-25 ... +70°C	-25 ... +70°C
degree of protection (EN 60529)	IP67	IP67	IP67
connection	2m PVC-cable, 3-wire	M12-connector, 3-pin	M8-connector, 3-pin
connection accessories	-	e.g. **VK200025**	e.g. **VK200075**
mounting accessories (clip)	**AY000047**	**AY000047**	**AY000047**
mounting accessories (universal holder)	**AY000115**	**AY000115**	**AY000115**

article-no.	**IB12010H**	**IB12012H**
switching distance (Sn)	**8mm**	**8mm**
output signal	**pnp, no**	**pnp, no**
mounting	**semi-flush**	**semi-flush**
connection	**cable**	**M12-connector**
article-no.	*	*
output signal	**pnp, nc**	**pnp, nc**
article-no.	*	*
output signal	**npn, no**	**npn, no**
article-no.	*	*
output signal	**npn, nc**	**npn, nc**

*** on request**



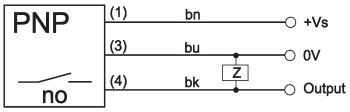


TECHNICAL DATA

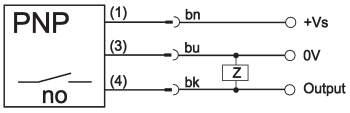
switching distance (Sn)	8mm	8mm
output signal	see above	see above
operating voltage	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 10mA	≤ 10mA
output current (max. load)	200mA	200mA
voltage drop (max. load)	2.0V DC	2.0V DC
norm measuring plate	32x32x1mm	32x32x1mm
hysteresis	< 10%	< 10%
repeat accuracy	0.4mm	0.4mm
readiness delay	50ms	50ms
correction factor (St/Al/Ms)	1.0/0.27/0.36	1.0/0.27/0.36
correction factor (stainl. steel/Cu)	0.67/0.23	0.67/0.23
switching frequency	400Hz	400Hz
display (signal)	yellow LED	yellow LED
short-circuit protection	+	+
reverse polarity protection	+	+
dimensions	M12x1	M12x1
length (thread/complete)	50mm/50mm	40mm/60mm
housing material	chrome-plated brass	chrome-plated brass
material (front cap)	PBTP	PBTP
operating temperature	-25 ... +70°C	-25 ... +70°C
degree of protection (EN 60529)	IP67	IP67
connection	2m PVC-cable, 3-wire	M12-connector, 3-pin
connection accessories	-	e.g. **VK200025**
mounting accessories (clip)	**AY000049**	**AY000049**
mounting accessories (universal holder)	**AY000115**	**AY000115**

connection

cable device



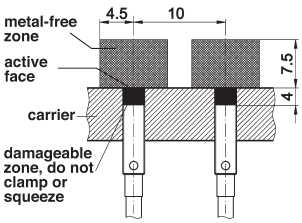
connector device



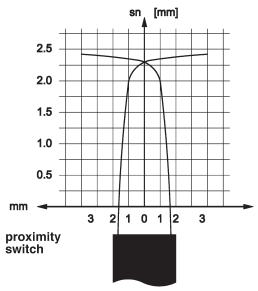
wire colors: bn = brown (1), bu = blue (3), bk = black (4)

IBR401XH

flush mounting



response curve

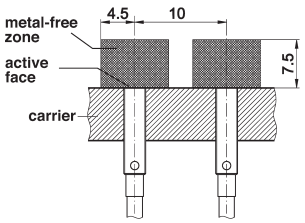


correction factors

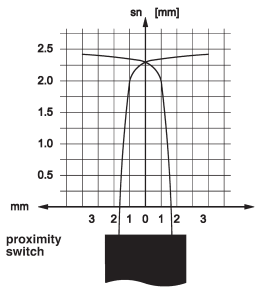
steel (St37)	1.0
stainless steel	0.60
aluminum	0.28
copper	0.25
brass	0.36

IB0501XH

flush mounting



response curve

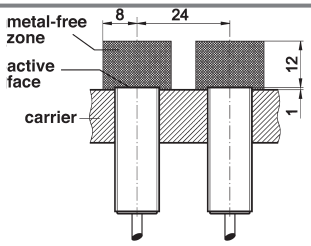


correction factors

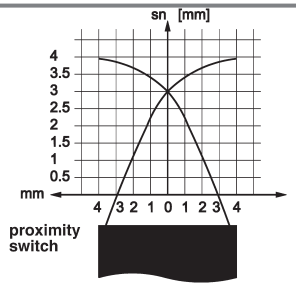
steel (St37)	1.0
stainless steel	0.67
aluminum	0.33
copper	0.30
brass	0.42

IB0801XH

flush mounting

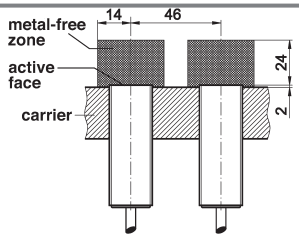


response curve

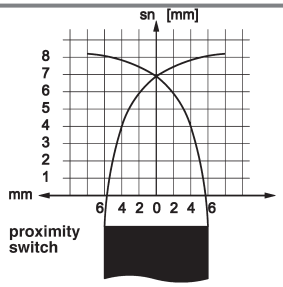


IB1201XH

semi-flush mounting



response curve



correction factors

steel (St37)	1.0
stainless steel	0.65
aluminum	0.25
copper	0.22
brass	0.35

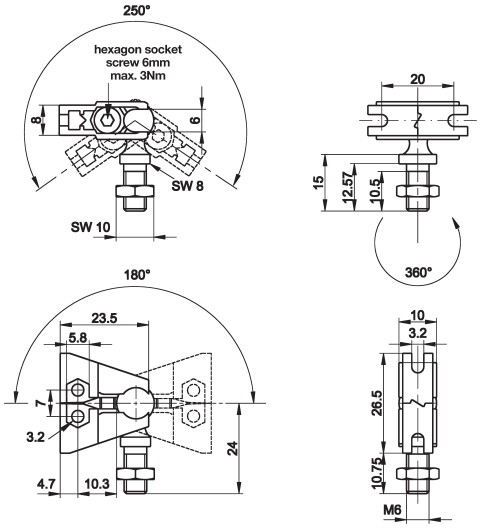
steel (St37)	1.0
stainless steel	0.67
aluminum	0.27
copper	0.23
brass	0.36

This data sheet contains the standard versions only. Kindly request the availability of other output- and connection functions.

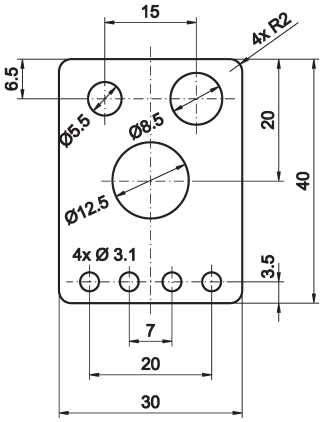
We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter „accessories“ under „cable sockets ipf-*SENSORFLEX®*“ or search our website for „VK“.

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

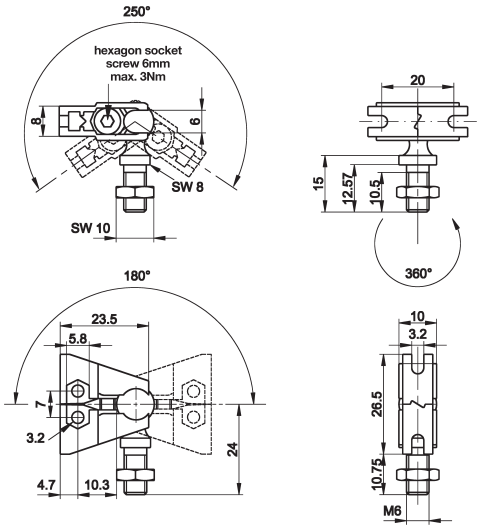
universal mounting AY000115
consisting of **base module ...**



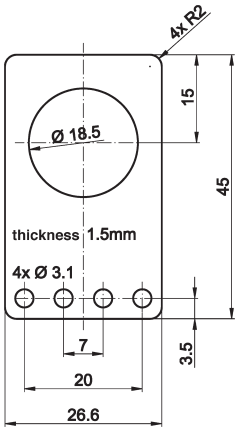
... and **fitting panel**



universal mounting AY000117
consisting of **base module ...**



... and **fitting panel**



ACCESSORIES

article-no.	description	material
AY000088	base module *	flanges: stainless steel, ball pins: galvanized steel
AY000115	mounting kit for M5, M8, M12 sensors	stainless steel
AY000117	mounting kit for M18 sensors	stainless steel

* The **AY000088** base module is contained in every mounting kit.
Material of bolts and nuts: galvanized steel