



COMPACT CATALOG

KOMPAKTKATALOG

◆ LED INDICATORS

LED-ANZEIGEN

◆ ELECTRONIC BUTTONS

ELEKTRONISCHE TASTER

◆ PHOTOELECTRIC SENSORS

OPTISCHE SENSOREN

◆ INDUCTIVE PROXIMITY SWITCHES

INDUKTIVE NÄHERUNGSSCHALTER

◆ CAPACITIVE PROXIMITY SWITCHES

KAPAZITIVE NÄHERUNGSSCHALTER

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 Betriebsreichweiten
- ▶ Hell↔Dunkel-Umschalter
- ▶ Ausgangs- und Stabilitätsanzeige
- ▶ Hintergrundaussblendung
- ▶ Lichttaster, energetisch
- ▶ Reflex-Lichtschranke, polarisiert




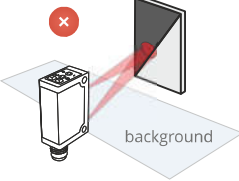
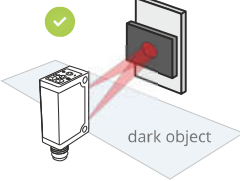
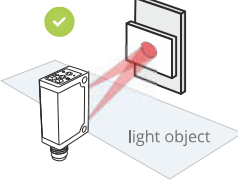
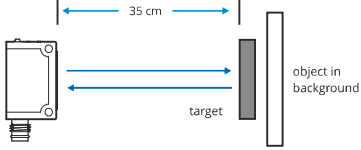

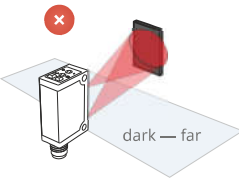
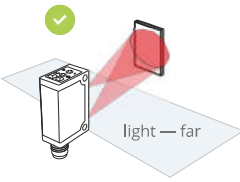
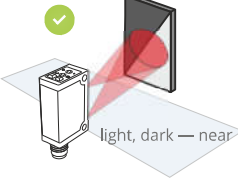
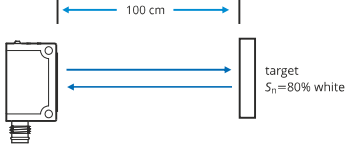

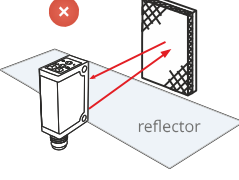
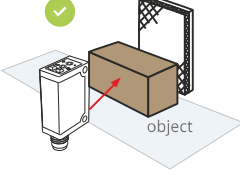
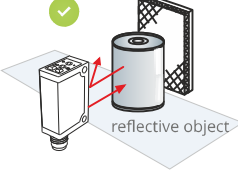
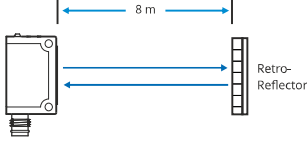
Technical data (typ.)

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, λ = 880 nm
Diffuse Reflective	
Light source	Infrared light, λ = 880 nm
Retro-Reflective	
Light source	Red light, λ = 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
Eigenstromaufnahme	<16 mA
Ausgangsbelastbarkeit	100 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Lichttaster mit Hintergrundaussblendung	
Lichtquelle	Infrarotlicht, λ = 880 nm
Lichttaster, energetisch	
Lichtquelle	Infrarotlicht, λ = 880 nm
Reflexions-Lichtschranke, polarisiert	
Lichtquelle	Rotlicht, λ = 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 Hintergrundausblendung						
0.35	Cable 2 m, PVC	2	11 × 20 × 31	NO↔NC	PNP	OD31-B04-PS-A2P
	Connector M8					OD31-B04-PS-A8
	Cable 2 m, PVC				NPN	OD31-B04-NS-A2P
	Connector M8					OD31-B04-NS-A8
						
Diffuse reflection · Lichttaster, energetisch						
1	Cable 2 m, PVC	2	11 × 20 × 31	NO↔NC	PNP	OD31-D1-PS-A2P
	Connector M8					OD31-D1-PS-A8
	Cable 2 m, PVC				NPN	OD31-D1-NS-A2P
	Connector M8					OD31-D1-NS-A8
						
Retro-reflective, polarized · Retro-reflektiv, polarisiert						
8	Cable 2 m, PVC	3	11 × 20 × 31	NO↔NC	PNP	OD31-P8-PS-A2P
	Connector M8					OD31-P8-PS-A8
	Cable 2 m, PVC				NPN	OD31-P8-NS-A2P
	Connector M8					OD31-P8-NS-A8
						

Retro-reflective, effective range against reflectors

MR82	(Ø82 mm)	solid	8.00 m	(100%)
MR80	(Ø80 mm)	solid	6.50 m	
MQ4060	(40 × 60 mm)	solid	6.50 m	
PRT50	(50 × 50 mm)	adhesive tape	5.00 m	
PRT75	(75 × 75 mm)	adhesive tape	5.50 m	
PRT100	(100 × 100 mm)	adhesive tape	6.00 m	

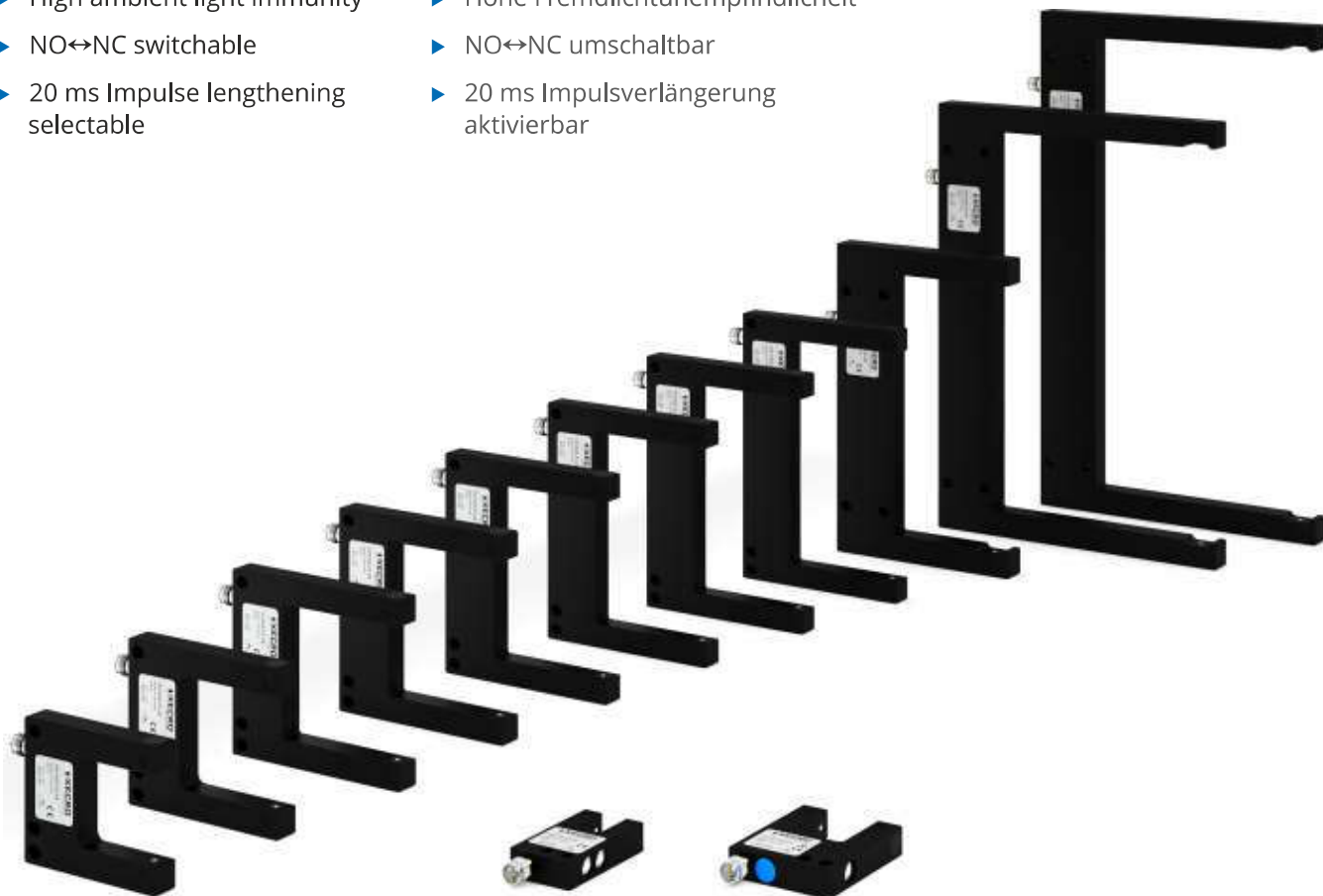
Retro-reflektiv, Effektivreichweite gegen Reflektor

MR82	(Ø82 mm)	starr	8,00 m	(100%)
MR80	(Ø80 mm)	starr	6,50 m	
MQ4060	(40 × 60 mm)	starr	6,50 m	
PRT50	(50 × 50 mm)	Klebestreifen	5,00 m	
PRT75	(75 × 75 mm)	Klebestreifen	5,50 m	
PRT100	(105 × 100 mm)	Klebestreifen	6,00 m	

Fork Light Barriers

Gabellichtschranken

- ▶ One-piece housings only
- ▶ Identical dimensions for laser, red light, and infrared light versions
- ▶ Potentiometer or Teach function
- ▶ Static and dynamic evaluation
- ▶ High switching frequency
- ▶ High ambient light immunity
- ▶ NO↔NC switchable
- ▶ 20 ms Impulse lengthening selectable
- ▶ Ausschließlich einteilige Gehäuse
- ▶ Identische Abmessungen für Laser-, Rotlicht- und Infrarotlicht-Ausführungen
- ▶ Potentiometer oder Teach-Funktion
- ▶ Statische und dynamische Auswertung
- ▶ Hohe Schaltfrequenz
- ▶ Hohe Fremdlichtunempfindlichkeit
- ▶ NO↔NC umschaltbar
- ▶ 20 ms Impulsverlängerung aktivierbar



Technical data (typ.)

Supply voltage	10...35 V _{DC}
Reverse polarity protection	built-in
Current consumption	<50 mA
Current load capability	200 mA
Short circuit protection	built-in, self-resetting
Impulse lengthening	20 ms, selectable*
Red light · Infrared light	
Operating temperature	−20...+55 °C −4...+131 °F
Laser · Laser	
Operating temperature	−10...+45 °C 14...+113 °F
Laser protection class	1 (EN 60825-1)
Ambient light immunity	100 kLux
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
Eigenstromaufnahme	<50 mA
Ausgangsbelaubarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Impulsverlängerung	20 ms, zuschaltbar*
Rotlicht · Infrarotlicht	
Betriebstemperatur	−20...+55 °C
Laser · Laser	
Betriebstemperatur	−10...+45 °C
Laserschutzklasse	1 (EN 60825-1)
Fremdlichtunempfindlichkeit	100 kLux
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 impulse lengthening
 Zuschaltbare Impulsverlängerung
 IO-Link capable, protocol 1.1
 IO-Link-fähig, Protokoll 1.1

Order code
Bestellnummer

Teach button for sensitivity adjustment
 Teach-Taste für Empfindlichkeitseinstellung
 Selectable impulse lengthening
 Zuschaltbare Impulsverlängerung
 IO-Link capable, protocol 1.1
 IO-Link-fähig, Protokoll 1.1

Order code
Bestellnummer

Standard version · Standardausführung													
10	0.5	2500	0.02		✓	✓			FIS10P-PS-A8				
20	0.5	2500	0.02	✓		✓			FRS20P-PS-A8				
30	0.5	2500	0.02	✓		✓			FRS30P-PS-A8				
40	0.5	2500	0.02	✓		✓			FRS40P-PS-A8				
50	0.5	2500	0.02	✓		✓			FRS50P-PS-A8				
60	0.5	2500	0.02	✓		✓			FRS60P-PS-A8				
70	0.5	2500	0.02	✓		✓			FRS70P-PS-A8				
80	0.5	2500	0.02	✓		✓			FRS80P-PS-A8				
90	0.5	2500	0.02	✓		✓			FRS90P-PS-A8				
100	0.6	2500	0.02	✓		✓			FRS100P-PS-A8				
120	0.7	2500	0.02	✓		✓			FRS120P-PS-A8				
180	0.8	2500	0.02	✓		✓			FRS180P-PS-A8				
220	0.9	2500	0.02	✓		✓			FRS220P-PS-A8				
High resolution · Hochauflösend													
10	0.2	5000	0.01		✓	✓	✓		FIH10P-PS-A8	✓	✓	✓	FIH10T-PS-A8
20	0.2	5000	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
180	0.2	5000	0.01	✓		✓	✓		FRH180P-PS-A8	✓	✓	✓	FRH180T-PS-A8
220	0.2	5000	0.01	✓		✓	✓		FRH220P-PS-A8	✓	✓	✓	FRH220T-PS-A8



IO-Link
 Universal · Smart · Easy



Fork opening [mm] Gabelweite [mm]	Resolution [Ø mm] Auflösung [Ø mm]	Switching frequency [Hz] Schaltfrequenz [Hz]	Repeatability [mm] Wiederholgenauigkeit [mm]	Red light, λ = 630 nm, modulated Rotlicht, λ = 630 nm, moduliert	Infrared, λ = 940 nm, modulated Infrarot, λ = 940 nm, moduliert	Potentiometer for sensitivity adjustment Potentiometer für Empfindlichkeitseinstellung	Selectable on-delay 50 ms Zuschaltbare Einschaltverzögerung 50 ms	IO-Link capable, protocol 1.1 IO-Link-fähig, Protokoll 1.1	Order code Bestellnummer	Teach button for sensitivity adjustment Teach-Taste für Empfindlichkeitseinstellung	Selectable impulse lengthening 20 ms Zuschaltbar Impulsverlängerung 20 ms	IO-Link capable, protocol 1.1 IO-Link-fähig, Protokoll 1.1	Order code Bestellnummer
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Dynamic evaluation · dynamische Auswertung												
10	0.2	5000	0.01		✓				✓	✓	✓	FIH10D-PS-A8
20	0.2	5000	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
180	0.2	5000	0.01	✓					✓	✓	✓	FRH180D-PS-A8
220	0.2	5000	0.01	✓					✓	✓	✓	FRH220D-PS-A8

increased contamination resistance · erhöhte Schmutzunempfindlichkeit												
10	0.5	250	0.1		✓	✓	✓		FIC10P-PS-A8			
20	0.5	250	0.1		✓	✓	✓		FIC20P-PS-A8			
30	0.5	250	0.1		✓	✓	✓		FIC30P-PS-A8			
40	0.5	250	0.1		✓	✓	✓		FIC40P-PS-A8			
50	0.5	250	0.1		✓	✓	✓		FIC50P-PS-A8			
60	0.5	250	0.1		✓	✓	✓		FIC60P-PS-A8			
70	0.5	250	0.1		✓	✓	✓		FIC70P-PS-A8			
80	0.5	250	0.1		✓	✓	✓		FIC80P-PS-A8			
90	0.5	250	0.1		✓	✓	✓		FIC90P-PS-A8			
100	0.6	250	0.1		✓	✓	✓		FIC100P-PS-A8			
120	0.7	250	0.1		✓	✓	✓		FIC120P-PS-A8			
180	0.8	250	0.1		✓	✓	✓		FIC180P-PS-A8			
220	0.9	250	0.1		✓	✓	✓		FIC220P-PS-A8			

Fork opening [mm] Gabelweite [mm]	Resolution [Ø mm] Auflösung [Ø mm]	Switching frequency [Hz] Schaltfrequenz [Hz]	Repeatability [mm] Wiederholgenauigkeit [mm]	Red light laser, λ = 630 nm, modulated Rotlicht-Laser, λ = 630 nm, moduliert	Infrared, λ = 940 nm, modulated Infrarot, λ = 940 nm, moduliert	Potentiometer for sensitivity adjustment Potentiometer für Empfindlichkeitseinstellung	Selectable impulse lengthening Zuschaltbare Impulsverlängerung	IO-Link capable, protocol 1.1 IO-Link-fähig, Protokoll 1.1	Order code Bestellnummer	Teach button for sensitivity adjustment Teach-Taste für Empfindlichkeitseinstellung	Selectable impulse lengthening Zuschaltbare Impulsverlängerung	IO-Link capable, protocol 1.1 IO-Link-fähig, Protokoll 1.1	Order code Bestellnummer
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⚠ Laser standard version · Laser Standardausführung

10													
20	0.1	2500	0.01	✓		✓			FLS20P-PS-A8				
30	0.1	2500	0.01	✓		✓			FLS30P-PS-A8				
40	0.1	2500	0.01	✓		✓			FLS40P-PS-A8				
50	0.1	2500	0.01	✓		✓			FLS50P-PS-A8				
60	0.1	2500	0.01	✓		✓			FLS60P-PS-A8				
70	0.1	2500	0.01	✓		✓			FLS70P-PS-A8				
80	0.1	2500	0.01	✓		✓			FLS80P-PS-A8				
90	0.1	2500	0.01	✓		✓			FLS90P-PS-A8				
100	0.1	2500	0.01	✓		✓			FLS100P-PS-A8				
120	0.1	2500	0.01	✓		✓			FLS120P-PS-A8				
180	0.1	2500	0.01	✓		✓			FLS180P-PS-A8				
220	0.1	2500	0.01	✓		✓			FLS220P-PS-A8				

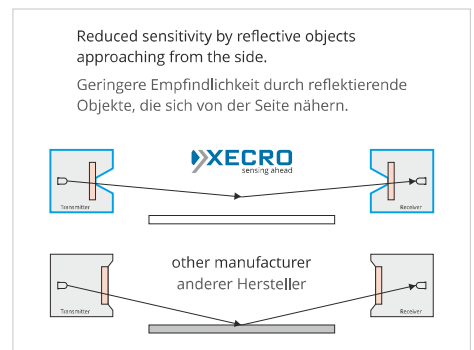
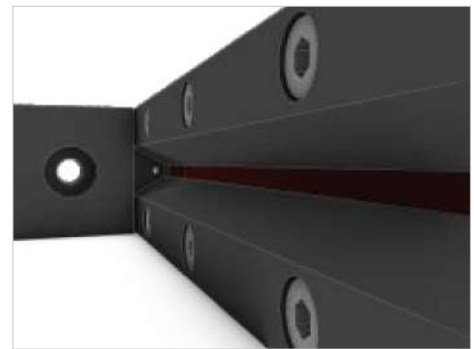
⚠ Laser high resolution · Laser hochauflösend

10													
20	0.03	5000	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
180	0.03	5000	0.01	✓		✓	✓		FLH180P-PS-A8	✓	✓	✓	FLH180T-PS-A8
220	0.03	5000	0.01	✓		✓	✓		FLH220P-PS-A8	✓	✓	✓	FLH220T-PS-A8



Frame Light Barrier Rahmenlichtschranken

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



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
Impulse 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 kLux
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

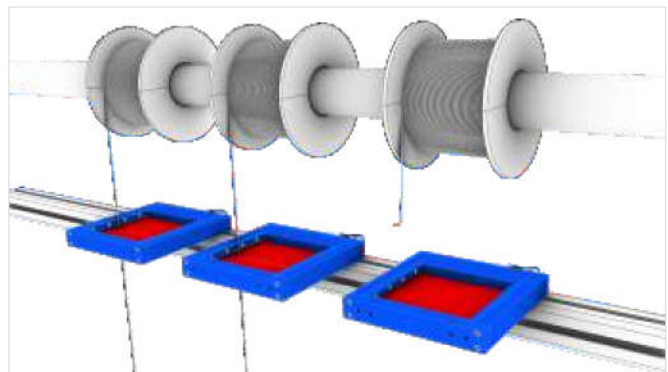
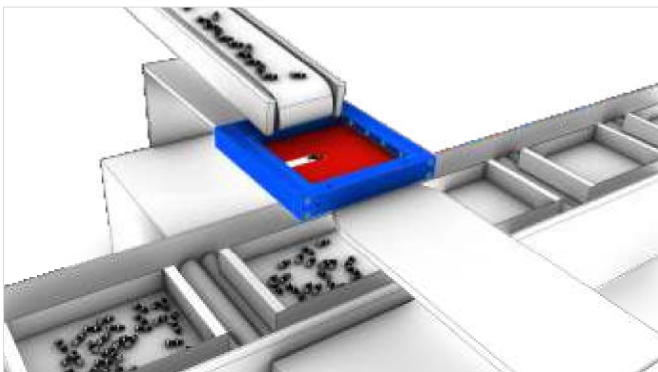
Technische Daten (typ.)

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



Active area [mm ²] Aktive Fläche [mm ²]	Resolution Auflösung	Ambient light immunity Fremdlichtunempfindlichkeit	Response time, release time Ansprechzeit, Abfallzeit	Dimensions, w X l X h Abmessungen, b X l X 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 Nitrile rubber · Nitrilkautschuk	OFT50A-PS-A8 OFT50N-PS-A8
70×68	1.5 mm	100 klx	0.1 ms	110 × 118 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT70A-PS-A8 OFT70N-PS-A8
100×98	2.5 mm	60 klx	0.1 ms	140 × 148 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT100A-PS-A8 OFT100N-PS-A8
150×148	3.0 mm	30 klx	0.1 ms	190 × 198 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT150A-PS-A8 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 Nitrile rubber · Nitrilkautschuk	OFT50A-RPS-A8 OFT50N-RPS-A8
70×68	0.4 mm	100 klx	0.1 ms	110 × 118 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT70A-RPS-A8 OFT70N-RPS-A8
100×98	0.6 mm	60 klx	0.1 ms	140 × 148 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT100A-RPS-A8 OFT100N-RPS-A8
150×148	0.8 mm	30 klx	0.1 ms	190 × 198 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT150A-RPS-A8 OFT150N-RPS-A8
High speed · Hochgeschwindigkeit								
50×48	0.7 mm	200 klx	25 μs	90 × 100 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT50A-SPS-A8 OFT50N-SPS-A8
70×68	1.5 mm	100 klx	25 μs	110 × 118 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT70A-SPS-A8 OFT70N-SPS-A8
100×98	2.5 mm	60 klx	25 μs	140 × 148 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT100A-SPS-A8 OFT100N-SPS-A8
150×148	3.0 mm	30 klx	25 μs	190 × 198 × 20 mm	NO↔NC	PNP	Aluminum · Aluminium Nitrile rubber · Nitrilkautschuk	OFT150A-SPS-A8 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.



Ring Sensors — inductive, capacitive, and photoelectric

Ringsensoren — induktive, kapazitive und optische

- ▶ Inductive ring sensors to detect metal 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 impulse 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
Ausgangslastbarkeit	200 mA
Kurzschlusschutz	integriert, selbstrückstellend
Spannungsabfall	<1,5 V @ 200 mA
Induktiv, Kapazitiv	
Gehäusematerial	PBT
Ringmaterial	PA 6.6
Eigenstromaufnahme	<10 mA
Optisch	
Gehäusematerial	Zinkdruckguss, schwarz lackiert
Ringmaterial	PMMA
Eigenstromaufnahme	<50 mA
Schaltanzeige	LED, gelb
Betriebstemperatur	-20...+70 °C
Schutzart	IP67



	Resolution Auflösung	Max. object speed Max. Objektgeschw.	Impulse lengthening Impulsverlängerung	Inner diameter Innendurchmesser	Evaluation Auswertung	Connection Anschluss	Order code Bestellnummer	
Inductive	>0.5 mm Ø	 35 m/s	0.1...150 ms adjustable einstellbar	Ø 6.1 mm	Static	Connector M12, straight	IR06S-PS150-A12	
						Connector M12, angled	IR06S-PS150-RA12	
					Dynamic	Connector M12, straight	IR06D-PS150-A12	
						Connector M12, angled	IR06D-PS150-RA12	
	>0.6 mm Ø			Static	Ø 10.1 mm	Connector M12, straight	IR10S-PS150-A12	
						Connector M12, angled	IR10S-PS150-RA12	
				Dynamic	Connector M12, straight	IR10D-PS150-A12		
					Connector M12, angled	IR10D-PS150-RA12		
	>0.8 mm Ø			Static	Ø 15.1 mm	Connector M12, straight	IR15S-PS150-A12	
						Connector M12, angled	IR15S-PS150-RA12	
				Dynamic		Connector M12, straight	IR15D-PS150-A12	
						Connector M12, angled	IR15D-PS150-RA12	
>1.0 mm Ø	Static	Ø 21.1 mm	Connector M12, straight	IR21S-PS150-A12				
			Connector M12, angled	IR21S-PS150-RA12				
	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
Photoelectric	>1.0 mm Ø in the center im Zentrum	 30 m/s	0.1...20 ms selectable wählbar	Ø 6.1 mm	Static	Connector M8	OR06S-PS20-A8	
					Dynamic	Connector M8	IR06D-PS20-A8	
				Ø 10.1 mm	Static	Connector M8	OR10S-PS20-A8	
					Dynamic	Connector M8	IR10D-PS20-A8	
				Ø 15.1 mm	Static	Connector M8	OR15S-PS20-A8	
					Dynamic	Connector M8	IR15D-PS20-A8	
				Ø 20.1 mm	Static	Connector M8	OR20S-PS20-A8	
					Dynamic	Connector M8	IR20D-PS20-A8	
				Ø 25.1 mm	Static	Connector M8	OR25S-PS20-A8	
					Dynamic	Connector M8	IR25D-PS20-A8	
				Ø 20.1 mm	Static	Connector M8	OR30S-PS20-A8	
					Dynamic	Connector M8	IR30D-PS20-A8	

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.