

dimensions	<b>Ø 6.5mm</b>	
	<b>M8x1</b>	
	<b>M12x1</b>	
	<b>M18x1</b>	
	<b>M30x1.5</b>	
flush	switching distance	<b>1.5 to 10mm</b>
non-flush	switching distance	<b>3.0 to 15mm</b>

- ✓ **robust metal housing**
- ✓ **integrated amplifier**
- ✓ **LED display**
- ✓ **connection with M8- and M12-connector**



**temperature range from -40 to +100°C**



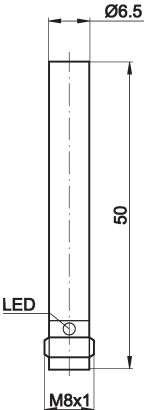
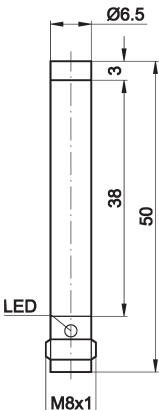
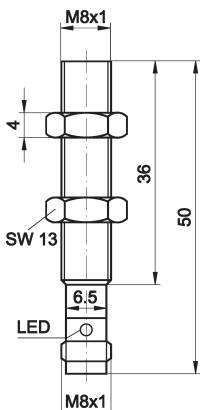
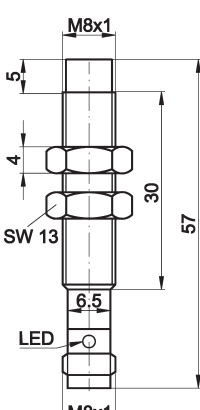
**description**

Inductive sensors with enlarged temperature range are available in Ø 6.5, M8, M12, M18 and M30 designs. The maximum ambient temperature must not exceed +100°C. The electronics of these sensors are housed in a sturdy metal housing. As a consequence of the compound, the electronics are perfectly protected from vibrations. The devices are provided with an M8 or M12 plug connection. The connection is made via cable sockets, which are also suitable for elevated temperatures. The sensors work through the contactless detection of objects, without wear and tear. Detection of the objects is signaled by a yellow LED.

To obtain the maximum switching distance, pay attention to the size of the object (standard target) and its surface finish (even surface).

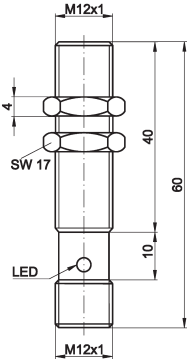
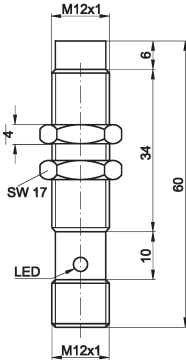
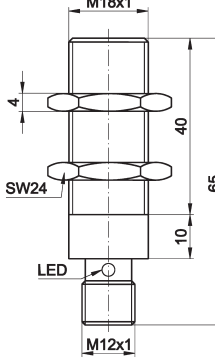
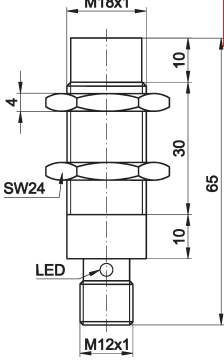
**application examples**

- ▶ integration in machine parts subject to rough industrial environments
- ▶ robotics applications
- ▶ detection of hot workpieces in the steel industry, in foundries and glass manufacture
- ▶ positioning hot parts in handling and conveying systems

article-no.	IA06017W	IM06017W	IA08017W	IM08017W
switching distance	1.5mm	3.0mm	1.5mm	3.0mm
mounting	flush	non-flush	flush	non-flush
				

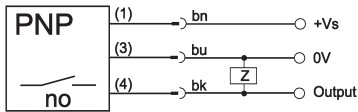
## TECHNICAL DATA

switching distance (Sn)	1.5mm	3.0mm	1.5mm	3.0mm
mounting	flush	non-flush	flush	non-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)	≤ 13mA	≤ 13mA	≤ 13mA	≤ 13mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.4V DC	2.4V DC	2.4V DC	2.4V DC
hysteresis	< 15%	< 15%	< 15%	< 15%
repeat accuracy	< 10%	< 10%	< 10%	< 10%
readiness delay	≤ 300ms	≤ 300ms	≤ 300ms	≤ 300ms
switching frequency	2kHz	1kHz	2kHz	1kHz
display (signal)	+	+	+	+
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
dimensions	∅ 6.5mm	∅ 6.5mm	M8x1	M8x1
length (thread/complete)	-/50mm	-/50mm	36mm/50mm	30mm/57mm
housing material	nickel-plated brass	nickel-plated brass	nickel-plated brass	nickel-plated brass
material (front cap)	Pocan	Pocan	Pocan	Pocan
operating temperature	-40 ... +100°C	-40 ... +100°C	-40 ... +100°C	-40 ... +100°C
degree of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	M8-connector	M8-connector	M8-connector	M8-connector
connection accessories	e.g. <b>VK20H075</b>	e.g. <b>VK20H075</b>	e.g. <b>VK20H075</b>	e.g. <b>VK20H075</b>
mounting accessories (universal holder)	-	-	e.g. <b>AY000115</b>	e.g. <b>AY000115</b>
mounting accessories (bracket)	-	-	e.g. <b>AY000098</b>	e.g. <b>AY000098</b>
mounting accessories (clip)	e.g. <b>AY000019</b>	e.g. <b>AY000019</b>	-	-

article-no.	IA12012W	IM12012W	IA18012W	IM18012W
switching distance	2.0mm	4.0mm	5.0mm	8.0mm
mounting	flush	non-flush	flush	non-flush
				
<b>TECHNICAL DATA</b>				
switching distance (S <sub>n</sub> )	2.0mm	4.0mm	5.0mm	8.0mm
mounting	flush	non-flush	flush	non-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)	≤ 13mA	≤ 13mA	≤ 13mA	≤ 13mA
output current (max. load)	200mA	200mA	200mA	200mA
voltage drop (max. load)	2.4V DC	2.4V DC	2.4V DC	2.4V DC
hysteresis	< 15%	< 15%	< 15%	< 15%
repeat accuracy	< 10%	< 10%	< 5%	< 5%
readiness delay	≤ 300ms	≤ 300ms	≤ 300ms	≤ 300ms
switching frequency	2kHz	1kHz	1kHz	500Hz
display (signal)	+	+	+	+
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
dimensions	M12x1	M12x1	M18x1	M18x1
length (thread/complete)	40mm/60mm	34mm/60mm	40mm/65mm	30mm/65mm
housing material	nickel-plated brass	nickel-plated brass	nickel-plated brass	nickel-plated brass
material (front cap)	PCB	PCB	PCB	PCB
operating temperature	-40 ... +100°C	-40 ... +100°C	-40 ... +100°C	-40 ... +100°C
degree of protection (EN 60529)	IP67	IP67	IP67	IP67
connection	M12-connector	M12-connector	M12-connector	M12-connector
connection accessories	e.g. VK20H026	e.g. VK20H026	e.g. VK20H026	e.g. VK20H026
mounting accessories (universal holder)	e.g. AY000115	e.g. AY000115	e.g. AY000117	e.g. AY000117
mounting accessories (bracket)	e.g. AY000099	e.g. AY000099	e.g. AY000100	e.g. AY000100

article-no.	IA30012W	IM30012W
switching distance	10.0mm	15.0mm
mounting	flush	non-flush
<b>TECHNICAL DATA</b>		
switching distance (Sn)	10.0mm	15.0mm
mounting	flush	non-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
hysteresis	< 15%	< 15%
repeat accuracy	< 10%	< 10%
readiness delay	≤ 300ms	≤ 300ms
switching frequency	500Hz	300Hz
display (signal)	+	+
short-circuit protection	+	+
reverse polarity protection	+	+
dimensions	M30x1.5	M30x1.5
length (thread/complete)	50mm/75mm	34mm/74mm
housing material	nickel-plated brass	nickel-plated brass
material (front cap)	PCB	PCB
operating temperature	-40 ... +100°C	-40 ... +100°C
degree of protection (EN 60529)	IP67	IP67
connection	M12-connector	M12-connector
connection accessories	e.g. <b>VK20H026</b>	e.g. <b>VK20H026</b>
mounting accessories (bracket)	e.g. <b>AY000101</b>	e.g. <b>AY000101</b>

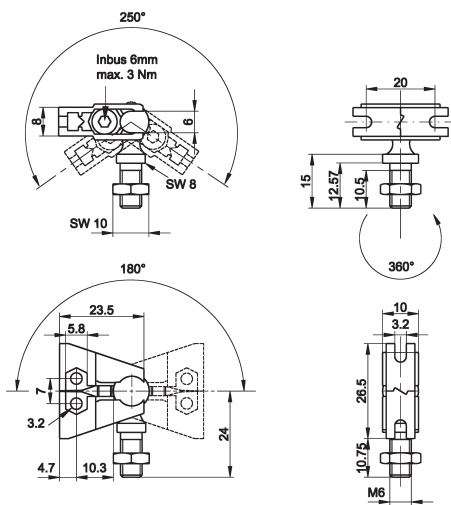
connection



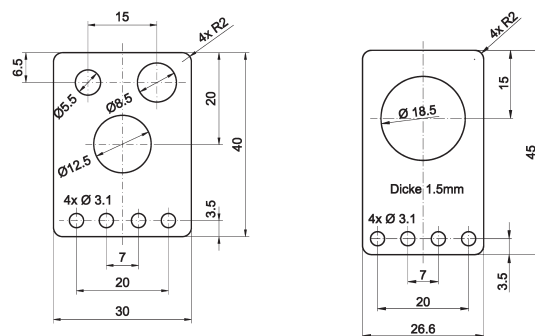
wire colors: bn = brown (1), bu = blue (3), bk = black (4)

universal mounting AY000115, AY000117

consisting of base module



... and fitting panel



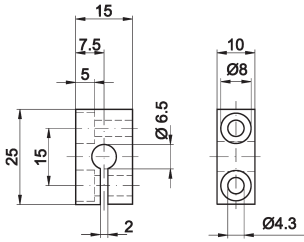
ACCESSORIES

article-no.	description	note
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

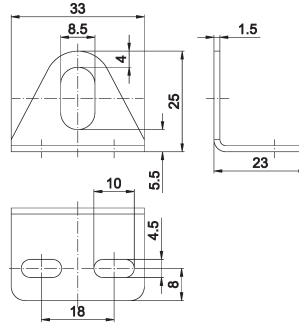
\* The AY000088 base module is contained in every mounting kit.  
Material of bolts and nuts: galvanized steel

accessories - brackets

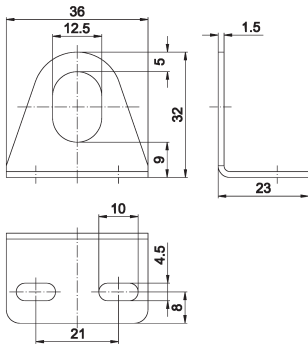
AY000019 for design  $\varnothing 6.5$



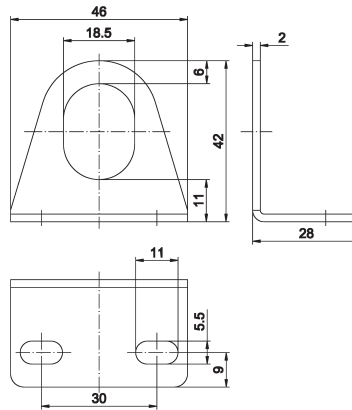
AY000098 for design M8x1, stainl. steel



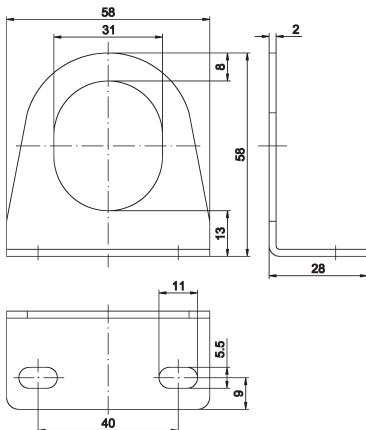
AY000099 for design M12x1, stainl. steel



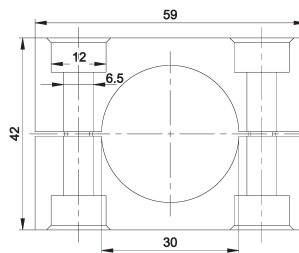
AY000100 for design M18x1, stainl. steel



AY000101 for design M30x1.5, stainl. steel



AY000104 for design M30x1.5



This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under **ipf-SENSORFLEX**® "cable sockets" or in the search window on our homepage [www.ipf-electronic.com](http://www.ipf-electronic.com) (using the search term "VK").

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