Lichtschranken Serie 30

Optoelectronic sensors Series 30

Kompakt und leistungsstark
Compact and powerful

Lichtschranken Serie 30
Optoelectronic sensors Series 30

Die neue Geräteserie Baugröße 30 ist in vielen Funktionsprinzipien verfügbar und zeichnet sich bei ihrer kompakten Bauform durch große Tast- und Reichweiten aus.

Alle Gerätevarianten sind als Kabel-, Stecker- oder Pigtail-Varianten verfügbar. Die komplette Geräteserie verfügt über eine Hell-/Dunkel-Umschaltung. Somit stehen beide Ausgangsfunktionen Schließer (NO) oder Öffner (NC) bei Bedarf zur Verfügung.

The new di-soric Series 30 is available in different functional principles. A long operating distance characterizes the series even in spite of its compact housing dimensions.

All devices of this new Series 30 are available as connector, cable, or pigtail version. Furthermore they include light and dark switching functionality which means that both output versions (NO and NC) are offered in one device.

Die Lichttaster mit Hintergrundausblendung verfügen über eine farbunabhängige Erfassung über den kompletten Arbeitsbereich.
Es sind sowohl Rotlicht als auch Infrarotgeräte mit erhöhter Reichweite verfügbar.

The BGS versions feature a color-independent detection over the entire range.
Those models are available in red light as well as infrared light with increased ranges.

Die Lichttaster mit energetischem Funktionsprinzip sind mit verschiedenen Reichweiten erhältlich, um unterschiedlichste Applikationen passend abdecken zu können.

The diffuse sensors with energetic principle are offered in different ranges and therefore they are covering the most versatile applications perfectly.

Die im Markt übliche Befestigung mit genormtem Lochmaß ermöglicht einen einfachen Austausch auch an bestehenden Anlagen. Darüber hinaus sind verschiedene Montagewinkel erhältlich, um eine schnelle und einfache Integration in Ihre Anwendung zu gewährleisten. Einige dieser Halterungen schützen die Sensoren auch mechanisch.

The position of the mounting holes fit to the market standard and allows an easy exchange on already existing systems. Furthermore there are various mounting brackets available to ensure a fast and simple integration into your application. Some of those mounting brackets even protect the sensors mechanically.

Erkennung transparenter Objekte
Detection of transparent objects

Mit den Reflexionslichtschranken können auch bei großer Reichweite sehr kleine Produkte über den ganzen Arbeitsbereich erfasst werden. Varianten für die Erkennung transparenter Objekte runden hier die Typenvielfalt ab.

Very small objects can be detected with the retro-reflective sensors over the entire detection area. Different models which are developed to detect transparent objects reliably complete the range.

Die große Reichweite bei den Einweg-Lichtschranken überzeugt bei der sehr kompakten Bauform.

Eine im Optikfenster des Empfängers integrierte LED erleichtert die Ausrichtung des Systems bei großen Reichweiten.

The through beam sensors offer an enormous detecting range even in spite of their compact housing dimensions.

A built-in LED in the receiver's optical window facilitates the alignment of the system at large operating ranges.

Überzeugen Sie sich selbst von den sehr guten Eigenschaften dieser neuen Serie 30.

Convince yourself of the outstanding features of this new Series 30.

Lichtschranken Serie 30
Optoelectronic sensors Series 30

Lichttaster OH mit Hintergrundausblendung
Diffuse sensors OH with background suppression

- Mechanische Hintergrundausblendung
- Kompakte Bauform
- Rotlicht getaktet
- Empfindlichkeit einstellbar
- Hell-/Dunkelschaltung umschaltbar
- Genormter Lochabstand 25,4 mm

- Mechanical background suppression
- Compact design
- Red light clocked
- Sensitivity adjustable
- Light/dark switching switchable
- Standardized hole spacing 25.4 mm

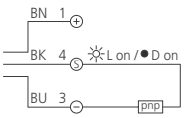
Lichttaster OT energetisch
Diffuse sensors OT energetic

- Kompakte Bauform
- Rotlicht getaktet
- Empfindlichkeit einstellbar
- Hell-/Dunkelschaltung umschaltbar
- Vollvergossene Elektronik, vibrationsfest
- Genormter Lochabstand 25,4 mm

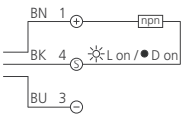
- Compact design
- Red light clocked
- Sensitivity adjustable
- Light/dark switching switchable
- Fully encapsulated electronic circuitry, vibration-resistant
- Standardized hole spacing 25.4 mm

Anschlussschema / Connection diagram OH / OT / OR 3x K ...

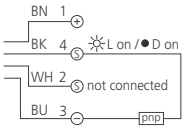
3-polig /3-pin pnp



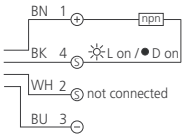
3-polig /3-pin npn



4-polig / 4-pin pnp



4-polig / 4-pin npn



Reflexionslichtschranken OR
Retroreflective sensors OR

- Kompakte Bauform
- Hohe Reichweiten
- Varianten zur Erfassung transparenter Objekte
- Empfindlichkeit einstellbar
- Rotlicht, getaktet
- Hell- / Dunkelschaltung umschaltbar
- Vollvergossene Elektronik, vibrationsfest
- Genormter Lochabstand 25,4 mm

- Compact design
- High operating distance
- Versions for detection of transparent objects
- Sensitivity adjustable
- Red light clocked
- Light/dark switching switchable
- Fully encapsulated electronic circuitry, vibration-resistant
- Standardized hole spacing 25.4 mm

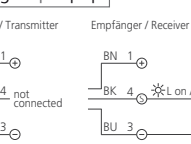
Einweglichtschranken OES
Through beam sensors OES

- Set besteht aus Sender und Empfänger
- Hohe Reichweite
- Integrierte Ausrichthilfe
- Kompakte Bauform
- Rotlicht, getaktet
- Empfindlichkeit einstellbar
- Hell- / Dunkelschaltung umschaltbar
- Vollvergossene Elektronik, vibrationsfest
- Genormter Lochabstand 25,4 mm

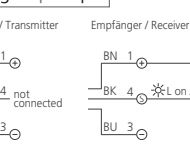
- Set includes transmitter and receiver
- High operating distance
- Integrated alignment aid
- Compact design
- Red light clocked
- Sensitivity adjustable
- Light/dark switching switchable
- Fully encapsulated electronic circuitry, vibration-resistant
- Standardized hole spacing 25.4 mm

Anschlussschema / Connection diagram OES 31 K ...

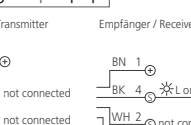
3-polig /3-pin pnp



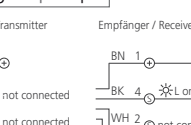
3-polig /3-pin npn



4-polig / 4-pin pnp



4-polig / 4-pin npn



Technische Daten (typ.) / Technical data (typ.)

Serie 30: Technische Daten (typ.) bei +20°C, 24V DC / Series 30: Technical data (typ.) at +20°C, 24V DC		
Empfindlichkeitseinstellung	Sensitivity adjustment	Potentiometer
Betriebsspannung	Service voltage	10 ... 30 V DC
Schaltausgang	Switching output	100mA, ☼ L on / ● D on
Umgebungstemperatur	Ambient temperature	-25 ... 70 °C
Schutzart	Protection class	IP 67

	Tast-/Reichweite (mm) / Operating distance (mm)	Sendelicht / Emitted light Rot / Red, 630 nm, getaktet / clocked	Sendelicht / Emitted light Infrarot / Infrared, 850 nm, getaktet / clocked	Schaltfrequenz / Operating frequency	Steckverbinder / Kabellänge / Connector / Cable length	Ausgang / Output PNP	Ausgang / Output NPN
	Lichttaster mit Hintergrundausblendung / Diffuse sensors with background suppression					Produktbezeichnung / Product-ID PNP	NPN
	30 ... 200	■		1 KHz	2.000 mm, 3-pin	OH 31 K 200 P3-3	OH 31 K 200 N3-3
					M8, 4-pin	OH 31 K 200 P3-T4	OH 31 K 200 N3-T4
					200 mm, M8 Pigtail, 3-pin	OH 31 K 200 P3-K-T3	OH 31 K 200 N3-K-T3
	30 ... 400		■	1 KHz	2.000 mm, 3-pin	OH 30 K 400 P3-3	OH 30 K 400 N3-3
					M8, 4-pin	OH 30 K 400 P3-T4	OH 30 K 400 N3-T4
					200 mm, M8 Pigtail, 3-pin	OH 30 K 400 P3-K-T3	OH 30 K 400 N3-K-T3
	Lichttaster energetisch / Diffuse sensors energetic					PNP	NPN
	10 ... 100	■		1 KHz	2.000 mm, 3-pin	OT 31 K 100 P3-3	OT 31 K 100 N3-3
					M8, 4-pin	OT 31 K 100 P3-T4	OT 31 K 100 N3-T4
					200 mm, M8 Pigtail, 3-pin	OT 31 K 100 P3-K-T3	OT 31 K 100 N3-K-T3
	0 ... 400	■		2 KHz	2.000 mm, 3-pin	OT 31 K 400 P3-3	OT 31 K 400 N3-3
					M8, 4-pin	OT 31 K 400 P3-T4	OT 31 K 400 N3-T4
					200 mm, M8 Pigtail, 3-pin	OT 31 K 400 P3-K-T3	OT 31 K 400 N3-K-T3
	0 ... 1000	■		1 KHz	2.000 mm, 3-pin	OT 31 K 1000 P3-3	OT 31 K 1000 N3-3
					M8, 4-pin	OT 31 K 1000 P3-T4	OT 31 K 1000 N3-T4
					200 mm, M8 Pigtail, 3-pin	OT 31 K 1000 P3-K-T3	OT 31 K 1000 N3-K-T3
	Reflexionslichtschranken / Retroreflective sensors					PNP	NPN
	50 ... 1.500* Transparente Objekte Transparent objects	■		2 KHz	2.000 mm, 3-pin	OR 31 K 1500 P3-3	OR 31 K 1500 N3-3
					M8, 4-pin	OR 31 K 1500 P3-T4	OR 31 K 1500 N3-T4
					200 mm, M8 Pigtail, 3-pin	OR 31 K 1500 P3-K-T3	OR 31 K 1500 N3-K-T3
	400 ... 4.000* Transparente Objekte Transparent objects	■		2 KHz	2.000 mm, 3-pin	OR 31 K 4000 P3-3	OR 31 K 4000 N3-3
					M8, 4-pin	OR 31 K 4000 P3-T4	OR 31 K 4000 N3-T4
					200 mm, M8 Pigtail, 3-pin	OR 31 K 4000 P3-K-T3	OR 31 K 4000 N3-K-T3
	20 ... 5.000*	■		2 KHz	2.000 mm, 3-pin	OR 31 K 5000 P3-3	OR 31 K 5000 N3-3
					M8, 4-pin	OR 31 K 5000 P3-T4	OR 31 K 5000 N3-T4
					200 mm, M8 Pigtail, 3-pin	OR 31 K 5000 P3-K-T3	OR 31 K 5000 N3-K-T3
	Einweglichtschranken / Through beam sensors					PNP	NPN
	0 ... 20.000	■		2 KHz	2.000 mm, 3-pin	OES 31 K 20000 P3-3	OES 31 K 20000 N3-3
					M8, 4-pin	OES 31 K 20000 P3-T4	OES 31 K 20000 N3-T4
					200 mm, M8 Pigtail, 3-pin	OES 31 K 20000 P3-K-T3	OES 31 K 20000 N3-K-T3

* Bezugsreflektor R 84 (nicht im Lieferumfang enthalten) | * With reflector R 84 (not included)

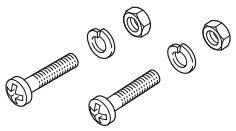
Zubehör: Seite 6/7
Maßzeichnungen und Ansprechdiagramme: Seite 8 ff.
Accessories: page 6/7
Drawings and response diagrams: page 8ff.

Zubehör / Accessories

Halterungen / Mounting brackets

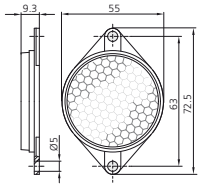
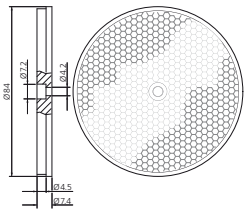
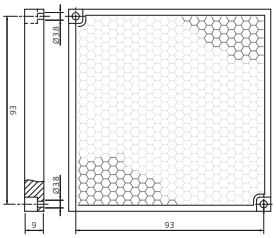
Für die Sensoren-Typen: For sensor types:	... -3 / ... -T4 / ...-K-T3	... -3 / ... -K-T3	... -3 / ... -K-T3	... -3 / ... -T4 / ...-K-T3
Befestigungsmaterial im Lieferumfang erhalten. Mounting materials included in scope of delivery.				
Produktbezeichnung Product-ID	**BW 31-36**	**BW 31-39**	**BW 31-41**	**BW 31-56**

Schraubensatz (Ersatzteilset, optional) / Set of screws (spare parts kit, optional)

	Inhalt	**Produktbezeichnung** / Product-ID
	20 x Kreuzschlitzschrauben M3x20, 20 x Sechskantmuttern M3, 20 x Sicherungsscheiben Ø 3 mm	**O 31-BEF-10**
	20 x Phillips screws M3x20, 20 x hexagon nuts M3, 20 x lockwashers Ø 3 mm	

Reflektoren / Reflectors

- Für Infrarot- und Rotlicht
- For Infrared and red light

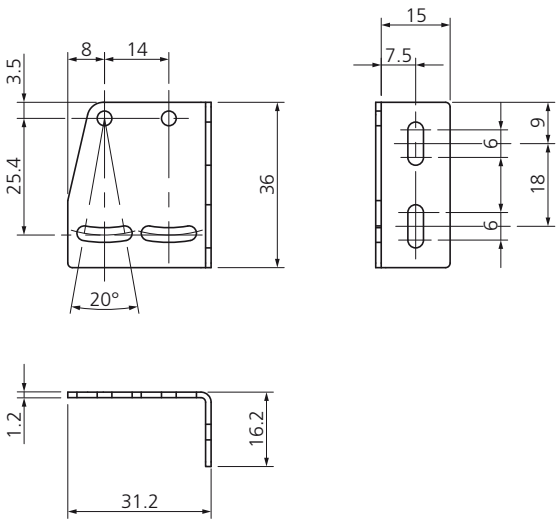
			
Abmessungen / dimensions	Ø 50 mm	Ø 84 mm	100 x 100 mm
Höhe / height	9 mm	7,4 mm	9 mm
Befestigung / mounting	2 Bohrungen / holes	Bohrung / hole Ø 4,5 mm	2 Bohrungen / holes Ø 3,8 mm
Temperaturfest / heat resistant	bis / until 80 °C	bis / until 80 °C	bis / until 60 °C
Produktbezeichnung / Product-ID	**R 55**	**R 84**	**R 100 x 100**

Anschlusskabel / Connection cables

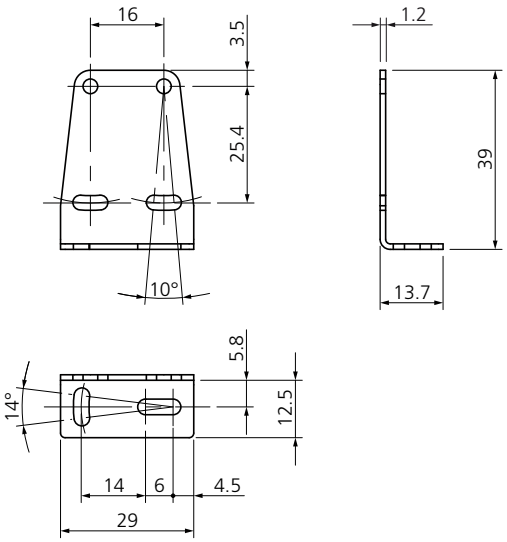
3-pin (... -T3)	PVC 2,5 m	PVC 5,0 m	PVC 10,0 m	PUR 2,5 m	PUR 5,0 m	PUR 10,0 m
M8, gerade / straight	TKPM-Z-2.5	TKPM-Z-5	TKPM-Z-10	TKHM-Z-2.5	TKHM-Z-5	TKHM-Z-10
M8, gewinkelt / angled	TKPM-W-2.5	TKPM-W-5	TKPM-W-10	TKHM-W-2.5	TKHM-W-5	TKHM-W-10
4-pin (... -T4)	PVC 2,5 m	PVC 5,0 m	PVC 10,0 m	PUR 2,5 m	PUR 5,0 m	PUR 10,0 m
M8, gerade / straight	TKPM-Z-2.5/4	TKPM-Z-5/4	TKPM-Z-10/4	TKHM-Z-2.5/4	TKHM-Z-5/4	TKHM-Z-10/4
M8, gewinkelt / angled	TKPM-W-2.5/4	TKPM-W-5/4	TKPM-W-10/4	TKHM-W-2.5/4	TKHM-W-5/4	TKPM-W-10/4

Halterungen / Mounting brackets

BW 31-36



BW 31-39



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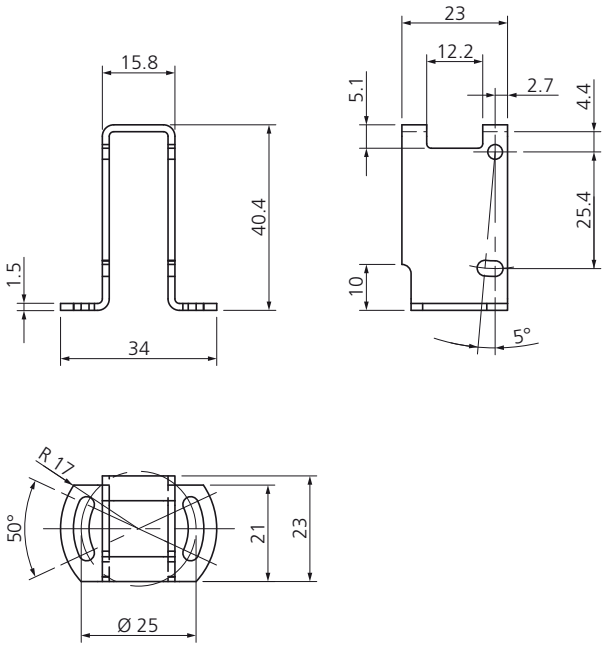
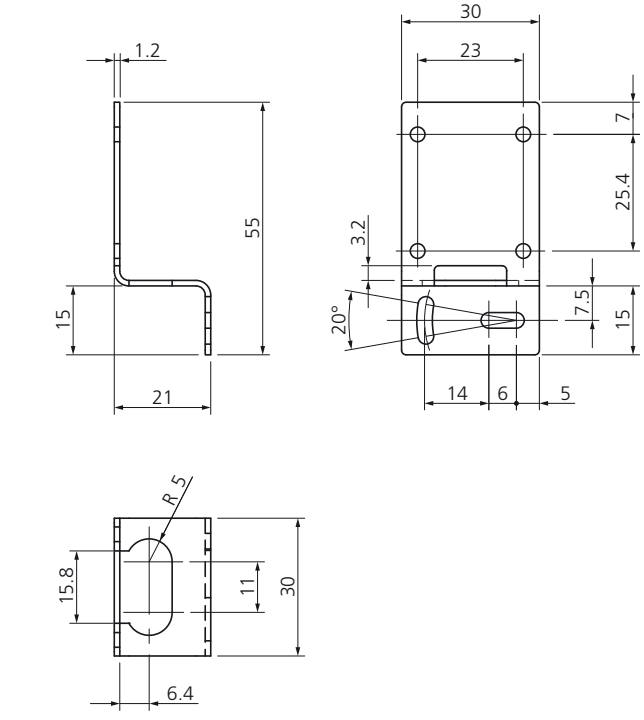
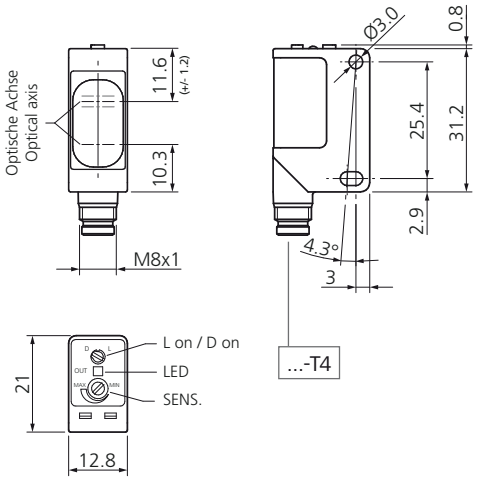


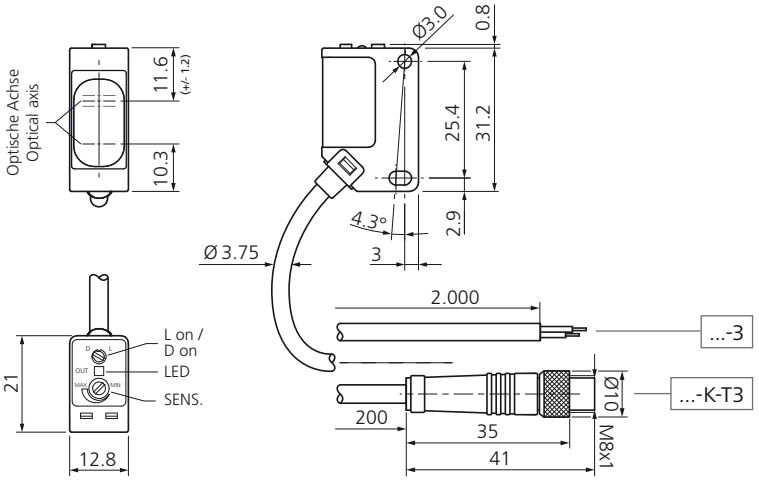
BW 31-56



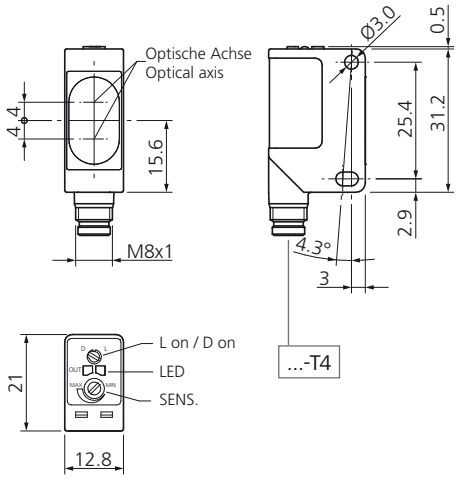
Maßzeichnungen / Drawings

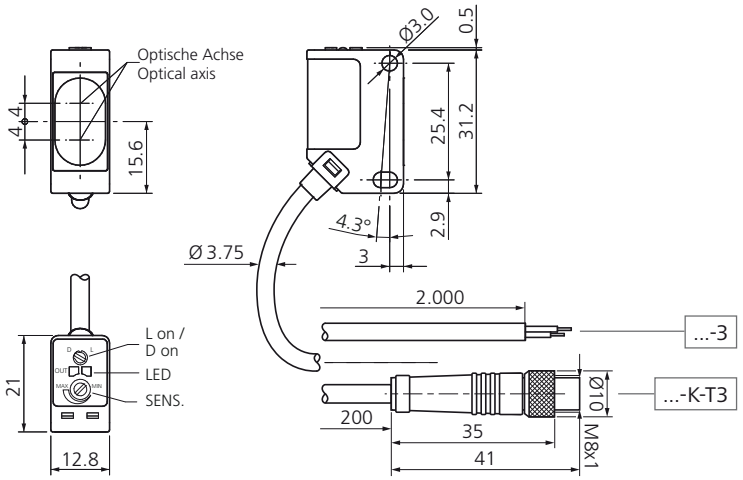
OH 3x K ...



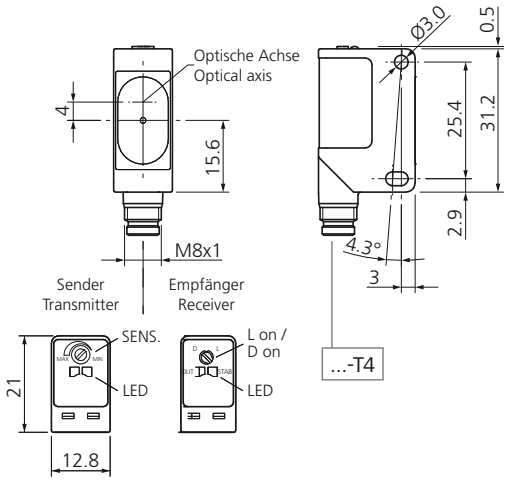


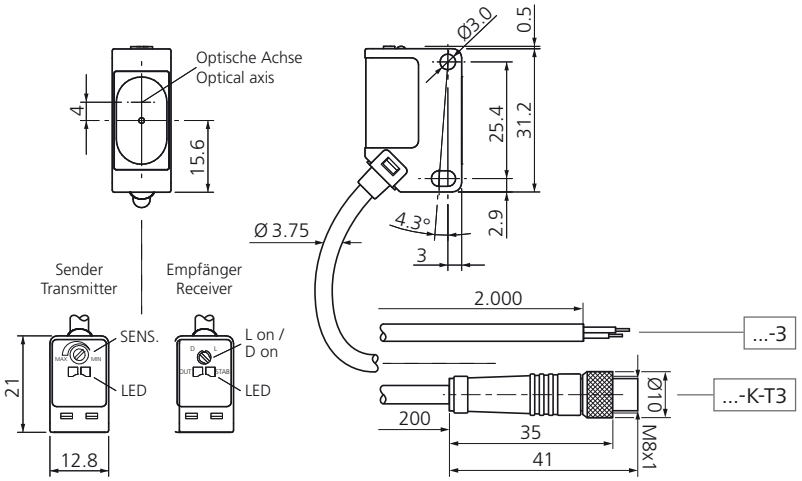
OT/OR 31 K ...



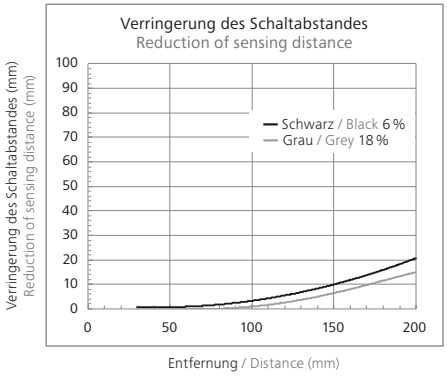


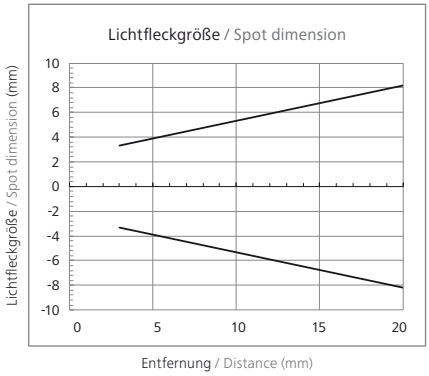
OES 31 K ...

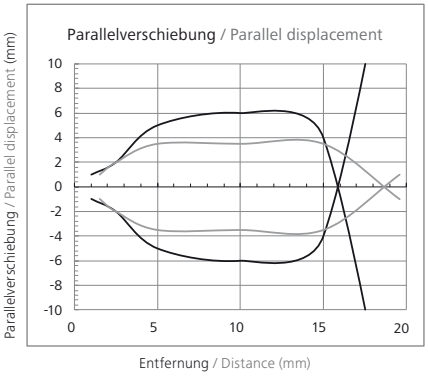




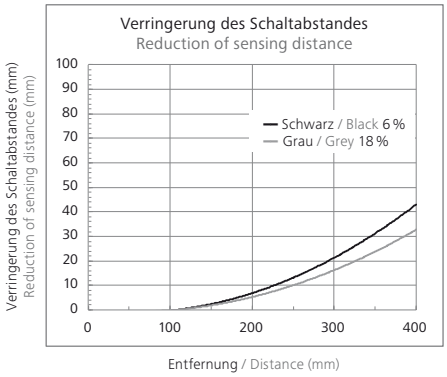
OH 31 K 200 ...

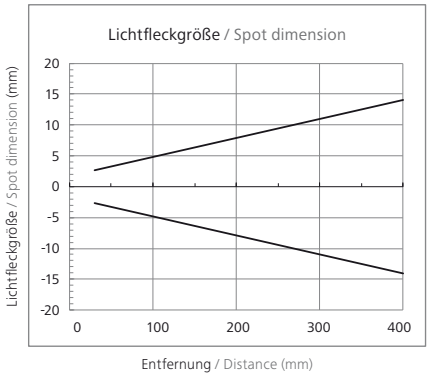


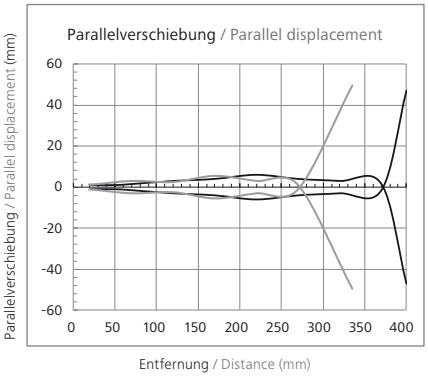




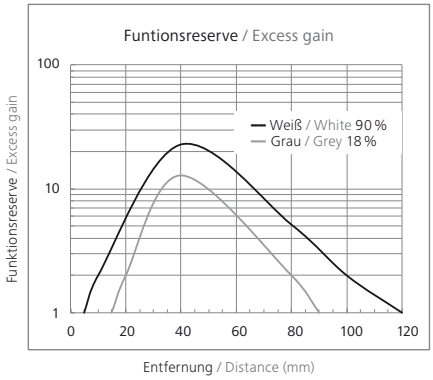
OH 30 K 400 ...

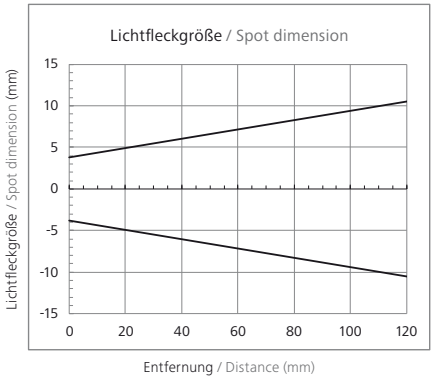


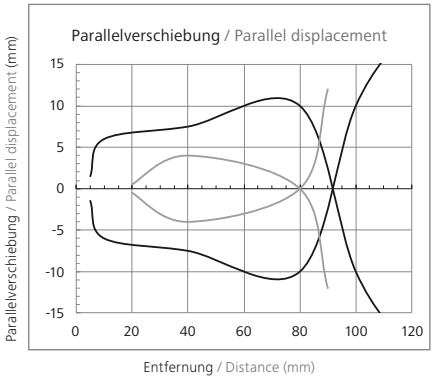




OT 31 K 100 ...

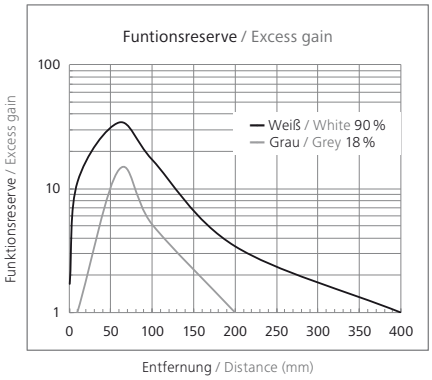


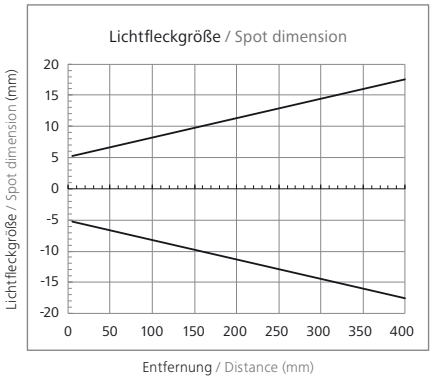


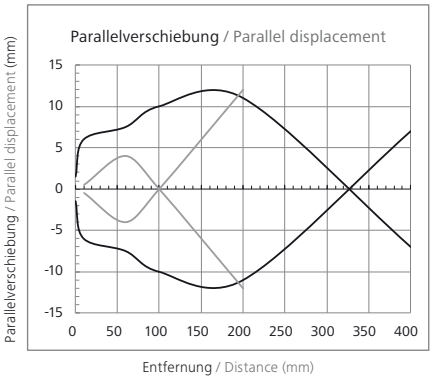


Ansprechdiagramme / Response diagrams

OT 31 K 400 ...







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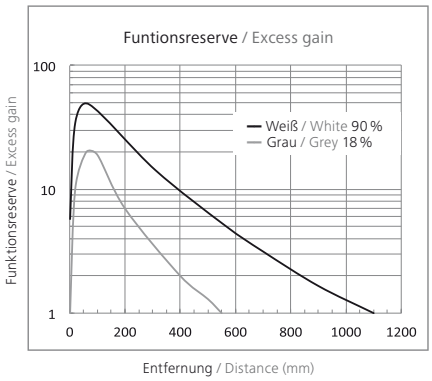

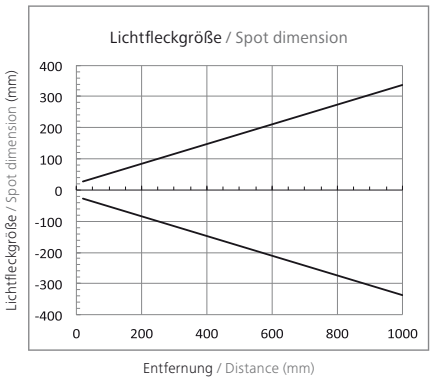

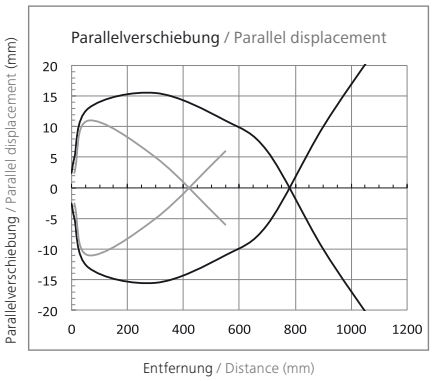

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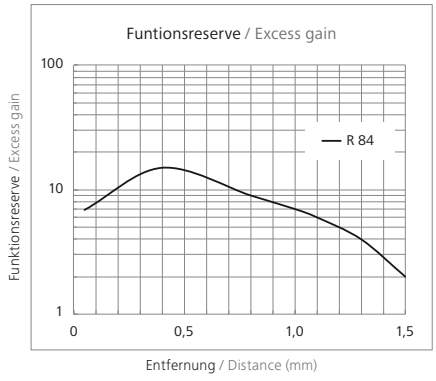

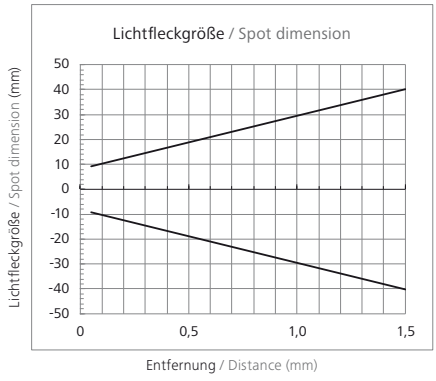

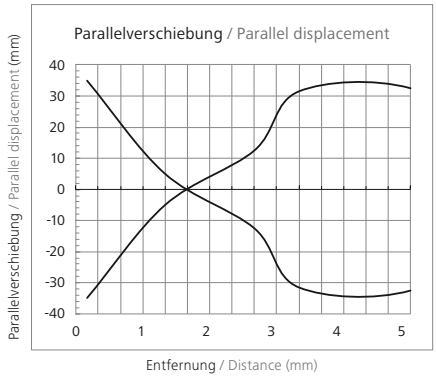

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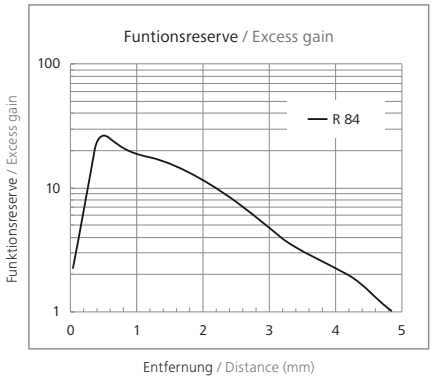

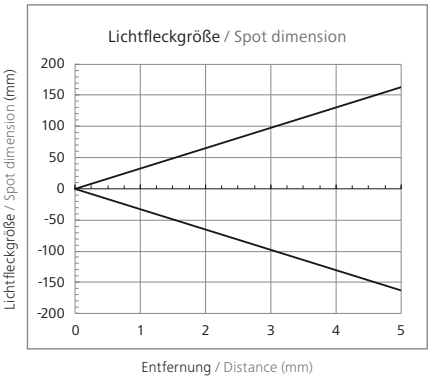

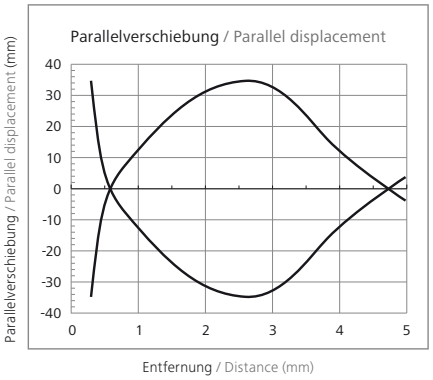

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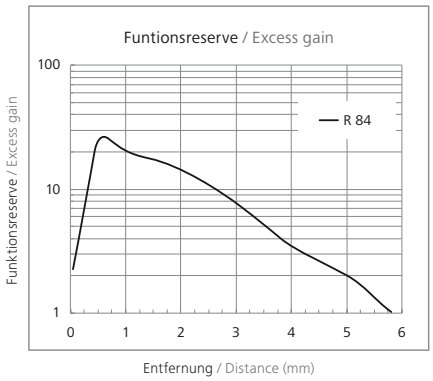

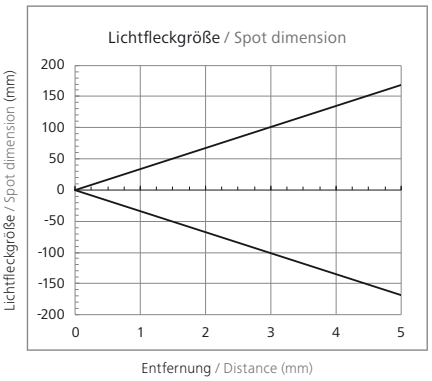

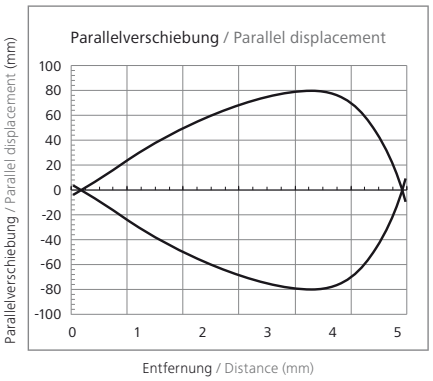

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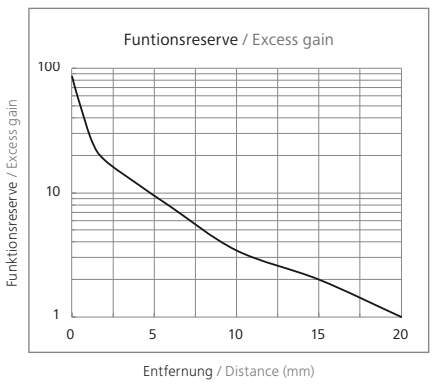

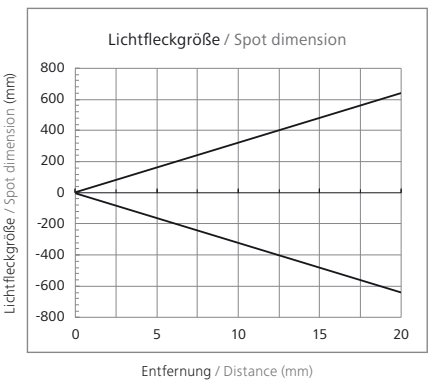

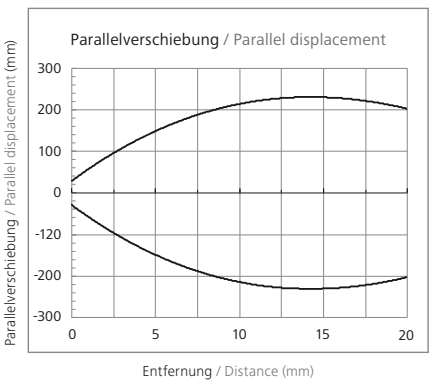

GERMANY
di-soric GmbH & Co. KG
Steinbeisstraße 6
73660 Urbach
Germany
Fon: +49 (0) 71 81 / 98 79 - 0
Fax: +49 (0) 71 81 / 98 79 - 179
info@di-soric.com

Niederlassungen
Subsidiaries

© di-soric

AUSTRIA
di-soric Austria GmbH & Co. KG
Burg 39
4531 Kematen an der Krems
Austria
Fon: +43 (0) 72 28 / 72 366
Fax: +43 (0) 72 28 / 72 366 - 4
info.at@di-soric.com

FRANCE
di-soric SAS
19, Chemin du Vieux Chêne
38240 Meylan
France
Fon: +33 (0) 4 76 / 61 65 90
Fax: +33 (0) 4 76 / 61 65 98
info.fr@di-soric.com

SINGAPORE
di-soric Pte. Ltd.
8 Ubi Road 2, #07-13 Zervex
Singapore 408538
Singapore
Fon: +65 / 66 34 38 43
Fax: +65 / 66 34 38 44
info.sg@di-soric.com

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www.di-soric.com