

# large sensing ranges 1300

design **Ø4mm** 

M5 x 0.5 M8 x 1 M12 x 1

flushsensing range2.5mmsemi-flushsensing range4 to 8mm







- √ high lifetime thanks to large sensing range
- ✓ stainless steel housing or chrome-plated brass
- ✓ integrated amplifier
- ✓ easy setting thanks to LED display
- ✓ connection with cable, M8- or M12-connector

super-plus, up to 4-way the norm sensing range











### description

*ipf* electronic's Super Plus series of inductive proximity switches are characterized by especially 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 far greater sensing ranges are achieved.

Super Plus series devices are preferably put to use in applications where a long sensing range has to be achieved, but 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 example, the range of applications for these inductive sensors includes system and machine engineering, the

automobile industry, transportation and packaging technology, printing and paper processing, chemical and processing industries, as well as many others.

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 installation conditions on page 5 are adhered to.

### application examples

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





# 1300 large sensing ranges



article-no.	IBR4010H	IBR4017H	IB05010H	IB05017H
sensing range (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	<b>Ø4</b>	. <del>224</del>	M5x0.5	M5x0.5
	€ LED Ø3.5	Ø6.5 LED Ø6.5	97 LED 93.5	25 LED 92 25 26 26 26 26 26 26 26 26 26 26 26 26 26
				M8x1
	2.5mm		2.5mm	
sensing range (Sn)	2.5mm see above		2.5mm see above	
sensing range (Sn) output signal		2.5mm		2.5mm
sensing range (Sn) output signal operating voltage	see above	2.5mm see above	see above	2.5mm see above
sensing range (Sn) output signal operating voltage current consumption (w/o load)	see above 10 30V DC ≤ 10mA	2.5mm see above 10 30V DC ≤ 10mA	see above 10 30V DC ≤ 10mA	2.5mm see above 10 30V DC ≤ 10mA
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load)	see above 10 30V DC ≤ 10mA 200mA	2.5mm see above 10 30V DC ≤ 10mA 200mA	see above 10 30V DC ≤ 10mA 200mA	2.5mm see above 10 30V DC ≤ 10mA 200mA
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC
rechnical data  sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8%	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8%
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sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.28/0.36	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.28/0.36	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.33/0.42	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42
output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.28/0.36  0.6/0.25	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.28/0.36 0.6/0.25	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.33/0.42  0.67/0.3	2.5mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42 0.67/0.3
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sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature system of protection (EN 60529)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.28/0.36  0.6/0.25  800Hz  yellow LED  +  +  Ø4mm  -/25mm  stainless steel  -25 +70°C  IP67	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.28/0.36  0.6/0.25  800Hz yellow LED + + Ø4mm -/38mm stainless steel -25 +70°C IP67	see above  10 30V DC  ≤ 10mA 200mA 2.0V DC  7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42  0.67/0.3  800Hz  yellow LED  + + M5x0.5 20mm/25mm stainless steel -25 +70°C IP67	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42  0.67/0.3  800Hz yellow LED + + M5x0.5 20mm/38mm stainless steel -25 +70°C IP67
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature system of protection (EN 60529) connection	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.28/0.36  0.6/0.25  800Hz  yellow LED  +  +  Ø4mm  -/25mm  stainless steel  -25 +70°C	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.28/0.36  0.6/0.25  800Hz yellow LED + + # Ø4mm -/38mm stainless steel -25 +70°C IP67 M8-connector, 3-pin	see above  10 30V DC  ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42  0.67/0.3  800Hz  yellow LED  + + M5x0.5 20mm/25mm stainless steel -25 +70°C	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42  0.67/0.3  800Hz yellow LED + + M5x0.5 20mm/38mm stainless steel -25 +70°C IP67 M8-connector, 3-pin
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature system of protection (EN 60529)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  7.5x7.5x1.0mm  < 8%  0.03mm  1.0/0.28/0.36  0.6/0.25  800Hz  yellow LED  +  +  Ø4mm  -/25mm  stainless steel  -25 +70°C  IP67	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.28/0.36  0.6/0.25  800Hz yellow LED + + Ø4mm -/38mm stainless steel -25 +70°C IP67	see above  10 30V DC  ≤ 10mA 200mA 2.0V DC  7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42  0.67/0.3  800Hz  yellow LED  + + M5x0.5 20mm/25mm stainless steel -25 +70°C IP67	2.5mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 7.5x7.5x1.0mm < 8% 0.03mm 1.0/0.33/0.42  0.67/0.3  800Hz yellow LED + + M5x0.5 20mm/38mm stainless steel -25 +70°C IP67









# large sensing ranges 1300

article-no.	IB08010H	IB08012H	IB08017H
sensing range (Sn)	4mm	4mm	4mm
output signal	pnp, no	pnp, no	pnp, no
mounting	semi-flush	semi-flush	semi-flush
connection	cable	M12-connector	M8-connector
article-no.	*	*	*
output signal	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	*
output signal	nnn no	npn, no	nnn no
	npn, no	npn, no	npn, no
article-no.	*	•	
output signal	npn, nc	npn, nc	npn, nc
* on request	Mex1	<u>M</u> 8x1	<u>M8×1</u>
	SW 13 SW 13	88 88	SW 13 99 8
		,	M8x1
TECHNICAL DATA		1	
sensing range (Sn)	4mm	4mm	4mm
sensing range (Sn) output signal	4mm see above	4mm see above	4mm see above
sensing range (Sn) output signal operating voltage	see above	4mm see above 10 30V DC	4mm see above 10 30V DC
sensing range (Sn) output signal operating voltage	see above	4mm see above	4mm see above
sensing range (Sn) output signal operating voltage current consumption (w/o load)	see above	4mm see above 10 30V DC	4mm see above 10 30V DC
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load)	see above 10 30V DC ≤ 10mA	4mm see above 10 30V DC ≤ 10mA	4mm see above 10 30V DC ≤ 10mA
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load)	see above  10 30V DC  ≤ 10mA  200mA	4mm see above  10 30V DC ≤ 10mA 200mA	4mm see above  10 30V DC ≤ 10mA 200mA
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm	4mm see above 10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10%	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10%
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35
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sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED
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sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED
pensing range (Sn) putput signal perating voltage current consumption (w/o load) putput current (max. load) portage drop (max. load) prom trimming plate physteresis (of Sn) typical prepeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) pampling frequency status display short-circuit protection preverse polarity protection	see above  10 30V DC  ≤ 10mA 200mA 2.0V DC  16x16x1mm  < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  +	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED +	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED +
output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + +	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + +	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + +
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + + M8x1  45mm/45mm	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED + + M8x1 44mm/66mm	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + + + M8x1 45mm/60mm
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + + + M8x1	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + + M8x1	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + + M8x1
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + + M8x1  45mm/45mm chrome-plated brass	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED + + + M8x1 44mm/66mm chrome-plated brass	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + +  M8x1 45mm/60mm chrome-plated brass -25 +70°C
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature system of protection (EN 60529)	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + + M8x1  45mm/45mm chrome-plated brass -25 +70°C IP67	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + + M8x1 44mm/66mm chrome-plated brass -25 +70°C IP67	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + +  M8x1 45mm/60mm chrome-plated brass -25 +70°C IP67
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature system of protection (EN 60529) connection	see above  10 30V DC  ≤ 10mA 200mA 2.0V DC  16x16x1mm  < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + + M8x1 45mm/45mm chrome-plated brass -25 +70°C	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + +  M8x1 44mm/66mm chrome-plated brass -25 +70°C IP67  M12-connector, 3-pin e.g. VK200025	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + +  M8x1 45mm/60mm chrome-plated brass -25 +70°C IP67  M8-connector, 3-pin e.g. VK200075
sensing range (Sn) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis (of Sn) typical repeat accuracy correction factors (steel/aluminium/brass) correction factors (stainless steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housig material operating temperature system of protection (EN 60529) connection connection accessories	see above  10 30V DC  ≤ 10mA  200mA  2.0V DC  16x16x1mm  < 10%  0.2mm  1.0/0.25/0.35  0.65/0.22  500Hz  yellow LED  + + M8x1  45mm/45mm chrome-plated brass -25 +70°C IP67	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + + M8x1 44mm/66mm chrome-plated brass -25 +70°C IP67  M12-connector, 3-pin	4mm see above  10 30V DC ≤ 10mA 200mA 2.0V DC 16x16x1mm < 10% 0.2mm 1.0/0.25/0.35  0.65/0.22  500Hz yellow LED + + M8x1 45mm/60mm chrome-plated brass -25 +70°C IP67 M8-connector, 3-pin



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# 1300 large sensing ranges



	8	
article-no.	IB12010H	IB12012H
sensing range (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	M12x1  SW 17  LED	M12x1 SW 17 LED 8
TECHNICAL DATA	0	0
sensing range (Sn)	8mm see above	8mm
output signal		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 trimming plate	32x32x1mm	32x32x1mm
hysteresis (of Sn) typical	< 10%	< 10%
repeat accuracy	0.4mm	0.4mm
correction factors (steel/aluminium/brass)	1.0/0.27/0.36	1.0/0.27/0.36
correction factors (stainless steel/copper)	0.67/0.23	0.67/0.23
sampling frequency	400Hz	400Hz
status display	yellow LED	yellow LED
short-circuit protection	+	+
reverse polarity protection	+	+
design	M12x1	M12x1
length (thread/complete)	50mm/50mm	40mm/60mm
housig material	chrome-plated brass	chrome-plated brass
operating temperature	-25 +70°C	-25 +70°C
system of protection (EN 60529)	IP67	IP67
connection	2m PVC-cable, 3-wire	
connection connection accessories	2111 F VC-Cable, 5-WIFE	M12-connector, 3-pin e.g. <b>VK200025</b>
		2m, PUR, straight
mounting accessories	e.g. <b>AY000049</b>	e.g. <b>AY000049</b>
inf electronic amph Kalver Straße	27 Fon ±49 (0) 2351 / 9365 0 MANAWI	inf electronic com  Subject to alteration







# large sensing ranges 1300

### connection

cable device



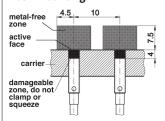
wire colors: bn = brown (1), bu = blue (3), bk = black (4)

### connector device

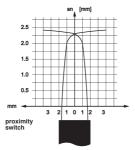


#### IBR401XH

## flush mounting

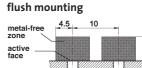


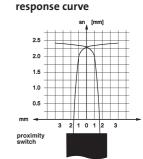
response curve



### **IB0501XH**

carrie



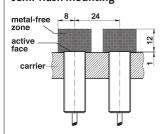


### correction factors

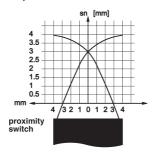
steel	1.0	steel	1.0
stainless steel	0.60	stainless steel	0.67
aluminium	0.28	aluminium	0.33
copper	0.25	copper	0.30
brass	0.36	brass	0.42

### IB0801XH

# semi-flush mounting

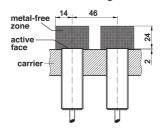


### response curve

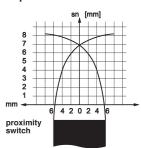


### IB1201XH

## semi-flush mounting



### response curve



### correction factors

steel	1.0	steel	1,0	
stainless steel	0.65	stainless steel	0.67	
aluminium	0.25	aluminium	0.27	
copper	0.22	copper	0.23	
brass	0.35	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.







# 1300 large sensing ranges



notes

export division

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