



pressure-proof 2100

design **M12x1 M18x1**

flush sensing range 1.5mm





- ✓ operating temperature up to +90°C
- √ housing made of stainless steel
- ✓ sensor surface made of ceramic
- ✓ integrated amplifier
- ✓ connection with cable and M12-connector

high-pressure-proof up to 500bar max. peak-pressure 800bar











description

These devices are perfectly suited for applications with high dynamic pressure loads.

The main problem with pressure-proof inductive proximity switches is the thick coverage of the active surface (generally from a ceramic material) required to obtain the pressure resistance.

The thickness of this coverage must be deducted from the normal usable sensing range of the device, with the result that just a small or even no usable sensing range remains. In the market devices are available, which come with the oscillator coil mounted on the high-pressure side.

It is inevitable that this type of proximity switches poses reliability problems when used in an environment of standard applications like hydraulic oil, high temperatures or alternating pressure loads.

The *ipf electronic* pressure-proof sensors have all their electronic components, including ferrite core and coil, on the pressureless side. The remaining usable sensing range is more than sufficient. The sensor has a very high mechanical resistance and an outstanding impermeability, as the sturdy robust ceramic plate is shrink fitted into the stainless steel housing. The very large sensing range allows the use of a simple, robust ceramic plate with sufficient thickness on the front face.

application examples

▶ position recognition of hydraulic cylinder pistons







inductive sensors

2100 pressure-proof



article-no.	IP120105	IP120120	IP120121	IP120122
operating range	1.5mm	1.5mm	1.5mm	1.5mm
output	pnp, no	pnp, no	pnp, no	pnp, no
version	M12x1	M12x1	M12x1	M12x1
connection	cable	M12-connector	M12-connector	M12-connector
article-no.	*	*	*	*
output	pnp, nc	pnp, nc	pnp, nc	pnp, nc
·	*	y	μπρ, πε *	prip, ric
article-no.				•
output	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output	npn, nc	npn, nc	npn, nc	npn, nc
*on request	M12x1 Ø10e7 O-Ring SW 17 SW 10	M12x1 Ø10e7 O-Ring SW 17 SW 10	M12x1 Ø10e7 O-Fing SW 17	M12x1 Ø10e7 O-Ring SW 17 SW 17
TECHNICAL DATA				
TECHNICAL DATA sensing range (Sn)	1.5mm	1.5mm	1.5mm	1.5mm
sensing range (Sn) mounting	flush	flush	flush	flush
sensing range (Sn) mounting pressure resistance (operation)	flush 500bar	flush 500bar	flush 500bar	flush 500bar
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak)	flush 500bar 800bar	flush 500bar 800bar	flush 500bar 800bar	flush 500bar 800bar
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal	flush 500bar 800bar see above	flush 500bar 800bar see above	flush 500bar 800bar see above	flush 500bar 800bar see above
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage	flush 500bar 800bar see above 10 30V DC	flush 500bar 800bar see above 10 30V DC	flush 500bar 800bar see above 10 30V DC	flush 500bar 800bar see above 10 30V DC
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load)	flush 500bar 800bar see above 10 30V DC ≤ 10mA	flush 500bar 800bar see above 10 30V DC ≤ 10mA	flush 500bar 800bar see above 10 30V DC ≤ 10mA	flush 500bar 800bar see above 10 30V DC ≤ 10mA
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max.load)	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load)	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8%	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8%	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8%	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8%
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass)	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper)	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display	flush 500bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - +	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - +	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - +	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - +
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz + +	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + +	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz + +	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + +
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz + + M12x1	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz + + M12x1	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz + + M12x1	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz + + M12x1
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete)	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 25mm/43mm	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 38mm/69mm	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 42mm/78mm	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 62mm/93mm
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housing material	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 25mm/43mm stainless steel	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 38mm/69mm stainless steel	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 42mm/78mm stainless steel	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 62mm/93mm stainless steel
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housing material front cap material	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 25mm/43mm stainless steel ceramic ZrO2	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 38mm/69mm stainless steel ceramic ZrO2	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 42mm/78mm stainless steel ceramic ZrO2	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 62mm/93mm stainless steel ceramic ZrO2
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housing material front cap material operating temperature	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 25mm/43mm stainless steel	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 38mm/69mm stainless steel	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 42mm/78mm stainless steel	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 62mm/93mm stainless steel
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak) output signal operating voltage current consumption (w/o load) output current (max. load) voltage drop (max. load) norm trimming plate hysteresis repeat accuracy correct. factor (steel/alum./brass) correct. factor (stainl. steel/copper) sampling frequency status display short-circuit protection reverse polarity protection design length (thread/complete) housing material front cap material operating temperature	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 25mm/43mm stainless steel ceramic ZrO2	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 38mm/69mm stainless steel ceramic ZrO2	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 42mm/78mm stainless steel ceramic ZrO2	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 62mm/93mm stainless steel ceramic ZrO2
sensing range (Sn) mounting pressure resistance (operation) pressure resistance (peak)	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 25mm/43mm stainless steel ceramic ZrO2 -25 +90°C	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 38mm/69mm stainless steel ceramic ZrO2 -25 +90°C	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 42mm/78mm stainless steel ceramic ZrO2 -25 +90°C	flush 500bar 800bar 800bar see above 10 30V DC ≤ 10mA 200mA 2.0V DC 10x10x1mm < 8% 0.1mm 1.0/0.2/0.34 0.75/0.12 600Hz - + + M12x1 62mm/93mm stainless steel ceramic ZrO2 -25 +90°C



ipf electronic gmbh Kalve

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pressure-proof 2100

			pressure proof 2200	
article-no.	IP120123	IP120124	IP120125	IP180120
operating range	1.5mm	1.5mm	1.5mm	1.5mm
output	pnp, no	pnp, no	pnp, no	pnp, no
version	M12x1	M12x1	M12x1	M18x1
connection	M12-connector	M12-connector	M12-connector	M12-connector
article-no.	*	*	*	*
output	pnp, nc	pnp, nc	pnp, nc	pnp, nc
article-no.	*	*	*	*
output	npn, no	npn, no	npn, no	npn, no
article-no.	*	*	*	*
output	npn, nc	npn, nc	npn, nc	npn, nc
1	, ,			
*on request	M12x1 Ø10e7 O-Ring SW 17 88 88	M12x1 Ø10e7 O-Ring SW 17	M12x1 Ø10e7 O-Ring SW 17	M18x1 Ø15f7 99 99 97 97 97 97 97 97 97 97 97 97 97
sensing range (Sn)	1.5mm	1.5mm	1.5mm	1.5mm
mounting	flush	flush	flush	flush
pressure resistance (operation)	500bar	500bar	500bar	500bar
pressure resistance (peak)	800bar	800bar	800bar	800bar
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
	≥ 10mA 200mA	200mA	200mA	200mA
output current (max. load)	2.0V DC	2.0V DC	2.0V DC	2.0V DC
voltage drop (max. load) norm trimming plate			10x10x1mm	
0 1	10x10x1mm < 8%	10x10x1mm < 8%	< 8%	15x15x1mm < 10%
hysteresis				
repeat accuracy	0.1mm	0.1mm	0.1mm	0.1mm
correct. factor (steel/alum./brass)	1.0/0.2/0.34	1.0/0.2/0.34	1.0/0.2/0.34	1.0/-/0.1
correct. factor (stainl. steel/copper)	0.75/0.12	0.75/0.12	0.75/0.12	0.95/-
sampling frequency	600Hz	600Hz	600Hz	800Hz
status display	-	-	-	-
short-circuit protection	+	+	+	+
reverse polarity protection	+	+	+	+
design	M12x1	M12x1	M12x1	M18x1
length (thread/complete)	107mm/138mm	41mm/56mm	38mm/56mm	7mm/55.5mm
housing material	stainless steel	stainless steel	stainless steel	stainless steel
front cap material	ceramic ZrO2	ceramic ZrO2	ceramic ZrO2	ceramic ZrO2
operating temperature	-25 +90°C	-25 +90°C	-25 +90°C	-25 +80°C
system of protection (EN60529)	IP68	IP68	IP68	IP68
connection	M12-connector, 4-pin 3 assigned	M12-connector, 4-pin 3 assigned	M12-connector, 4-pin 3 assigned	M12-connector, 4-pin 3 assigned
connection accessories	e.g. VK200025 2m, PUR, straight	e.g. VK200025 2m, PUR, straight	e.g. VK200025 2m, PUR, straight	e.g. VK200025 2m, PUR, straight





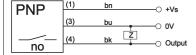
inductive sensors

2100 pressure-proof



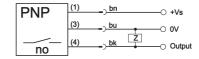
connection

cable device

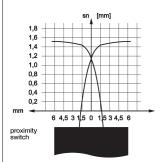


Aderfarben: bn = braun (1), bu = blau (3), bk = schwarz (4)

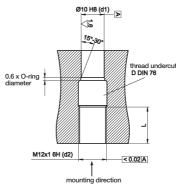
connector device



connection IP12

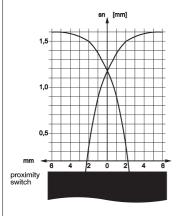


mounting IP12

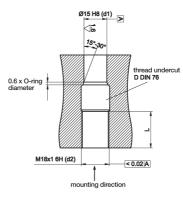


- d1: diameter of the mounting hole for the sensor head
- d2: nominal thread diameter
- L: recommended screw-in depth $L \ge 0.8 \times d2$

connection IP18



mounting IP18



- d1: diameter of the mounting hole for the sensor head
- d2: nominal thread diameter
- L: recommended screw-in depth $L \ge 0.8 \times d2$

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 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.



