

### Benefits:

- ▶ Pressure proof up to 1000 bar (14503 psi)
- ▶ Stainless steel housing (SS304)
- ▶ Sensing face made of stainless steel or ceramic
- ▶ Optional LED switching indicator simplifies the mechanical set-up

### Vorteile:

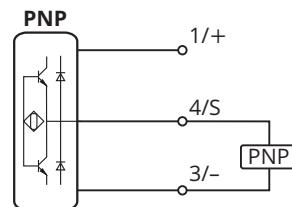
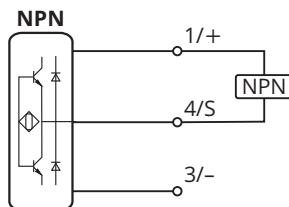
- ▶ Hochdruckfest bis zu 1000 bar (14503 psi)
- ▶ Edelstahlgehäuse (V2A)
- ▶ Sensorfläche aus Keramik oder Edelstahl
- ▶ Optionale LED-Schaltanzeige vereinfacht die mechanische Einrichtung

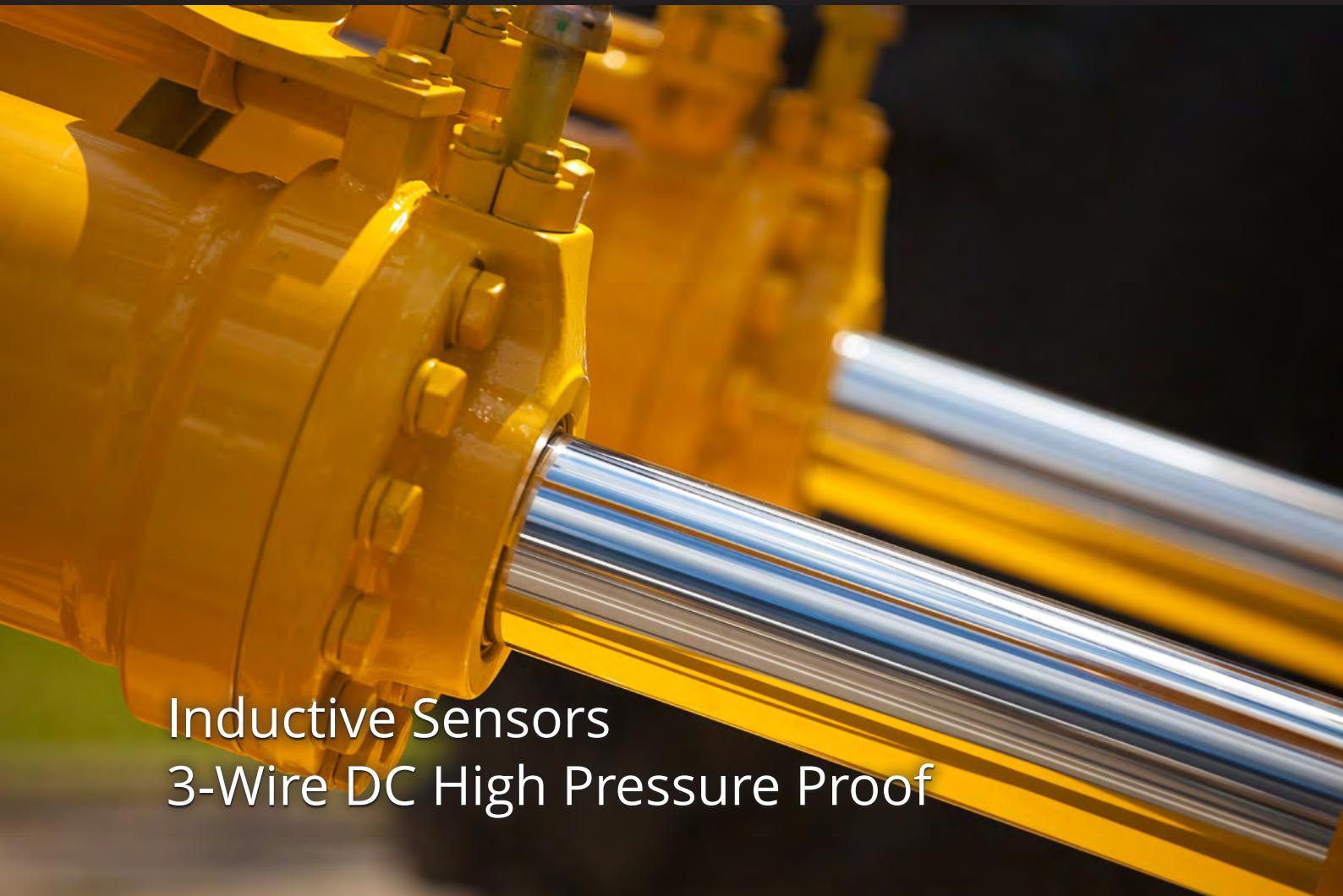
Data sheets are available on  
<http://xecro.com>.

Datenblätter sind auf  
<http://xecro.com> verfügbar.

All devices of this section may  
not be used if the safety of  
persons rely on their faultless  
function!

Alle Geräte dieses Abschnittes  
dürfen nicht verwendet werden,  
wenn die Sicherheit von  
Personen von deren fehlerlosen  
Funktion abhängt!





## Inductive Sensors 3-Wire DC High Pressure Proof

Precise position sensing that operates under high pressure requires well-constructed sensors. XECRO fulfills these requirements with the wide range of High Pressure Series sensors produced with two specialized techniques. These techniques result in a permanent pressure-proof level of up to 1000 bar (14503 psi).

Sensors for pressures of up to 500 bar (7251 psi) contain a conventional ceramic sealing to separate both the ferrite coil combination and the processor electronics from the pressure-facing section of the housing. To achieve outstanding pressure resistance, XECRO manufactures selected High Pressure Sensors with Metal-Face housings, which means that the housing consists of one continuous piece of stainless steel including the sensing face. This full-metal construction offers excellent peak-pressure immunity and endure even under the harshest environments.

Most sensors of the High Pressure Series from XECRO are available with a built-in LED switching indicator to simplify the mechanical set-up.

Die präzise Positionsbestimmung unter Hochdruck erfordert gut konstruierte Sensoren. XECRO erfüllt diese Anforderungen mit einer großen Auswahl an hochdruckfesten Sensoren, die auf zwei unterschiedlichen Techniken basieren. Diese Produktionsverfahren ergeben eine dauerhafte Druckfestigkeit bis zu 1000 bar (14503 psi).

Sensoren mit einer Druckfestigkeit bis zu 500 bar enthalten eine übliche Keramikdichtplatte, um die Ferritspulen-Kombination und die Auswerteelektronik von der Druckseite zu trennen. Um eine außergewöhnliche Widerstandsfähigkeit bei hohen Drücken zu erreichen, fertigt XECRO einige Sensoren mit Vollmetallgehäusen, so dass der Sensor aus einem durchgehenden Edelstahlgehäuse einschließlich der Sensorfläche besteht. Diese Konstruktion bietet ausgezeichnete Festigkeit gegen Druckspitzen und besteht auch unter den härtesten Bedingungen.

Zur Erleichterung der Montage sind nahezu alle druckfesten Sensoren von XECRO mit einer LED-Schaltanzeige erhältlich.

## Inductive Proximity Switch 3-Wire DC High Pressure Proof

### Induktive Näherungsschalter 3-Leiter DC Hochdruckfest

flush  
bündig  
**M12×1 | 1.5 mm**



flush  
bündig  
**M12×1 | 1.5 mm**



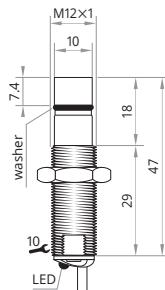
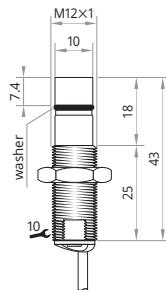
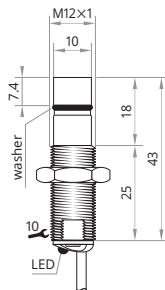
flush  
bündig  
**M12×1 | 1.5 mm**



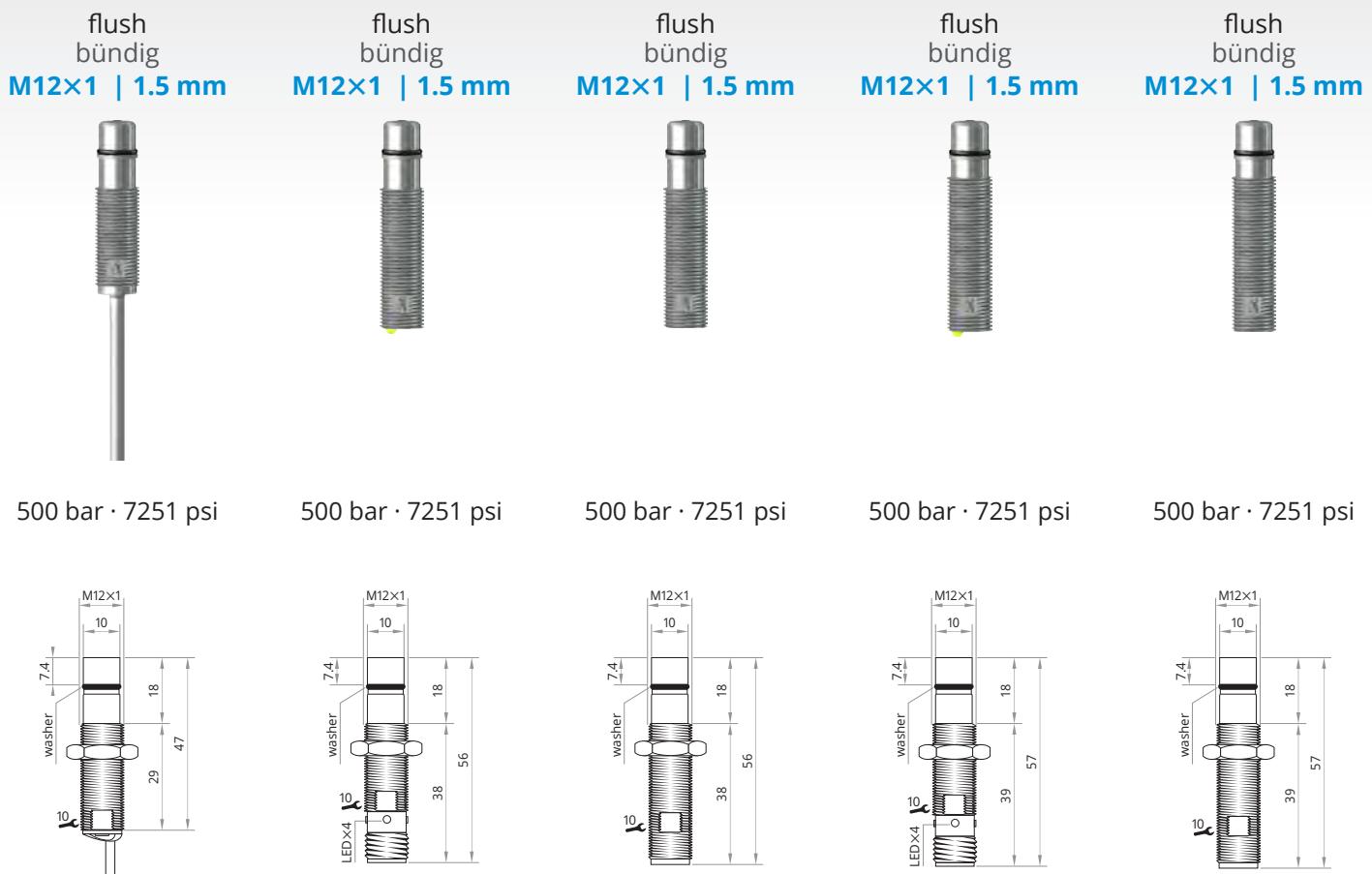
500 bar · 7251 psi

500 bar · 7251 psi

500 bar · 7251 psi



Sensing distance $S_n$	Schaltabstand $S_n$	1.5 mm	1.5 mm	1.5 mm
Operating voltage	Betriebsspannung	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>
Reverse polarity protection	Verpolungsschutz	built-in	integriert	built-in
Current consumption	Stromverbrauch	<8 mA	<8 mA	<8 mA
Current load capability	Ausgangsbelastbarkeit	200 mA	200 mA	200 mA
Short circuit protection	Kurzschlusschutz	built-in	integriert	built-in
Voltage drop	Spannungsabfall	<1.5 V @ 200 mA	<1.5 V @ 200 mA	<1.5 V @ 200 mA
Switching frequency	Schaltfrequenz	1000 Hz	1000 Hz	1000 Hz
Reduction factors	Reduktionsfaktoren	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85
Operating temperature	Betriebstemperatur	-25...+70 °C	-25...+70 °C	-25...+70 °C
Protection class	Schutzklasse	IP 69k, IP 67	IP 69k, IP 67	IP 69k, IP 67
Sensing face material	Sensorflächenwerkstoff	ceramic	Keramik	ceramic
Housing material	Gehäusewerkstoff	SS304	V2A	SS304
Switching indicator	Schaltanzeige	built-in	integriert	—
Connection	Anschluss	PVC, ultra-flex	PVC, ultra-flex	PVC, ultra-flex
Article code PNP, NO	—	IHP12-S1.5PO43-A2P	IHP12-S1.5PO43-N2P	IHP12-S1.5PO47-A2P
Article code PNP, NC	—	IHP12-S1.5PC43-A2P	IHP12-S1.5PC43-N2P	IHP12-S1.5PC47-A2P
Article code NPN, NO	—	IHP12-S1.5NO43-A2P	IHP12-S1.5NO43-N2P	IHP12-S1.5NO47-A2P
Article code NPN, NC	—	IHP12-S1.5NC43-A2P	IHP12-S1.5NC43-N2P	IHP12-S1.5NC47-A2P



1.5 mm		1.5 mm		1.5 mm		1.5 mm		1.5 mm	
10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in
integriert		integriert		integriert		integriert		integriert	
<8 mA		<8 mA		<8 mA		<8 mA		<8 mA	
200 mA		200 mA		200 mA		200 mA		200 mA	
built-in	integriert	built-in	integriert	built-in	integriert	built-in	integriert	built-in	integriert
<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA	
1000 Hz		1000 Hz		1000 Hz		1000 Hz		1000 Hz	
Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85	
-25...+70 °C		-25...+70 °C		-25...+70 °C		-25...+70 °C		-25...+70 °C	
IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67	
ceramic	Keramik	ceramic	Keramik	ceramic	Keramik	ceramic	Keramik	ceramic	Keramik
SS304	V2A	SS304	V2A	SS304	V2A	SS304	V2A	SS304	V2A
—		built-in	integriert	—		built-in	integriert	—	
PVC, ultra-flex		conn. M12	Stecker M12						
IHP12-S1.5PO47-N2P		IHP12-S1.5PO56-A12		IHP12-S1.5PO56-N12		IHP12-S1.5PO57-A12		IHP12-S1.5PO57-N12	
IHP12-S1.5PC47-N2P		IHP12-S1.5PC56-A12		IHP12-S1.5PC56-N12		IHP12-S1.5PC57-A12		IHP12-S1.5PC57-N12	
IHP12-S1.5NO47-N2P		IHP12-S1.5NO56-A12		IHP12-S1.5NO56-N12		IHP12-S1.5NO57-A12		IHP12-S1.5NO57-N12	
IHP12-S1.5NC47-N2P		IHP12-S1.5NC56-A12		IHP12-S1.5NC56-N12		IHP12-S1.5NC57-A12		IHP12-S1.5NC57-N12	

## Inductive Proximity Switch 3-Wire DC High Pressure Proof

### Induktive Näherungsschalter 3-Leiter DC Hochdruckfest

flush  
bündig  
**M12×1 | 1.5 mm**



flush  
bündig  
**M12×1 | 1.5 mm**



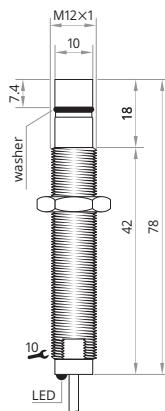
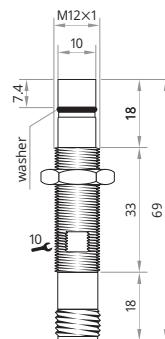
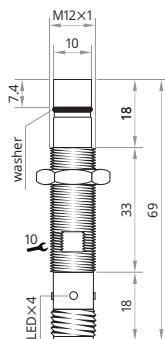
flush  
bündig  
**M12×1 | 1.5 mm**



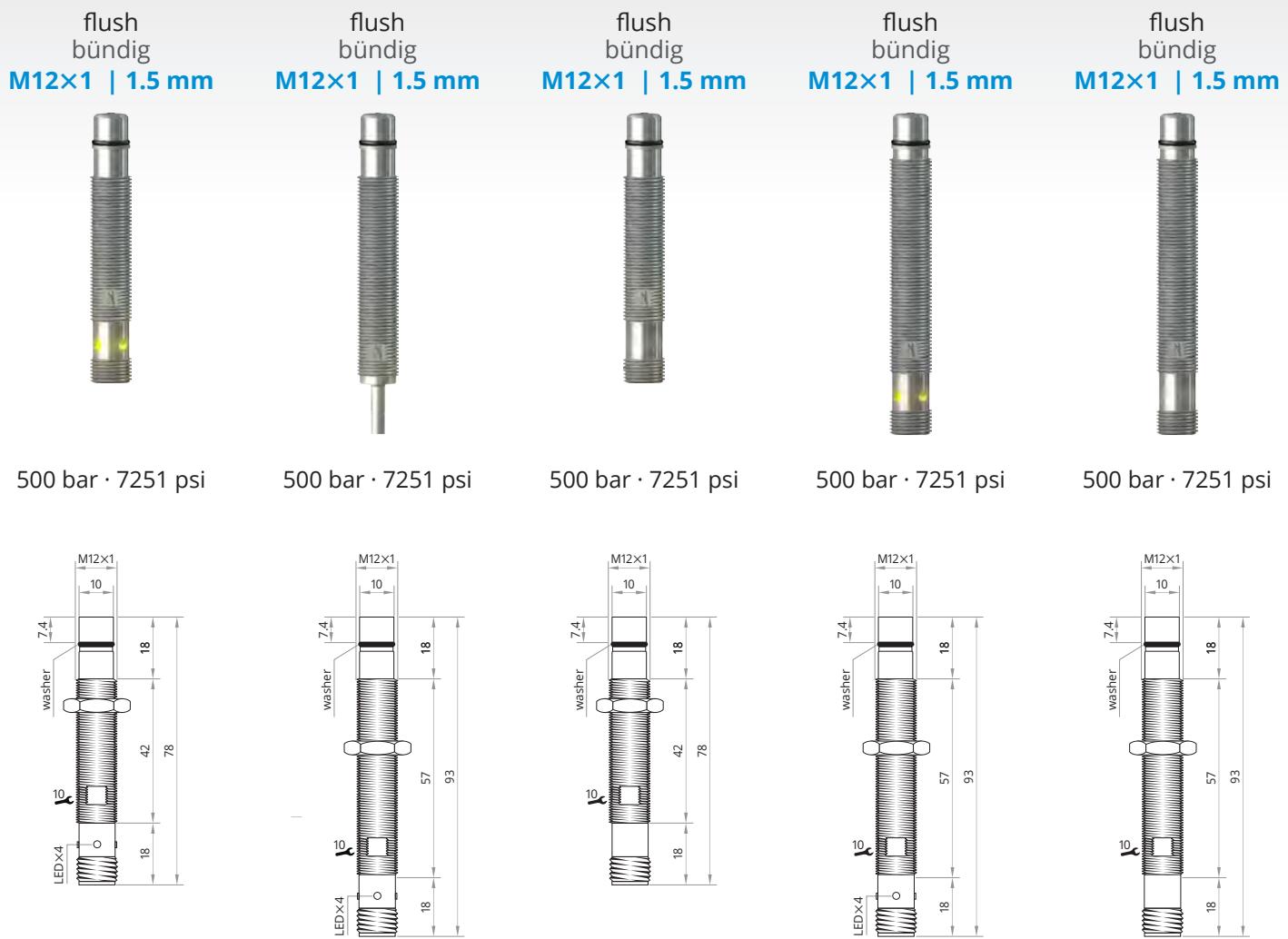
500 bar · 7251 psi

500 bar · 7251 psi

500 bar · 7251 psi



Sensing distance $S_n$	Schaltabstand $S_n$	1.5 mm	1.5 mm	1.5 mm
Operating voltage	Betriebsspannung	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>
Reverse polarity protection	Verpolungsschutz	built-in	integriert	built-in
Current consumption	Stromverbrauch	<8 mA	<8 mA	<8 mA
Current load capability	Ausgangsbelastbarkeit	200 mA	200 mA	200 mA
Short circuit protection	Kurzschlusschutz	built-in	integriert	built-in
Voltage drop	Spannungsabfall	<1.5 V @ 200 mA	<1.5 V @ 200 mA	<1.5 V @ 200 mA
Switching frequency	Schaltfrequenz	1000 Hz	1000 Hz	1000 Hz
Reduction factors	Reduktionsfaktoren	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85
Operating temperature	Betriebstemperatur	-25...+70 °C	-25...+70 °C	-25...+70 °C
Protection class	Schutzklasse	IP 69k, IP 67	IP 69k, IP 67	IP 69k, IP 67
Sensing face material	Sensorflächenwerkstoff	ceramic	Keramik	ceramic
Housing material	Gehäusewerkstoff	SS304	V2A	SS304
Switching indicator	Schaltanzeige	built-in	integriert	—
Connection	Anschluss	conn. M12	Stecker M12	PVC, ultra-flex
Article code PNP, NO	—	IHP12-S1.5PO69-A12	IHP12-S1.5PO69-N12	IHP12-S1.5PO78-A2P
Article code PNP, NC	—	IHP12-S1.5PC69-A12	IHP12-S1.5PC69-N12	IHP12-S1.5PC78-A2P
Article code NPN, NO	—	IHP12-S1.5NO69-A12	IHP12-S1.5NO69-N12	IHP12-S1.5NO78-A2P
Article code NPN, NC	—	IHP12-S1.5NC69-A12	IHP12-S1.5NC69-N12	IHP12-S1.5NC78-A2P



1.5 mm		1.5 mm		1.5 mm		1.5 mm		1.5 mm	
10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in	10...30 V <sub>DC</sub>	built-in
integriert		integriert		integriert		integriert		integriert	
<8 mA		<8 mA		<8 mA		<8 mA		<8 mA	
200 mA		200 mA		200 mA		200 mA		200 mA	
built-in	integriert	built-in	integriert	built-in	integriert	built-in	integriert	built-in	integriert
<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA	
1000 Hz		1000 Hz		1000 Hz		1000 Hz		1000 Hz	
Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85	
-25...+70 °C		-25...+70 °C		-25...+70 °C		-25...+70 °C		-25...+70 °C	
IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67	
ceramic	Keramik	ceramic	Keramik	ceramic	Keramik	ceramic	Keramik	ceramic	Keramik
SS304	V2A	SS304	V2A	SS304	V2A	SS304	V2A	SS304	V2A
built-in	integriert	—	—	—	—	built-in	integriert	—	—
conn. M12	Stecker M12	PVC, ultra-flex		conn. M12	Stecker M12	conn. M12	Stecker M12	conn. M12	Stecker M12
IHP12-S1.5PO78-A12		IHP12-S1.5PO78-N2P		IHP12-S1.5PO78-N12		IHP12-S1.5PO93-A12		IHP12-S1.5PO93-N12	
IHP12-S1.5PC78-A12		IHP12-S1.5PC78-N2P		IHP12-S1.5PC78-N12		IHP12-S1.5PC93-A12		IHP12-S1.5PC93-N12	
IHP12-S1.5NO78-A12		IHP12-S1.5NO78-N2P		IHP12-S1.5NO78-N12		IHP12-S1.5NO93-A12		IHP12-S1.5NO93-N12	
IHP12-S1.5NC78-A12		IHP12-S1.5NC78-N2P		IHP12-S1.5NC78-N12		IHP12-S1.5NC93-A12		IHP12-S1.5NC93-N12	

## Inductive Proximity Switch 3-Wire DC High Pressure Proof

Induktive Näherungsschalter  
3-Leiter DC Hochdruckfest

flush  
bündig  
**M12×1 | 1.5 mm**



**M12×1 | 1.5 mm**

flush  
bündig  
**M12×1 | 1.5 mm**



**M12×1 | 1.5 mm**

flush  
bündig  
**M12×1 | 1.5 mm**

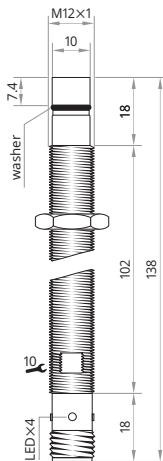
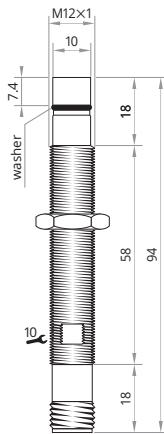
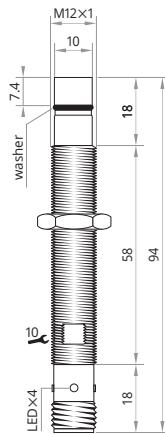


**M12×1 | 1.5 mm**

500 bar · 7251 psi

500 bar · 7251 psi

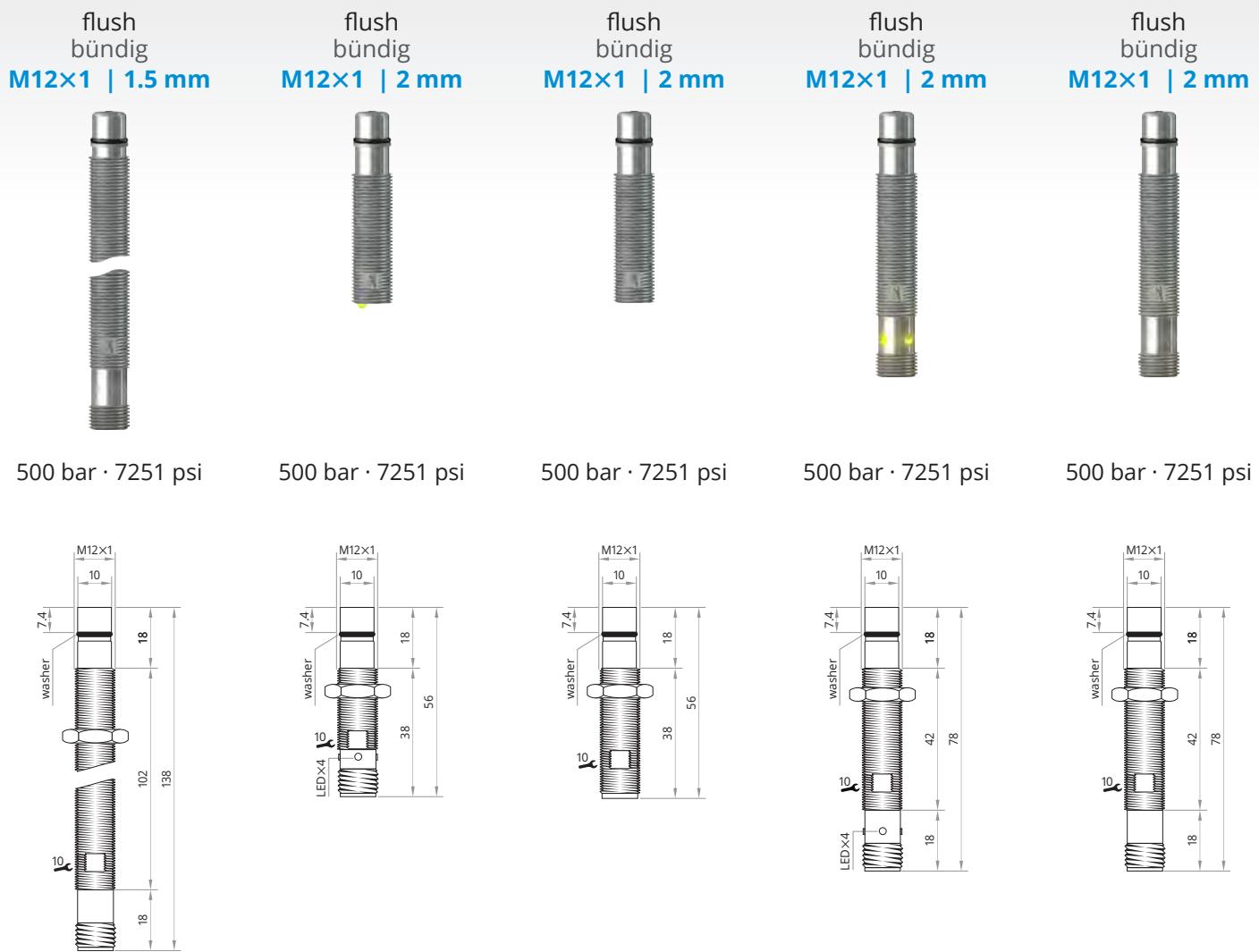
500 bar · 7251 psi



Sensing distance $S_n$	Schaltabstand $S_n$	1.5 mm	1.5 mm	1.5 mm
Operating voltage	Betriebsspannung	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>
Reverse polarity protection	Verpolungsschutz	built-in	integriert	built-in
Current consumption	Stromverbrauch	<8 mA	<8 mA	<8 mA
Current load capability	Ausgangsbelastbarkeit	200 mA	200 mA	200 mA
Short circuit protection	Kurzschlusschutz	built-in	integriert	built-in
Voltage drop	Spannungsabfall	<1.5 V @ 200 mA	<1.5 V @ 200 mA	<1.5 V @ 200 mA
Switching frequency	Schaltfrequenz	1000 Hz	1000 Hz	1000 Hz
Reduction factors	Reduktionsfaktoren	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85
Operating temperature	Betriebstemperatur	-25...+70 °C	-25...+70 °C	-25...+70 °C
Protection class	Schutzklasse	IP 69k, IP 67	IP 69k, IP 67	IP 69k, IP 67
Sensing face material	Sensorflächenwerkstoff	ceramic	Keramik	ceramic
Housing material	Gehäusewerkstoff	SS304	V2A	SS304
Switching indicator	Schaltanzeige	built-in	integriert	—
Connection	Anschluss	conn. M12	Stecker M12	conn. M12
Article code PNP, NO	—	IHP12-S1.5PO94-A12	IHP12-S1.5PO94-N12	IHP12-S1.5PO138-A12
Article code PNP, NC	—L	IHP12-S1.5PC94-A12	IHP12-S1.5PC94-N12	IHP12-S1.5PC138-A12
Article code NPN, NO	—	IHP12-S1.5NO94-A12	IHP12-S1.5NO94-N12	IHP12-S1.5NO138-A12
Article code NPN, NC	—L	IHP12-S1.5NC94-A12	IHP12-S1.5NC94-N12	IHP12-S1.5NC138-A12

Mind O≠0, I≠I≠1, S≠5, B≠8.

O≠0, I≠I≠1, S≠5, B≠8 beachten.



1.5 mm	2 mm	2 mm	2 mm	2 mm
10...30 V <sub>DC</sub>				
built-in	integriert	built-in	integriert	built-in
<8 mA				
200 mA				
built-in	integriert	built-in	integriert	built-in
<1.5 V @ 200 mA				
1000 Hz				
Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85
-25...+70 °C				
IP 69k, IP 67				
ceramic	Keramik	ceramic	Keramik	ceramic
SS304	V2A	SS304	V2A	SS304
—	built-in	integriert	—	built-in
conn. M12	Stecker M12	conn. M12	Stecker M12	conn. M12
IHP12-S1.5PO138-N12	IHP12-S2PO56-A12	IHP12-S2PO56-N12	IHP12-S2PO78-A12	IHP12-S2PO78-N12
IHP12-S1.5PC138-N12	IHP12-S2PC56-A12	IHP12-S2PC56-N12	IHP12-S2PC78-A12	IHP12-S2PC78-N12
IHP12-S1.5NO138-N12	IHP12-S2NO56-A12	IHP12-S2NO56-N12	IHP12-S2NO78-A12	IHP12-S2NO78-N12
IHP12-S1.5NC138-N12	IHP12-S2NC56-A12	IHP12-S2NC56-N12	IHP12-S2NC78-A12	IHP12-S2NC78-N12

## Inductive Proximity Switch 3-Wire DC High Pressure Proof

### Induktive Näherungsschalter 3-Leiter DC Hochdruckfest

flush  
bündig  
**M14x1.5 | 3 mm**



flush  
bündig  
**M14x1.5 | 3 mm**



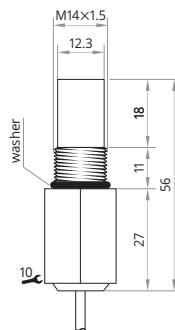
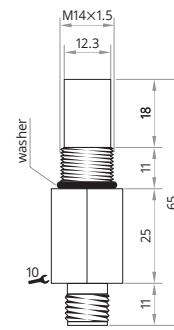
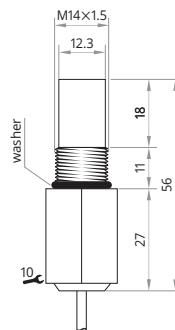
flush  
bündig  
**M14x1.5 | 3 mm**



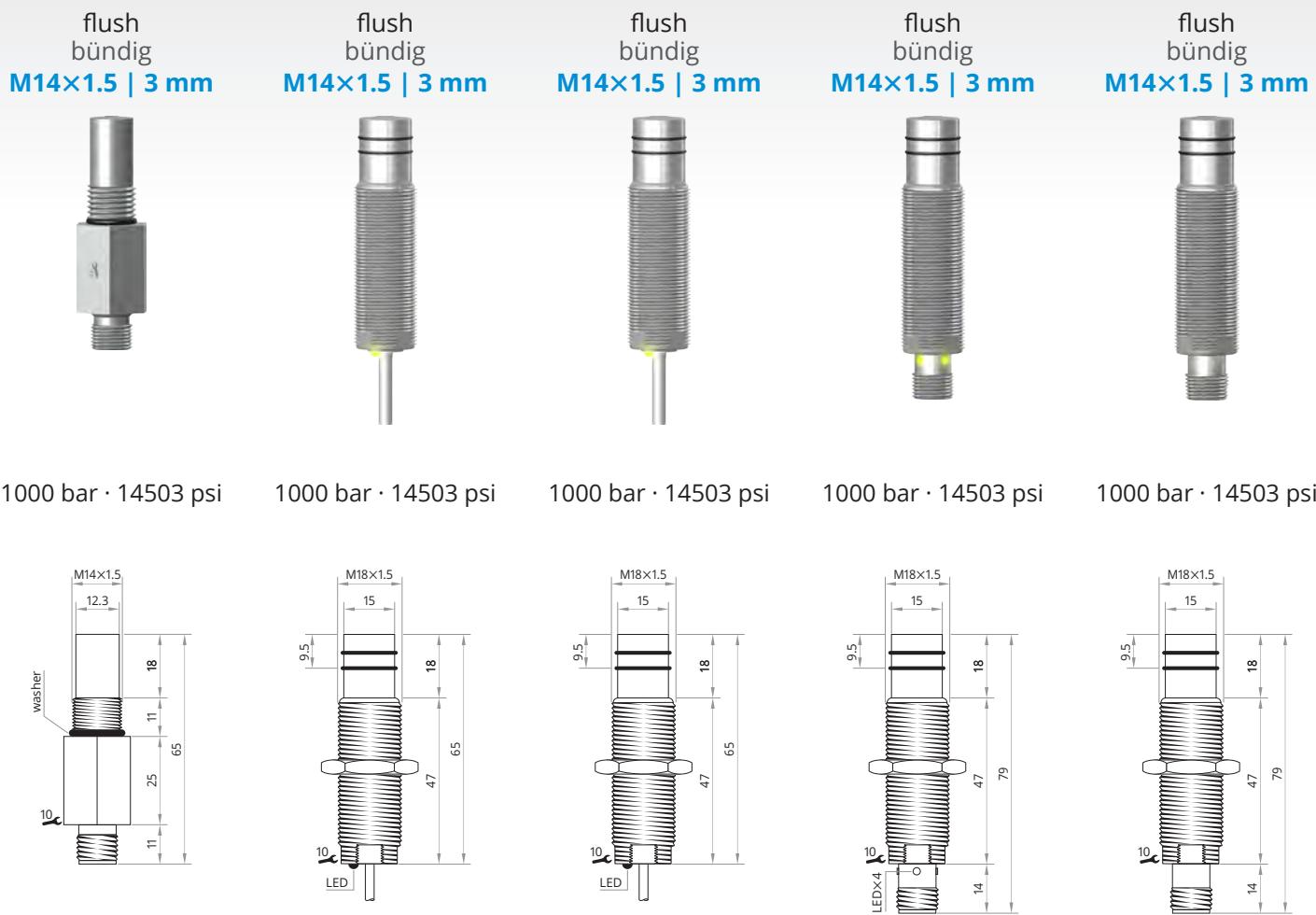
500 bar · 7251 psi

500 bar · 7251 psi

1000 bar · 14503 psi



Sensing distance $S_n$	Schaltabstand $S_n$	3 mm	3 mm	3 mm
Operating voltage	Betriebsspannung	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>
Reverse polarity protection	Verpolungsschutz	built-in	integriert	built-in
Current consumption	Stromverbrauch	<8 mA	<8 mA	<8 mA
Current load capability	Ausgangsbelastbarkeit	200 mA	200 mA	200 mA
Short circuit protection	Kurzschlusschutz	built-in	integriert	built-in
Voltage drop	Spannungsabfall	<1.5 V @ 200 mA	<1.5 V @ 200 mA	<1.5 V @ 200 mA
Switching frequency	Schaltfrequenz	1000 Hz	1000 Hz	500 Hz
Reduction factors	Reduktionsfaktoren	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85	Alu 0.45 · Brs 0.50 · SS 0.85
Operating temperature	Betriebstemperatur	-25...+70 °C	-25...+70 °C	-25...+70 °C
Protection class	Schutzklasse	IP 69k, IP 67	IP 69k, IP 67	IP 69k, IP 67
Sensing face material	Sensorflächenwerkstoff	ceramic	Keramik	SS304
Housing material	Gehäusewerkstoff	SS304	V2A	SS304
Switching indicator	Schaltanzeige	—	—	—
Connection	Anschluss	conn. M12	Stecker M12	conn. M12
Article code PNP, NO	—	IHP14-S3PO56-N2P	IHP14-S3PO65-N12	IHP14-S3PO56S-N2P
Article code PNP, NC	—	IHP14-S3PC56-N2P	IHP14-S3PC65-N12	IHP14-S3PC56S-N2P
Article code NPN, NO	—	IHP14-S3NO56-N2P	IHP14-S3NO65-N12	IHP14-S3NO56S-N2P
Article code NPN, NC	—	IHP14-S3NC56-N2P	IHP14-S3NC65-N12	IHP14-S3NC56S-N2P



3 mm	3 mm	3 mm	3 mm	3 mm
10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>	10...30 V <sub>DC</sub>
built-in	integriert	built-in	integriert	built-in
<8 mA		<8 mA		<8 mA
200 mA		200 mA		200 mA
built-in	integriert	built-in	integriert	built-in
<1.5 V @ 200 mA		<1.5 V @ 200 mA		<1.5 V @ 200 mA
500 Hz		1000 Hz		1000 Hz
Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85		Alu 0.45 · Brs 0.50 · SS 0.85
-25...+70 °C		-25...+70 °C		-25...+70 °C
IP 69k, IP 67		IP 69k, IP 67		IP 69k, IP 67
SS304	V2A	ceramic	Keramik	ceramic
SS304	V2A	SS304	V2A	SS304
—	built-in	integriert	—	built-in
conn. M12	Stecker M12	conn. M12	Stecker M12	conn. M12
IHP14-S3PO65S-N12		IHP18-S3PO65S-A2P		IHP18-S3PO79S-A12
IHP14-S3PC65S-N12		IHP18-S3PC65S-A2P		IHP18-S3PC79S-A12
IHP14-S3NO65S-N12		IHP18-S3NO65S-A2P		IHP18-S3NO79S-A12
IHP14-S3NC65S-N12		IHP18-S3NC65S-A2P		IHP18-S3NC79S-A12