

COMPACT CATALOG

KOMPAKTKATALOG

SMART BUTTONS
ELEKTRONISCHE TASTER

LED INDICATORS
LED-ANZEIGEN

PHOTOELECTRIC SENSORS
OPTISCHE SENSOREN

HIGH TEMPERATURE LEVEL PROBES
HOCHTEMPERATUR-FÜLLSTANDSONDEN

CYLINDER POSITION SENSORS
PNEUMATIKZYLINDERSCHALTER

INDUCTIVE PROXIMITY SWITCHES
INDUKTIVE NÄHERUNGSSCHALTER

CAPACITIVE PROXIMITY SWITCHES
KAPAZITIVE NÄHERUNGSSCHALTER

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Think for technology

XECRO is an independent company with more than 20 years of experience in the sensor industry. XECRO develops, produces and sells industrial sensors and general industrial electronics worldwide.

Over the years, XECRO has expanded its production line to become one of the most comprehensive ranges in the automation industry; focussing on the highest performance available.

XECRO's innovations and the high standard of its technology enable us to produce the thinnest and shortest sensors, quadruple sensing distances, high pressure proof, heatproof, and extremely resistant proximity switches with closed stainless housings.

Global organization

XECRO is one of the world's leading developers and manufacturers of inductive and capacitive technology with customers in Europe, North and Latin America, Asia, Africa, and the Middle East. The organization operates in compliance with the strict rules and directives of ISO 9001:2015.

Our headquarters, situated in a modern 2000 m² facility in the vicinity of Hanover, Germany, is home to our Financial and Sales, Research and Development, Customer Support, and Shipping departments. Customers benefit from the synergistic nature of our organization: XECRO produces in Germany and in cooperation with selected strategic production facilities within the European Union.

Dynamic research and development

Research and Development are the heart of the company. Due to the expertise we have gained from many years of implementing individual solutions, we are able to adapt our products to meet almost any customer need.

If special housings are required, then we design them in 3D. XECRO has *rapid prototyping* for any shape and can provide IGES or STEP files in advance to verify that the planned integration will be possible.

All XECRO products are made to the highest accuracy and are fully tested after production. The **CE** marking on the products shows the conformity to EU and EN standards and directives.

Technikorientiertes Denken

XECRO ist ein unabhängiges Unternehmen mit mehr als 20 Jahren Erfahrung in der Sensorindustrie. XECRO entwickelt, produziert und vertreibt Industriesensoren und allgemeine Industrieelektronik weltweit.

Mit den Jahren hat XECRO seine Produktreihen dahingehend erweitert, dass sie heute zu einer der vollständigsten und leistungsfähigsten in der Automatisierungstechnik zählt.

XECROs Innovation und der hohe Stand seiner Technologie ermöglichen, die dünnsten und kürzesten Sensoren, Sensoren mit vierfachem Normschaltabstand, hochdruck- und hitzefesten Sensoren, sowie Sensoren mit außergewöhnlich widerstandsfähigen Vollmetallgehäusen zu produzieren.

Weltweite Organisation

XECRO ist einer der führenden Anbieter induktiver und kapazitiver Technologie und beliefert Kunden in Europa, Nord- und Lateinamerika, Asien, Afrika und dem Nahen Osten. Die Organisation arbeitet in Übereinstimmung mit den strengen Vorgaben der ISO 9001:2015.

Unser Hauptsitz nahe Hannover repräsentiert das Zentrum unseres Handelns. Finanzen und Vertrieb, Forschung und Entwicklung, Kundendienst und Versand befinden sich in einem modernen Gebäude mit 2000 m². Kunden profitieren von unserer synergetischen Organisation. XECRO stellt in Deutschland her und in enger Zusammenarbeit mit strategisch ausgewählten Produktionsstätten innerhalb der Europäischen Union.

Engagierte Forschung und Entwicklung

Forschung und Entwicklung bilden den Schwerpunkt des Unternehmens. Auf Grund in Jahren gewonnener Erfahrungen bei der Implementierung individueller Lösungen sind wir in der Lage, unsere Produkte auf nahezu alle Anforderungen unserer Kunden anzupassen.

Wenn besondere Gehäuse erforderlich sind, dann entwerfen wir diese in 3D. XECRO verfügt über *Rapid Prototyping* für jede Form und kann bereits im Vorfeld IGES- oder STEP-Dateien zur Verfügung stellen, um eine spätere Integration sicherzustellen.

Alle Produkte von XECRO werden mit der höchsten Präzision hergestellt und anschließend vollständig getestet. Die Übereinstimmung der Produkte mit EU- und EN-Standards dokumentiert die **CE**-Kennzeichnung auf allen Produkten.



4



Smart buttons
touch and push sensitive

Intelligente Taster
berührungs- und druckempfindl.

6



Beacons
multiple colored LED + sound

Signalleuchten
mehrfarbig LED + Signalton

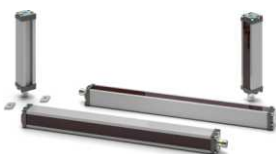
8



Multiple colored LED pilots
automatically flashing

Mehrfarbige LED-Leuchtmelder
selbständig blinkend

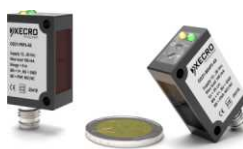
10



Area sensors (light curtains)
high resolution crossed beams

Lichtgitter mit gekreuzten Strahlen
hochauflösend

12



Photoelectric sensors
reflective, background suppress.

Optische Sensoren
reflektiv, Hintergrundausblendung

14



Frame light barriers
detecting falling objects

Rahmen-Lichtschranken
erkennen Objekte im freien Fall

16



Fork light barriers
red light, infrared light, laser

Gabel-Lichtschranken
Rotlicht, Infrarotlicht, Laser

19



High temperature level probe
up to 230 °C | 443 °F—hotmelt

Hochtemperatur-Füllstandsonde
bis zu 150 °C – Heißkleber

20



Ring sensors
inductive, capacitive

Ringsensoren
induktiv, kapazitiv

22



Cylinder Position Sensors
electronic

Pneumatikzylinderschalter
elektronisch

24



Inductive proximity switches
Miniature

Induktive Näherungsschalter
Miniatur

26



Inductive proximity switches
high performance, 4x S_N

Induktive Sensoren
Hochleistung, 4x S_N

34



Inductive proximity switches
closed stainless steel housing

Induktive Sensoren
Vollmetallgehäuse

36



Inductive proximity switches
high temperature up to 180 °C

Induktive Sensoren
Hochtemperatur bis zu 180 °C

38



Inductive proximity switches
food grade, IP69k, -40 °C

Induktive Sensoren
lebensmitteltauglich, IP69k, -40 °C

40



Inductive proximity switches
pressure proof up to 1000 bar

Induktive Näherungsschalter
druckfest bis zu 1000 bar

42



Inductive proximity switches
analog outputs

Induktive Näherungsschalter
Analogausgänge

44



Inductive proximity switches
2-wire DC, 2-wire AC

Induktive Näherungsschalter
2-Leiter DC, 2-Leiter AC

46



Capacitive proximity switches
performance, chem. resistant

Kapazitive Näherungsschalter
Hochleistung, chem. resistent

50

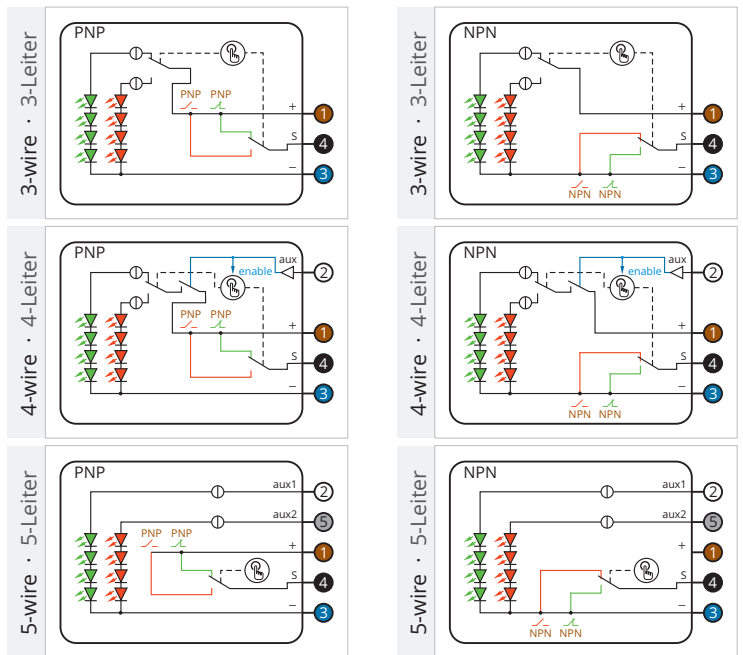


Capacitive proximity switches
high temperature up to 150 °C

Kapazitive Näherungsschalter
Hochtemperatur bis zu 150 °C

Electronic Buttons, Touch or Push Sensitive Elektronische Taster, berührungs- oder druckempfindlich

- Fits into Ø 22.5 mm mounting standard holes
Passt in Ø 22,5 mm Montagestandardbohrungen
- Touch or push sensitive
Berührungs- oder druckempfindlich
- No moving parts — no wear
Keine bewegten Teile – kein Verschleiß
- 100% waterproof and oilproof — IP69k
100% wasser- und öldicht – IP69k
- Shock resistant — completely potted
Erschütterungsfest – vollständig vergossen
- Bright optical bicolor feedback
Helle optische zweifarbige Rückmeldung
- Up to two inputs for individual LED control
Bis zu zwei externe Eingänge zur LED-Ansteuerung



Technical data (typ.)

Number of operations	no mechanical wear
Supply voltage	10...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<30 mA @ 24 V
Light source	high efficient LED
Housing material	brass, nickel plated
Bezel material	stainless steel 1.4305
Hygienic bezel material	stainless steel 1.4404
Sensing face material	polycarbonate
Operating temperature	–20...+55 °C –4...+131 °F
IP code, on the front	IP69k

Technische Daten (typ.)

Anzahl der Betätigungen	kein mechanischer Verschleiß
Versorgungsspannung	10...35 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<30 mA @ 24 V
Leuchtmittel	Hocheffizienz-LED
Gehäusematerial	Messing, vernickelt
Material der Einfassung	Edelstahl 1.4305
Hygienische Einfassung	Edelstahl 1.4404, V4A
Material der Tastfläche	Polycarbonat
Betriebstemperatur	–20...+55 °C
Schutzart, frontseitig	IP69k



Note: *Touch* buttons also react to water on the touch surface. *Push* buttons are immune to water. Please think of it when you select a button.

Hinweis: *Touch*-Taster reagieren auch auf Wasser auf der Tastfläche. *Druck*taster sind gegen Wasser immun. Bitte denken Sie daran, wenn Sie einen Taster auswählen.

Operating mode Betriebsart		IO-Link mode IO-Link-Modus				Bezel Einfassung	Actuation type Betätigungsart	Wires Leiter	Connection Anschluss	Order code Bestellnummer
 Universal · Smart · Easy · Dynamic · Static · Latching · Combo · Dynamisch · Statisch · Rastend · Combo		1. Switching IO mode: You can select or define persistent features by IO-Link and then operate the button without an IO-Link device. 2. IO-Link mode: You control the button at each moment by a 8 bit value. Please read our IO-Link documentation to access the IO-Link features of our buttons.				Standard	Touch · Berührung Pressure · Druck	3	Connector M12	TS22-3IO-N12
						Protector Schutzkragen	Touch · Berührung Pressure · Druck		Connector M12	PS22-3IO-N12
							Connector M12		TP22-3IO-N12	
						Flush Bündig	Touch · Berührung Pressure · Druck		Connector M12	TF22-3IO-N12
							Connector M12		PF22-3IO-N12	
						Hygienic Hygienisch	Touch · Berührung Pressure · Druck		Connector M12	TH22-3IO-N12
Connector M12	PH22-3IO-N12									
Idle Unbetätigt	Activated Betätigt	Output Ausgang	Bezel Einfassung	Actuation type Betätigungsart	Wires Leiter	Connection Anschluss	Operation mode · Betriebsart Order code · Bestellnummer			
							Static	Dynamic	Latching	Combo
GR Other color pairs available Weiter erhältliche Farbpaaere WR WG BR In the order code replace GR by WR, WG, or BR. Ersetzen Sie GR in der Bestellnummer durch WR, WG oder BR.		PNP, NO	Standard	Touch · Berührung	3	Connector M12	TS22S-3POGR-N12	TS22D-3POGR-N12	TS22T-3POGR-N12	TS22C-3POGR-N12
					4	Connector M12	TS22S-4POGR-N12	TS22D-4POGR-N12	TS22T-4POGR-N12	TS22C-4POGR-N12
					5	Pigtail + M12 con.	TS22S-5POGR-3U12	TS22D-5POGR-3U12	TS22T-5POGR-3U12	TS22C-5POGR-3U12
				Push · Druck	3	Connector M12	PS22S-3POGR-N12	PS22D-3POGR-N12	PS22T-3POGR-N12	PS22C-3POGR-N12
					4	Connector M12	PS22S-4POGR-N12	PS22D-4POGR-N12	PS22T-4POGR-N12	PS22C-4POGR-N12
					5	Pigtail + M12 con.	PS22S-5POGR-3U12	PS22D-5POGR-3U12	PS22T-5POGR-3U12	PS22C-5POGR-3U12
			Protector Schutzkragen	Touch · Berührung	3	Connector M12	TP22S-3POGR-N12	TP22D-3POGR-N12	TP22T-3POGR-N12	TP22C-3POGR-N12
					4	Connector M12	TP22S-4POGR-N12	TP22D-4POGR-N12	TP22T-4POGR-N12	TP22C-4POGR-N12
					5	Pigtail + M12 con.	TP22S-5POGR-3U12	TP22D-5POGR-3U12	TP22T-5POGR-3U12	TP22C-5POGR-3U12
				Push · Druck	3	Connector M12	PP22S-3POGR-N12	PP22D-3POGR-N12	PP22T-3POGR-N12	PP22C-3POGR-N12
					4	Connector M12	PP22S-4POGR-N12	PP22D-4POGR-N12	PP22T-4POGR-N12	PP22C-4POGR-N12
					5	Pigtail + M12 con.	PP22S-5POGR-3U12	PP22D-5POGR-3U12	PP22T-5POGR-3U12	PP22C-5POGR-3U12
			Flush Bündig	Touch · Berührung	3	Connector M12	TF22S-3POGR-N12	TF22D-3POGR-N12	TF22T-3POGR-N12	TF22C-3POGR-N12
					4	Connector M12	TF22S-4POGR-N12	TF22D-4POGR-N12	TF22T-4POGR-N12	TF22C-4POGR-N12
					5	Pigtail + M12 con.	TF22S-5POGR-3U12	TF22D-5POGR-3U12	TF22T-5POGR-3U12	TF22C-5POGR-3U12
				Push · Druck	3	Connector M12	PF22S-3POGR-N12	PF22D-3POGR-N12	PF22T-3POGR-N12	PF22C-3POGR-N12
					4	Connector M12	PF22S-4POGR-N12	PF22D-4POGR-N12	PF22T-4POGR-N12	PF22C-4POGR-N12
					5	Pigtail + M12 con.	PF22S-5POGR-3U12	PF22D-5POGR-3U12	PF22T-5POGR-3U12	PF22C-5POGR-3U12
			Hygienic Hygienisch	Touch · Berührung	3	Connector M12	TH22S-3POGR-N12	TH22D-3POGR-N12	TH22T-3POGR-N12	TH22C-3POGR-N12
					4	Connector M12	TH22S-4POGR-N12	TH22D-4POGR-N12	TH22T-4POGR-N12	TH22C-4POGR-N12
					5	Pigtail + M12 con.	TH22S-5POGR-3U12	TH22D-5POGR-3U12	TH22T-5POGR-3U12	TH22C-5POGR-3U12
				Push · Druck	3	Connector M12	PH22S-3POGR-N12	PH22D-3POGR-N12	PH22T-3POGR-N12	PH22C-3POGR-N12
					4	Connector M12	PH22S-4POGR-N12	PH22D-4POGR-N12	PH22T-4POGR-N12	PH22C-4POGR-N12
					5	Pigtail + M12 con.	PH22S-5POGR-3U12	PH22D-5POGR-3U12	PH22T-5POGR-3U12	PH22C-5POGR-3U12

Polarity: PNP or NPN. For NPN, replace P in the middle of the order code by N.
Polarität: PNP oder NPN. Für NPN ersetzen Sie P in der Mitte der Bestellnummer durch N.

Output function: Normally open or normally closed. For normally closed replace O by C.
Ausgangsfunktion: Schließer oder Öffner. Für Öffner ersetzen Sie O durch C.

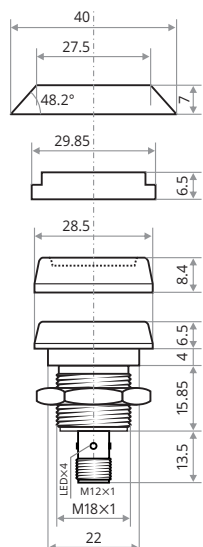
Available connections
Erhältliche Anschlüsse

Suffix	Description	Beschreibung	3 poles	4 poles	5 poles
N12	M12 Euro male connector	M12-Eurostecker	●	●	○
3U12	M12 Euro male connector pigtail (30 cm PU cable)	M12-Eurostecker Pigtail (30 cm PU-Kabel)	●	●	●
N2P	2 m PVC cable	2 m PVC-Kabel	●	●	○

Available Symbols · Verfügbare Symbole



Connector M12 · Stecker M12



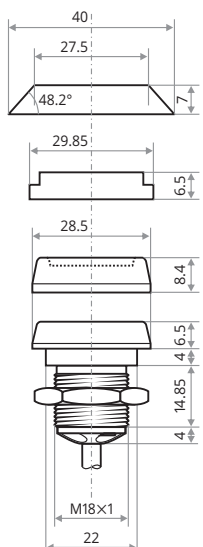
Hygienic Hygienisch

Flush Bündig

Protector Schutzkragen

Standard

Connecting cable · Kabelanschluss



LED Beacons, multiple colored LED

LED-Anzeigen, mehrfarbige LED

- ▶ Fits into Ø 22.5 mm mounting standard
Passt in Ø 22,5 mm Montagestandard
- ▶ Up to 7 colors, blink patterns, and sounds
Bis zu 7 Farben, Blinkmuster und Signaltöne
- ▶ Homogeneous bright illumination
Gleichmäßige helle Ausleuchtung
- ▶ Also available with stainless steel (1.4404) housing
Auch mit Gehäuse aus Edelstahl (1.4404) erhältlich
- ▶ Versions with synchronization available
Ausführungen mit Gleichtakt erhältlich
- ▶ Also available with low-current inputs
Auch mit Low-Current-Eingängen erhältlich

Customer-specific configuration

A color, a blink pattern, and a sound can be assigned to each of the seven input combinations.

Kundenspezifische Konfiguration

Jeder der sieben Eingangskombinationen kann jeweils eine Farbe, ein Blinkmuster und ein Signalton zugeordnet werden.



Technical data (typ.)

Supply voltage	12...24 V _{DC} IO-Link 24 V _{DC}
Reverse polarity protection	built-in
Power consumption	≈2.4 W
Max. inrush current (limited)	<200 mA
Light source	high efficient LED
PWM dimmable	no
Self-generated frequency	≤20 Hz*
Bulb material	polycarbonate
Operating temperature	-20...+50 °C -4...+122 °F
IP code	IP67
devices with sound	IP67, bottom IP63

* Only for devices which do not generate their own blink pattern.

Technische Daten (typ.)

Versorgungsspannung (V _{CC})	12...24 V _{DC} IO-Link 24 V _{DC}
Verpolungsschutz	integriert
Leistungsaufnahme	≈2,4 W
Max. Einschaltstrom	<200 mA
Leuchtmittel	hocheffiziente LED
PWM dimmbar	Nein
Selbsterzeugte Frequenz	≤20 Hz*
Material Leuchtkörper	Polykarbonat
Betriebstemperatur	-20...+50 °C
Schutzart	IP67
Geräte mit Signalton	IP67, Unterseite IP63

* Nur für Geräte, die ihr Blinkmuster nicht selbst erzeugen.



Program Programm	Connection Anschluss	Input · Eingang 1 4 2	Blink pattern Blinkmuster	Sound Signalton	Housing Gehäuse	Order code Bestellnummer
1. Switching IO mode: You can select or define a persistent program by IO-Link and then operate the LED indicator without an IO-Link device. 2. IO-Link standard mode: You can select or define a program and use that program by IO-Link. 3. IO-Link direct mode: You control the color (24 bit RGB) and the sound (if available) at each moment by a 32 bit value.	Connector M12* Stecker M12*		24-bit RGB color space 24 Bit RGB-Farbraum	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-IO-N12#000 SD60Z-IO-S-N12#000 SD60S-IO-N12#000 SD60S-IO-S-N12#000
R-G-B, secondary colors R-G-B, Mischfarben		Activating more than one color at the same time yields secondary colors. Die gleichzeitige Aktivierung mehrerer Farben ergibt Mischfarben.				
001	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ● ● ○ ● ● ● ○ ● ● ●	off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#001 SD60S-PW-N12#001
R-G-Y alternating R-G-Y wechselnd		When more than one color is activated at the same time, then the selected colors cycle. Wird mehr als eine Farbe gleichzeitig angesteuert, die gewählten Farben wechseln zyklisch.				
002	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ●	off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#002 SD60Z-PWS-N12#002 SD60S-PW-N12#002 SD60S-PWS-N12#002
R-G-Y with prioritized inputs R-G-Y mit priorisierten Eingängen		GREEN can remain permanently activated. YELLOW overrides green, RED overrides yellow. GRÜN kann dauerhaft aktiviert bleiben. GELB übersteuert grün, ROT übersteuert gelb.				
003	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ●	off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#003 SD60Z-PWS-N12#003 SD60S-PW-N12#003 SD60S-PWS-N12#003
R-G-Y with prioritized inputs R-G-Y mit priorisierten Eingängen		GREEN can remain permanently activated. YELLOW blinks slowly and overrides green, RED blinks quickly and overrides yellow. GRÜN kann dauerhaft aktiviert bleiben. GELB blinkt langsam und übersteuert grün, ROT blinkt schnell und übersteuert gelb.				
004	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ●	off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#004 SD60Z-PWS-N12#004 SD60S-PW-N12#004 SD60S-PWS-N12#004
R-G-Y with prioritized inputs R-G-Y mit priorisierten Eingängen		GREEN can remain permanently activated. YELLOW blinks quickly and overrides green, RED bursts and overrides yellow. GRÜN kann dauerhaft aktiviert bleiben. GELB blinkt schnell und übersteuert grün, ROT flackert und übersteuert gelb.				
005	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ●	off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#005 SD60Z-PWS-N12#005 SD60S-PW-N12#005 SD60S-PWS-N12#005
R-G-Y with blink enable R-G-Y mit Blink-Auswahl		Red, green, and yellow form the basic or mixed colors. A signal at pin 1 (BR) generates a blink cycle of the selected color. Rot, Grün und Gelb bilden die Grund- bzw. Mischfarben. Ein Signal an Pin 1 (BR) erzeugt einen Blinktakt der gewählten Farbe.				
018	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ●	off off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#018 SD60Z-PWS-N12#018 SD60S-PW-N12#018 SD60S-PWS-N12#018
R-G-B with blink enable R-G-B mit Blink-Auswahl		Red, green, and blue form the basic or mixed colors. A signal at pin 1 (BR) generates a blink cycle of the selected color. Rot, Grün und Blau bilden die Grund- bzw. Mischfarben. Ein Signal an Pin 1 (BR) erzeugt einen Blinktakt der gewählten Farbe.				
019	Connector M12* Stecker M12*	○ ○ ○ ○ ○ ● ○ ● ○ ● ○ ○ ● ○ ○ ● ● ○ ● ● ●	off off 	○ ● ○ ●	Zinc die-cast Zinkdruckguss Stainless 1.4404 Edelstahl 1.4404	SD60Z-PW-N12#019 SD60Z-PWS-N12#019 SD60S-PW-N12#019 SD60S-PWS-N12#019

Devices with synchronization and low-current inputs are also available.
Geräte mit Gleichtakt und Low-Current-Eingängen sind ebenfalls verfügbar.

★ Order codes are valid for M12 connector (-N12). Cable connection (-N2P) also available.
★ Bestellnummern gelten für M12-Stecker (-N12). Festkabel (-N2P) ebenfalls erhältlich.

LED Pilots, multiple colored LED

LED-Leuchtmelder, mehrfarbige LED

- ▶ Field and panel mount versions
Vor-Ort-Montage und Fronttafeleinbau
- ▶ Up to 7 colors and blink patterns
Bis zu 7 Farben und Blinkmuster
- ▶ Homogeneous bright illumination
Gleichmäßig helle Ausleuchtung
- ▶ Food-grade hygienic version available
Hygieneausführung erhältlich
- ▶ Versions with blink synchronization available
Ausführungen mit Gleichtaktblinken erhältlich
- ▶ Also available with low-current inputs
Auch mit Low-Current-Eingängen erhältlich

Customer-specific configuration

A color and a blink pattern can be assigned to each of the seven input combinations.

Kundenspezifische Konfiguration

Jeder der sieben Eingangskombinationen kann jeweils eine Farbe und ein Blinkmuster zugeordnet werden.



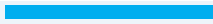
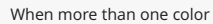
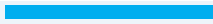
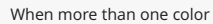
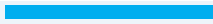
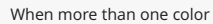
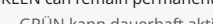
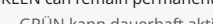
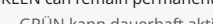
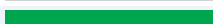
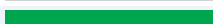
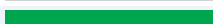
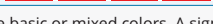
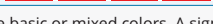
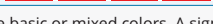
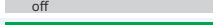
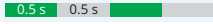
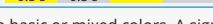
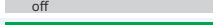
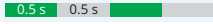
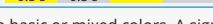
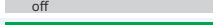
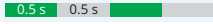
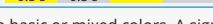
Technical data (typ.)	
Supply voltage	12...24 V _{DC}
Reverse polarity protection	built-in
Current consumption	<50 mA*
Light source	high efficient LED
PWM dimmable	no
Housing material	brass, nickel plated
Bezel material	
MLS22, MLF22, MLP22	stainless steel 1.4305
MLH22	stainless steel 1.4404
Pane material	polycarbonate
Operating temperature	−20...+50 °C −4...+122 °F
IP code	IP67, Ø22.5 IP69k IP67

* These multiple colored LED pilots cannot be dimmed by PWM.

Technische Daten (typ.)	
Versorgungsspannung	12...24 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<50 mA*
Leuchtmittel	hocheffiziente LED
PWM dimmbar	Nein
Gehäusematerial	Messing, vernickelt
Material der Einfassung	
MLS22, MLF22, MLP22	Edelstahl 1.4305
MLH22	Edelstahl 1.4404 (V4A)
Scheibenmaterial	Polycarbonat
Betriebstemperatur	−20...+50 °C
Schutzart	IP67, Ø22,5 IP69k IP67

* Diese LED-Anzeigen können nicht per PWM gedimmt werden.



Program Programm	Connection Anschluss	Input · Eingang 1 4 2	Blinkpattern Blinkmuster	Version Ausführung	Order code Bestellnummer																																
1. Switching IO mode: You can select or define a persistant program by IO-Link and then operate the LED indicator without an IO-Link device.																																					
2. IO-Link standard mode: You can select or define a program and use that program by IO-Link.																																					
3. IO-Link direct mode: You control the color (24 bit RGB) and the sound (if available) at each moment by a 32 bit value.																																					
Connector M12* Stecker M12*			 24 Bit RGB-Farbraum	M18x1 M30x1.5 ø22.5, Standard ø22.5, Protector ø22.5, Flush ø22.5, Hygienic	MLS18-IO-N12#000 MLS30-IO-N12#000 MLS22-IO-N12#000 MLP22-IO-N12#000 MLF22-IO-N12#000 MLH22-IO-N12#000																																
R-G-B, secondary colors R-G-B, Mischfarben																																					
Activating more than one color at the same time yields secondary colors. Die gleichzeitige Aktivierung mehrerer Farben ergibt Mischfarben.																																					
001	Connector M12* Stecker M12*	<table><tr><td>○</td><td>○</td><td>○</td></tr><tr><td>○</td><td>○</td><td>●</td></tr><tr><td>○</td><td>●</td><td>○</td></tr><tr><td>○</td><td>●</td><td>●</td></tr><tr><td>●</td><td>○</td><td>○</td></tr><tr><td>●</td><td>○</td><td>●</td></tr><tr><td>●</td><td>●</td><td>○</td></tr><tr><td>●</td><td>●</td><td>●</td></tr></table>	○	○	○	○	○	●	○	●	○	○	●	●	●	○	○	●	○	●	●	●	○	●	●	●	<table><tr><td>off</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr></table>	off								M18x1 M30x1.5 ø22.5, Standard ø22.5, Protector ø22.5, Flush ø22.5, Hygienic	MLS18-PW-N12#001 MLS30-PW-N12#001 MLS22-PW-N12#001 MLP22-PW-N12#001 MLF22-PW-N12#001 MLH22-PW-N12#001
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R-G-Y alternating R-G-Y wechselnd																																					
When more than one color is activated at the same time, then the selected colors cycle. Wird mehr als eine Farbe gleichzeitig angesteuert, die gewählten Farben wechseln zyklisch.																																					
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R-G-Y with prioritized inputs R-G-Y mit priorisierten Eingängen																																					
GREEN can remain permanently activated. YELLOW overrides green, RED overrides yellow. GRÜN kann dauerhaft aktiviert bleiben. GELB übersteuert grün, ROT übersteuert gelb.																																					
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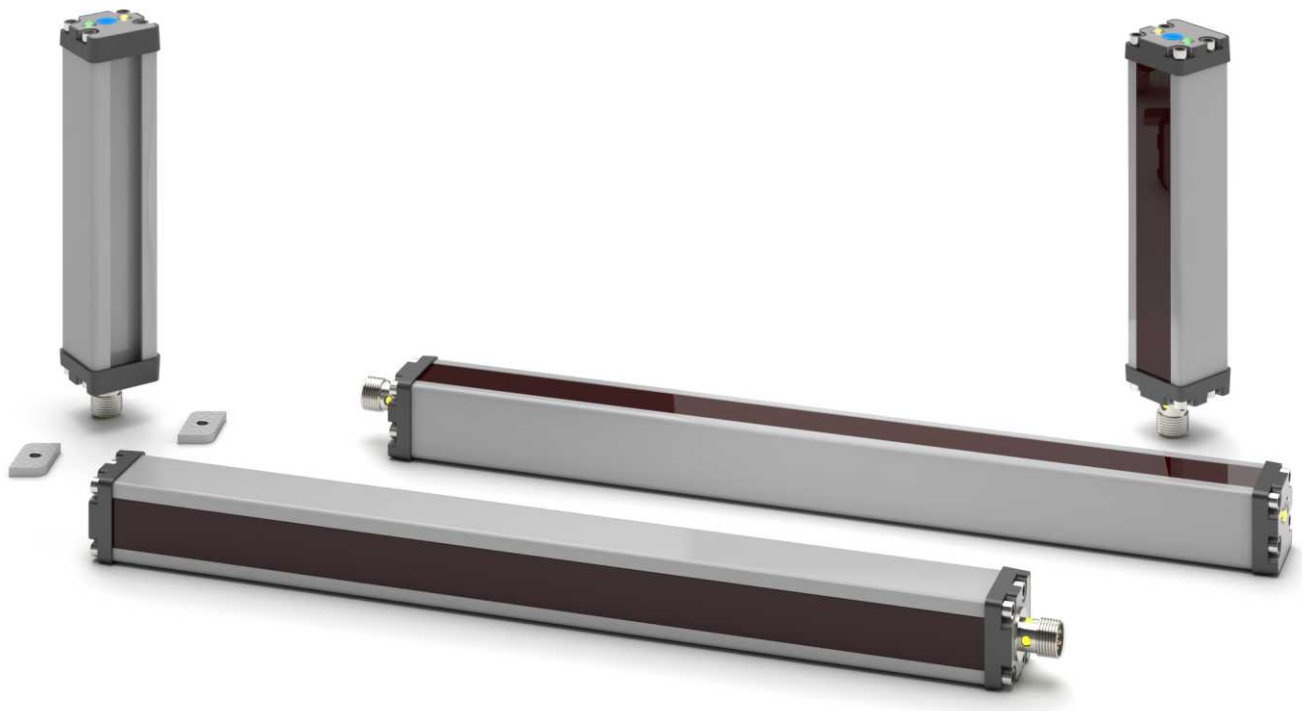
Devices with synchronization and low-current inputs are also available.
Geräte mit Synchronisation und Low-Current-Eingängen sind ebenfalls verfügbar.

★ Order codes are valid for M12 connector (-N12). Cable connection (-N2P) also available.
★ Bestellnummern gelten für M12-Stecker (-N12). Festkabel (-N2P) ebenfalls erhältlich.

Crossed-Beams Area Sensors (Light Curtains)

Lichtgitter mit gekreuzten Strahlen

- ▶ Fully crossed beam geometry
- ▶ Extremely short blind zone
- ▶ High switching frequency
- ▶ High ambient light immunity
- ▶ Dual output NO and NC
- ▶ Mute input (PNP or NPN) available
- ▶ Sturdy metal housing with rubber-coated end caps
- ▶ Recessed optical window protected against mechanical impact
- ▶ T-slot nuts allow flexible mounting and height adjustment
- ▶ IP code IP65
- ▶ Vollständig gekreuzte Strahlgeometrie
- ▶ Extrem kurze Totzone
- ▶ Hohe Schaltfrequenz
- ▶ Hohe Fremdlichtunempfindlichkeit
- ▶ Doppelausgang Schließer und Öffner
- ▶ Muting-Eingang (PNP oder NPN) verfügbar
- ▶ Robustes Metallgehäuse mit gummierten Endkappen
- ▶ Zurückgesetzte Frontscheibe geschützt vor mechanischem Aufprall
- ▶ Nutensteine erlauben eine flexible Montage und Höheneinstellung
- ▶ Schutzart IP65



Technical data (typ.)

Supply voltage	10...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<50 mA
Current load capability	2× 200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.2 V @ 200 mA
Ambient light immunity	>100 klx
Switching indicator	LED, yellow
Housing material	aluminum, powder coated
Operating temperature	−20...+55 °C −4...+131 °F
IP code	IP65

★ Transmitters with mute input (PNP or NPN) are available on request.

Technische Daten (typ.)

Versorgungsspannung	10...35 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<50 mA
Ausgangsbelastbarkeit	2× 200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,2 V @ 200 mA
Fremdlichtunempfindlichkeit	>100 klx
Schaltanzeige	LED, gelb
Gehäusematerial	Aluminium, pulverbeschichtet
Betriebstemperatur	−20...+55 °C
Schutzart	IP65

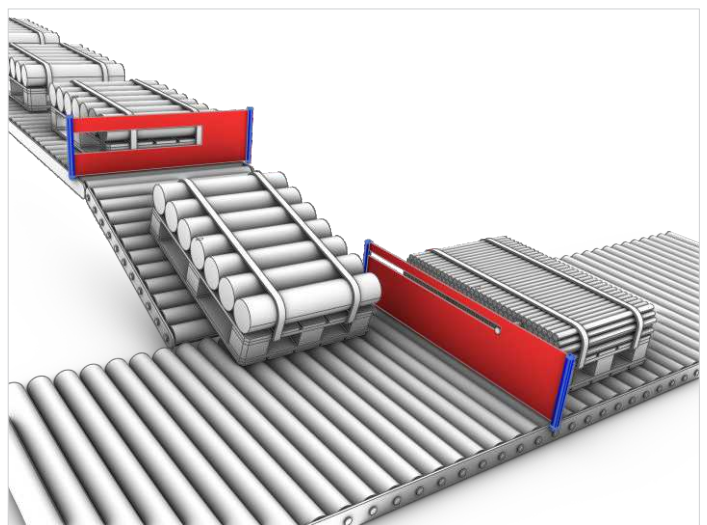
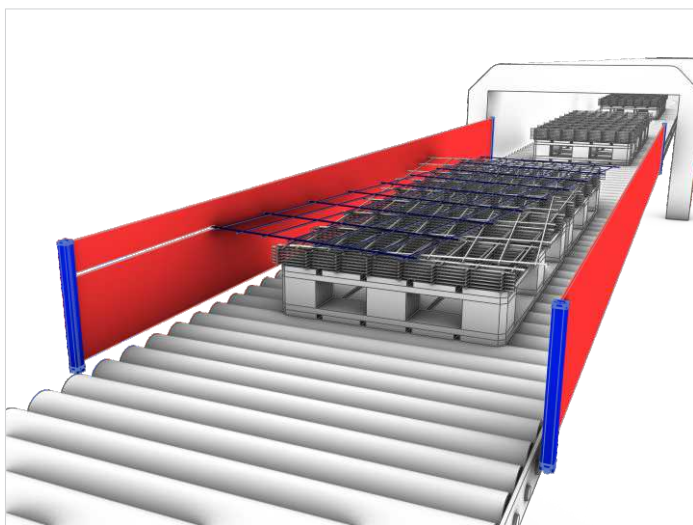
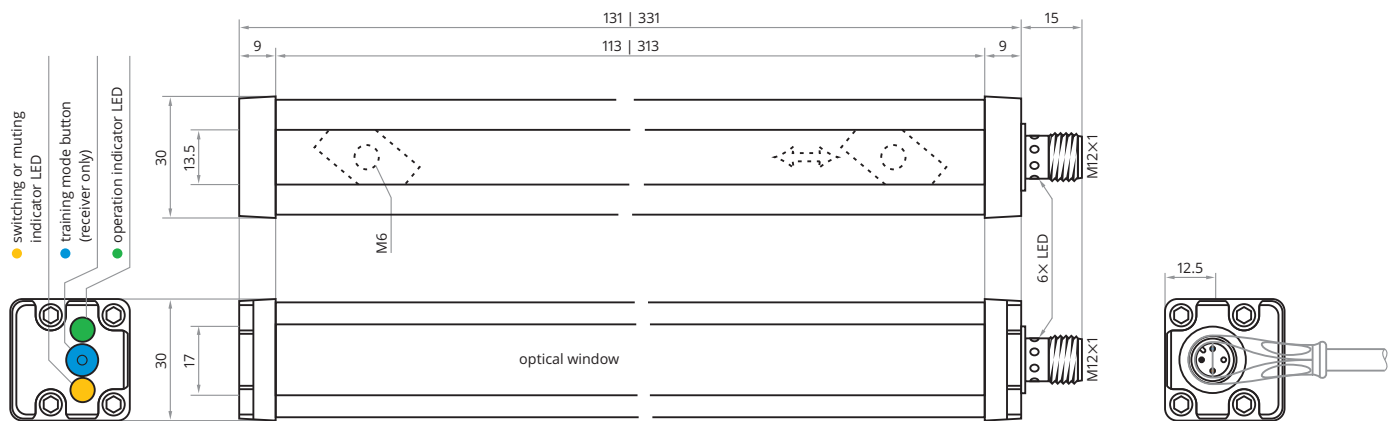
★ Sender mit Muting-Eingang (PNP oder NPN) sind auf Anfrage erhältlich.



	Height of the active area [mm] Höhe der aktiven Zone [mm]	Min. distance TX↔RX [mm] Mindestabstand TX↔RX [mm]	Range [cm] Reichweite [cm]	Cycle time [ms] Zykluszeit [ms]	Dimensions, w × l × h [mm] Abmessungen, b × l × h [mm]	Connection Anschluss	Transmitter without mute input Sender ohne Muting-Eingang	Transmitter with mute input Sender mit Muting-Eingang	Receiver with two outputs NO and NC Empfänger mit zwei Ausgängen Schließer und Öffner
100	10	150	7.5	30 × 30 × 131	Cable 2 m, PVC	CBAS100-T2-G2P	CBAS100-T2P-G2P	CBAS100-R2PCO-A2P	
				30 × 30 × 131	30 cm, PUR, M12	CBAS100-T2-3G12	CBAS100-T2P-3G12	CBAS100-R2PCO-3A12	
				30 × 30 × 146	Connector M12	CBAS100-T2-G12	CBAS100-T2P-G12	CBAS100-R2PCO-A12	
	25	360		30 × 30 × 131	Cable 2 m, PVC	CBAS100-T4-G2P	CBAS100-T4P-G2P	CBAS100-R4PCO-A2P	
				30 × 30 × 131	30 cm, PUR, M12	CBAS100-T4-3G12	CBAS100-T4P-3G12	CBAS100-R4PCO-3A12	
				30 × 30 × 146	Connector M12	CBAS100-T4-G12	CBAS100-T4P-G12	CBAS100-R4PCO-A12	
300	40	150	13.5	30 × 30 × 331	Cable 2 m, PVC	CBAS300-T2-G2P	CBAS300-T2P-G2P	CBAS300-R2PCO-A2P	
				30 × 30 × 331	30 cm, PUR, M12	CBAS300-T2-3G12	CBAS300-T2P-3G12	CBAS300-R2PCO-3A12	
				30 × 30 × 346	Connector M12	CBAS300-T2-G12	CBAS300-T2P-G12	CBAS300-R2PCO-A12	
	80	400		30 × 30 × 331	Cable 2 m, PVC	CBAS300-T4-G2P	CBAS300-T4P-G2P	CBAS300-R4PCO-A2P	
				30 × 30 × 331	30 cm, PUR, M12	CBAS300-T4-3G12	CBAS300-T4P-3G12	CBAS300-R4PCO-3A12	
				30 × 30 × 346	Connector M12	CBAS300-T4-G12	CBAS300-T4P-G12	CBAS300-R4PCO-A12	

Order codes of receivers and transmitters with mute input are valid for PNP. These devices are also available with NPN.
Bestellnummern der Empfänger und Sender mit Muting-Eingang gelten für PNP. Diese Geräte sind auch mit NPN erhältlich.

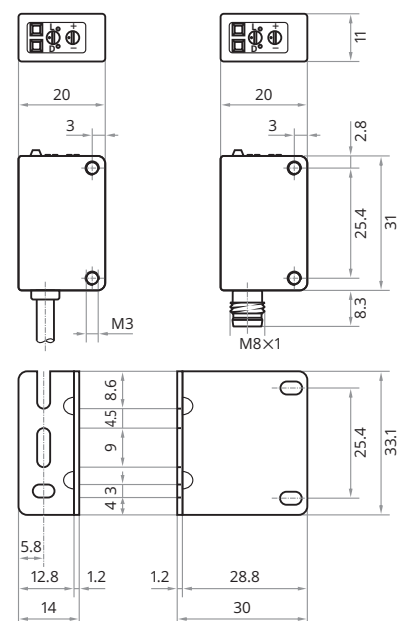
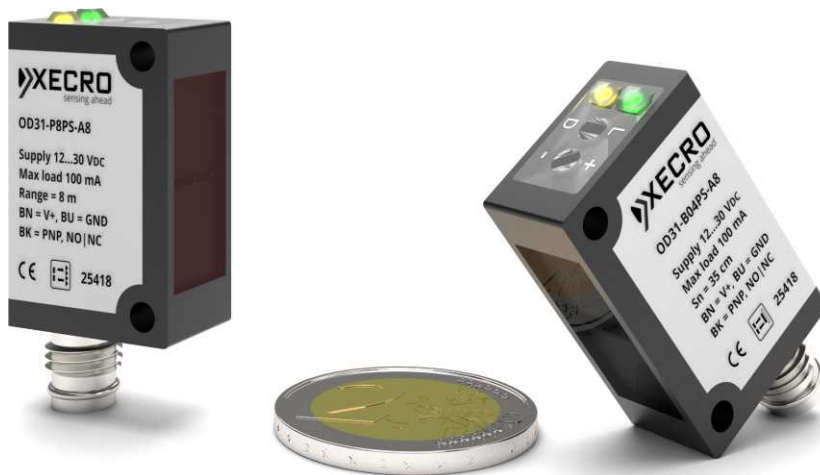
⚠ Caution! These area sensors must not be used when the safety of persons relies on their faultless function.
⚠ Achtung! Diese Lichtgitter dürfen nicht eingesetzt werden, wenn von ihrer fehlerfreien Funktion die Sicherheit von Personen abhängt.



Photoelectric Sensors

Optische Sensoren

- ▶ Compact housing
- ▶ Long sensing ranges
- ▶ Light↔dark selector
- ▶ Indicator for output and stability
- ▶ Background suppression
- ▶ Diffuse reflective
- ▶ Retro-reflective, polarized
- ▶ Kompaktes Gehäuse
- ▶ Hohe Reichweiten
- ▶ Hell↔Dunkel-Umschalter
- ▶ Ausgangs- und Stabilitätsanzeige
- ▶ Hintergrundaussblendung
- ▶ Lichttaster, energetisch
- ▶ Reflex-Lichtschranke, polarisiert



Technical data (typ.)

Supply voltage	12...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<16 mA
Current load capability	100 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Background suppression	
Light source	infrared light, $\lambda = 880$ nm
Diffuse Reflective	
Light source	infrared light, $\lambda = 880$ nm
Retro-Reflective	
Light source	red light, $\lambda = 650$ nm
Ambient light immunity	15 kLux
Supply indicator	LED, yellow
Stability indicator	LED, green
Housing material	ABS, PC
Operating temperature	-20...+55 °C -4...+131 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<16 mA
Ausgangsbelastbarkeit	100 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Lichttaster mit Hintergrundaussblendung	
Lichtquelle	Infrarotlicht, $\lambda = 880$ nm
Lichttaster, energetisch	
Lichtquelle	Infrarotlicht, $\lambda = 880$ nm
Reflexions-Lichtschranke, polarisiert	
Lichtquelle	Rotlicht, $\lambda = 650$ nm
Fremdlichtunempfindlichkeit	15 kLux
Spannungsanzeige	LED, gelb
Stabilitätsanzeige	LED, grün
Gehäusematerial	ABS, PC
Betriebstemperatur	-20...+55 °C
Schutzart	IP67



Sensing range [m] Reichweite [m]	Connection Anschluss	Response time [ms] Ansprechzeit [ms]	Dimensions, w × l × h [mm] Abmessungen, b × l × h [mm]	Output function Ausgangsfunktion	Output polarity Ausgangspolarität	Order code Bestellnummer
Background suppression · Lichttaster mit Hintergrundaussblendung						
0.35 	Cable 2 m, PVC	2	11 × 20 × 31	NO↔NC	PNP	OD31-B04PS-A2P
	Connector M8					OD31-B04PS-A8
	Cable 2 m, PVC				NPN	OD31-B04NS-A2P
	Connector M8					OD31-B04NS-A8
Diffuse reflection · Lichttaster, energetisch						
1 	Cable 2 m, PVC	2	11 × 20 × 31	NO↔NC	PNP	OD31-D1PS-A2P
	Connector M8					OD31-D1PS-A8
	Cable 2 m, PVC				NPN	OD31-D1NS-A2P
	Connector M8					OD31-D1NS-A8
Retro-reflective, polarized · Reflexionslichtschranke mit Polarisationsfilter						
8 	Cable 2 m, PVC	3	11 × 20 × 31	NO↔NC	PNP	OD31-P8PS-A2P
	Connector M8					OD31-P8PS-A8
	Cable 2 m, PVC				NPN	OD31-P8NS-A2P
	Connector M8					OD31-P8NS-A8

Retro-reflective, effective sensing range against reflectors

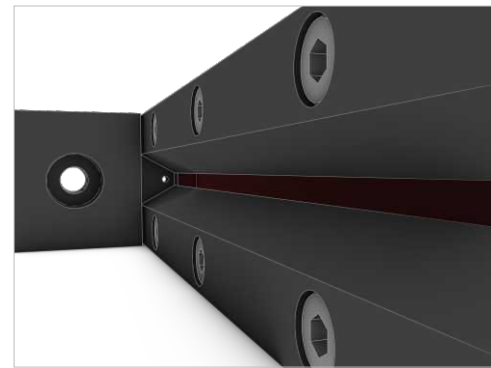
MR82	(Ø 82 mm)	solid	8.00 m	(100%)
MR80	(Ø 80 mm)	solid	6.50 m	
MQ4060	(40 × 60 mm ²)	solid	6.50 m	
PRT25	(25 × 25 mm ²)	adhesive tape	1.50 m	
PRT50	(50 × 50 mm ²)	adhesive tape	2.00 m	
PRT100	(100 × 100 mm ²)	adhesive tape	6.00 m	

Retro-reflektiv, Effektivreichweite gegen Reflektor

MR82	(Ø 82 mm)	starr	8,00 m	(100%)
MR80	(Ø 80 mm)	starr	6,50 m	
MQ4060	(40 × 60 mm ²)	starr	6,50 m	
PRT25	(25 × 25 mm ²)	Klebestreifen	1,50 m	
PRT50	(50 × 50 mm ²)	Klebestreifen	2,00 m	
PRT100	(100 × 100 mm ²)	Klebestreifen	6,00 m	

Frame Light Barriers Rahmenlichtschranken

- ▶ Resolution from 0.3 mm
- ▶ Response time from 25 µs
- ▶ Impact protection for optics
- ▶ Also with soft impact protection
- ▶ Static and dynamic evaluation, selectable
- ▶ Adjustable pulse lengthening
- ▶ High ambient light immunity
- ▶ Integrated blow-out connections
- ▶ Sturdy metal housing
- ▶ Auflösung ab 0,3 mm
- ▶ Ansprechzeit ab 25 µs
- ▶ Prallschutz für Optik
- ▶ Wahlweise mit elastischem Prallschutz
- ▶ Statische und dynamische Auswertung, umschaltbar
- ▶ Einstellbare Impulsverlängerung
- ▶ Hohe Fremdlichtunempfindlichkeit
- ▶ Eingebaute Freiblasanschlüsse
- ▶ Robustes Metallgehäuse



Reduced sensitivity by reflective objects approaching from the side
Geringere Empfindlichkeit durch reflektierende Objekte, die sich von der Seite nähern



Technical data (typ.)

Supply voltage	10...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<50 mA
Detecting — switching output	
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Pulse lengthening	...150 ms, adjustable
Measuring — analog output	
Output type	current
Output offset	0...4 mA, adjustable
Output range	20 mA, adjustable
Output invertible	yes
Ambient light immunity	100 klx
Housing material	aluminum, black anodized
Impact protector material	aluminum, black anodized
alternatively	nitrile rubber (shore A70)
Operating temperature	−20...+55 °C −4...+131 °F
IP code	IP67

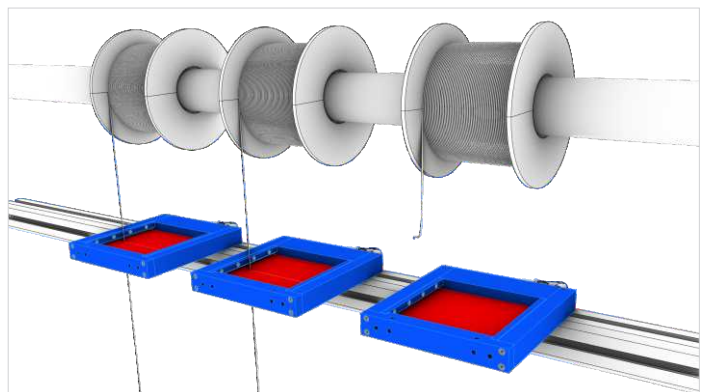
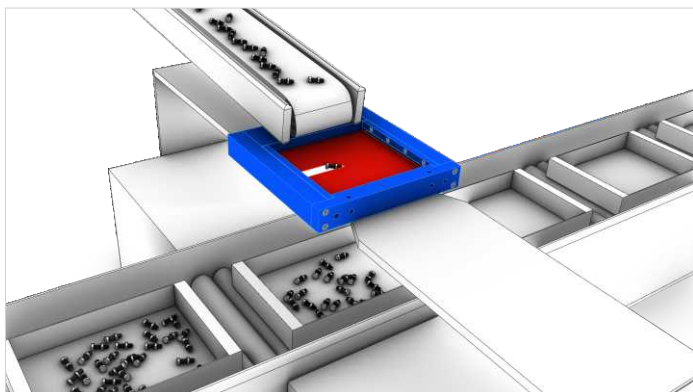
Technische Daten (typ.)

Versorgungsspannung	10...35 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<50 mA
Erkennend – Schaltausgang	
Ausgangsbelaubarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Pulsverlängerung	...150 ms, einstellbar
Messend – Analogausgang	
Ausgangstyp	Strom
Ausgangs-Offset	0...4 mA, einstellbar
Ausgangsbereich	20 mA, einstellbar
Ausgang umkehrbar	ja
Fremdlichtunempfindlichkeit	100 klx
Gehäusematerial	Aluminium, schwarz eloxiert
Prallschutzmaterial	Aluminium, schwarz eloxiert
alternativ	Nitrilkautschuk (shore A70)
Betriebstemperatur	−20...+55 °C
Schutzart	IP67



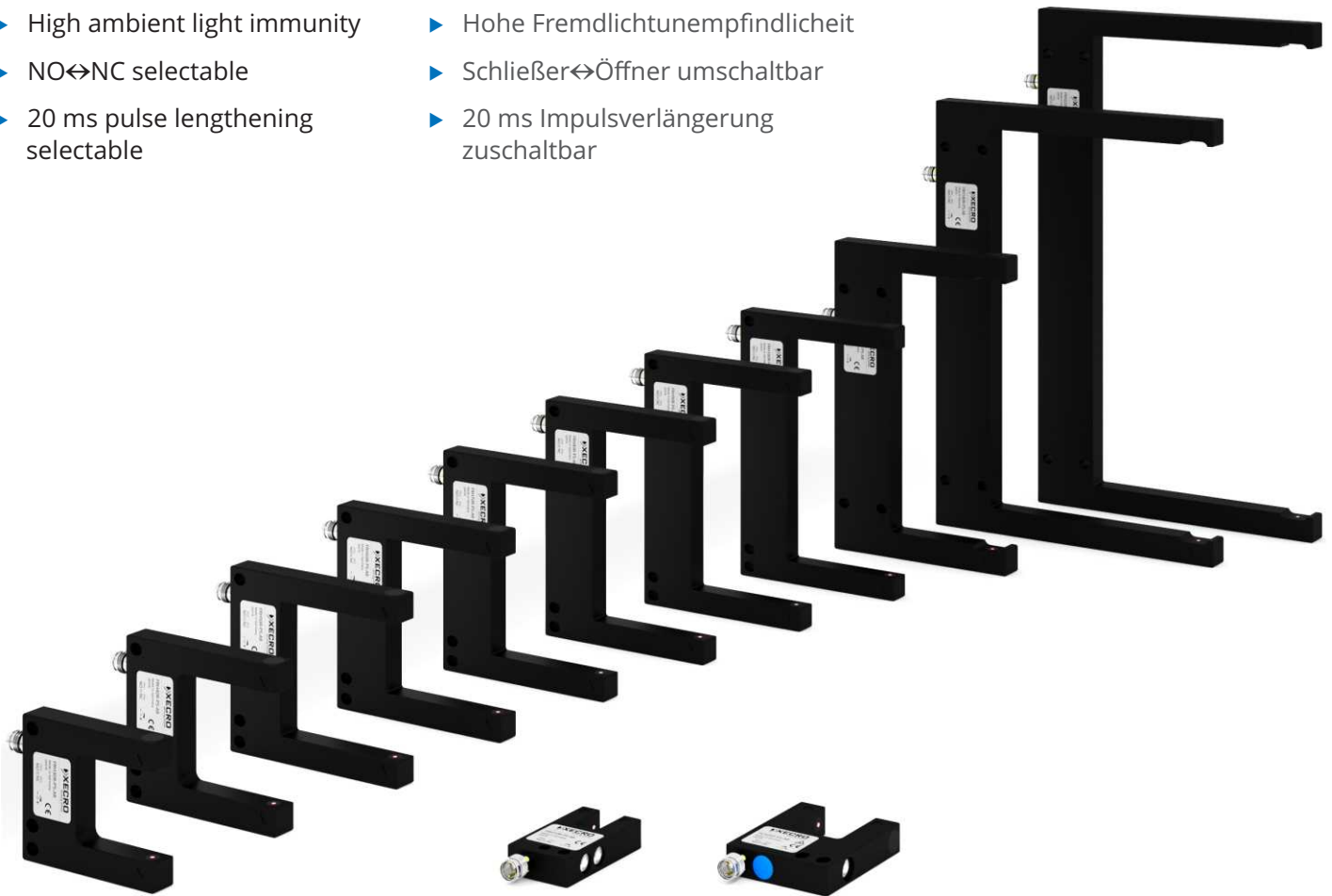
Active area [mm²] Aktive Fläche [mm²]		Resolution Auflösung	Ambient light immunity Fremdlichtunempfindlichkeit	Response time, release time Ansprechzeit, Abfallzeit	Dimensions, w × l × h Abmessungen, b × l × h		Output function Ausgangsfunktion	Output polarity Ausgangspolarität	Impact protector material Prallschutzwerkstoff	Order code Bestellnummer
Standard										
50×48	0.7 mm	200 klx	0.1 ms	90 × 100 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT50A-PS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT50N-PS-A8	
70×68	1.5 mm	100 klx	0.1 ms	110 × 118 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT70A-PS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT70N-PS-A8	
100×98	2.5 mm	60 klx	0.1 ms	140 × 148 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT100A-PS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT100N-PS-A8	
150×148	3.0 mm	30 klx	0.1 ms	190 × 198 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT150A-PS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT150N-PS-A8	
High resolution · Hochauflösend										
50×48	0.3 mm	200 klx	0.1 ms	90 × 100 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT50A-RPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT50N-RPS-A8	
70×68	0.4 mm	100 klx	0.1 ms	110 × 118 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT70A-RPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT70N-RPS-A8	
100×98	0.6 mm	60 klx	0.1 ms	140 × 148 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT100A-RPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT100N-RPS-A8	
150×148	0.8 mm	30 klx	0.1 ms	190 × 198 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT150A-RPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT150N-RPS-A8	
High speed · Hochgeschwindigkeit										
50×48	0.7 mm	200 klx	25 µs	90 × 100 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT50A-SPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT50N-SPS-A8	
70×68	1.5 mm	100 klx	25 µs	110 × 118 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT70A-SPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT70N-SPS-A8	
100×98	2.5 mm	60 klx	25 µs	140 × 148 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT100A-SPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT100N-SPS-A8	
150×148	3.0 mm	30 klx	25 µs	190 × 198 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium		OFT150A-SPS-A8	
							Nitrile rubber · Nitrilkautschuk		OFT150N-SPS-A8	
Analog output · Analogausgang										
50×48	0.3 mm	200 klx	1 kHz	90 × 100 × 20 mm	Current Strom	4...20 mA	Aluminum · Aluminium		OF50A-AI420-A8	
70×68	0.4 mm	100 klx		110 × 118 × 20 mm			Aluminum · Aluminium		OF70A-AI420-A8	
100×98	0.6 mm	60 klx		140 × 148 × 20 mm			Aluminum · Aluminium		OF100A-AI420-A8	
150×148	0.8 mm	30 klx		190 × 198 × 20 mm			Aluminum · Aluminium		OF150A-AI420-A8	

Order codes are valid for PNP (PS) configuration. All devices also available in NPN (NS) configuration.
Bestellnummern gelten für PNP (PS) Konfiguration. Alle Geräte auch erhältlich als NPN (NS) Konfiguration.



Fork Light Barriers Gabellichtschranken

- ▶ One-piece housings only
- ▶ Identical dimensions for laser, red light, and infrared light versions
- ▶ Potentiometer or Training mode button
- ▶ Static and dynamic evaluation
- ▶ High switching frequency
- ▶ High ambient light immunity
- ▶ NO↔NC selectable
- ▶ 20 ms pulse lengthening selectable
- ▶ Ausschließlich einteilige Gehäuse
- ▶ Identische Abmessungen für Laser-, Rotlicht- und Infrarotlicht-Ausführungen
- ▶ Potentiometer oder Einlern-Taste
- ▶ Statische und dynamische Auswertung
- ▶ Hohe Schaltfrequenz
- ▶ Hohe Fremdlichtunempfindlichkeit
- ▶ Schließer↔Öffner umschaltbar
- ▶ 20 ms Impulsverlängerung zuschaltbar



Technical data (typ.)

Supply voltage	10...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<40 mA
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Pulse lengthening	20 ms, selectable*
Red light · Infrared light	
Operating temperature	−20...+55 °C −4...+131 °F
Laser	
Operating temperature	−10...+45 °C +14...+113 °F
Laser protection class	1 (EN 60825-1)
Ambient light immunity	>100 klx
Switching indicator	LED, yellow
Housing material	zinc die-cast, powder coated
IP code	IP67

* selected models

Technische Daten (typ.)

Versorgungsspannung	10...35 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<40 mA
Ausgangsbelaastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Pulsverlängerung	20 ms, zuschaltbar*
Rotlicht · Infrarotlicht	
Betriebstemperatur	−20...+55 °C
Laser	
Betriebstemperatur	−10...+45 °C
Laserschutzklasse	1 (EN 60825-1)
Fremdlichtunempfindlichkeit	>100 klx
Schaltanzeige	LED, gelb
Gehäusematerial	Zinkdruckguss, pulverbeschichtet
Schutzart	IP67

* ausgewählte Modelle



Fork opening [mm] Gabelweite [mm]		Resolution [Ø mm] Auflösung [Ø mm]		Switching frequency [Hz] Schaltfrequenz [Hz]		Repeatability [mm] Wiederholgenauigkeit [mm]		Red light, $\lambda = 630$ nm, modulated Rotlicht, $\lambda = 630$ nm, moduliert		Infrared, $\lambda = 940$ nm, modulated Infrarot, $\lambda = 940$ nm, moduliert		Potentiometer for sensitivity adjustment Potentiometer für Empfindlichkeitseinstellung		Selectable pulse lengthening 20 ms IO-Link capable, protocol 1.1 Zuschaltbare Impulsverlängerung 20 ms IO-Link-fähig, Protokoll 1.1		Order code Bestellnummer		Training mode button for sensitivity adjustment Einlern-Taste für Empfindlichkeitseinstellung		Selectable pulse lengthening 20 ms IO-Link capable, protocol 1.1 Zuschaltbar Pulsverlängerung 20 ms IO-Link-fähig, Protokoll 1.1		Order code Bestellnummer		
Red light - High resolution · Rotlicht - Hochauflösend																								
10	0.2	10000	0.01			✓	✓	✓						FIH10P-PS-A8	✓	✓	✓							FIH10T-PS-A8
20	0.2	10000	0.01	✓			✓	✓						FRH20P-PS-A8	✓	✓	✓							FRH20T-PS-A8
30	0.2	5000	0.01	✓			✓	✓						FRH30P-PS-A8	✓	✓	✓							FRH30T-PS-A8
40	0.2	5000	0.01	✓			✓	✓						FRH40P-PS-A8	✓	✓	✓							FRH40T-PS-A8
50	0.2	5000	0.01	✓			✓	✓						FRH50P-PS-A8	✓	✓	✓							FRH50T-PS-A8
60	0.2	5000	0.01	✓			✓	✓						FRH60P-PS-A8	✓	✓	✓							FRH60T-PS-A8
70	0.2	5000	0.01	✓			✓	✓						FRH70P-PS-A8	✓	✓	✓							FRH70T-PS-A8
80	0.2	5000	0.01	✓			✓	✓						FRH80P-PS-A8	✓	✓	✓							FRH80T-PS-A8
90	0.2	5000	0.01	✓			✓	✓						FRH90P-PS-A8	✓	✓	✓							FRH90T-PS-A8
100	0.2	5000	0.01	✓			✓	✓						FRH100P-PS-A8	✓	✓	✓							FRH100T-PS-A8
120	0.2	5000	0.01	✓			✓	✓						FRH120P-PS-A8	✓	✓	✓							FRH120T-PS-A8
220	0.2	2500	0.01	✓			✓	✓						FRH220P-PS-A8	✓	✓	✓							FRH220T-PS-A8
⚠ Laser high resolution · Laser hochauflösend																								
10																								
20	0.03	10000	0.01	✓			✓	✓						FLH20P-PS-A8	✓	✓	✓							FLH20T-PS-A8
30	0.03	5000	0.01	✓			✓	✓						FLH30P-PS-A8	✓	✓	✓							FLH30T-PS-A8
40	0.03	5000	0.01	✓			✓	✓						FLH40P-PS-A8	✓	✓	✓							FLH40T-PS-A8
50	0.03	5000	0.01	✓			✓	✓						FLH50P-PS-A8	✓	✓	✓							FLH50T-PS-A8
60	0.03	5000	0.01	✓			✓	✓						FLH60P-PS-A8	✓	✓	✓							FLH60T-PS-A8
70	0.03	5000	0.01	✓			✓	✓						FLH70P-PS-A8	✓	✓	✓							FLH70T-PS-A8
80	0.03	5000	0.01	✓			✓	✓						FLH80P-PS-A8	✓	✓	✓							FLH80T-PS-A8
90	0.03	5000	0.01	✓			✓	✓						FLH90P-PS-A8	✓	✓	✓							FLH90T-PS-A8
100	0.03	5000	0.01	✓			✓	✓						FLH100P-PS-A8	✓	✓	✓							FLH100T-PS-A8
120	0.03	5000	0.01	✓			✓	✓						FLH120P-PS-A8	✓	✓	✓							FLH120T-PS-A8
220	0.03	1250	0.01	✓			✓	✓						FLH220P-PS-A8	✓	✓	✓							FLH220T-PS-A8



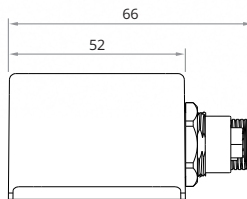
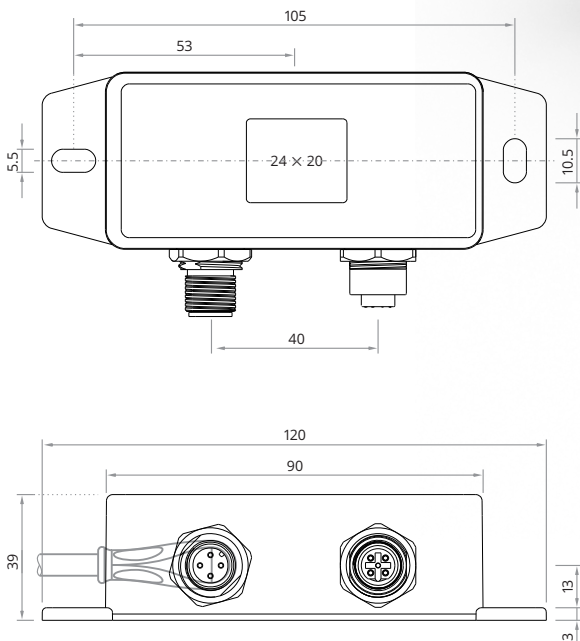


Fork opening [mm] Gabelweite [mm]	Resolution [Ø mm] Auflösung [Ø mm]	Switching frequency [Hz] Schaltfrequenz [Hz]	Repeatability [mm] Wiederholgenauigkeit [mm]	Red light, $\lambda = 630$ nm, modulated Rotlicht, $\lambda = 630$ nm, moduliert	Infrared, $\lambda = 940$ nm, modulated Infrarot, $\lambda = 940$ nm, moduliert	Potentiometer for sensitivity adjustment Potentiometer für Empfindlichkeitseinstellung	Selectable power-on delay 0.4 s Zuschaltbare Einschaltverzögerung 0,4 s	IO-Link capable, protocol 1.1 IO-Link-fähig, Protokoll 1.1	Order code Bestellnummer	Training mode button for sensitivity adjustment Einlern-taste für Empfindlichkeitseinstellung	Selectable pulse lengthening 20 ms Zuschaltbar Impulsverlängerung 20 ms	IO-Link capable, protocol 1.1 IO-Link-fähig, Protokoll 1.1	Order code Bestellnummer
--------------------------------------	---------------------------------------	---	---	---	--	---	--	---	-----------------------------	--	--	---	-----------------------------

Dynamic evaluation · dynamische Auswertung													
10	0.2	10000	0.01		✓					✓	✓	✓	FIH10D-PS-A8
20	0.2	10000	0.01	✓						✓	✓	✓	FRH20D-PS-A8
30	0.2	5000	0.01	✓						✓	✓	✓	FRH30D-PS-A8
40	0.2	5000	0.01	✓						✓	✓	✓	FRH40D-PS-A8
50	0.2	5000	0.01	✓						✓	✓	✓	FRH50D-PS-A8
60	0.2	5000	0.01	✓						✓	✓	✓	FRH60D-PS-A8
70	0.2	5000	0.01	✓						✓	✓	✓	FRH70D-PS-A8
80	0.2	5000	0.01	✓						✓	✓	✓	FRH80D-PS-A8
90	0.2	5000	0.01	✓						✓	✓	✓	FRH90D-PS-A8
100	0.2	5000	0.01	✓						✓	✓	✓	FRH100D-PS-A8
120	0.2	5000	0.01	✓						✓	✓	✓	FRH120D-PS-A8
220	0.2	1250	0.01	✓						✓	✓	✓	FRH220D-PS-A8
Increased contamination resistance · erhöhte Schmutzunempfindlichkeit													
10	0.5	10000	0.1		✓	✓	✓		FIC10P-PS-A8				
20	0.5	10000	0.1		✓	✓	✓		FIC20P-PS-A8				
30	0.5	5000	0.1		✓	✓	✓		FIC30P-PS-A8				
40	0.5	5000	0.1		✓	✓	✓		FIC40P-PS-A8				
50	0.5	5000	0.1		✓	✓	✓		FIC50P-PS-A8				
60	0.5	5000	0.1		✓	✓	✓		FIC60P-PS-A8				
70	0.5	5000	0.1		✓	✓	✓		FIC70P-PS-A8				
80	0.5	5000	0.1		✓	✓	✓		FIC80P-PS-A8				
90	0.5	5000	0.1		✓	✓	✓		FIC90P-PS-A8				
100	0.6	5000	0.1		✓	✓	✓		FIC100P-PS-A8				
120	0.7	5000	0.1		✓	✓	✓		FIC120P-PS-A8				
220	0.9	1250	0.1		✓	✓	✓		FIC220P-PS-A8				



- ▶ Media temperature up to 230 °C | 446 °F
- ▶ For strongly adherent media
Hotmelt, chocolate, toffee, ...
- ▶ 100 and 300 mm probes
- ▶ Configuration menu
- ▶ Two switching outputs
- ▶ NO↔NC selectable
- ▶ PNP↔NPN selectable
- ▶ Medientemperatur bis zu 230 °C
- ▶ Für stark anhaftende Medien
Heißkleber, Schokolade, Toffee, ...
- ▶ 100 und 300 mm Sonden
- ▶ Konfigurationsmenü
- ▶ Zwei Schaltausgänge
- ▶ Schließer↔Öffner umschaltbar
- ▶ PNP↔NPN umschaltbar



Technical data (typ.)

Supply voltage	10...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<50 mA
Current load capability	2× 200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.2 V @ 200 mA
Probes	
Material	PEEK
Operating temperature	230 °C 446 °F
Amplifier	
Housing material	aluminum, powder coated
Operating temperature	−20...+50 °C −4...+122 °F
IP code	IP65
Order code	
Amplifier 2× PNP NPN, IO-Link®	HTLP-2PCNO-N12
Probe, 100 mm, PTFE cable 1 m, M12	HTLP100-T1N12
Probe, 200 mm, PTFE cable 1 m, M12	HTLP200-T1N12

Technische Daten (typ.)

Versorgungsspannung	10...35 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<50 mA
Ausgangsbelastbarkeit	2× 200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,2 V @ 200 mA
Sonden	
Material	PEEK
Betriebstemperatur	230 °C
Verstärker	
Gehäusematerial	Aluminium, pulverbeschichtet
Betriebstemperatur	−20...+50 °C
Schutzart	IP65
Bestellnummer	
Verstärker 2× PNP NPN, IO-Link®	HTLP-2PCNO-N12
Sonde, 100 mm, PTFE-Kabel 1 m, M12	HTLP100-T1N12
Sonde, 200 mm, PTFE-Kabel 1 m, M12	HTLP200-T1N12



Ring Sensors — inductive, capacitive, and photoelectric

Ringsensoren – induktive, kapazitive und optische

- ▶ Inductive ring sensors to detect metallic parts
Induktive Ringsensoren zur Erkennung von Metallteilen
- ▶ Capacitive sensors to detect liquids in tubes
Kapazitive Sensoren zur Erkennung von Flüssigkeiten in Schläuchen
- ▶ Optical ring sensors to detect metallic or non-metallic parts
Optische Ringsensoren für die Erkennung von metallischen oder nicht-metallischen Teilen
- ▶ Versions with pulse lengthening are available
Ausführungen mit Impulsverlängerung erhältlich



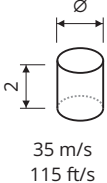
Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Inductive, Capacitive	
Housing material	PBT
Ring material	PA 6.6
Current consumption	<10 mA
Photoelectric	
Housing material	Zinc die-cast, black painted
Ring material	PMMA
Current consumption	<50 mA
Switching indicator	LED, yellow
Operating temperature	−20...+70 °C −4...+158 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Ausgangsbelaubarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Induktiv, Kapazitiv	
Gehäusematerial	PBT
Ringmaterial	PA 6.6
Stromaufnahme	<10 mA
Optisch	
Gehäusematerial	Zinkdruckguss, schwarz lackiert
Ringmaterial	PMMA
Stromaufnahme	<50 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	−20...+70 °C
Schutzart	IP67



	Resolution Auflösung	Max. object speed Max. Objektgeschw.	Pulse lengthening Impulsverlängerung	Inner diameter Innendurchmesser	Evaluation Auswertung	Connection Anschluss	Order code Bestellnummer
Inductive	>1 mm Ø	 35 m/s 115 ft/s	0.1...150 ms adjustable einstellbar	Ø 6.1 mm	Static	Connector M12, straight	IR06S-PS150-A12
	Connector M12, angled					IR06S-PS150-RA12	
	>0.5 mm Ø				Dynamic	Connector M12, straight	IR06D-PS150-A12
	Connector M12, angled					IR06D-PS150-RA12	
	>1 mm Ø			Ø 10.1 mm	Static	Connector M12, straight	IR10S-PS150-A12
	Connector M12, angled					IR10S-PS150-RA12	
	>0.6 mm Ø				Dynamic	Connector M12, straight	IR10D-PS150-A12
	Connector M12, angled					IR10D-PS150-RA12	
	>2 mm Ø			Ø 15.1 mm	Static	Connector M12, straight	IR15S-PS150-A12
	Connector M12, angled					IR15S-PS150-RA12	
	>0.8 mm Ø				Dynamic	Connector M12, straight	IR15D-PS150-A12
	Connector M12, angled					IR15D-PS150-RA12	
	>2 mm Ø			Ø 21.1 mm	Static	Connector M12, straight	IR21S-PS150-A12
	Connector M12, angled					IR21S-PS150-RA12	
	>1.0 mm Ø				Dynamic	Connector M12, straight	IR21D-PS150-A12
	Connector M12, angled					IR21D-PS150-RA12	
Capacitive	Depends on permittivity ϵ_r Abhängig von Permittivität ϵ_r	Static	None Keine	Ø 6.1 mm	Static	Connector M12, straight	CR06S-PO-A12
						Connector M12, angled	CR06S-PO-RA12
				Ø 10.1 mm		Connector M12, straight	CR10S-PO-A12
						Connector M12, angled	CR10S-PO-RA12
				Ø 15.1 mm		Connector M12, straight	CR15S-PO-A12
						Connector M12, angled	CR15S-PO-RA12
				Ø 21.1 mm		Connector M12, straight	CR21S-PO-A12
						Connector M12, angled	CR21S-PO-RA12

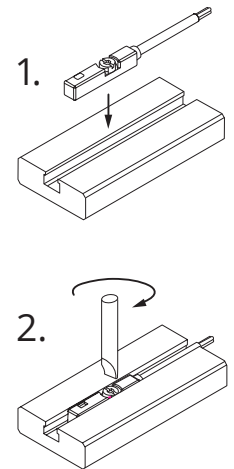
Order codes are valid for PNP, NO (PO) or PNP, NO↔NC (PS) configuration. All devices also available in NPN configuration.
Bestellnummern gelten für PNP, NO (PO) oder PNP, NO↔NC (PS) Konfiguration. Alle Geräte auch erhältlich mit NPN Konfiguration.

Cylinder Position Sensors

Positionssensoren für Pneumatikzylinder

- ▶ Fully electronic sensor design
- ▶ Fastening screw located close to cable exit preventing the sensor from moving if cable is pulled
- ▶ Compact design
TBL 28 respectively 25.5 mm only
- ▶ Clearly visible switching indicator
- ▶ Available with cable or connector
- ▶ Optional accessories for mounting
- ▶ Elektronisches Sensorkonzept
- ▶ Befestigungsschraube nah am Anschlusskabel sichert den Sensor vor Bewegung, wenn am Kabel gezogen wird
- ▶ Kompakte Bauform
Gesamtlänge nur 28 bzw. 25,5 mm
- ▶ Deutlich sichtbare Schaltanzeige
- ▶ Erhältlich mit Festkabel oder Stecker
- ▶ Optionales Montagezubehör

T-slot fastening · T-Nut-Befestigung



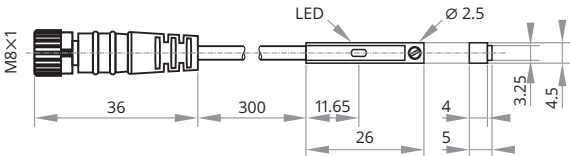
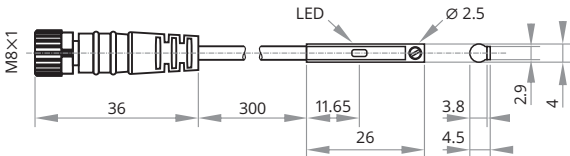
Technical data (typ.)

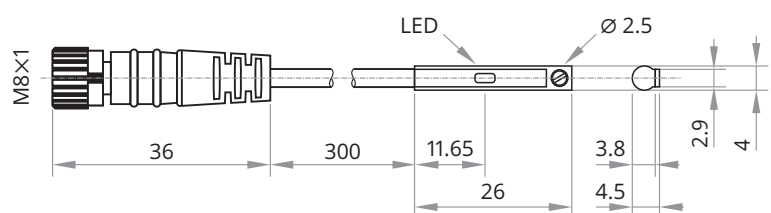
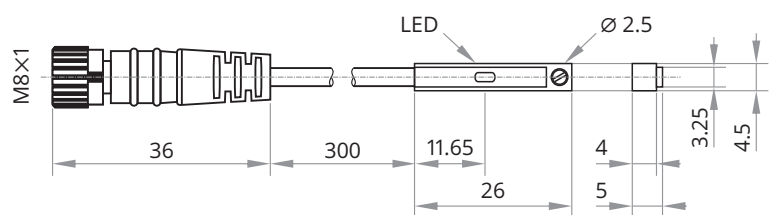
Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Output function	—/— normally open
Voltage drop	<1.5 V @ 200 mA
Sensing element	Solid state
Switching frequency	1000 Hz
Switching indicator	LED, yellow
Housing material	PBT
Operating temperature	−10...+75 °C 14...+167 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Eigenstromaufnahme	<10 mA
Ausgangsbelastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Ausgangsfunktion	—/— Schließer
Spannungsabfall	<1,5 V @ 200 mA
Sensortyp	Halbleiter
Schaltfrequenz	1000 Hz
Schaltanzeige	LED, gelb
Gehäusematerial	PBT
Betriebstemperatur	−10...+75 °C
Schutzart	IP67



Cross section Querschnitt	Connection Anschluss	Drawing Zeichnung	Output function Ausgangsfunktion	Output polarity Ausgangspolarität	Order code Bestellnummer
T-slot · T-Nut					
	Cable 2 m, PVC		normally open 	PNP	CPS-TPO28-A2P
	PUR, Connector M8			PNP	CPS-TPO28-3U8
	Cable 2 m, PVC		Schließer 	NPN	CPS-TNO28-A2P
	PUR, Connector M8			NPN	CPS-TNO28-3U8
C-slot · C-Nut					
	Cable 2 m, PVC		normally open 	PNP	CPS-CPO25-A2P
	PUR, Connector M8			PNP	CPS-CPO25-3U8
	Cable 2 m, PVC		Schließer 	NPN	CPS-CNO25-A2P
	PUR, Connector M8			NPN	CPS-CNO25-3U8



Proximity Switches, inductive Näherungsschalter, induktiv

► Miniature, Ø 3 mm...Ø 5×5 mm Miniatur, Ø 3 mm...Ø 5×5 mm

- High performance with up to $4 \times S_n$
Hochleistung mit bis zu $4 \times S_n$
- Closed stainless steel housing with IP69k
Geschlossene Edelstahlgehäuse mit IP69k
- High temperature proof versions up to 180 °C | 356 °F
Hochtemperaturfeste Ausführungen bis 180 °C
- Low temperature –40 °C | –40 °F, food grade, IP69k
Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
- Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- Devices with analog outputs
Geräte mit Analogausgängen
- 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}

5000+
different proximity switches



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.2 V @ 200 mA
Switching indicator	LED, yellow
Operating temperature	–20...+70 °C –4...+158 °F
IP code	IP67

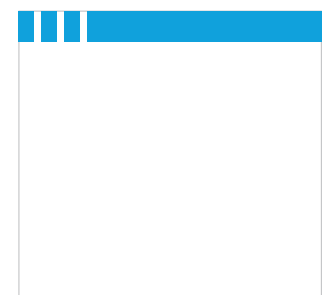
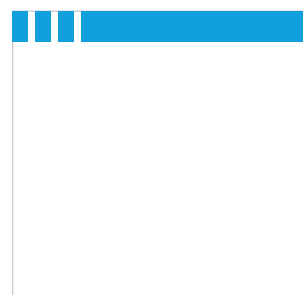
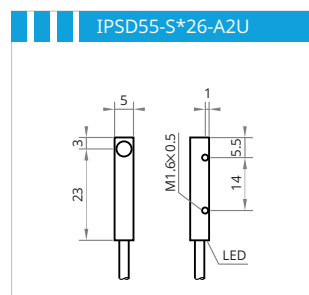
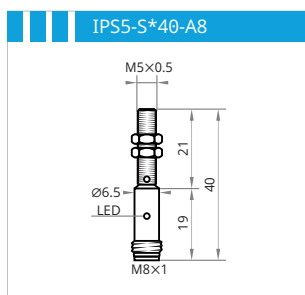
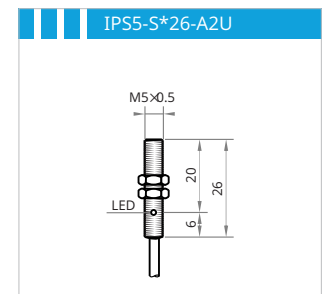
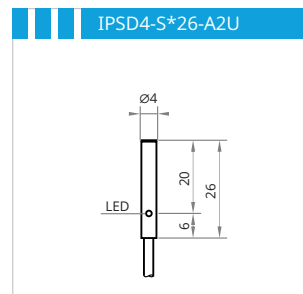
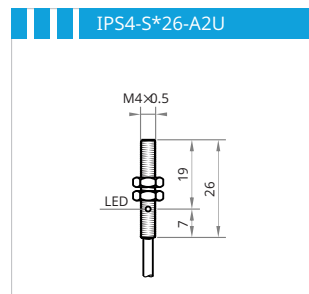
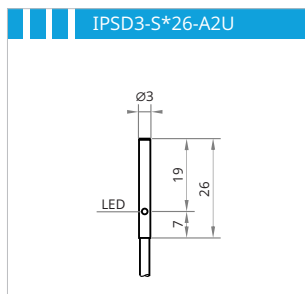
Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Ausgangsbelastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,2 V @ 200 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	–20...+70 °C
Schutzart	IP67



	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]		Housing material Gehäusematerial	Switching frequency Schaltfrequenz
				26	40		
Ø 3 mm	●	0.6	Cable 2 m, PUR	IPSD3-S06PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPSD3-S06PO26-3U8		Stainless steel Edelstahl	2000 Hz
		1	Cable 2 m, PUR	IPSD3-S1PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPSD3-S1PO26-3U8		Stainless steel Edelstahl	2000 Hz
M4×0.5	●	0.6	Cable 2 m, PUR	IPS4-S06PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPS4-S06PO26-3U8		Stainless steel Edelstahl	2000 Hz
		1	Cable 2 m, PUR	IPS4-S1PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPS4-S1PO26-3U8		Stainless steel Edelstahl	2000 Hz
Ø 4 mm	●	0.8	Cable 2 m, PUR	IPSD4-S08PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPSD4-S08PO26-3U8		Stainless steel Edelstahl	2000 Hz
		1.5	Cable 2 m, PUR	IPSD4-S1.5PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPSD4-S1.5PO26-3U8		Stainless steel Edelstahl	2000 Hz
M5×0.5	●	0.8	Cable 2 m, PUR	IPSS-S08PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPSS-S08PO26-3U8		Stainless steel Edelstahl	2000 Hz
			Connector M8		IPSS-S08PO40-A8	Stainless steel Edelstahl	2000 Hz
		1.5	Cable 2 m, PUR	IPSS-S1.5PO26-A2U		Stainless steel Edelstahl	2000 Hz
			30 cm, PUR, M8	IPSS-S1.5PO26-3U8		Stainless steel Edelstahl	2000 Hz
			Connector M8		IPSS-S1.5PO40-A8	Stainless steel Edelstahl	2000 Hz
Ø 5×5	●	0.8	Cable 2 m, PUR	IPSS5-S08PO26-A2U		Nickel plated brass Messing vernickelt	2000 Hz
			30 cm, PUR, M8	IPSS5-S08PO26-3U8		Nickel plated brass Messing vernickelt	2000 Hz
		1.5	Cable 2 m, PUR	IPSS5-S1.5PO26-A2U		Nickel plated brass Messing vernickelt	2000 Hz
			30 cm, PUR, M8	IPSS5-S1.5PO26-3U8		Nickel plated brass Messing vernickelt	2000 Hz

Order codes are valid for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern gelten für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.



Proximity Switches, inductive Näherungsschalter, induktiv

- ▶ Miniature, Ø 3 mm...Ø 5×5 mm
Miniatur, Ø 3 mm...Ø 5×5 mm
- ▶ **High performance with up to 4× S_N**
Hochleistung mit bis zu 4× S_N
- ▶ Closed stainless steel housing with IP69k
Geschlossene Edelstahlgehäuse mit IP69k
- ▶ High temperature proof versions up to 180 °C | 356 °F
Hochtemperaturfeste Ausführungen bis 180 °C
- ▶ Low temperature –40 °C | –40 °F, food grade, IP69k
Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
- ▶ Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- ▶ Devices with analog outputs
Geräte mit Analogausgängen
- ▶ 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}



Technical data (typ.)

Supply voltage	5...35 V _{DC} or 10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	LED, yellow
Operating temperature	–20...+70 °C –4...+158 °F
IP code	IP67



Technische Daten (typ.)

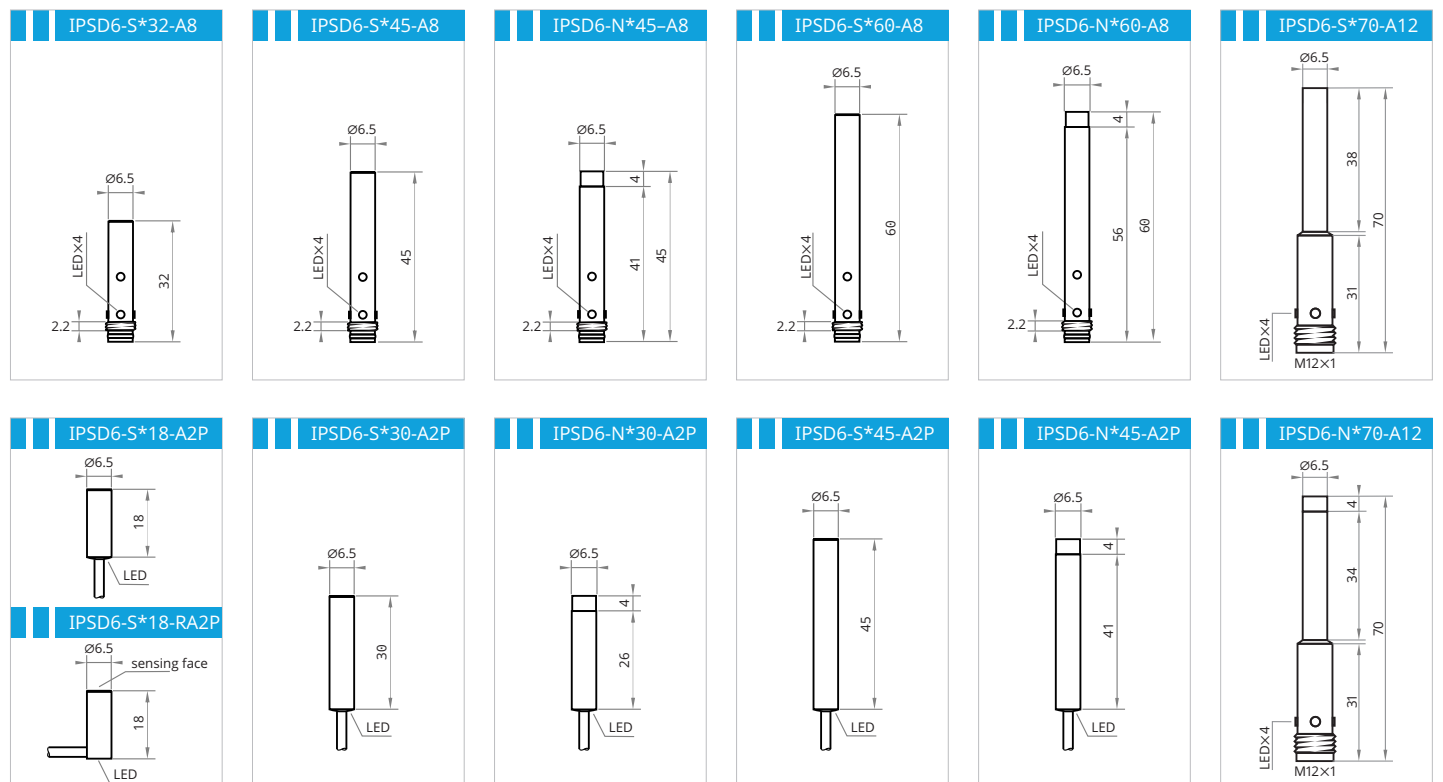
Versorgungsspannung	5...35 V _{DC} oder 10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Ausgangsbelastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	–20...+70 °C
Schutzart	IP67



	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]						
				18	30	32	45	60	70	
Standard	●	1	Cable 2 m, PVC		IPSD6-S1PO30-A2P		IPSD6-S1PO45-A2P			2000 Hz
			Connector M8				IPSD6-S1PO45-A8	IPSD6-S1PO60-A8		
			Connector M12						IPSD6-S1PO70-A12	
	○	2	Cable 2 m, PVC		IPSD6-N2PO30-A2P		IPSD6-N2PO45-A2P			
			Connector M8				IPSD6-N2PO45-A8	IPSD6-N2PO60-A8		
			Connector M12						IPSD6-N2PO70-A12	
Increased · Erhöht	●	2	Cable 2 m, PVC	IPSD6-S2PO18-A2P	IPSD6-S2PO30-A2P		IPSD6-S2PO45-A2P			2000 Hz
			Cable 2 m, radial	IPSD6-S2PO18-RA2P						
			30 cm, PUR, M8	IPSD6-S2PO18-3U8	IPSD6-S2PO30-3U8					
			30 cm, M8, radial	IPSD6-S2PO18-R3U8						
			Connector M8			IPSD6-S2PO32-A8	IPSD6-S2PO45-A8	IPSD6-S2PO60-A8		
			Connector M12						IPSD6-S2PO70-A12	
	○	4	Cable 2 m, PVC		IPSD6-N4PO30-A2P		IPSD6-N4PO45-A2P			1000 Hz
			Connector M8				IPSD6-N4PO45-A8	IPSD6-N4PO60-A8		
			Connector M12						IPSD6-N4PO70-A12	
	●	3	Cable 2 m, PVC	IPSD6-S3PO18-A2P	IPSD6-S3PO30-A2P		IPSD6-S3PO45-A2P			1000 Hz
			Cable 2 m, radial	IPSD6-S3PO18-RA2P						
			30 cm, PUR, M8	IPSD6-S3PO18-3U8	IPSD6-S3PO30-3U8					
			30 cm, M8, radial	IPSD6-S3PO18-R3U8						
			Connector M8			IPSD6-S3PO32-A8	IPSD6-S3PO45-A8	IPSD6-S3PO60-A8		
			Connector M12						IPSD6-S3PO70-A12	
Extended · Erweitert	○	6	Cable 2 m, PVC		IPSD6-N6PO30-A2P		IPSD6-N6PO45-A2P			500 Hz
			Connector M8				IPSD6-N6PO45-A8	IPSD6-N6PO60-A8		
			Connector M12						IPSD6-N6PO70-A12	

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

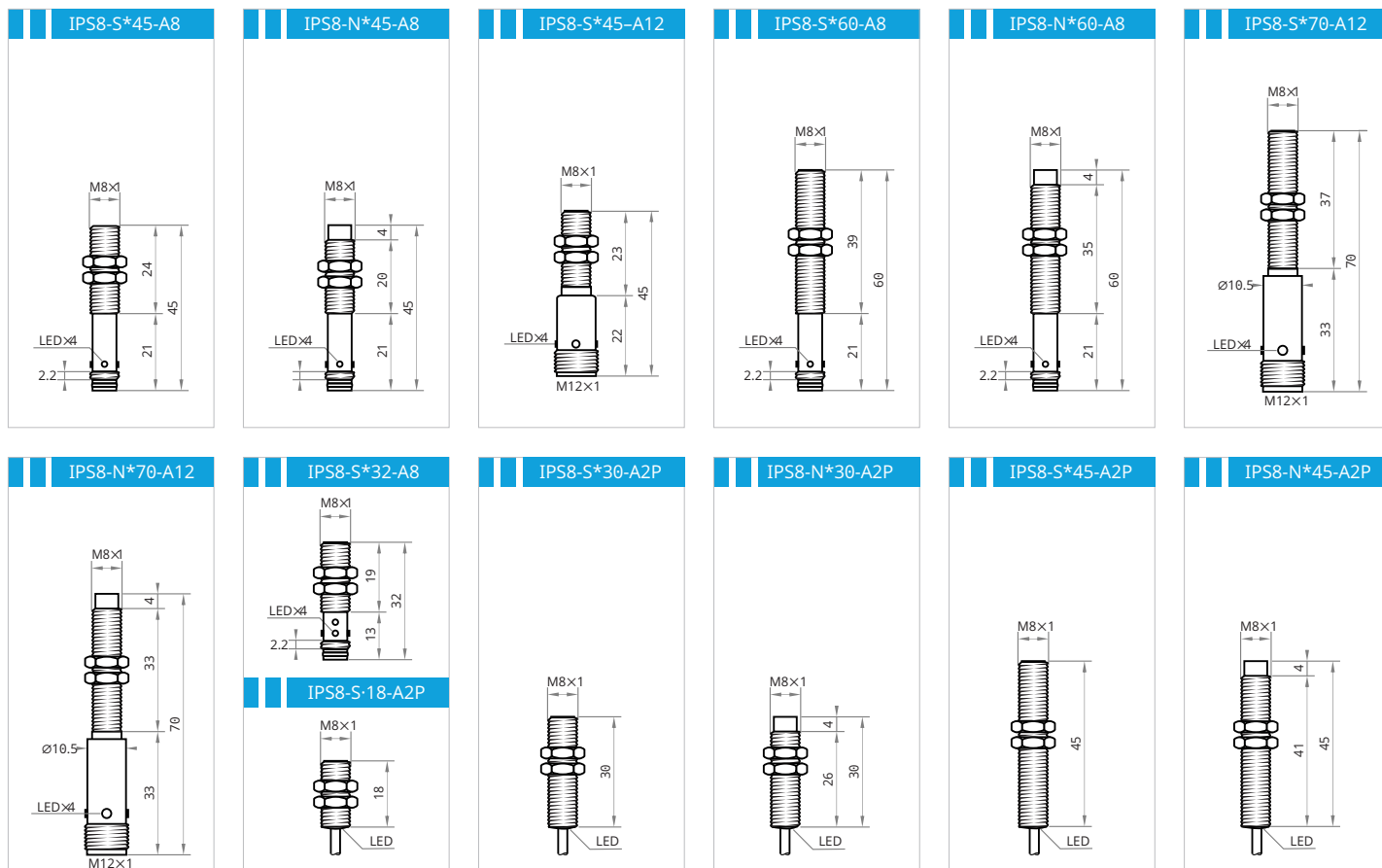
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	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]						
				18	30	32	45	60	70	
Standard	●	1	Cable 2 m, PVC	IPS8-S1PO18-A2P	IPS8-S1PO30-A2P		IPS8-S1PO45-A2P			2000 Hz
			Connector M8			IPS8-S1PO32-A8	IPS8-S1PO45-A8	IPS8-S1PO60-A8		
	○	2	Cable 2 m, PVC	IPS8-N2PO18-A2P	IPS8-N2PO30-A2P		IPS8-N2PO45-A2P	IPS8-N2PO60-A8		2000 Hz
			Connector M8				IPS8-N2PO45-A8			
Increased · Erhöht	●	2	Cable 2 m, PVC	IPS8-S2PO18-A2P	IPS8-S2PO30-A2P		IPS8-S2PO45-A2P			2000 Hz
			30 cm, PUR, M8	IPS8-S2PO18-3U8	IPS8-S2PO30-3U8					
			Connector M8			IPS8-S2PO32-A8	IPS8-S2PO45-A8	IPS8-S2PO60-A8		
			Connector M12				IPS8-S2PO45-A12		IPS8-S2PO70-A12	
	○	4	Cable 2 m, PVC	IPS8-N4PO18-A2P	IPS8-N4PO30-A2P		IPS8-N4PO45-A2P			1000 Hz
			Connector M8				IPS8-N4PO45-A8	IPS8-N4PO60-A8	IPS8-N4PO70-A12	
Extended · Erweitert	●	3	Cable 2 m, PVC	IPS8-S3PO18-A2P	IPS8-S3PO30-A2P		IPS8-S3PO45-A2P			1000 Hz
			30 cm, PUR, M8	IPS8-S3PO18-3U8	IPS8-S3PO30-3U8					
			Connector M8			IPS8-S3PO32-A8	IPS8-S3PO45-A8	IPS8-S3PO60-A8		
			Connector M12				IPS8-S3PO45-A12		IPS8-S3PO70-A12	
	○	6	Cable 2 m, PVC	IPS8-N6PO18-3U8	IPS8-N6PO30-A2P		IPS8-N6PO45-A2P			500 Hz
			Connector M8				IPS8-N6PO45-A8	IPS8-N6PO60-A8	IPS8-N6PO70-A12	
Performance	●	4	Cable 2 m, PVC	IPS8-S4PO18-A2P	IPS8-S4PO30-A2P		IPS8-S4PO45-A2P			500 Hz
			30 cm, PUR, M8	IPS8-S4PO18-3U8	IPS8-S4PO30-3U8					
			Connector M8			IPS8-S4PO32-A8	IPS8-S4PO45-A8	IPS8-S4PO60-A8		
			Connector M12				IPS8-S4PO45-A12		IPS8-S4PO70-A12	

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

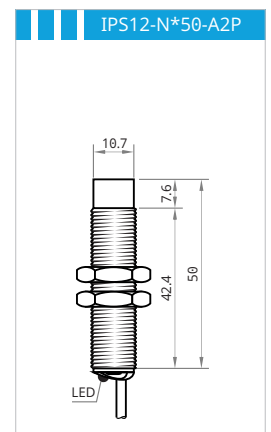
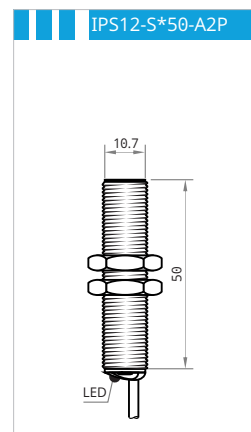
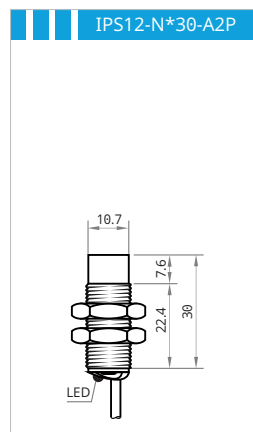
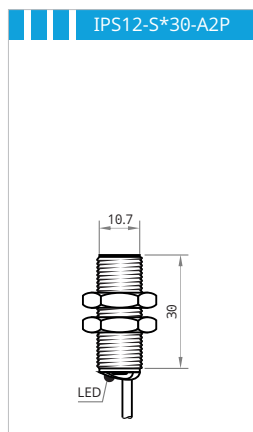
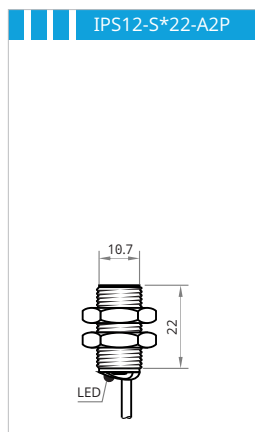
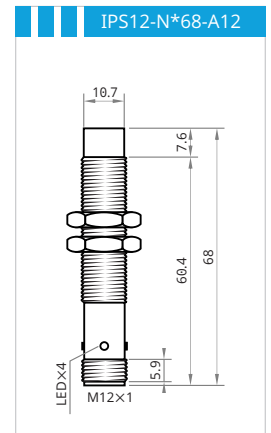
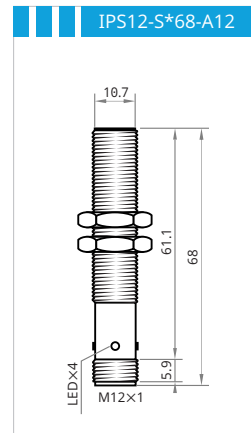
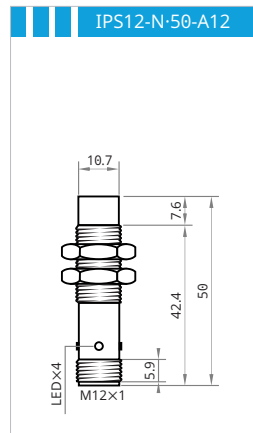
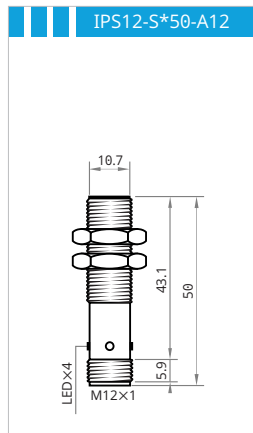
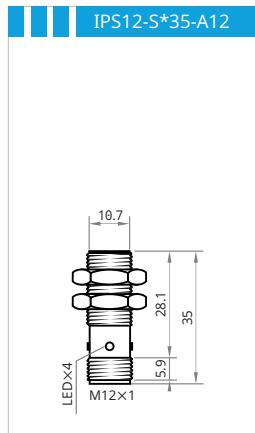
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	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]					Switching frequency Schaltfrequenz
				22	30	35	50	68	
Standard	●	2	Cable 2 m, PVC		IPS12-S2PO30-A2P		IPS12-S2PO50-A2P		2000 Hz
			Connector M12				IPS12-S2PO50-A12	IPS12-S2PO68-A12	
	○	4	Cable 2 m, PVC		IPS12-N4PO30-A2P		IPS12-N4PO50-A2P		1000 Hz
			Connector M12				IPS12-N4PO50-A12	IPS12-N4PO68-A12	
Increased · Erhöht	●	4	Cable 2 m, PVC	IPS12-S4PO22-A2P	IPS12-S4PO30-A2P		IPS12-S4PO50-A2P		1000 Hz
			30 cm, PUR, M12	IPS12-S4PO22-3U12					
			Connector M12			IPS12-S4PO35-A12	IPS12-S4PO50-A12	IPS12-S4PO68-A12	
	○	8	Cable 2 m, PVC		IPS12-N8PO30-A2P		IPS12-N8PO50-A2P		500 Hz
			Connector M12				IPS12-N8PO50-A12	IPS12-N8PO68-A12	
Extended · Erweitert	●	6	Cable 2 m, PVC	IPS12-S6PO22-A2P	IPS12-S6PO30-A2P		IPS12-S6PO50-A2P		800 Hz
			30 cm, PUR, M12	IPS12-S6PO22-3U12					
			Connector M12			IPS12-S6PO35-A12	IPS12-S6PO50-A12	IPS12-S6PO68-A12	
	○	10	Cable 2 m, PVC		IPS12-N10PO30-A2P		IPS12-N10PO50-A2P		400 Hz
			Connector M12				IPS12-N10PO50-A12	IPS12-N10PO68-A12	
Performance	●	8	Cable 2 m, PVC	IPS12-S8PO22-A2P	IPS12-S8PO30-A2P		IPS12-S8PO50-A2P		500 Hz
			30 cm, PUR, M12	IPS12-S8PO22-3U12					
			Connector M12			IPS12-S8PO35-A12	IPS12-S8PO50-A12	IPS12-S8PO68-A12	

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

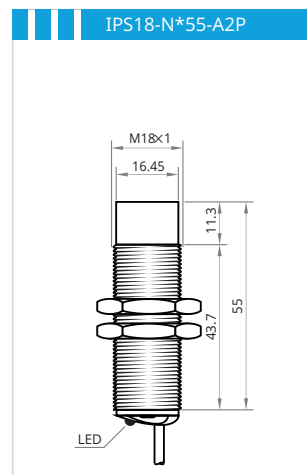
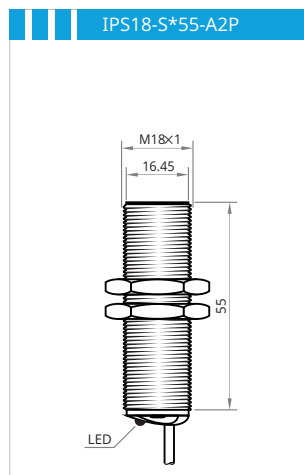
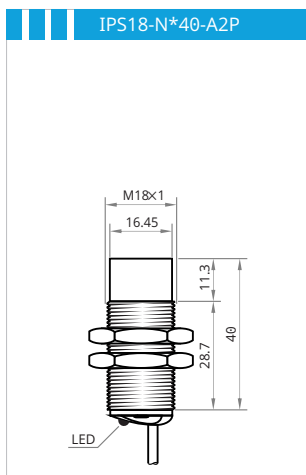
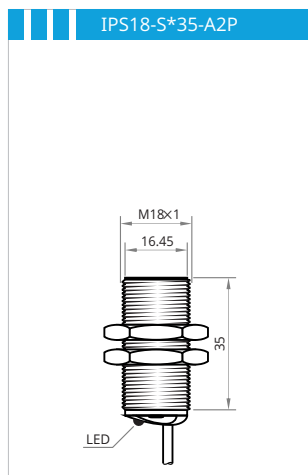
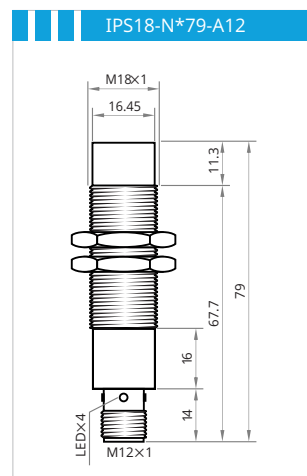
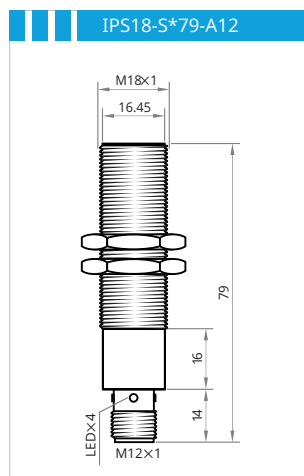
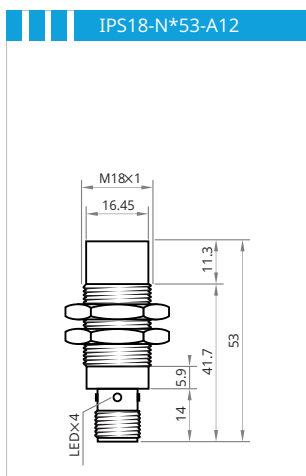
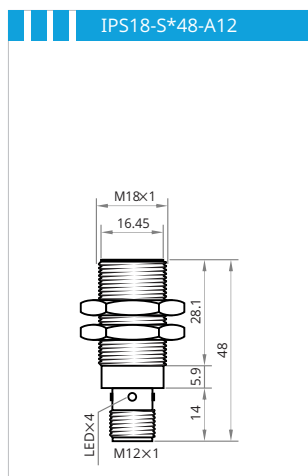
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	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]						
				35	40	48	53	55	79	
Standard	●	5	Cable 2 m, PVC	IPS18-S5PO35-A2P				IPS18-S5PO55-A2P		1000 Hz
			Connector M12			IPS18-S5PO48-A12			IPS18-S5PO79-A12	
	○	8	Cable 2 m, PVC		IPS18-N8PO40-A2P			IPS18-N8PO55-A2P		500 Hz
			Connector M12				IPS18-N8PO53-A12		IPS18-N8PO79-A12	
Increased · Erhöht	●	8	Cable 2 m, PVC	IPS18-S8PO35-A2P				IPS18-S8PO55-A2P		500 Hz
			Connector M12			IPS18-S8PO48-A12			IPS18-S8PO79-A12	
	○	16	Cable 2 m, PVC		IPS18-N16PO40-A2P			IPS18-N16PO55-A2P		150 Hz
			Connector M12				IPS18-N16PO53-A12		IPS18-N16PO79-A12	
Extended · Erweitert	●	12	Cable 2 m, PVC	IPS18-S12PO35-A2P				IPS18-S12PO55-A2P		300 Hz
			Connector M12			IPS18-S12PO48-A12			IPS18-S12PO79-A12	
	○	20	Cable 2 m, PVC		IPS18-N20PO40-A2P			IPS18-N20PO55-A2P		100 Hz
			Connector M12				IPS18-N20PO53-A12		IPS18-N20PO79-A12	

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

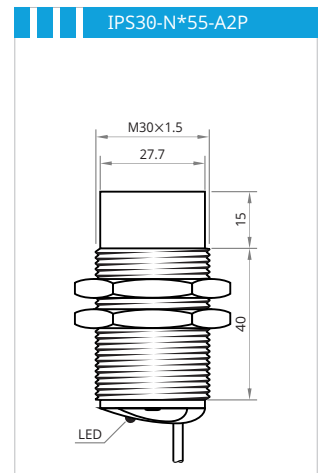
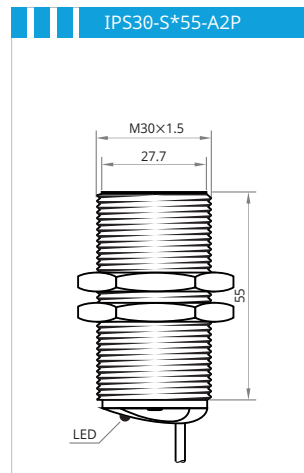
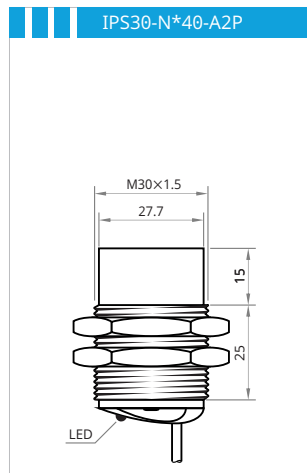
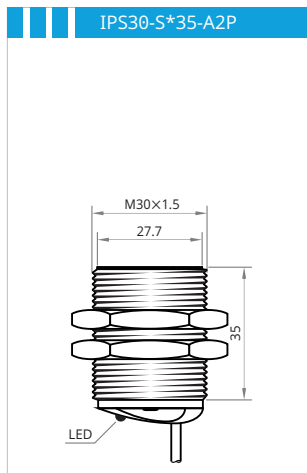
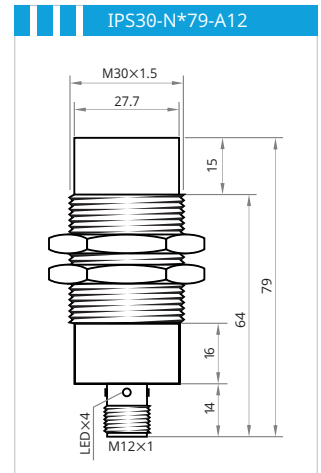
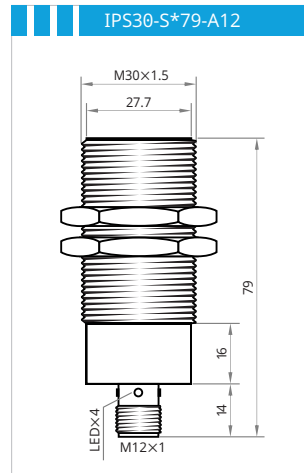
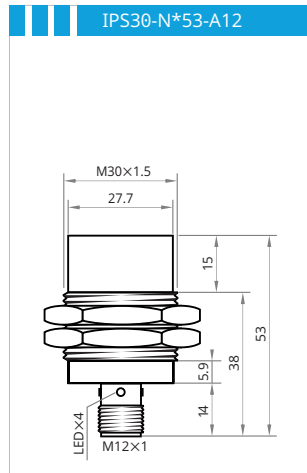
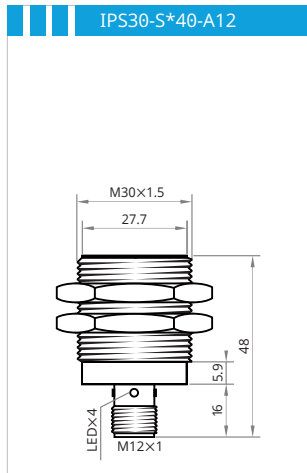
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	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]					
				35	40	48	53	55	79
Standard	●	10	Cable 2 m, PVC	IPS30-S10PO35-A2P				IPS30-S10PO55-A2P	1000 Hz
			Connector M12			IPS30-S10PO48-A12		IPS30-S10PO79-A12	
	○	15	Cable 2 m, PVC		IPS30-N15PO40-A2P			IPS30-N15PO55-A2P	500 Hz
			Connector M12				IPS30-N15PO53-A12	IPS30-N15PO79-A12	
Increased · Erhöht	●	16	Cable 2 m, PVC	IPS30-S16PO35-A2P				IPS30-S16PO55-A2P	500 Hz
			Connector M12			IPS30-S16PO48-A12		IPS30-S16PO79-A12	
	○	25	Cable 2 m, PVC		IPS30-N25PO40-A2P			IPS30-N25PO55-A2P	150 Hz
			Connector M12				IPS30-N25PO53-A12	IPS30-N25PO79-A12	
Extended · Erweitert	●	22	Cable 2 m, PVC	IPS30-S22PO35-A2P				IPS30-S22PO55-A2P	300 Hz
			Connector M12			IPS30-S22PO48-A12		IPS30-S22PO79-A12	
	○	40	Cable 2 m, PVC		IPS30-N40PO40-A2P			IPS30-N40PO55-A2P	100 Hz
			Connector M12				IPS30-N40PO53-A12	IPS30-N40PO79-A12	
Performance	○	50	Cable 2 m, PVC		IPS30-N50PO40-A2P			IPS30-N50PO55-A2P	100 Hz
			Connector M12				IPS30-N50PO53-A12	IPS30-N50PO79-A12	

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

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Cuboid and special shapes

Quaderförmige und besondere Bauformen

	Mounting Montage	S _n [mm]	Connection Anschluss	Supply voltage · Versorgungsspannung					
				10...30 V _{DC} , 3-wire		10...55 V _{DC} , 2-wire		20...255 V _{AC} , 2-wire	
40×40 (long)	●	15	Terminal block (also available with M12 connector)	IPS40-S15PCOL-PG13	120 Hz	IPS40-S15DOL-PG13	60 Hz	IPS40-S15AOL-PG13	25 Hz
	●	20		IPS40-S20PCOL-PG13		IPS40-S20DOL-PG13		IPS40-S20AOL-PG13	
	○	30		IPS40-N30PCOL-PG13		IPS40-N30DOL-PG13		IPS40-N30AOL-PG13	
	●	25		IPS40-S25PCOL-PG13					
	○	40		IPS40-N40PCOL-PG13					
	○	50		IPS40-N50PCOL-PG13					
40×40 (short)	●	15	Connector M12	IPS40-S15PCOS-N12	120 Hz	IPS40-S15DOS-N12	60 Hz	IPS40-S15AOS-N12	25 Hz
	●	20		IPS40-S20PCOS-N12		IPS40-S20DOS-N12		IPS40-S20AOS-N12	
	○	30		IPS40-N30PCOS-N12		IPS40-N30DOS-N12		IPS40-N30AOS-N12	
	●	25		IPS40-S25PCOS-N12					
	○	40		IPS40-N40PCOS-N12					
	○	40							
8×8	●	2	Connector M8	IPS88-S2PO60-A8	2000 Hz				
			Cable 2 m, PVC	IPS88-S2PO40-A2P					
	●	3	Connector M8	IPS88-S3PO60-A8	1000 Hz				
			Cable 2 m, PVC	IPS88-S3PO40-A2P					
16×28	●	1	Connector M8	IPS1628-S1POS-A8	2000 Hz				
			Cable 2 m, PVC	IPS1628-S1POS-A2P					
	○	2	Connector M8	IPS1628-N2POS-A8					
			Cable 2 m, PVC	IPS1628-N2POS-A2P					
	●	2	Connector M8	IPS1628-S2POS-A8					
			Cable 2 m, PVC	IPS1628-S2POS-A2P					
	○	4	Connector M8	IPS1628-N4POS-A8	1000 Hz				
			Cable 2 m, PVC	IPS1628-N4POS-A2P					
	●	3	Connector M8	IPS1628-S3POS-A8					
			Cable 2 m, PVC	IPS1628-S3POS-A2P					
	○	6	Connector M8	IPS1628-N6POS-A8					
			Cable 2 m, PVC	IPS1628-N6POS-A2P					
Ø18	●	5	Single strands 2 m	IPSD18-S5PO-001	500 Hz				
			Single strands 2 m	IPSD18-S5PC-001					
Ø5×5	●	0.8	Cable 2 m, PUR	IPS55-S08PO26-A2U	2000 Hz				
			30 cm, PUR, M8	IPS55-S08PO26-3U8					
		1.5	Cable 2 m, PUR	IPS55-S1.5PO26-A2U					
			30 cm, PUR, M8	IPS55-S1.5PO26-3U8					

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Technical data (typ.)

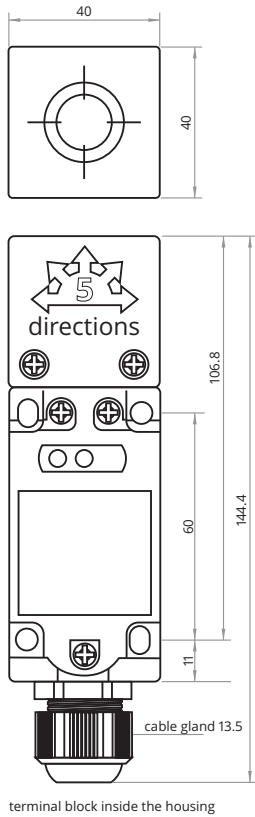
Supply voltage	see table head
Reverse polarity protection	built-in
Current consumption	<10 mA
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.2 V @ 200 mA
Switching indicator	LED, yellow
Operating temperature	−20...+70 °C −4...+158 °F
IP code	IP67

Technische Daten (typ.)

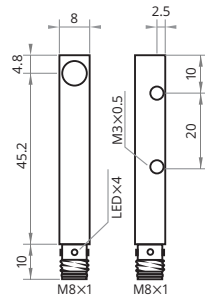
Versorgungsspannung	siehe Tabellenkopf
Verpolungsschutz	integriert
Eigenstromaufnahme	<10 mA
Ausgangsbelastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,2 V @ 200 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	−20...+70 °C
Schutzart	IP67



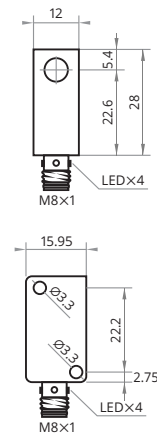
IPS40...L...



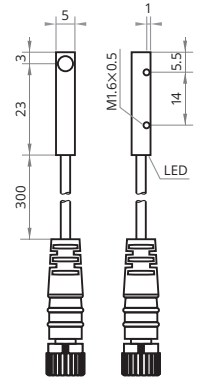
IPS88-S*60-A8



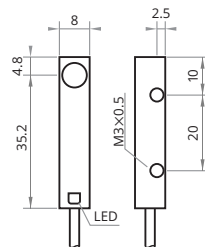
IPS1628-*S-A8



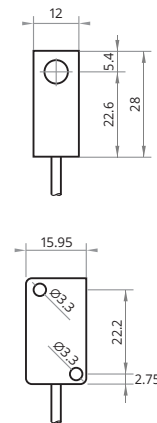
IPS55-S*26-3U8



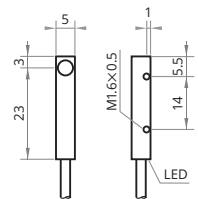
IPS88-S*40-A2P



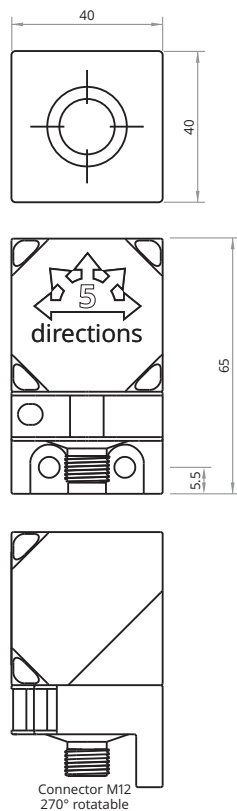
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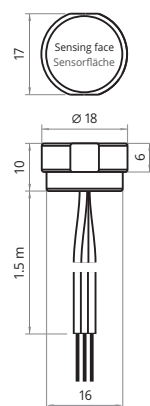
IPS55-S*26-A2U



IPS40...S...



IPSD18



Proximity Switches, inductive

Näherungsschalter, induktiv

- ▶ Miniature, Ø 3 mm...Ø 5×5 mm
Miniatur, Ø 3 mm...Ø 5×5 mm
- ▶ High performance with up to 4×S_n
Hochleistung mit bis zu 4×S_n
- ▶ **Closed stainless steel housing with IP69k**
Geschlossene Edelstahlgehäuse mit IP69k
- ▶ High temperature proof versions up to 180 °C | 356 °F
Hochtemperaturfeste Ausführungen bis 180 °C
- ▶ Low temperature –40 °C | –40 °F, food grade, IP69k
Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
- ▶ Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- ▶ Devices with analog outputs
Geräte mit Analogausgängen
- ▶ 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	LED, yellow
Operating temperature	–20...+70 °C –4...+158 °F
IP code	IP69k, IP67 rear end

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	–20...+70 °C
Schutzart	IP69k, IP67 Rückseite



	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]					
				30	45	50	60	68	70
M8X1	●	2	Cable 2 m, PVC	IMF8-S2PO30-A2P	IMF8-S2PO45-A2P				
			Connector M8		IMF8-S2PO45-A8		IMF8-S2PO60-A8		
			Connector M12						IMF8-S2PO70-A12
	○	3.5	Cable 2 m, PVC	IMF8-N4PO30-A2P	IMF8-N4PO45-A2P				
			Connector M8		IMF8-N4PO45-A8		IMF8-N4PO60-A8		
			Connector M12						IMF8-N4PO70-A12
M12X1	●	4	Cable 2 m, PVC	IMF12-S4PO30-A2P		IMF12-S4PO50-A2P			
			Connector M12			IMF12-S4PO50-A12		IMF12-S4PO68-A12	
	○	6	Cable 2 m, PVC	IMF12-N6PO30-A2P		IMF12-N6PO50-A2P			
			Connector M12			IMF12-N6PO50-A12		IMF12-N6PO68-A12	
				35	40	48	53	55	79
M18X1	●	8	Cable 2 m, PVC	IMF18-S8PO35-A2P				IMF18-S8PO55-A2P	
			Connector M12			IMF18-S8PO48-A12			IMF18-S8PO79-A12
	○	10	Cable 2 m, PVC		IMF18-N10PO40-A2P			IMF18-N10PO55-A2P	
			Connector M12				IMF18-N10PO53-A12		IMF18-N10PO79-A12
M30X1.5	●	10	Cable 2 m, PVC	IMF30-S10PO35-A2P				IMF30-S10PO55-A2P	
			Connector M12			IMF30-S10PO48-A12			IMF30-S10PO79-A12
	○	15	Cable 2 m, PVC		IMF30-N15PO40-A2P			IMF30-N15PO55-A2P	
			Connector M12				IMF30-N15PO53-A12		IMF30-N15PO79-A12

Order codes are valid for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern gelten für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.

Inductive Metal Face

The dimensions of the IMF series correspond to those of the IPS series on the pages 28–31.

Induktiv Vollmetall

Die Abmessungen der IMF-Baureihe entsprechen denen der IPS-Baureihe auf den Seiten 28–31.

Proximity Switches, inductive

Näherungsschalter, induktiv

- ▶ Miniature, Ø 3 mm...Ø 5×5 mm
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Hochleistung mit bis zu 4×S_n
- ▶ Closed stainless steel housing with IP69k
Geschlossene Edelstahlgehäuse mit IP69k
- ▶ **High temperature proof versions up to 180 °C | 356 °F**
Hochtemperaturfeste Ausführungen bis 180 °C
- ▶ Low temperature –40 °C | –40 °F, food grade, IP69k
Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
- ▶ Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- ▶ Devices with analog outputs
Geräte mit Analogausgängen
- ▶ 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	on request
Operating temperature	–20... °C –4... °F
IP code	IP67

Remark:

To simplify the mechanical setup, all high temperature proximity switches up to 150 °C can be equipped optionally with a LED to indicate the status of the switching output. High temperature can damage permanently this LED. However, the failure of the LED does not affect the function of the device. A failure of the LED is no warranty case.

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	auf Anfrage
Betriebstemperatur	–20... °C
Schutzart	IP67

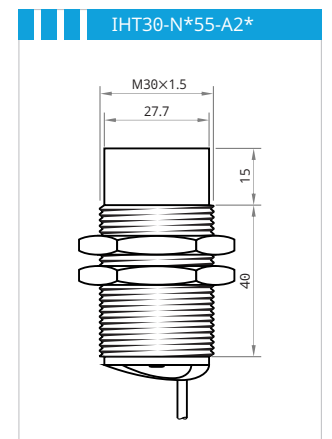
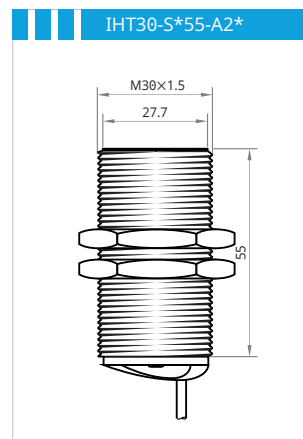
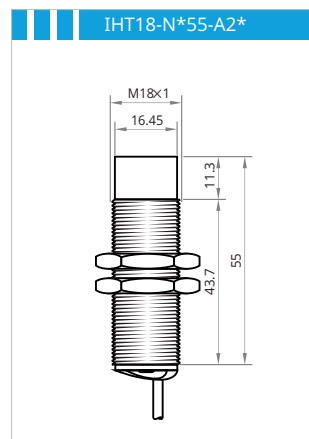
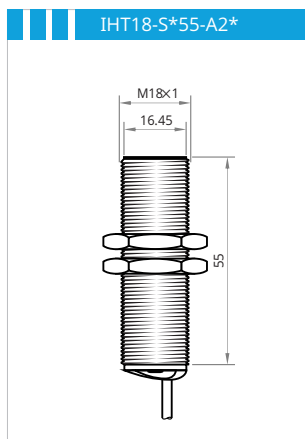
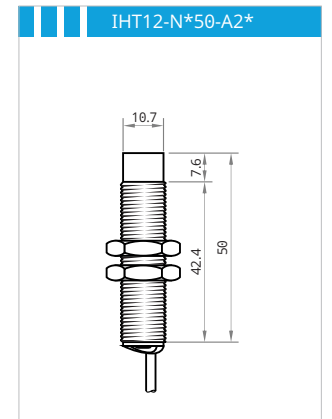
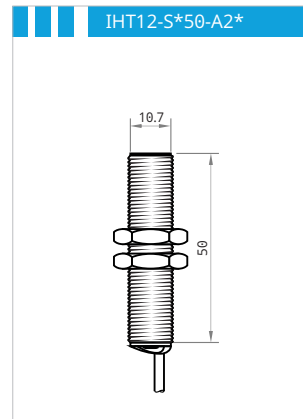
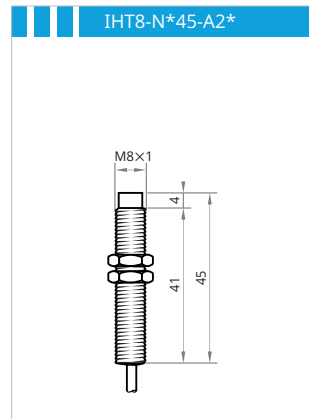
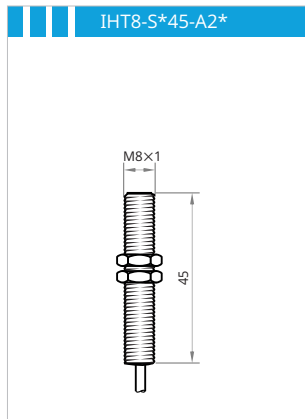


Anmerkung:

Zur Erleichterung der mechanischen Einrichtung können wahlweise alle Hochtemperatur-Näherungsschalter bis 150 °C mit einer LED zur Anzeige des Schaltzustands ausgerüstet werden. Hohe Temperaturen können diese LED dauerhaft beschädigen. Der Ausfall der LED hat jedoch keinen Einfluss auf die Funktion des Gerätes. Ein Ausfall der LED ist kein Garantiefall.

	Mounting Montage	S _n [mm]	Connection Anschluss	Temperature · Temperatur [permanent]			Current load capability Ausgangsbelastbarkeit	
				120 °C 250 °F	150 °C 300 °F	180 °C 355 °F		
Ø 6.5 mm	●	2	Cable 2 m, silicone	IHTD6-S2APO45-N2S			< 120 mA	800 Hz
			Cable 2 m, PTFE	IHTD6-S2APO45-N2T			< 120 mA	
	○	4	Cable 2 m, silicone	IHTD6-N4APO45-N2S			< 120 mA	500 Hz
			Cable 2 m, PTFE	IHTD6-N4APO45-N2T			< 120 mA	
M8x1	●	2	Cable 2 m, silicone	IHT8-S2APO45-N2S			< 120 mA	800 Hz
			Cable 2 m, PTFE	IHT8-S2APO45-N2T			< 120 mA	
	○	4	Cable 2 m, silicone	IHT8-N4APO45-N2S			< 120 mA	500 Hz
			Cable 2 m, PTFE	IHT8-N4APO45-N2T			< 120 mA	
M12x1	●	2	Cable 2 m, silicone	IHT12-S2APO50-N2S	IHT12-S2BPO50-N2S		< 120 mA	800 Hz
			Cable 2 m, PTFE	IHT12-S2APO50-N2T	IHT12-S2BPO50-N2T		< 120 mA	
	○	4	Cable 2 m, silicone	IHT12-N4APO50-N2S	IHT12-N4BPO50-N2S		< 120 mA	500 Hz
			Cable 2 m, PTFE	IHT12-N4APO50-N2T	IHT12-N4BPO50-N2T		< 120 mA	
	●	4	Cable 2 m, silicone	IHT12-S4APO50-N2S	IHT12-S4BPO50-N2S		< 120 mA	800 Hz
			Cable 2 m, PTFE	IHT12-S4APO50-N2T	IHT12-S4BPO50-N2T		< 120 mA	
	○	8	Cable 2 m, silicone	IHT12-N8APO50-N2S	IHT12-N8BPO50-N2S		< 120 mA	500 Hz
			Cable 2 m, PTFE	IHT12-N8APO50-N2T	IHT12-N8BPO50-N2T		< 120 mA	
M18x1	●	5	Cable 2 m, silicone	IHT18-S5APO55-N2S	IHT18-S5BPO55-N2S	IHT18-S5CPO55-N2S	< 150 mA	500 Hz
			Cable 2 m, PTFE	IHT18-S5APO55-N2T	IHT18-S5BPO55-N2T	IHT18-S5CPO55-N2T	< 150 mA	
	○	8	Cable 2 m, silicone	IHT18-N8APO55-N2S	IHT18-N8BPO55-N2S	IHT18-N8CPO55-N2S	< 150 mA	500 Hz
			Cable 2 m, PTFE	IHT18-N8APO55-N2T	IHT18-N8BPO55-N2T	IHT18-N8CPO55-N2T	< 150 mA	
M30x1.5	●	10	Cable 2 m, silicone	IHT30-S10APO55-N2S	IHT30-S10BPO55-N2S	IHT30-S10CPO55-N2S	< 150 mA	200 Hz
			Cable 2 m, PTFE	IHT30-S10APO55-N2T	IHT30-S10BPO55-N2T	IHT30-S10CPO55-N2T	< 150 mA	
	○	15	Cable 2 m, silicone	IHT30-N15APO55-N2S	IHT30-N15BPO55-N2S	IHT30-N15CPO55-N2S	< 150 mA	200 Hz
			Cable 2 m, PTFE	IHT30-N15APO55-N2T	IHT30-N15BPO55-N2T	IHT30-N15CPO55-N2T	< 150 mA	

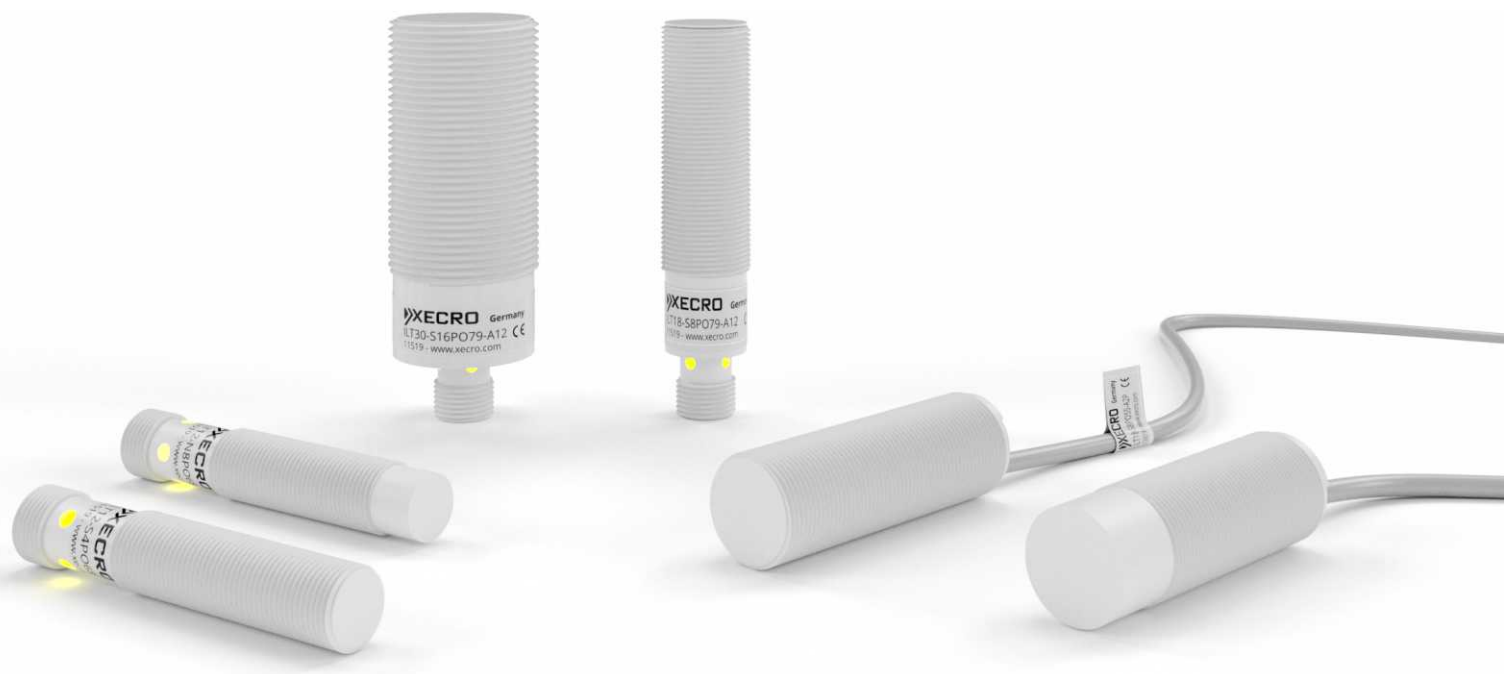
Order codes are for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.



Proximity Switches, inductive

Näherungsschalter, induktiv

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Hochleistung mit bis zu 4×S_n
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Geschlossene Edelstahlgehäuse mit IP69k
- ▶ High temperature proof versions up to 180 °C | 356 °F
Hochtemperaturfeste Ausführungen bis 180 °C
- ▶ **Low temperature –40 °C | –40 °F, food grade, IP69k**
Tiefemperatur –40 °C, lebensmitteltauglich, IP69k
- ▶ Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- ▶ Devices with analog outputs
Geräte mit Analogausgängen
- ▶ 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	LED, yellow
Housing material	PBT
Operating temperature	–40...+70 °C –40...+158 °F
IP code	IP69k, IP67 rear end

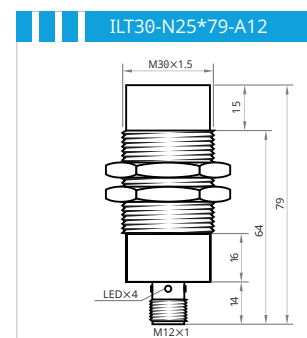
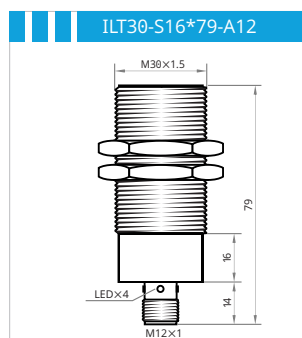
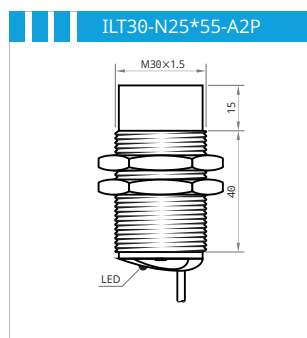
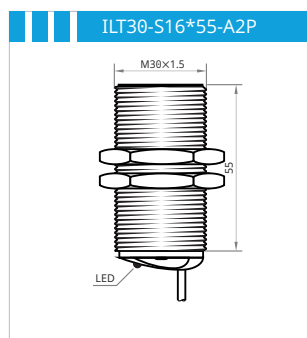
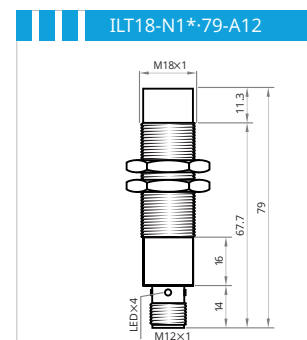
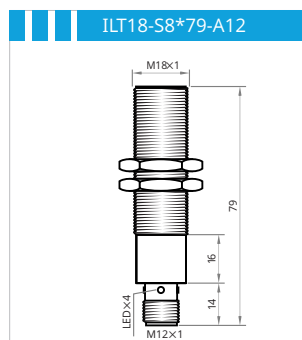
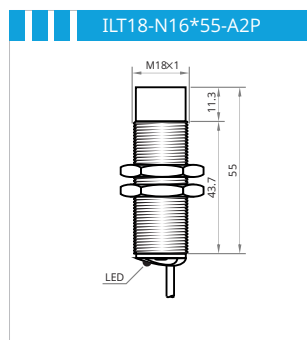
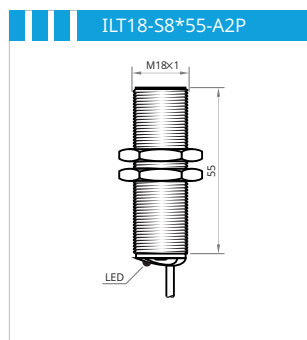
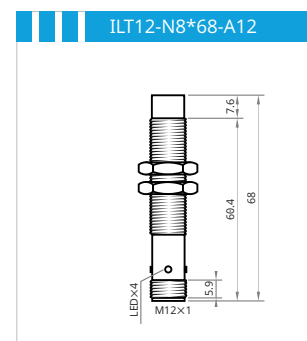
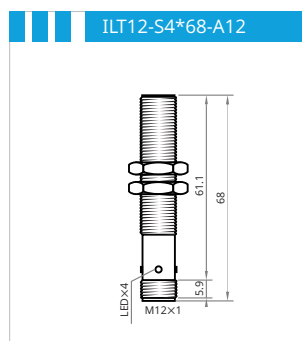
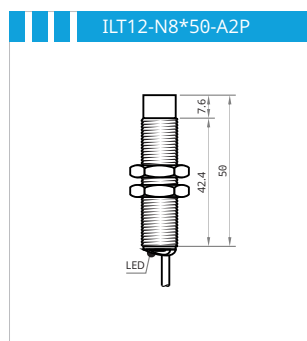
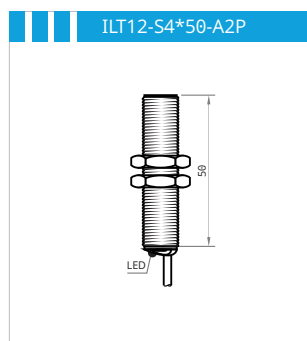
Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	LED, gelb
Gehäusematerial	PBT
Betriebstemperatur	–40...+70 °C
Schutzart	IP69k, IP67 Rückseite



	Mounting Montage	S _n [mm]	Connection Anschluss	Output Ausgang	Housing length · Gehäuselänge [mm]				
					50	55	68	79	
M12x1	●	4	Cable 2 m, PVC		ILT12-S4PO50-A2P				1000 Hz
			Connector M12				ILT12-S4PO68-A12		
	○	8	Cable 2 m, PVC		ILT12-N8PO50-A2P				500 Hz
			Connector M12				ILT12-N8PO68-A12		
M18x1	●	8	Cable 2 m, PVC			ILT18-S8PO55-A2P			500 Hz
			Connector M12					ILT18-S8PO79-A12	
	○	16	Cable 2 m, PVC			ILT18-N16PO55-A2P			150 Hz
			Connector M12					ILT18-N25PO79-A12	
M30x1.5	●	16	Cable 2 m, PVC			ILT30-S16PO55-A2P			500 Hz
			Connector M12					ILT30-S16PO79-A12	
	○	25	Cable 2 m, PVC			ILT30-N25PO55-A2P			150 Hz
			Connector M12					ILT30-N16PO79-A12	

Order codes are for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.



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Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
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Druckfeste Ausführungen bis 1000 bar
- ▶ Devices with analog outputs
Geräte mit Analogausgängen
- ▶ 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	LED, yellow — some models
Operating temperature	–20...+70 °C –4...+158 °F
IP code	IP69k, IP67 rear end

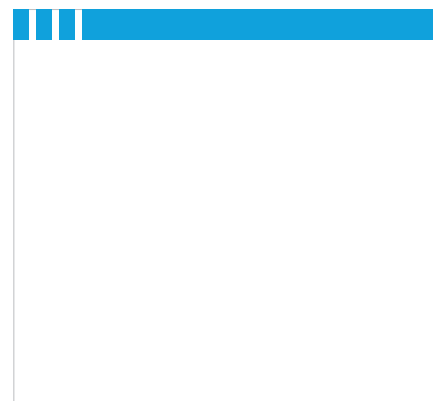
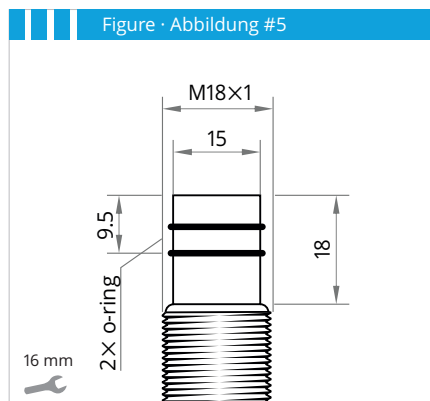
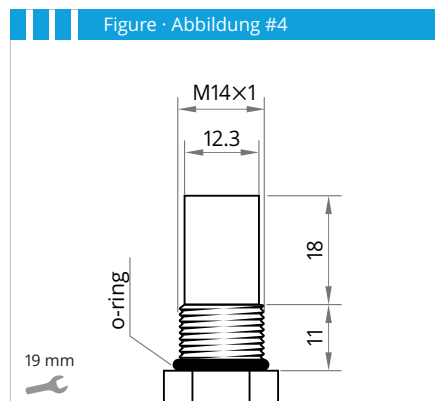
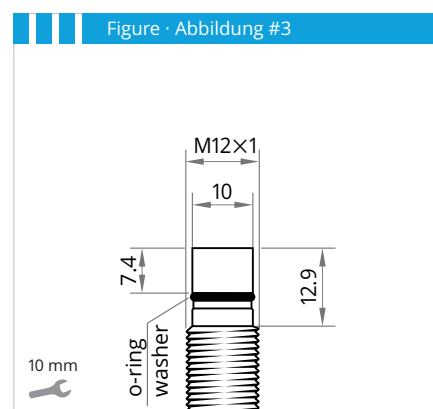
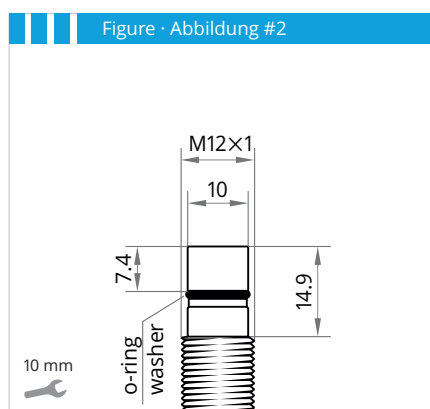
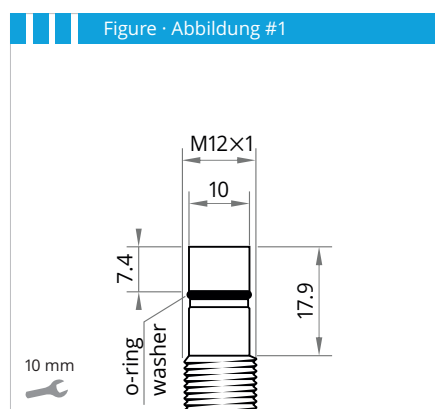
Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	LED, gelb – einige Ausführungen
Betriebstemperatur	–20...+70 °C
Schutzart	IP69k, IP67 Rückseite



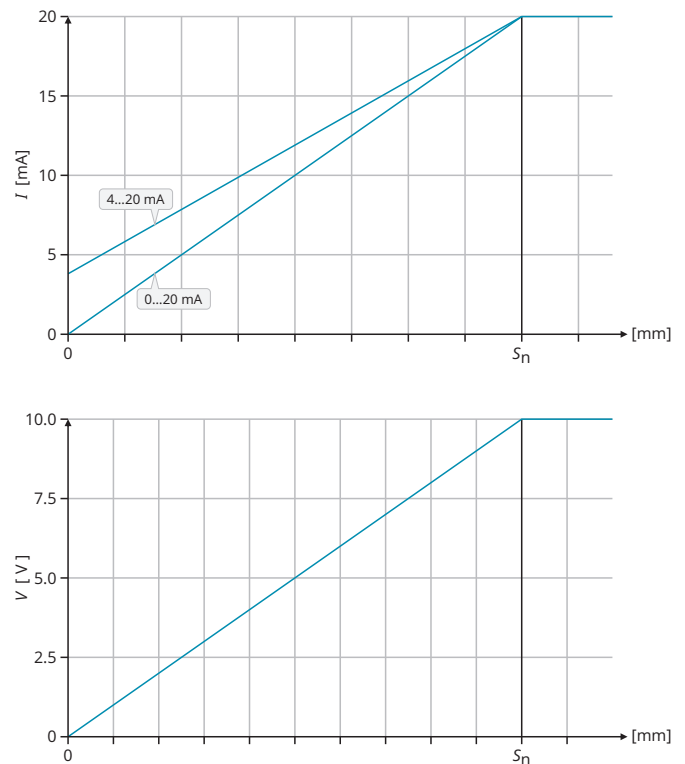
	S_n [mm]	Connection Anschluss	Pressure proof Druckfest	Housing length [mm] Gehäuselänge [mm]	Order code Bestellnummer	Figure Abbildung
M12×1	1.5	Cable 2 m, PVC	500 bar 7251 psi	43	IHP12-S1.5PO43-A2P	1
		Cable 2 m, PVC		47	IHP12-S1.5PO47-A2P	1
		Connector M12		56	IHP12-S1.5PO56-A12	1
		Connector M12		56	IHP12-S1.5PO57-A12	2
		Connector M12		69	IHP12-S1.5PO69-A12	3
		Cable 2 m, PVC		78	IHP12-S1.5PO78-A2P	1
		Connector M12		78	IHP12-S1.5PO78-A12	1
		Connector M12		93	IHP12-S1.5PO93-A12	3
		Connector M12		93	IHP12-S1.5PO94-A12	1
		Connector M12		138	IHP12-S1.5PO138-A12	3
	2	Connector M12	500 bar 7251 psi	56	IHP12-S2PO56-A12	1
		Connector M12		78	IHP12-S2PO78-A12	1
M14×1	3	Cable 2 m, PVC	500 bar 7251 psi	56	IHP14-S3PO56-N2P	4
		Connector M12	500 bar 7251 psi	65	IHP14-S3PO65-N12	
		Cable 2 m, PVC	1000 bar 14500 psi	56	IHP14-S3PO56S-N2P	
		Connector M12	1000 bar 14500 psi	65	IHP14-S3PO65S-N12	
M18×1	3	Cable 2 m, PVC	1000 bar 14500 psi	65	IHP18-S3PO65S-A2P	5
		Connector M12		79	IHP18-S3PO79S-A12	

Order codes are for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.



Proximity Switches, inductive Näherungsschalter, induktiv

- ▶ Miniature, Ø 3 mm...Ø 5×5 mm
Miniatur, Ø 3 mm...Ø 5×5 mm
- ▶ High performance with up to 4×S_n
Hochleistung mit bis zu 4×S_n
- ▶ Closed stainless steel housing with IP69k
Geschlossene Edelstahlgehäuse mit IP69k
- ▶ High temperature proof versions up to 180 °C | 356 °F
Hochtemperaturfeste Ausführungen bis 180 °C
- ▶ Low temperature –40 °C | –40 °F, food grade, IP69k
Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
- ▶ Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- ▶ **Devices with analog outputs**
Geräte mit Analogausgängen
- ▶ 2-wire 10...55 V_{DC} | 20...250 V_{AC}
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}



Technical data (typ.)

Supply voltage	18...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Output, pin 4, black	
Voltage	0...10 V
Current load capability	<7 mA
Bandwidth	500 Hz
Short circuit protection	built-in, self-resetting
Output, pin 2, white	
Current	0...20 mA
Bandwidth	500 Hz
Supply voltage indicator	LED, green
Operating temperature	–20...+70 °C –4...+158 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	18...35 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Ausgang, Pin 4, Schwarz	
Spannung	0...10 V
Strombelastbarkeit	<7 mA
Bandbreite	500 Hz
Kurzschlusschutz	integriert, selbstrückstellend
Ausgang, Pin 2, Weiß	
Strom	0...20 mA
Bandbreite	500 Hz
Betriebsspannungsanzeige	LED, grün
Betriebstemperatur	–20...+70 °C
Schutzart	IP67



	Mounting Montage	S _n [mm]	Connection Anschluss	Outputs Ausgänge	Housing length · Gehäuselänge [mm]					
					45	50	55	60	68	79
M8X1	●	2	Cable 2 m, PVC	0...10 V	IA8-S2V-G2P					
			Connector M8	0...10 V				IA8-S2V-G8		
	○	4	Cable 2 m, PVC	0...10 V	IA8-N4V-G2P				IA8-N4V-G8	
			Connector M8	0...10 V						
M12X1	●	4	Cable 2 m, PVC	0...10 V 0...20 mA		IA12-S4VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA12-S4VI420-G2P				
	○	8	Cable 2 m, PVC	0...10 V 0...20 mA		IA12-N8VI020-G2P			IA12-S4VI020-G12	
			Connector M12	0...10 V 4...20 mA		IA12-N8VI420-G2P			IA12-S4VI420-G12	
M18X1	●	6	Cable 2 m, PVC	0...10 V 0...20 mA		IA12-S6VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA12-S6VI420-G2P				
	○	10	Cable 2 m, PVC	0...10 V 0...20 mA		IA12-N10VI020-G2P			IA12-S6VI020-G12	
			Connector M12	0...10 V 4...20 mA		IA12-N10VI420-G2P			IA12-S6VI420-G12	
M30X1.5	●	16	Cable 2 m, PVC	0...10 V 0...20 mA		IA18-S8VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA18-S8VI420-G2P				
	○	25	Cable 2 m, PVC	0...10 V 0...20 mA		IA18-N16VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA18-N16VI420-G2P				
M30X1.5	●	20	Cable 2 m, PVC	0...10 V 0...20 mA		IA18-S10VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA18-S10VI420-G2P				
	○	40	Cable 2 m, PVC	0...10 V 0...20 mA		IA18-N20VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA18-N20VI420-G2P				
M30X1.5	●	20	Cable 2 m, PVC	0...10 V 0...20 mA		IA30-S16VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA30-S16VI420-G2P				
	○	25	Cable 2 m, PVC	0...10 V 0...20 mA		IA30-N25VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA30-N25VI420-G2P				
M30X1.5	●	20	Cable 2 m, PVC	0...10 V 0...20 mA		IA30-S20VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA30-S20VI420-G2P				
	○	40	Cable 2 m, PVC	0...10 V 0...20 mA		IA30-N40VI020-G2P				
			Connector M12	0...10 V 4...20 mA		IA30-N40VI420-G2P				

Proximity Switches, inductive Näherungsschalter, induktiv

- ▶ Miniature, Ø 3 mm...Ø 5×5 mm
Miniatur, Ø 3 mm...Ø 5×5 mm
- ▶ High performance with up to 4×S_n
Hochleistung mit bis zu 4×S_n
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Geschlossene Edelstahlgehäuse mit IP69k
- ▶ High temperature proof versions up to 180 °C | 356 °F
Hochtemperaturfeste Ausführungen bis 180 °C
- ▶ Low temperature –40 °C | –40 °F, food grade, IP69k
Tieftemperatur –40 °C, lebensmitteltauglich, IP69k
- ▶ Pressure proof versions up to 1000 bar | 14500 psi
Druckfeste Ausführungen bis 1000 bar
- ▶ Devices with analog outputs
Geräte mit Analogausgängen
- ▶ **2-wire 10...55 V_{DC} | 20...250 V_{AC}**
2-Leiter 10...55 V_{DC} | 20...250 V_{AC}
- △ More devices Ø 40×40 on page 32
Weitere Geräte Ø 40×40 auf Seite 32



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
10...55 V_{DC}	
Reverse polarity protection	built-in
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
20...255 V_{AC}	
Reverse polarity protection	inherently
Current load capability	400 mA
Short circuit protection	none
Switching indicator	LED, yellow
Operating temperature	–20...+70 °C –4...+158 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
10...55 V_{DC}	
Verpolungsschutz	integriert
Ausgangsbelaastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
20...255 V_{AC}	
Verpolungsschutz	prinzipbedingt
Ausgangsbelaastbarkeit	400 mA
Kurzschlusschutz	ohne
Schaltanzeige	LED, gelb
Betriebstemperatur	–20...+70 °C
Schutzart	IP67



		► 2-wire 10...55 V _{DC}									
		Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]						
					35 40	45 50	48 53	55	60 68	70 79	
M8×1	●	2	Cable 2 m, PVC		IPS8-S2DO45-A2P					2000 Hz	
			Connector M8, M12				IPS8-S2DO60-A8	IPS8-S2DO70-A12			
	○	4	Cable 2 m, PVC		IPS8-N4DO45-A2P					2000 Hz	
			Connector M8, M12				IPS8-N4DO60-A8	IPS8-N4DO70-A12			
M12×1	●	4	Cable 2 m, PVC		IPS12-S4DO50-A2P					1000 Hz	
			Connector M12				IPS12-S4DO68-A12				
	○	8	Cable 2 m, PVC		IPS12-N8DO50-A2P					500 Hz	
			Connector M12				IPS12-N8DO68-A12				
M18×1	●	8	Cable 2 m, PVC				IPS18-S8DO55-A2P			500 Hz	
			Connector M12					IPS18-S8DO79-A12			
	○	16	Cable 2 m, PVC				IPS18-N16DO55-A2P			150 Hz	
			Connector M12					IPS18-N16DO79-A12			
M30×1.5	●	16	Cable 2 m, PVC	IPS30-S16DO35-A2P			IPS30-S16DO55-A2P			150 Hz	
			Connector M12			IPS30-S16DO48-A12		IPS30-S16DO79-A12			
	○	25	Cable 2 m, PVC	IPS30-N25DO40-A2P			IPS30-N25DO55-A2P			150 Hz	
			Connector M12			IPS30-N25DO53-A12		IPS30-N25DO79-A12			

Selection from our range of products.
Auszug aus unserem Lieferprogramm.

Order codes are valid for output function NO (DO). All devices also available with output function NC (DC).
Bestellnummern gültig für Schließer (DO). Alle Geräte sind auch als Öffner (DC) erhältlich.

► 2-wire 20...255 V _{AC}			Housing length · Gehäuselänge [mm]						
Mounting Montage	S _n [mm]	Connection Anschluss	35 40	40 45	48 53	55 60	68	79	
M12×1	●	4	Cable 2 m, PVC			IPS12-S4AO60-A2P			25 Hz
			Connector M12				IPS12-S4AO68-A12		
	○	8	Cable 2 m, PVC			IPS12-N8AO60-A2P			25 Hz
			Connector M12				IPS12-N8AO68-A12		
M18×1	●	8	Cable 2 m, PVC	IPS18-S8AO35-A2P		IPS18-S8AO55-A2P			25 Hz
			Connector M12		IPS18-S8AO48-A12			IPS18-S8AO79-A12	
	○	16	Cable 2 m, PVC	IPS18-N16AO40-A2P		IPS18-N16AO55-A2P			25 Hz
			Connector M12		IPS18-N16AO53-A12			IPS18-N16AO79-A12	
M30×1.5	●	16	Cable 2 m, PVC		IPS30-S16AO40-A2P	IPS30-S16AO55-A2P			25 Hz
			Connector M12					IPS30-S16AO79-A12	
	○	25	Cable 2 m, PVC		IPS30-N25AO45-A2P	IPS30-N25AO55-A2P			25 Hz
			Connector M12					IPS30-N25AO79-A12	

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

Order codes are valid for output function NO (AO). All devices also available with output function NC (AC).
Bestellnummern gültig für Schließer (AO). Alle Geräte sind auch als Öffner (AC) erhältlich.

Proximity Switches, capacitive

Näherungsschalter, kapazitiv

- ▶ **Metal housings from Ø 6.5 mm...M30**
Metallgehäuse Ø 6,5 mm...M30
- ▶ **Chemical resistant PTFE housings for M18 and M30**
Chemisch beständige PTFE-Gehäuse für M18 und M30
- ▶ **Highest sensing distances in its class**
Höchste Schaltabstände ihrer Klasse
- ▶ Plastic housings made of PBT M12...M30
Kunststoffgehäuse aus PBT M12...M30
- ▶ Permanent temperature up to 150 °C | 302 °F
Dauerhaft temperaturbeständig bis zu 150 °C



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	LED, yellow
Operating temperature	−20...+70 °C −4...+158 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	−20...+70 °C
Schutzart	IP67



	Mounting Montage	S _n [mm]	Connection Anschluss	Housing Material Gehäusematerial	Housing length · Gehäuselänge [mm]			
					45	60	70	80
M8x1	●	2	Cable 2 m, PVC	Brass · Messing	CS8-S2PO45-A2P			
			Connector M8	Brass · Messing		CS8-S2PO60-A8		
			Connector M12	Brass · Messing			CS8-S2PO70-A12	
	○	4	Cable 2 m, PVC	Brass · Messing	CS8-N4PO45-A2P			
			Connector M8	Brass · Messing		CS8-N4PO60-A8		
			Connector M12	Brass · Messing			CS8-N4PO70-A12	
M12x1	●	4	Cable 2 m, PVC	Brass · Messing		CS12-S4PO60-A2P		
			Connector M12	Brass · Messing		CS12-S4PO60-A12		
		6	Cable 2 m, PVC	Brass · Messing		CS12-S6PO60-A2P		
			Connector M12	Brass · Messing		CS12-S6PO60-A12		
	○	8	Cable 2 m, PVC	Brass · Messing		CS12-N8PO60-A2P		
			Connector M12	Brass · Messing		CS12-N8PO60-A12		
		10	Cable 2 m, PVC	Brass · Messing		CS12-N10PO60-A2P		
			Connector M12	Brass · Messing		CS12-N10PO60-A12		
M18x1	●	8	Cable 2 m, PVC	Brass · Messing				CS18-S8PO80-A2P
			Cable 2 m, PTFE	PTFE				CS18-S8PO80T-A2P
			Connector M12	Brass · Messing				CS18-S8PO80-A12
		12	Cable 2 m, PVC	Brass · Messing				CS18-S12PO80-A2P
			Cable 2 m, PTFE	PTFE				CS18-S12PO80T-A2P
			Connector M12	Brass · Messing				CS18-S12PO80-A12
	○	15	Cable 2 m, PVC	Brass · Messing				CS18-N15PO80-A2P
			Cable 2 m, PTFE	PTFE				CS18-N15PO80T-A2P
			Connector M12	Brass · Messing				CS18-N15PO80-A12
		20	Cable 2 m, PVC	Brass · Messing				CS18-N20PO80-A2P
			Cable 2 m, PTFE	PTFE				CS18-N20PO80T-A2P
			Connector M12	Brass · Messing				CS18-N20PO80-A12
M30x1.5	●	20	Cable 2 m, PVC	Brass · Messing				CS30-S20PO80-A2P
			Cable 2 m, PTFE	PTFE				CS30-S20PO80T-A2P
			Connector M12	Brass · Messing				CS30-S20PO80-A12
		25	Cable 2 m, PVC	Brass · Messing				CS30-S25PO80-A2P
			Cable 2 m, PTFE	PTFE				CS30-S25PO80T-A2P
			Connector M12	Brass · Messing				CS30-S25PO80-A12
	○	30	Cable 2 m, PVC	Brass · Messing				CS30-N30PO80-A2P
			Cable 2 m, PTFE	PTFE				CS30-N30PO80T-A2P
			Connector M12	Brass · Messing				CS30-N30PO80-A12
		35	Cable 2 m, PVC	Brass · Messing				CS30-N35PO80-A2P
			Cable 2 m, PTFE	PTFE				CS30-N35PO80T-A2P
			Connector M12	Brass · Messing				CS30-N35PO80-A12

Excerpt from our range of products.
Auszug aus unserem Lieferprogramm.

Order codes are valid for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern gelten für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.

Proximity Switches, capacitive

Näherungsschalter, kapazitiv

- ▶ Metal housings from Ø 6.5 mm...M30
Metallgehäuse Ø 6,5 mm...M30
- ▶ Chemical resistant PTFE housings for M18 and M30
Chemisch beständige PTFE-Gehäuse für M18 und M30
- ▶ **Highest sensing distances in its class**
Höchste Schaltabstände ihrer Klasse
- ▶ **Plastic housings made of PBT M12...M30**
Kunststoffgehäuse aus PBT M12...M30
- ▶ Permanent temperature up to 150 °C | 302 °F
Dauerhaft temperaturbeständig bis zu 150 °C



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Switching indicator	LED, yellow
Housing material	PBT
Operating temperature	−20...+70 °C −4...+158 °F
IP code	IP67

Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Eigenstromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Schaltanzeige	LED, gelb
Gehäusematerial	PBT
Betriebstemperatur	−20...+70 °C
Schutzart	IP67



	Mounting Montage	S _n [mm]	Connection Anschluss	Housing length · Gehäuselänge [mm]			
				60	80	30 × 50 × 7	40 × 40 × 142
M12×1	●	4	Cable 2 m, PVC	CS12-S4PO60P-A2P			
			Connector M12	CS12-S4PO60P-A12			
		6	Cable 2 m, PVC	CS12-S6PO60P-A2P			
			Connector M12	CS12-S6PO60P-A12			
	○	8	Cable 2 m, PVC	CS12-N8PO60P-A2P			
			Connector M12	CS12-N8PO60P-A12			
		10	Cable 2 m, PVC	CS12-N10PO60P-A2P			
			Connector M12	CS12-N10PO60P-A12			
M18×1	●	8	Cable 2 m, PVC		CS18-S8PO80P-A2P		
			Connector M12		CS18-S8PO80P-A12		
		12	Cable 2 m, PVC		CS18-S12PO80P-A2P		
			Connector M12		CS18-S12PO80P-A12		
	○	15	Cable 2 m, PVC		CS18-N15PO80P-A2P		
			Connector M12		CS18-N15PO80P-A12		
		20	Cable 2 m, PVC		CS18-N20PO80P-A2P		
			Connector M12		CS18-N20PO80P-A12		
M30×1	●	20	Cable 2 m, PVC		CS30-S20PO80P-A2P		
			Connector M12		CS30-S20PO80P-A12		
		25	Cable 2 m, PVC		CS30-S25PO80P-A2P		
			Connector M12		CS30-S25PO80P-A12		
	○	30	Cable 2 m, PVC		CS30-N30PO80P-A2P		
			Connector M12		CS30-N30PO80P-A12		
		35	Cable 2 m, PVC		CS30-N35PO80P-A2P		
			Connector M12		CS30-N35PO80P-A12		
□30×50	●	6	Cable, 2 m			CS3050-S6PO-A2P	
			30 cm, PUR, M8			CS3050-S6PO-3U8	
	○	10	Cable, 2 m			CS3050-N10PO-A2P	
			30 cm, PUR, M8			CS3050-N10PO-3U8	
□40×40	●	20	Terminal block				CS40-S20POL-PG13
	○	30					CS40-N30POL-PG13

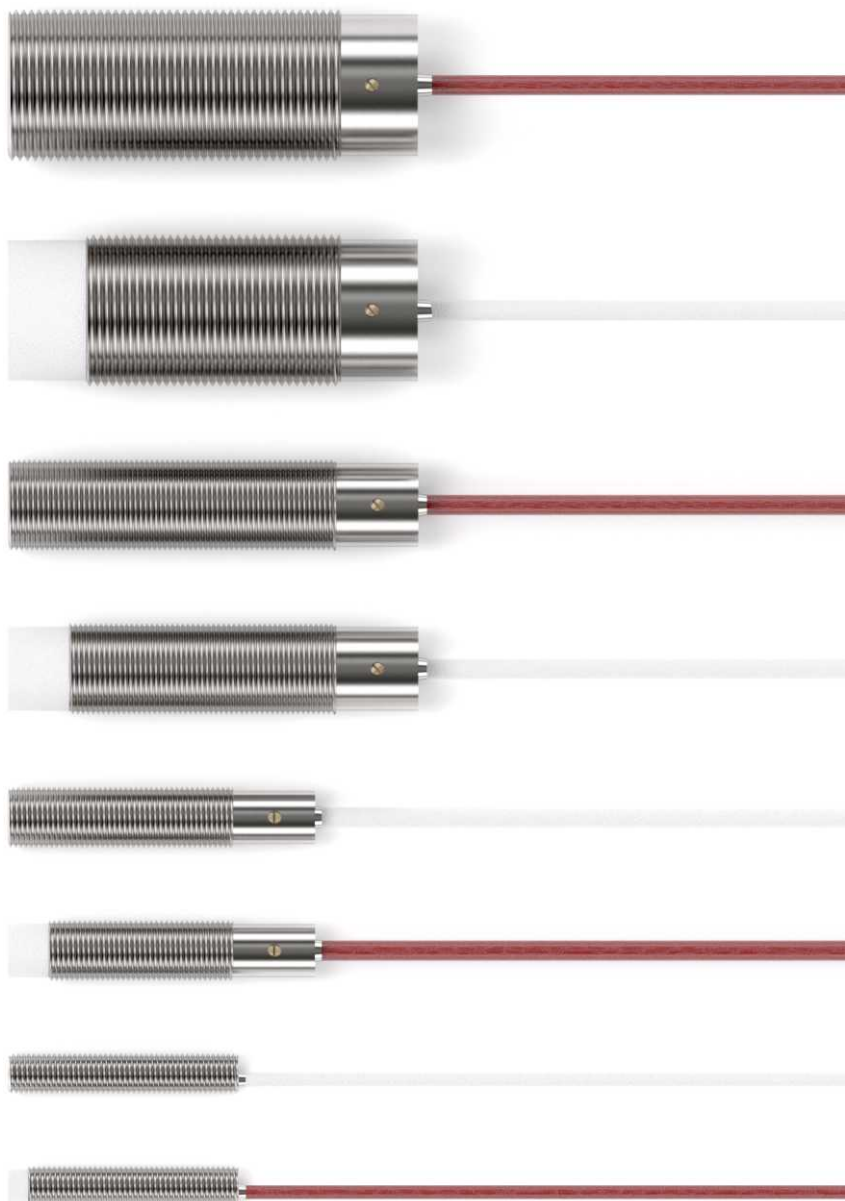
Excerpt from our range of products.
 Auszug aus unserem Lieferprogramm.

Order codes are valid for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
 Bestellnummern gelten für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.

Proximity Switches, capacitive

Näherungsschalter, kapazitiv

- ▶ Metal housings from Ø 6.5 mm...M30
Metallgehäuse Ø 6,5 mm...M30
- ▶ Chemical resistant PTFE housings for M18 and M30
Chemisch beständige PTFE-Gehäuse für M18 und M30
- ▶ **Highest sensing distances in its class**
Höchste Schaltabstände ihrer Klasse
- ▶ Plastic housings made of PBT M12...M30
Kunststoffgehäuse aus PBT M12...M30
- ▶ **Permanent temperature up to 150 °C | 302 °F**
Dauerhaft temperaturbeständig bis zu 150 °C



Technical data (typ.)

Supply voltage	10...30 V _{DC}
Reverse polarity protection	built-in
Current consumption	<10 mA
Short circuit protection	built-in, self-resetting
Voltage drop	<1.5 V @ 200 mA
Operating temperature	−20... °C −4... °F
IP code	IP67

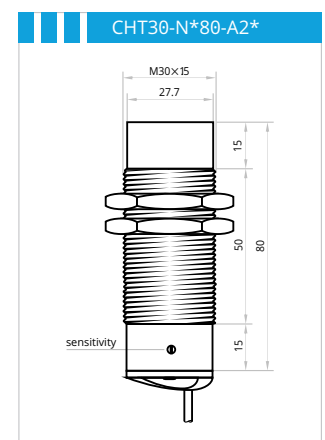
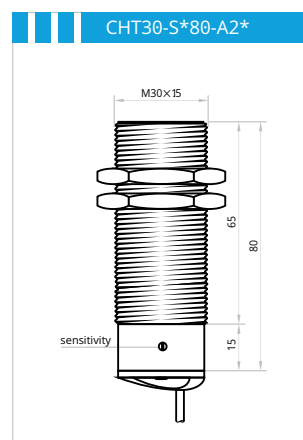
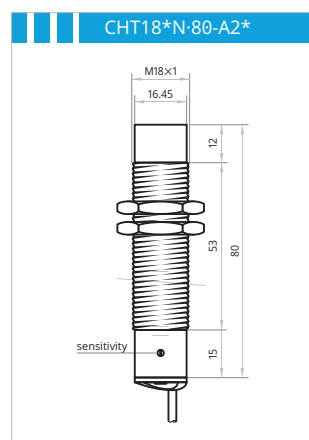
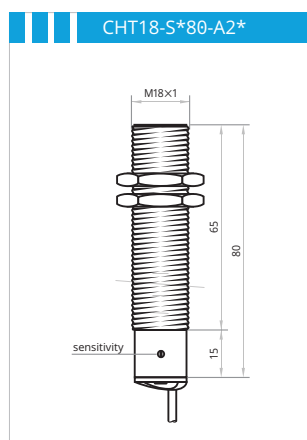
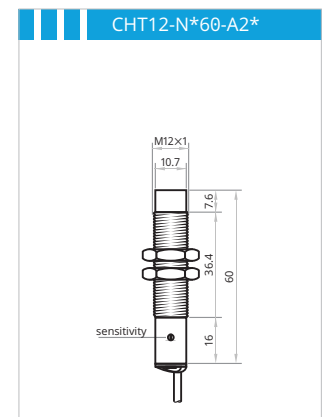
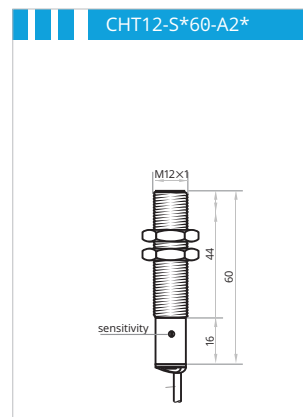
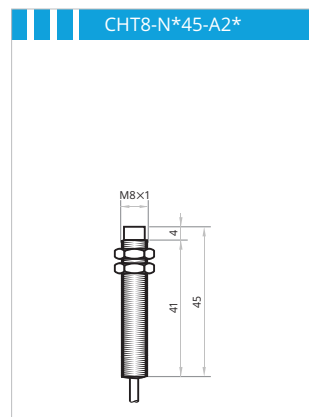
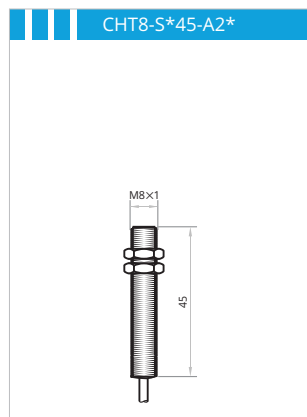
Technische Daten (typ.)

Versorgungsspannung	10...30 V _{DC}
Verpolungsschutz	integriert
Stromaufnahme	<10 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Betriebstemperatur	−20... °C
Schutzart	IP67



	Mounting Montage	S _n [mm]	Connection Anschluss	Temperature · Temperatur [permanent]		Output load capability Ausgangsbelastbarkeit
				120 °C 250 °F	150 °C 300 °F	
M8x1	●	2	Cable 2 m, silicone	CHT8-S2APO45-N2S	CHT8-S2BPO45-N2S	< 120 mA
			Cable 2 m PTFE	CHT8-S2APO45-N2T	CHT8-S2BPO45-N2T	< 120 mA
	○	4	Cable 2 m, silicone	CHT8-N4APO45-N2S	CHT8-N4BPO45-N2S	< 120 mA
			Cable 2 m PTFE	CHT8-N4APO45-N2T	CHT8-N4BPO45-N2T	< 120 mA
M12x1	●	2	Cable 2 m, silicone	CHT12-S2APO60-N2S	CHT12-S2BPO60-N2S	< 120 mA
			Cable 2 m PTFE	CHT12-S2APO60-N2T	CHT12-S2BPO60-N2T	< 120 mA
	○	4	Cable 2 m, silicone	CHT12-N4APO60-N2S	CHT12-N4BPO60-N2S	< 120 mA
			Cable 2 m PTFE	CHT12-N4APO60-N2T	CHT12-N4BPO60-N2T	< 120 mA
	●	4	Cable 2 m, silicone	CHT12-S4APO60-N2S	CHT12-S4BPO60-N2S	< 120 mA
			Cable 2 m PTFE	CHT12-S4APO60-N2T	CHT12-S4BPO60-N2T	< 120 mA
	○	8	Cable 2 m, silicone	CHT12-N8APO60-N2S	CHT12-N8BPO60-N2S	< 120 mA
			Cable 2 m PTFE	CHT12-N8APO60-N2T	CHT12-N8BPO60-N2T	< 120 mA
M18x1	●	5	Cable 2 m, silicone	CHT18-S5APO80-N2S	CHT18-S5BPO80-N2S	< 150 mA
			Cable 2 m PTFE	CHT18-S5APO80-N2T	CHT18-S5BPO80-N2T	< 150 mA
	○	8	Cable 2 m, silicone	CHT18-N8APO80-N2S	CHT18-N8BPO80-N2S	< 150 mA
			Cable 2 m PTFE	CHT18-N8APO80-N2T	CHT18-N8BPO80-N2T	< 150 mA
M30x1.5	●	10	Cable 2 m, silicone	CHT30-S10APO80-N2S	CHT30-S10BPO80-N2S	< 150 mA
			Cable 2 m PTFE	CHT30-S10APO80-N2T	CHT30-S10BPO80-N2T	< 150 mA
	○	15	Cable 2 m, silicone	CHT30-N15APO80-N2S	CHT30-N15BPO80-N2S	< 150 mA
			Cable 2 m PTFE	CHT30-N15APO80-N2T	CHT30-N15BPO80-N2T	< 150 mA

Order codes are for PNP, NO (PO) configuration. All devices also available in PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) configuration.
Bestellnummern für PNP, NO (PO) Konfiguration. Alle Geräte auch erhältlich als PNP, NC (PC), NPN, NO (NO), NPN, NC (NC) Konfiguration.





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