

Benefits:

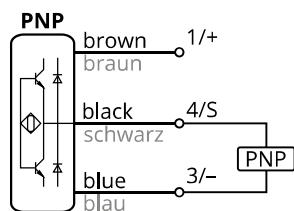
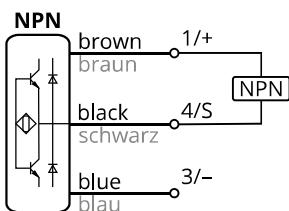
- ▶ Pressure proof up to 1000 bar (14503 psi)
 - ▶ Stainless steel housing (SS304)
 - ▶ Sensing face made of stainless steel or ceramic
 - ▶ Optional LED switching indicator simplifies the mechanical setup

Vorteile:

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

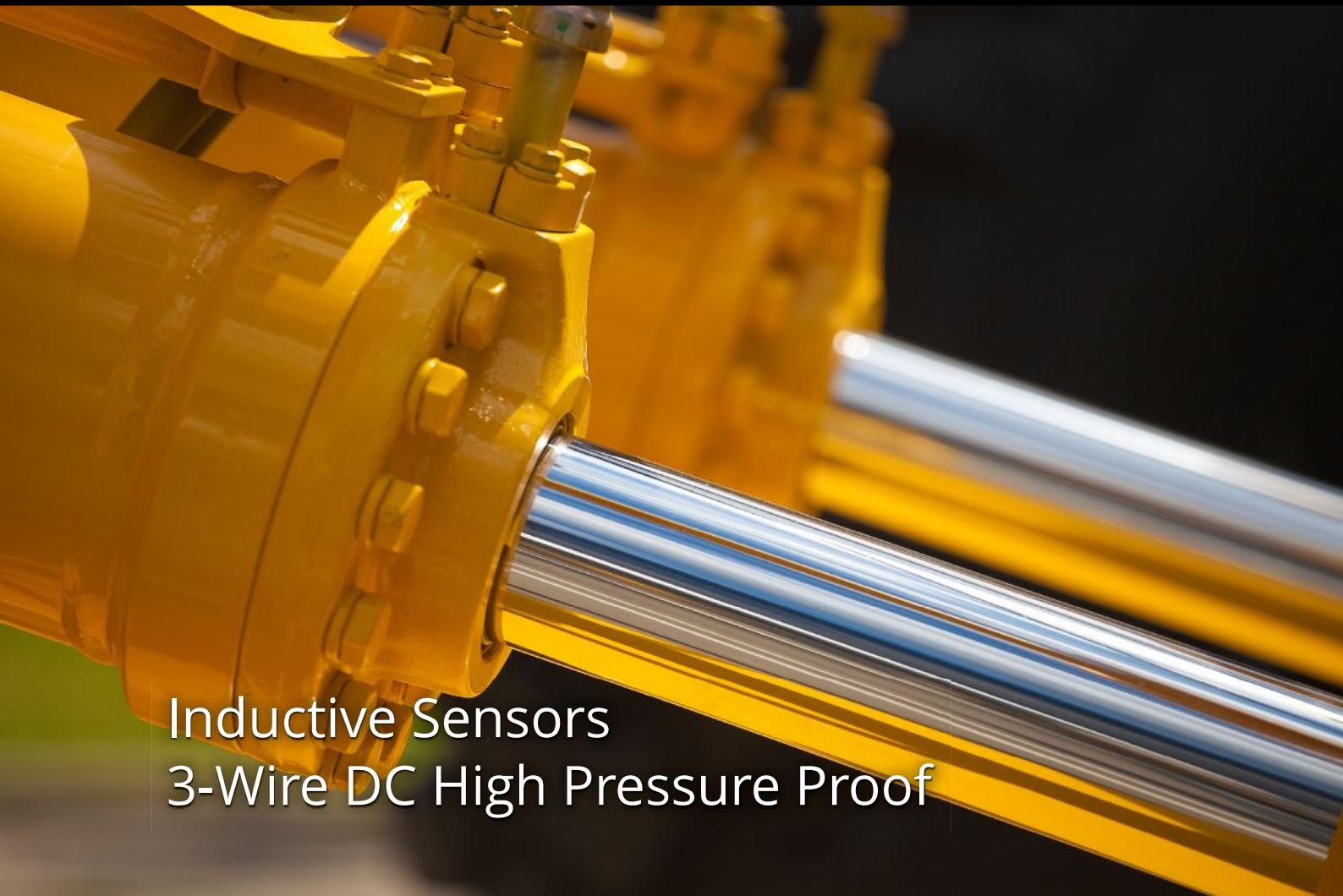
Data sheets are available on
<http://xecro.com>.

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 operating 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-resistant level of up to 1000 bar (14503 psi).

Sensors for pressures of up to 500 bar (7251 psi), utilize traditional ceramic sealing to separate both the ferrite-coil combination and the evaluation electronics from the pressure-facing section of the housing. To achieve outstanding pressure durability, XECRO manufactures select High Pressure Sensors with Metal-Face housings which means that the housing consists of one continuous piece of stainless steel including the sensing face. These full-metal constructions offer excellent peak-pressure immunity and survive 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 basieren auf einer üblichen Keramikdichtplatte, um die Spulen-Ferrit-Kombination und die Elektronik 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 Eigenschaften bei wechselnden Belastungen 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

shielded
bündig
M12x1 | 1.5 mm

shielded
bündig
M12x1 | 1.5 mm

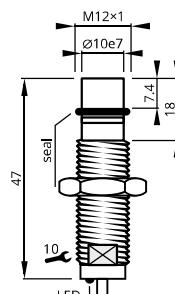
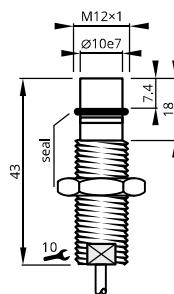
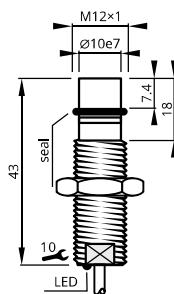
shielded
bündig
M12x1 | 1.5 mm



500 bar · 7251 psi

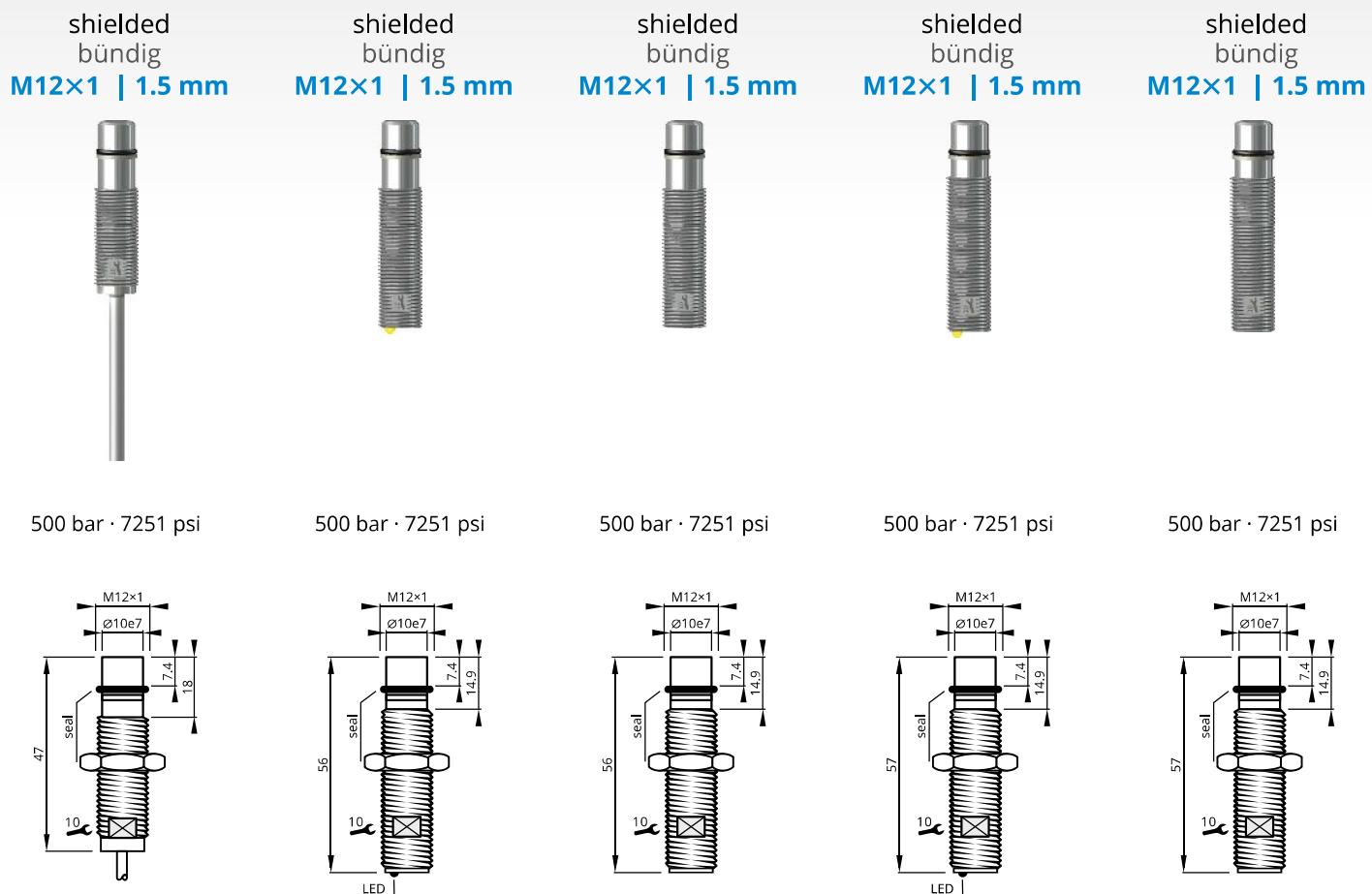
500 bar · 7251 psi

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 _{DC}	10...30 V _{DC}	10...30 V _{DC}	
Reverse polarity protection	Verpolungsschutz	built-in	integriert	built-in	integriert
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	integriert
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	
Correction factors	Korrekturfaktoren	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	Keramik
Housing material	Gehäusewerkstoff	SS304	V2A	SS304	V2A
Switching indicator	Schaltanzeige	built-in	integriert	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	—L	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	—L	IHP12-S1.5NC43-A2P	IHP12-S1.5NC43-N2P	IHP12-S1.5NC47-A2P	

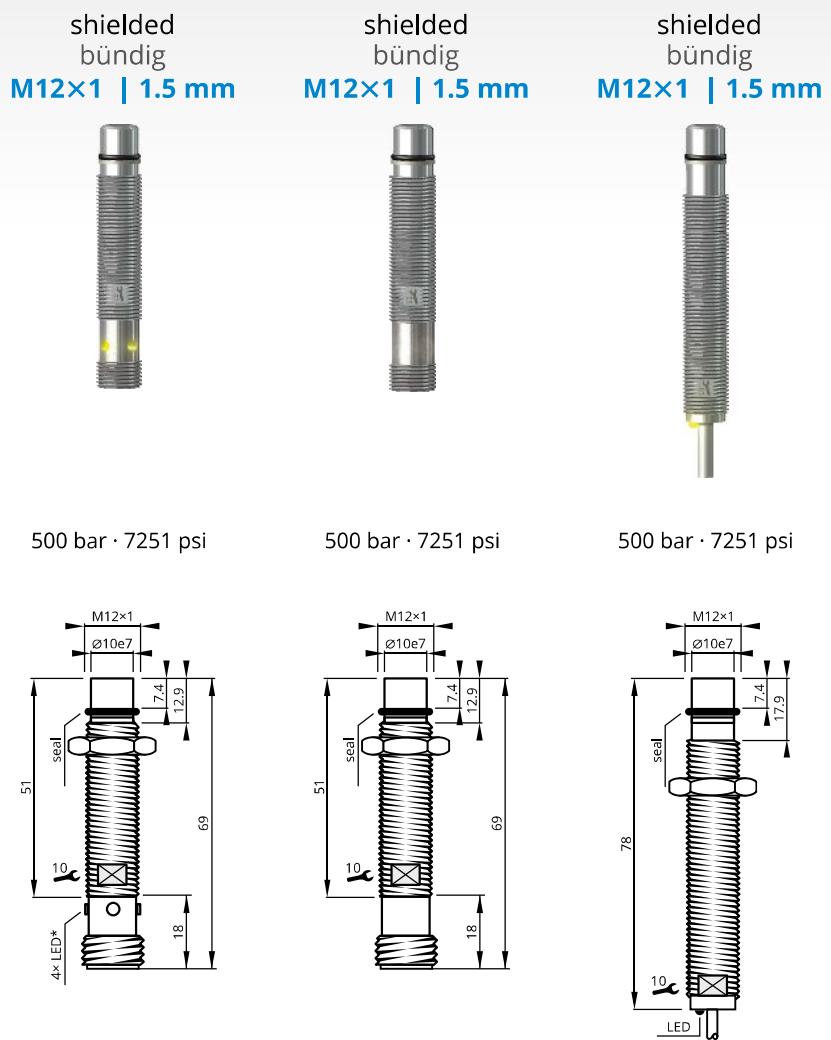
Mind O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8. O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8 beachten.



1.5 mm									
10...30 V _{DC}	built-in								
integriert	<8 mA								
200 mA	200 mA								
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	<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								
Alu 0.45 · Brs 0.50 · SS 0.85	-25...+70 °C	Alu 0.45 · Brs 0.50 · SS 0.85	-25...+70 °C	Alu 0.45 · Brs 0.50 · SS 0.85	-25...+70 °C	Alu 0.45 · Brs 0.50 · SS 0.85	-25...+70 °C	Alu 0.45 · Brs 0.50 · SS 0.85	-25...+70 °C
ceramic	Keramik								
SS304	V2A								
PVC, ultra-flex		conn. M12 M12-Stecker							
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	

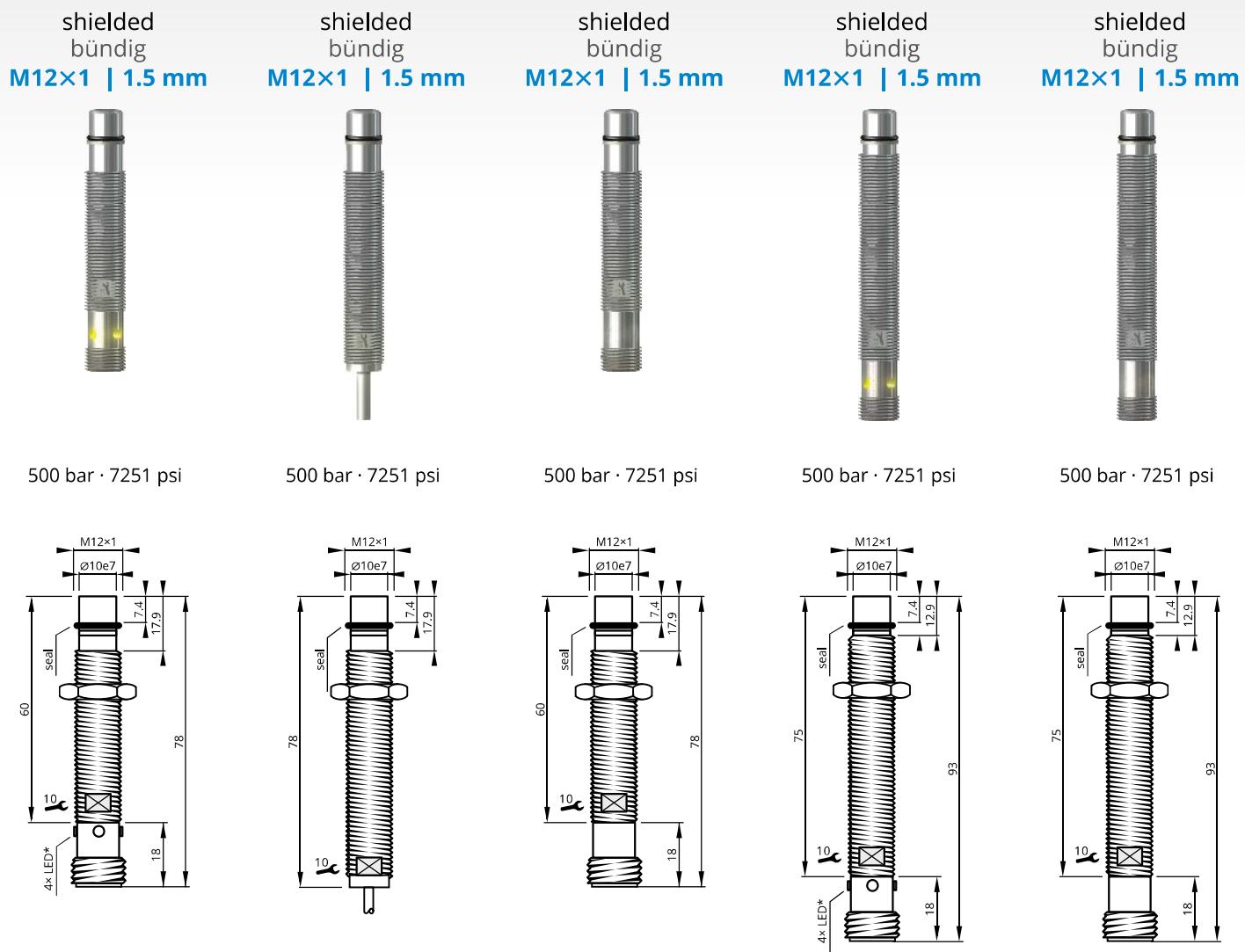
Inductive Proximity Switch 3-Wire DC High Pressure Proof

Induktive Näherungsschalter 3-Leiter DC Hochdruckfest



Sensing distance S_n	Schaltabstand S_n	1.5 mm	1.5 mm	1.5 mm
Operating voltage	Betriebsspannung	10...30 V _{DC}	10...30 V _{DC}	10...30 V _{DC}
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
Correction factors	Korrekturfaktoren	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	built-in
Connection	Anschluss	conn. M12	M12-Stecker	PVC, ultra-flex
Article code PNP, NO	—	IHP12-S1.5PO69-A12	IHP12-S1.5PO69-N12	IHP12-S1.5PO78-A2P
Article code PNP, NC	—L	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	—L	IHP12-S1.5NC69-A12	IHP12-S1.5NC69-N12	IHP12-S1.5NC78-A2P

Mind O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8. O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8 beachten.



| 1.5 mm |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 10...30 V _{DC}
built-in |
| integriert | integriert | integriert | integriert | integriert |
| <8 mA |
| 200 mA |
| built-in | built-in | built-in | built-in | built-in |
| integriert | integriert | integriert | integriert | integriert |
| <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			integriert
conn. M12	M12-Stecker	PVC, ultra-flex	conn. M12	M12-Stecker
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

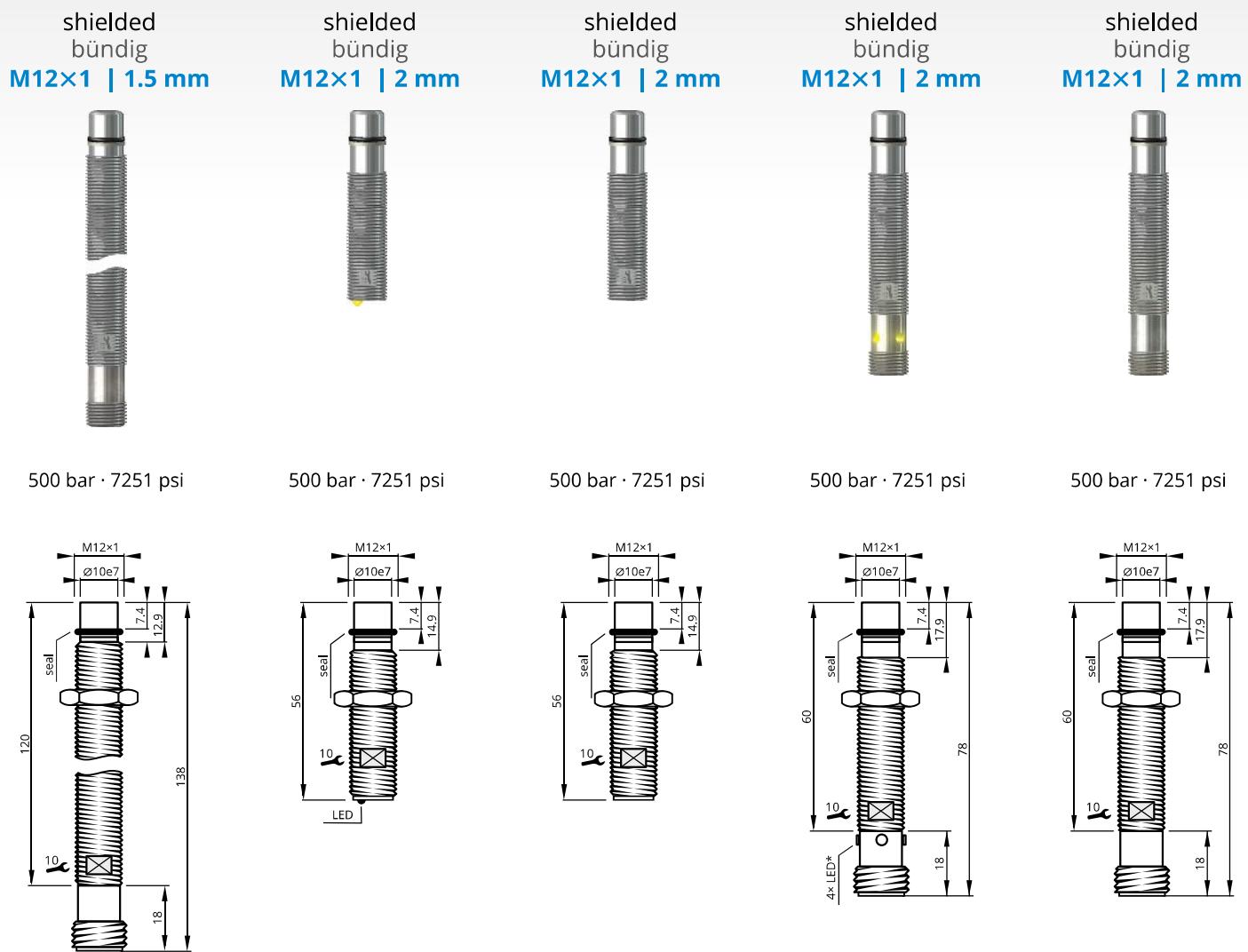
Inductive Proximity Switch 3-Wire DC High Pressure Proof

Induktive Näherungsschalter 3-Leiter DC Hochdruckfest



Sensing distance S_n	Schaltabstand S_n	1.5 mm	1.5 mm	1.5 mm
Operating voltage	Betriebsspannung	10...30 V _{DC}	10...30 V _{DC}	10...30 V _{DC}
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
Correction factors	Korrekturfaktoren	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	built-in
Connection	Anschluss	conn. M12	M12-Stecker	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 ≠ l ≠ 1, S ≠ 5, B ≠ 8. O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8 beachten.



1.5 mm	2 mm	2 mm	2 mm	2 mm
10...30 V _{DC}				
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	integriert	built-in
conn. M12	M12-Stecker	conn. M12	M12-Stecker	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

shielded
bündig
M14×1.5 | 3 mm

shielded
bündig
M14×1.5 | 3 mm

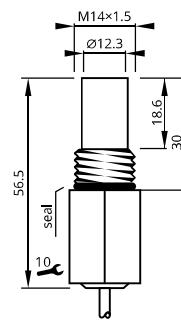
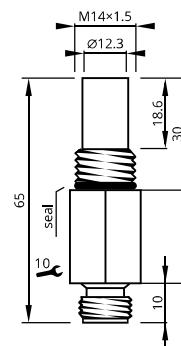
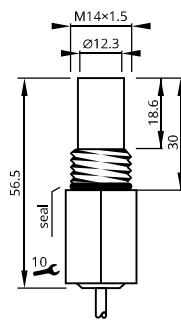
shielded
bündig
M14×1.5 | 3 mm



500 bar · 7251 psi

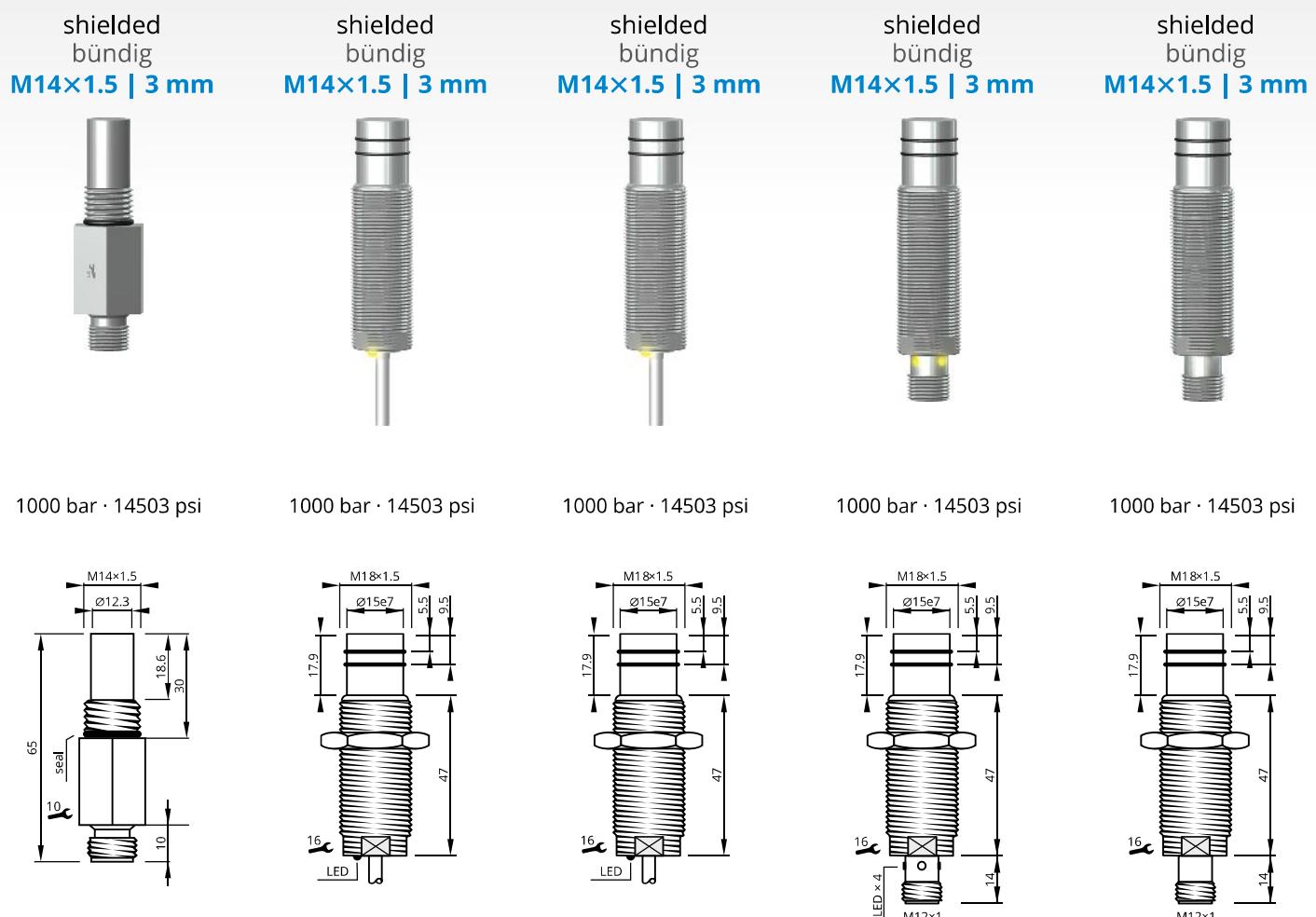
500 bar · 7251 psi

1000 bar · 14503 psi



Sensing distance S_n	Schaltabstand S_n	3 mm	3 mm	3 mm
Operating voltage	Betriebsspannung	10...30 V _{DC}	10...30 V _{DC}	10...30 V _{DC}
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
Correction factors	Korrekturfaktoren	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			V2A
Connection	Anschluss	PVC, ultraflex	conn. M12 M12-Stecker	PVC, ultraflex
Article code PNP, NO	—	IHP14-S3PO56-N2P	IHP14-S3PO65-N12	IHP14-S3PO56S-N2P
Article code PNP, NC	—L	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	—L	IHP14-S3NC56-N2P	IHP14-S3NC65-N12	IHP14-S3NC56S-N2P

Mind O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8. O ≠ 0, I ≠ l ≠ 1, S ≠ 5, B ≠ 8 beachten.



| 3 mm | |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 10...30 V _{DC} | built-in |
| integriert | <8 mA |
| 200 mA |
| built-in | integriert |
| <1.5 V @ 200 mA |
| 500 Hz | 1000 Hz | 1000 Hz | 1000 Hz | 1000 Hz | 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 | 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 |
SS304	V2A	ceramic	Keramik	ceramic	Keramik	ceramic	Keramik	ceramic	Keramik
SS304	V2A								
	built-in	integriert		built-in	integriert	built-in	integriert	built-in	integriert
conn. M12	M12-Stecker								
IHP14-S3PO65S-N12		IHP18-S3PO65S-A2P		IHP18-S3PO65S-N2P		IHP18-S3PO79S-A12		IHP18-S3PO79S-N12	
IHP14-S3PC65S-N12		IHP18-S3PC65S-A2P		IHP18-S3PC65S-N2P		IHP18-S3PC79S-A12		IHP18-S3PC79S-N12	
IHP14-S3NO65S-N12		IHP18-S3NO65S-A2P		IHP18-S3NO65S-N2P		IHP18-S3NO79S-A12		IHP18-S3NO79S-N12	
IHP14-S3NC65S-N12		IHP18-S3NC65S-A2P		IHP18-S3NC65S-N2P		IHP18-S3NC79S-A12		IHP18-S3NC79S-N12	