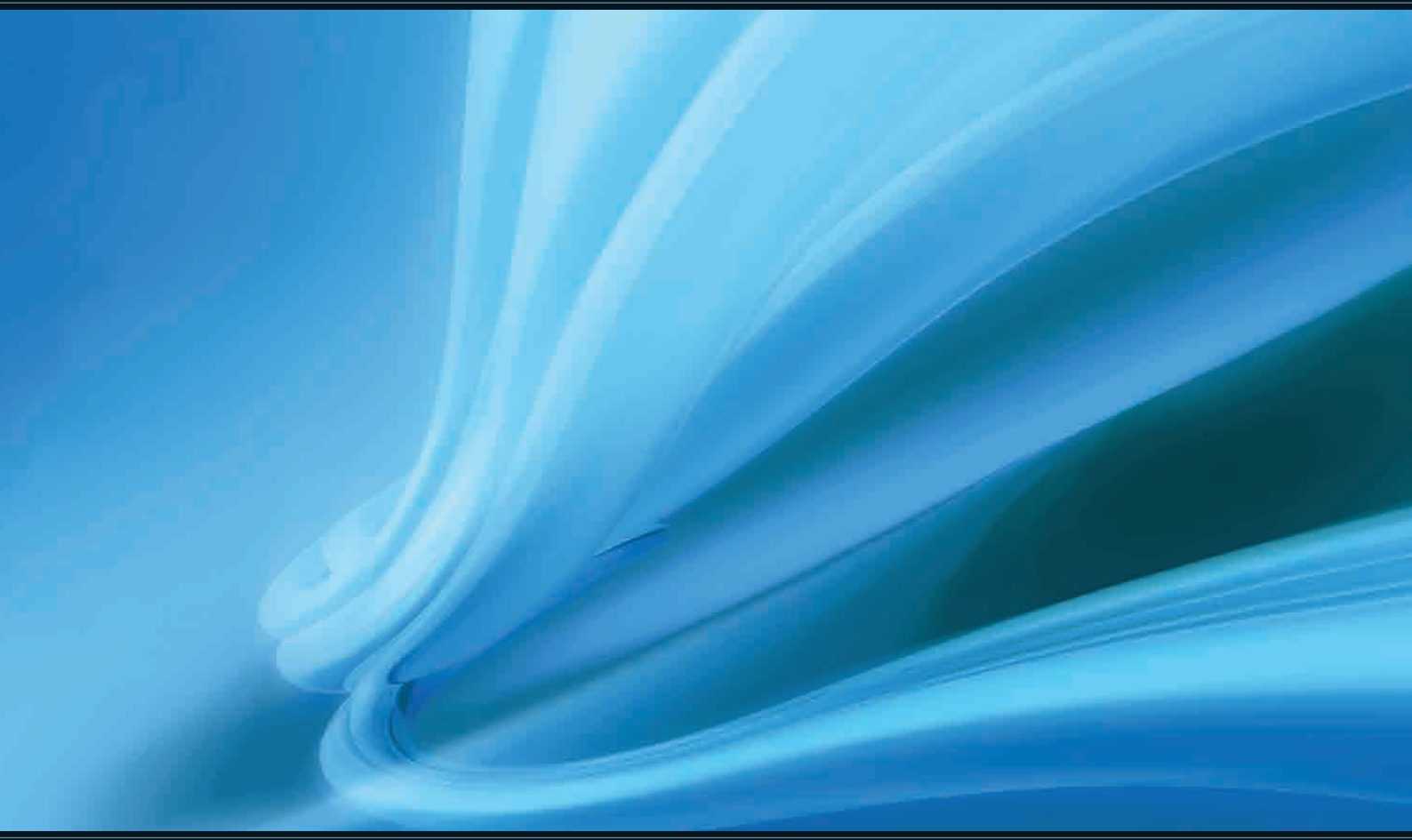
di-soric

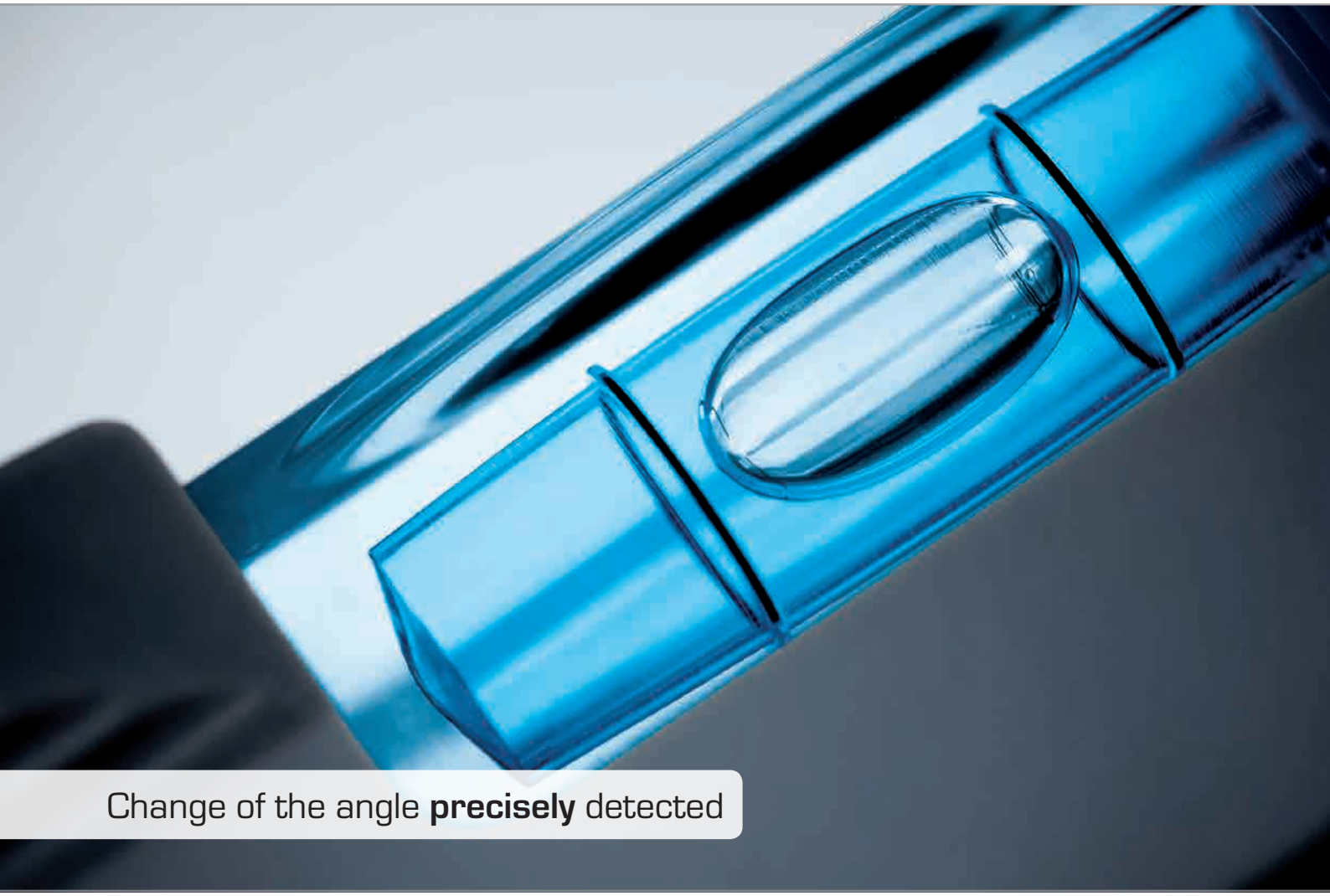
30 years

Compact Catalog

Sensors | Lighting | Vision | ID



www.di-soric.com



INCLINATION SENSORS

di-soric inclination sensors are designed to reliably detect changes in angle. Signals will be provided either as analog outputs or programmable switching outputs.

Thanks to the high protection class and the robust metal casing, these devices can also be perfectly used in harsh industrial environmental conditions as well as outdoors.

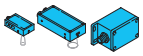
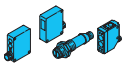
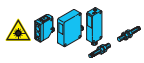
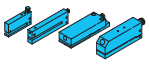
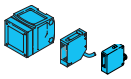
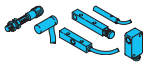
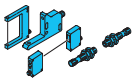
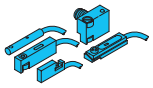
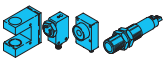
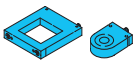
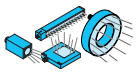
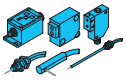
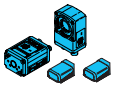
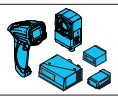
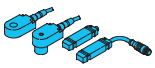
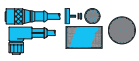
Further information on page 30.





Content

Innovative products
for your automation

	Page		Page
 Company	4	 Optical Movement Sensors	28
 Photoelectric Sensors	6	 Inclination Sensors	30
 Laser Photoelectric Sensors	8	 Label Sensors	32
 Laser Distance Sensors	10	 Proximity Switches	34
 High Performance Photoelectric Sensors	12	 Contact Sensors	36
 Angled Light Barriers	14	 Cylinder Sensors	38
 Fork Light Barriers	16	 Ultrasonic Sensors	40
 Frame and Ring Light Barriers	18	 Lighting	42
 Fibre-optic Cables/ -Amplifiers	20	 Vision Sensors	44
 Light Curtains	22	 Vision Systems	46
 Colour Sensors	24	 ID Systems	48
 Ring and Tube Sensors	26	 Accessories	50 – 53

© di-soric | We accept no responsibility for the correctness of the information provided | Subject to change | Stand 07/12

High performance and competence







For 30 years the di-soric corporate group is specialized in the development and production of sensors for industrial automation. Thanks to continuous innovations a vast product range is available, which is completed by high-value LED-lightings, machine vision and ID systems. The family owned company currently employs over 180 members of staff.

The headquarter is located in Urbach – east of Stuttgart, Germany. The development and production site is in Lüdenscheid – south of Dortmund, Germany.

Our customers include small and medium sized companies as well as international groups and numerous car manufacturers. Our products have unique selling points which are of great benefit to our customers. Special highlights are the well-known fork light barriers which were invented by di-soric over 20 years ago and are constantly further developed.

Close customer contact and continuous market analysis allow us to identify and implement new or changed product standards immediately. Customized versions are another particular strength of our production department.

Our international customers are advised and supported within their countries through our distribution partners. These partners operate with their own service technicians and engineers. This way customer proximity is always guaranteed – also for after sales services.

Friendly and helpful staff, competent technical advice by phone, on-site customer support, a highly efficient warehouse and quick delivery service are the reasons our customers value us. We don't consider ourselves just a supplier, but a partner to our customers.

Use this partnership to your advantage.

The Eisemann family

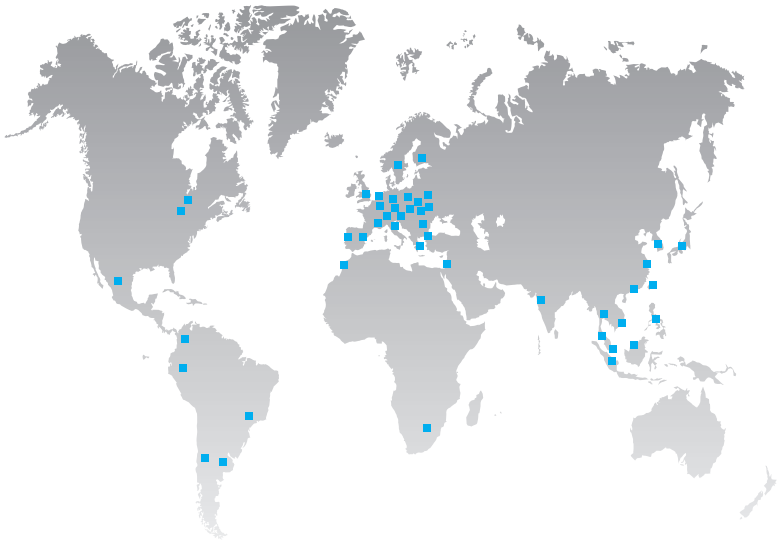


Sales, warehouse and administration in Urbach



Development and production in Lüdenscheid

International Sales Network



Find the appropriate product – easily online: di-soric e-shop

A clear structure in connection with intelligent search function allows for a simple indentification of the matching product. By means of that product finder and the technical features the matching product can be selected. The product direct selection allows the systematic search for a specific catalogue description or parts hereof.



Your advantages with just one click

- Exact delivery dates can be indicated by you
- Matching accessories
- SSL-encryption
- Order history

www.di-soric.com

Photoelectric Sensors

di-soric photoelectric sensors are the optimum solution for all tasks in automation technology. The most diverse designs and operating principles allow for a perfect, wide range of applications.





Through beam sensors

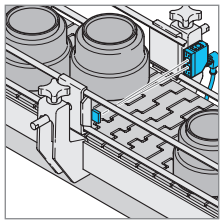
- High resolution
- Ranges up to 50 m
- Alignment aid
- Stainless steel casing with protection class IP 69K

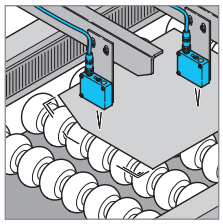
Retroreflective sensors

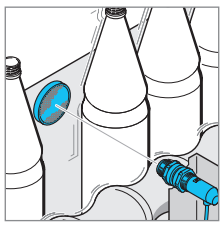
- High resolution
- Ranges up to 10 m
- Potentiometer or teach function
- Stainless steel casing with protection class IP 69K

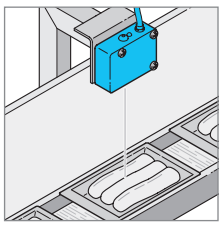
Diffuse sensors

- Contrast sensor with white light LED
- High resolution
- Sensing distance up to 2 m
- Background suppression
- Potentiometer or teach function
- Functional reserve/ contamination indicator
- Stainless steel casing with protection class IP 69K











CE

Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 30 V DC
	some versions with extended service voltage range 10 … 35 V DC

	Operating distance, Setting range (mm)	Size (mm)	Sensitivity adjustment by means of	Transmitter (S)/Receiver (E)	Red light, clocked	Infrared light, clocked	White light	Switching output	Ambient temperature (°C)	Protection class	Casing material	Connector / cable length	Connecting cable	Product-ID*
	Diffuse sensors, energetic													
	… 10	Ø 4,0	–	–		■		pnp, 100 mA, NO	0 … +55	IP 67	Stainless steel V2A	2 m	–	OTV 40 V 10 P1K
	… 20	M5	–	–		■		pnp, 100 mA, NO	0 … +55	IP 67		M8	TK …	OTV 05 V 20 P1K-TSSL
	… 50	40 x 5 x 7	–	–		■		pnp, 100 mA, NO	0 … +55	IP 67		2 m	–	OTV Q5 M 50 P1LK
	… 400	M18	Poti	–		■		pnp, 100 mA, NO/NC	–25 … +50	IP 66	Plastics	M12	VK… /4	OT 6-18 K 400 P3K-BSL
											Metal			OT 6-18 M 400 P3K-BSL
	100 … 500	50 x 40 x 15	Poti	–	■			pnp, 200 mA, NO/NC	–10 … +60	IP 67	Die-cast zinc	M12	VK…	OTV 51 M 500 P3K-IBS
			Teach											OTVTI 51 M 500 P3K-IBS
	100 … 1.000	41 x 31,5 x 16	Teach	–	■			Push-pull, 200 mA, NO/NC	–20 … +60	IP 67	Die-cast zinc	M8	TK…	OTT 41 M 1 G3-T3
			Teach, Remote teach										TK…/4	OTT 41 M 1 FG3-T4
	0 … 600	38 x 27 x 15	Poti	–	■			pnp, 100 mA, NO	–25 … +60	IP 67	Plastics	M8	TK…	OT 6-41 K 0.6 P1-T3
								pnp, 100 mA, NC						OT 6-41 K 0.6 P2-T3
	Diffuse sensors with background suppression													
	10 … 120	M18	Poti	–	■			pnp, 200 mA, NO	–25 … +55	IP 65	Brass nickel plated	M12	VK…	OHT 18 M 120 P1K-IBSL
	15 … 150	30 x 30 x 15	Poti	–	■			pnp, 200 mA, NO	–25 … +55	IP 65	Plastics	M8	TK…	OHT 30 K 150 P1K-TSSL
	200 … 2.000	68 x 40 x 20	Poti	–		■		pnp, 100 mA, NO/NC	–20 … +55	IP 67	Plastics	M12	VK…	OHT 68 K 2000 P3K-BSL
	40 … 200	41 x 31,5 x 16	Teach	–	■			Push-pull, 200 mA, NO/NC	0 … +50	IP 67	Die-cast zinc	M8	TK…	OHT 41 M 0.2 G3-T3
			Teach, Remote teach										TK…/4	OHT 41 M 0.2 FG3-T4
	Optical contrast diffuse sensor													
	30 ± 3	50 x 40 x 15	Teach	–			■	Push-pull, 200 mA, NO/NC	–10 … +60	IP 67	Die-cast zinc	M12	VK… /4	OKTTI 55 M 30 FG3LK-IBS
	Retroreflective sensors													
	… 2.000	M18	Poti	–		■		pnp, 100 mA, NO/NC	–25 … +50	IP 66	Plastics	M12	VK… /4	OR 6-18 K 2000 P3K-BSL
											Metal			OR 6-18 M 2000 P3K-BSL
	… 3.000	M18	Poti	–	■			pnp, 100 mA, NO/NC	–25 … +50	IP 66	Plastics	M12	VK… /4	OR 6-18-1 K 3000 P3K-BSL
											Metal			OR 6-18-1 M 3000 P3K-BSL
	40 … 2.000	50 x 40 x 15	Poti	–	■			pnp, 200 mA, NO/NC	–10 … +60	IP 67	Die-cast zinc	M12	VK…	ORV 51 M 2000 P3K-IBS
			Teach											ORVTI 51 M 2000 P3K-IBS
	200 … 10.000	41 x 31,5 x 16	Teach	–	■			Push-pull, 200 mA, NO/NC	–20 … +60	IP 67	Die-cast zinc	M8	TK…	ORT 41 M 10 G3-T3
			Teach, Fernteach										TK…/4	ORT 41 M 10 FG3-T4
	0 … 4.000	38 x 27 x 15	Poti	–	■			pnp, 100 mA, NC	–25 … +60	IP 67	Plastics	M8	TK…	OR 6-41 K 4 P1-T3
								pnp, 100 mA, NO						OR 6-41 K 4 P2-T3
	Through beam sensors													
	… 8.000	M18	Poti	S/E		■		pnp, 100 mA, NO/NC	–25 … +50	IP 66	Plastics	M12	VK… /4	OES 6-18 K 8000 P3K-BSL
											Metal			OES 6-18 M 8000 P3K-BSL
	0 … 10.000	50 x 40 x 15	Poti	S	■			–	–25 … +60	IP 67	Die-cast zinc	M12	VK…	OSV 51 M 10000-IBS
				E				pnp, 200 mA, NO/NC						OEV 51 M 10000 P3K-IBS
	0 … 50.000	50 x 40 x 15	Poti	S		■		–	–40 … +50	IP 67	Die-cast zinc	M12	VK…	OSP 50 M 50000-IBS
				E				Push-pull, 200 mA, NO/NC						OEVP 50 M 50000 G3K-IBS

* Excerpt from our delivery programme

Laser Photoelectric Sensors

Laser photoelectric sensors can safely, quickly and reliably detect even the smallest parts. The highly visible laser spot eases the alignment also on larger distances.





Laser photoelectric sensors

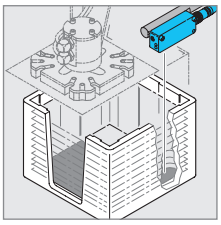
- Resolution 0,2 mm
- High switching frequency
- Collimated red light laser, clocked
- Range up to 50 m
- Robust metal casing
- Compact design

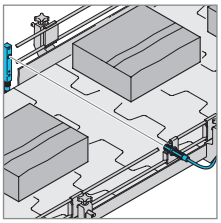
Laser line retroreflective sensors

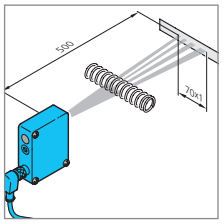
- Fan-shaped laser beam with auto collimation principle
- Detects small parts in the entire active zone
- Red light laser, clocked
- 4-way potentiometer or teach function
- Robust metal casing
- Compact design

Laser diffuse sensors with background suppression

- Optical or electronic background suppression
- Vibration-safe 6-way setting for very fine adjustment
- Red light laser, clocked, with small laser point
- Push-pull power stage pnp + npn
- High resolution, switching accuracy and frequency
- Functional reserve indicator/ contamination
- Automatic readjustment of the teach function transmit power
- Teach function









Technical data (typ.)	+20 °C, 24 V DC
Emitted light	Red light laser, clocked
Service voltage	10 … 35 V DC / 10,8 … 26,4 V DC (LLT 21 … / LRT 21 … / LES 21 …)
Protection class	IP 67

	Operating distance, Setting range (mm)	Size (mm)	Sensitivity adjustment by means of	Transmitter (S)/Receiver (E)	Switching output	Operating frequency (Hz)	Internal power consumption (mA)	Ambient temperature (°C)	Ambient light immunity (Lux)	Casing material	Connector	Connecting cable	Product-ID*
Laser diffuse sensors													
	45 … 300	22 x 13 x 8,5	Poti	–	pnp, 50 mA, NO/NC	1.000	15	–10 … +55	3.000	Plastic casing	2 m	–	LT 21 K 300 P3
											M8	TK … /4	LT 21 K 300 P3-K-T4
	75 … 200	50 x 40 x 15	Poti	–	pnp, 200 mA, NO/NC	2.000	30	–10 … +50	8.000	Die-cast zinc	M8	TK …	LTV 51 M 200 P3K-TSSL
											M12	VK …	LTV 51 M 200 P3K-IBS
	75 … 200	50 x 40 x 15	Teach	–	pnp, 200 mA, NO/NC	2.000	30	–10 … +50	8.000	Die-cast zinc	M8	TK …	LTVTI 51 M 200 P3K-TSSL
											M12	VK …	LTVTI 51 M 200 P3K-IBS
	100 … 600	50 x 40 x 15	Poti	–	pnp, 200 mA, NO/NC	500	30	–10 … +50	5.000	Die-cast zinc	M8	TK …	LTV 51 M 600 P3K-TSSL
											M12	VK …	LTV 51 M 600 P3K-IBS
	100 … 600	50 x 40 x 15	Teach	–	pnp, 200 mA, NO/NC	500	30	–10 … +50	5.000	Die-cast zinc	M8	TK …	LTVTI 51 M 600 P3K-TSSL
											M12	VK …	LTVTI 51 M 600 P3K-IBS
Laser diffuse sensors with background suppression													
	40 … 200	41 x 31,5 x 16	Teach	–	Push-pull, 200 mA, NO/NC	500	40	0 … +50	50.000	Die-cast zinc	M8	TK …	LHT 41 M 0.2 G3-T3 [3]
			Teach, Remote teach									TK … /4	LHT 41 M 0.2 FG3-T4 [3]
	50 … 200	50 x 40 x 15	Poti	–	pnp, 200 mA	500	45	–10 … +50	8.000	Die-cast zinc	M12	VK …	LHT 51 M 200 P3K-IBS [1]
			Teach									VK … /4	LHTTI 51 M 200 FP3K-IBS [1]
	40 … 300	76 x 30 x 18	Poti	–	Push-pull, 200 mA, NO/NC	1.000	30	–10 … +60	5.000	Die-cast zinc	M12	VK … /4	LHT 81 M 300 G4L-IBS [2] [3]
	40 … 400												LHT 81 M 400 G4L-IBS [2]
Laser retroreflective sensors													
	0 … 4.000	22 x 13 x 8,5	Poti	–	pnp, 50 mA, NO/NC	1.000	15	–10 … +55	3.000	Plastic casing	2 m	–	LR 21 K 4000 P3
											M8	TK … /4	LR 21 K 4000 P3-K-T4
	1.000	50 x 40 x 15	Poti	–	pnp, 200 mA, NO/NC	2.000	40	0 … +50	5.000	Die-cast zinc	M8	TK …	LRV 51 M 1000 P3K-TSSL
											M12	VK …	LRV 51 M 1000 P3K-IBS
	1.000	50 x 40 x 15	Teach	–	pnp, 200 mA, NO/NC	2.000	40	0 … +50	5.000	Die-cast zinc	M8	TK …	LRVTI 51 M 1000 P3K-TSSL
											M12	VK …	LRVTI 51 M 1000 P3K-IBS
	2.000	41 x 31,5 x 16	Teach	–	Push-pull, 200 mA, NO/NC	1.000	40	0 … +50	50.000	Die-cast zinc	M8	TK …	LRT 41 M 2 G3-T3 [3]
			Teach, Remote teach									TK … /4	LRT 41 M 2 FG3-T4 [3]
	2.000	50 x 40 x 15	Poti	–	pnp, 200 mA, NO/NC	2.000	40	0 … +50	5.000	Die-cast zinc	M8	TK …	LRV 51 M 2000 P3K-TSSL
											M12	VK …	LRV 51 M 2000 P3K-IBS
	2.000	50 x 40 x 15	Teach	–	pnp, 200 mA, NO/NC	2.000	40	0 … +50	5.000	Die-cast zinc	M8	TK …	LRVTI 51 M 2000 P3K-TSSL
											M12	VK …	LRVTI 51 M 2000 P3K-IBS
	10.000	50 x 40 x 15	Poti	–	pnp, 200 mA, NO/NC	2.000	40	0 … +50	5.000	Die-cast zinc	M8	TK …	LRV 51 M 10000 P3K-TSSL
											M12	VK …	LRV 51 M 10000 P3K-IBS
	10.000	50 x 40 x 15	Teach	–	pnp, 200 mA, NO/NC	2.000	40	0 … +50	5.000	Die-cast zinc	M8	TK …	LRVTI 51 M 10000 P3K-TSSL
											M12	VK …	LRVTI 51 M 10000 P3K-IBS
Laser through beam sensors													
	0 … 1.000	19 x 12 x 8,5	–	S / E	pnp, 50 mA, NO/NC	1.000	10	–10 … +55	3.000	Plastic casing	2 m	–	LES 21 K 1000 P3
											M8	TK … /4	LES 21 K 1000 P3-K-T4
	0 … 2.000	M8 x 70	–	S	–	2.000	30	0 … +50	–	Stainless steel	M8	TK …	OLS 08 V 2000-TSSL
				E	pnp, 200 mA, NO				5.000				OLE 08 V 2000 P2K-TSSL
	0 … 2.000	M12 x 70	–	S	–	2.000	30	0 … +50	–	Stainless steel	M12	VK …	OLS 12 V 2000-IBSL
				E	pnp, 200 mA, NO				5.000				OLE 12 V 2000 P2K-IBSL
	500…2.000	10 x 10 x 60	–	S	–	2.000	30	0 … +50	–	Die-cast zinc	M8	TK …	OLS Q 10 M 2000-TSSL
				E	pnp, 200 mA, NO				5.000				OLE Q 10 M 2000 P2K-TSSL
	2.000…50.000	15 x 15 x 69	Poti	S	–	1.200	24	5 … +45	–	Stainless steel	M8	TK …	OLS Q 15 V 50000-TSSL
				E	pnp, 200 mA, NO/NC		15						OLE Q 15 V 50000 P3K-TSSL

* Excerpt from our delivery programme

[1] electronic background suppression / [2] optical background suppression / [3] class 1 laser product

Further information and types will be found under **www.di-soric.com**

Laser Distance Sensors

Laser distance sensors with switching and/or analog output are working with laser light. The fields of application are diverse from height and loop control on conveyor belts up to distance measurement on linear units.



Laser distance sensors LAT 51 …

- Large detection range
- Exactly linearized object detection
- Digital and analog output
- Remote teach option with key-lock function
- Red light laser, clocked with small laser spot
- Robust metal casing
- High protection class

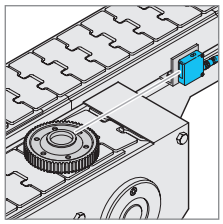
Laser distance sensors LHT 9-45 …

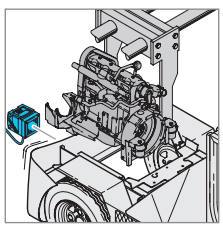
- Large range; up to 10 m
- Red light laser for simple alignment
- Switching and analog output parametrizable
- Four-digit display parametrizable
- Very good colour and surface independence
- Robust metal casing
- High protection class

Laser distance sensors LAT 61 …

- Extremely high resolution
- Integrated configuration display
- 2 analog and 3 digital outputs
- Timing-/ and multifunction input
- Light construction for mounting on moving parts
- High protection class



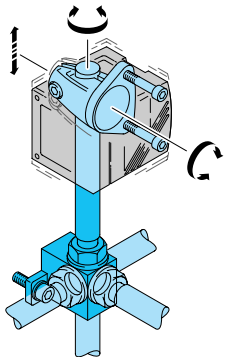




Technical data (typ.) +20 °C, 24 V DC	LAT 51 …	LAT 61 …	LHT 9-45 …
Switching output 1	Push-pull, 150 mA, short-circuit-proof	pnp/npn, 50 mA	Transistor pnp, 200 mA, NO/NC programmable
Switching output 2	–	pnp/npn, 50 mA	Transistor pnp or analog output
Switching output 3	–	pnp/npn, 50 mA	–
Analog output	4 … 20 mA (… IG3-B5)	4 … 20 mA	4 … 20 mA (instead of switching output 2) or
	0 … 10 V (… UG3-B5)	0 … 10 V	0 … 10 V (instead of switching output 2)
Linearity analog output	1,0 %	–	–
Load resistance (4 … 20 mA)	≤ 500 Ω	≤ 300 Ω	max. 250 Ω (only LHT 9-45 M 10 P3IU-B4)
Load resistance (0 … 10 V)	≥ 1.000 Ω	≥ 100 Ω	min. 5.000 Ω (only LHT 9-45 M 10 P3IU-B4)
Threshold	–	–	2 … 100 % adjustable
Internal power consumption	60 mA	< 100 mA	< 150 mA
Ambient temperature	0 … +50 °C	–10 … +45 °C	–10 … +60 °C
Ambient light immunity	5.000 Lux	3.000 Lux	100.000 Lux
Protection class	IP 67	IP 67	IP 67
Protection degree	III, Operation on protective low voltage	III, Operation on protective low voltage	III, Operation on protective low voltage
Casing material	Aluminium, black anodized	Plastic (PBT)	Die-cast zinc, black lacquered
Window casing	PMMA	Acryl	Glass

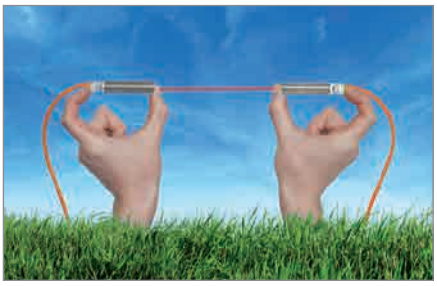
	Laser distance sensors	Laser sensors with background suppression	Detection range (mm)	Size (mm)	Red light laser, clocked (Laser class 2)	Service voltage (V DC)	Max. resolution (mm)	Max. operating frequency (Hz)	Output sequence frequency (Hz)	Diameter of light spot (mm)	Connector / cable length	Connecting cable	Product-ID*
	■		50 … 500	50 x 50 x 16	■	18 … 35	0,05 … 1,5	500	–	Ø 2	M12	VK … /5	LAT 51 M 500 IG3-B5
								500					LAT 51 M 500 UG3-B5
	■		30 ± 4	60 x 57 x 20	■	21,6 … 26,4	0,5 µm	–	–	0,1 x 0,1	5 m	–	LAT 61 K 30/8 IUPN
			50 ± 10				1,5 µm			0,5 x 1,0			LAT 61 K 50/20 IUPN
			85 ± 20				2,5 µm			0,75 x 1,25			LAT 61 K 85/40 IUPN
			120 ± 60				8,0 µm			1,0 x 1,5			LAT 61 K 120/120 IUPN
		■	200 … 10.000	45 x 52 x 42	■	10 … 30	–	5	–	Ø 6	M12	VK …	LHT 9-45 M 10 P3-B4 [1]
	■					18 … 30		5	1 … 33			VK … /4	LHT 9-45 M 10 P3IU-B4 [1]

[1] Digital display

Mounting set for laser distance sensor LHT 9-45 …	Product-ID*
■ Adjustable	
■ Robust design	
■ Stainless steel	
	SH-LHT9-45

* Excerpt from our delivery programme

High performance photoelectric sensors are the more poweful versions of the various photoelectric sensors series. Thanks to their extremely high performance, chips, dust, oil and waste water can all be reliably penetrated.



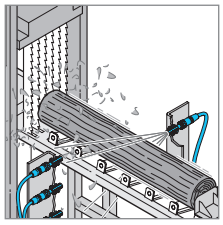


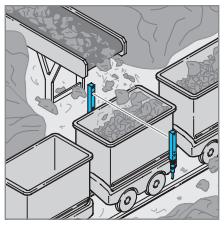
High performance photoelectric sensors

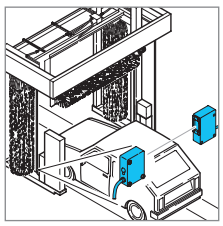
- High switching accuracy
- Extremely resistant to dirt
- Ranges up to 50 m
- Protection classes IP 67, IP 68 and IP 69K
- Versions with switchable heating function
- Versions with stainless steel casing

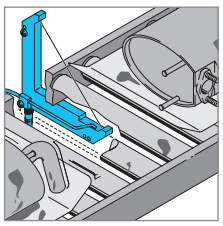
High performance angled light barriers with contamination indicator/-output

- Intelligent contamination output with LED
- Intelligent contamination indicator
- High functional reserve
- Listed in the automobile industry
- Optical axis approachable in x-, y- and z-direction
- All-purpose mounting
- Robust metal casing







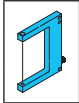
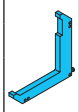




CE cULus LISTED *

* only OGLP and OGUP

Technical data (typ.)	+20 °C, 24 V DC
Emitted light	Infrared light, clocked
	Red light, clocked, collimated (only OGL 50/31 …/OGL 55/54 …)
Contamination output	200 mA, pnp (only OGL 50/31 …/OGL 55/54 …)
Ambient temperature	–10 … +60 °C
	–20 … +60 °C (only OxP 12 …)
	–40 … +50 °C (only …/H)
Protection class	IP 67
	IP 67, IP 68, IP 69K (only OxP 12 …)

	Operating distance, Setting range (mm), Fork opening (mm), Journal length (mm)	Size (mm)	Transmitter (S)/Receiver (E)	Service voltage (V DC)	Switching output	Operating frequency (Hz)	Internal power consumption (mA)	Ambient light immunity (Lux)	Casing material	Connector	Connecting cable	Product-ID*
	High performance through beam sensors											
	50.000	M12 x 75	S	10 … 35	–	–	55	–	Stainless steel V2A	M12	VK …	OSP 12 VHF-IBSL
			E		Push-pull, 200 mA, NO	20	40	15.000				OEP 12 V 50000 G2-IBSL
	50.000	12 x 12 x 91	S	10 … 35	–	–	55	–	Aluminium anodised	M8	TK …	OSPQ 12 MHF-TSSL
			E		Push-pull, 200 mA, NO		40	15.000				OEPQ 12 M 50000 G2-TSSL
	0 … 50.000	50 x 40 x 15	S	10 … 35	–	–	55	–	Die-cast zinc	M12	VK …	OSP 50 M 50000-IBS
			E		Push-pull, 200 mA , NO/NC	20	40	15.000				OEVP 50 M 50000 G3LK-IBS
	0 … 50.000	50 x 40 x 15	S	10 … 35	–	–	55	–	Die-cast zinc	M12	VK … /4	OSP 50 M 50000-IBS/H [1]
			E		Push-pull, 200 mA , NO/NC	20	40	15.000				OEVP 50 M 50000 G3LK-IBS/H [1]
	High performance fork light barriers											
	30	50 x 60 x 10	–	10 … 30	pnp, 200 mA, NO/NC	300	30	20.000	Die-cast zinc	M8	TK …	OGUP 030 P3K-TSSL
	50	70 x 80 x 10										OGUP 050 P3K-TSSL
	80	100 x 80 x 10										OGUP 080 P3K-TSSL
	High performance angled light barriers											
	50	75 x 75 x 10	–	10 … 35	pnp, 200 mA, NO/NC	1.000	30	20.000	Die-cast zinc	M8	TK …	OGLP 050 P3K-TSSL
	80	105 x 105 x 10				300	30	20.000				OGLP 080 P3K-TSSL
	120	150 x 150 x 12				2.000	40	50.000				OGLP 120 P3K-TSSL
	150	180 x 180 x 12				2.000	40	50.000	Aluminium			OGLP 150 P3K-TSSL
	High performance angled light barriers with contamination indicator/-output											
	50/31	60 x 83 x 10	–	10 … 35	pnp, 200 mA, NO	200	45	20.000	Die-cast zinc	M12	VK … /4	OGL 50/31 P6L-IBS
	55/54	65 x 106 x 10										OGL 55/54 P6L-IBS

* Excerpt from our delivery programme

[1] with heating function

Angled Light Barriers

The angled light barrier is of particular use when removing workpieces or detecting parts. With high operating frequency, short response time and high resolution; exact positioning as well as the safe detecion of extremely fast motion sequences of the smallest parts is possible.



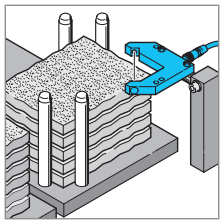


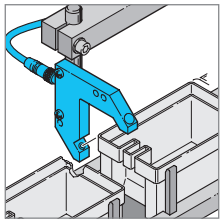
Angled light barriers

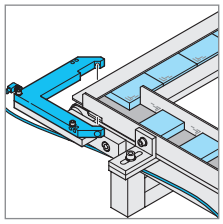
- Red and infrared types
- High operating frequency
- Sensitivity adjustable
- Light/dark switching
- Robust metal casing
- All-purpose mounting
- 3-years function guarantee*

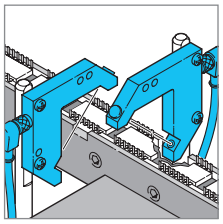
Laser angled light barriers

- Very high resolution
- Visible laser spot
- Mountable side by side
- High operating frequency
- Sensitivity adjustable
- Light/dark switching
- Robust metal casing
- All-purpose mounting
- Class 1 laser product







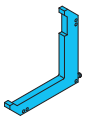




CE c UL us LISTED

* according to our General Conditions of Export

Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 35 V DC
Voltage drop	< 2,8 V
Switching hysteresis	< 0,25 mm
Ambient temperature	–10 … +60 °C
Insulation voltage endurance	500 V
Protection class	IP 67
Casing material	Die-cast zinc, lacquered

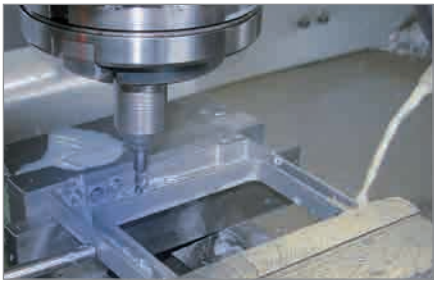
	Journal length (mm)	Size (mm)	Red light 660 nm	Infrared light 880 nm	Red light laser 670 nm	Switching output	Internal power consumption (mA)	Resolution (mm)	Operating frequency (Hz)	Ambient light immunity (Lux)	Reproducibility (mm)	Connector	Connecting cable	Product-ID*
	Angled light barriers													
	50	75 x 75 x 10	■		–	pnp, 200 mA, NO/NC	< 30	Ø 0,5	4.000	80.000	0,06	M8	TK …	OGL 051 P3K-TSSL
				■						25.000				OGL 050 P3K-TSSL
	80	105 x 105 x 10	■				< 30	Ø 0,7	4.000	70.000				OGL 081 P3K-TSSL
				■						20.000				OGL 080 P3K-TSSL
	120	150 x 150 x 12	■				< 40	Ø 1,0	2.000	80.000				OGL 121 P3K-TSSL
				■						50.000				OGL 120 P3K-TSSL
	Laser angled light barriers													
	50	81 x 81 x 10			■	pnp, 200 mA, NO/NC	< 30	Ø 0,05	3.000	100.000	0,01	M8	TK …	LGL 051 P3K-TSSL
	80	106 x 106 x 10												LGL 081 P3K-TSSL
	120	146 x 146 x 12												LGL 121 P3K-TSSL
	High performance angled light barriers see page 12 until 13													

* Excerpt from our delivery programme

Fork Light Barriers

With di-soric fork light barriers, you can reliably monitor, control and manage your material flow. The largest range of fork light barriers in conjunction with customised designs always offers the best solutions.





Fork light barriers

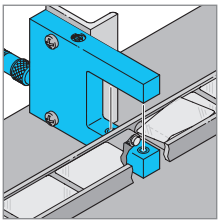
- Potentiometer or teach function
- Static or dynamic operating principle
- Analog/switching output
- Fork widths from 2 to 250 mm
- High operating frequency
- Sensitivity adjustable
- Light/dark switching
- Versions in V4A
- 3-years function guarantee*

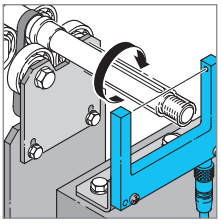
Differential fork light barriers

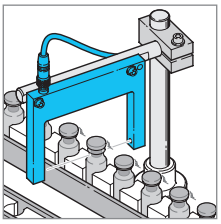
- Differential evaluation
- High resolution
- Detects transparent objects and the thinnest threads
- Fork widths from 30 to 90 mm
- 3-years function guarantee*

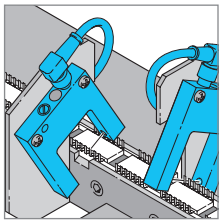
Laser fork light barriers

- Resolution 0,05 mm
- High switching frequency
- Reproducibility 0,01 mm
- Fork widths from 30 to 120 mm
- Class 1 laser product







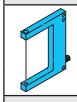
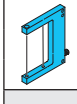




CE cULus LISTED

* according to our General Conditions of Export

Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 35 V DC / 12 … 35 V DC (only ODG …) / 10 … 30 V DC (only LGU …)
Switching output	pnp, 200 mA, NO/NC switchable / push-pull, 200 mA, NO/NC switchable (only … G3K …)
Sensitivity adjustment	Potentiometer
	Teach key (only OGUTI …)
Laser power	100 µW only LGU …
Laser class	1- EN 60825-1 (only LGU …)
Ambient temperature	–10 … 60 °C / +5 … 45 °C (only LGU …)
Protection class	IP 67
Casing material	Die-cast zinc, lacquered
	Stainless steel V4A (1.4404 / 1.4571) (only OGU … V4A)
	Aluminium, black anodized (only ODG …/LGU …)

	Fork opening (mm)	Size (mm)	Sensitivity adjustment by means of	Red light 660 nm, clocked	Infrared light 880 nm, unclocked	Red light laser 670 nm, clocked	Internal power consumption (mA)	Resolution, smallest detectable part (mm)	Voltage drop (V)	Operating frequency (Hz)	Switching hysteresis (mm)	Reproducibility (mm)	Ambient light immunity (Lux)	Connector	Connecting cable	Product-ID*
	Fork light barriers in standard version															
	10	25 x 45 x 10	Poti		■		40	Ø 0,3	2,4	10.000	0,1	0,01	20.000	M8	TK …	OGU 010 G3K-TSSL
	20	40 x 50 x 10		■			30	Ø 0,4	2,8	4.000	0,1	0,02	70.000			OGU 021 P3K-TSSL
	30	50 x 60 x 10		■			30	Ø 0,5	2,8	4.000	0,25	0,02	30.000			OGU 031 P3K-TSSL
	50	70 x 80 x 10		■			30	Ø 0,5	2,8	4.000	0,25	0,04	25.000			OGU 051 P3K-TSSL
	80	100 x 80 x 10		■			30	Ø 0,5	2,8	4.000	0,25	0,06	25.000			OGU 081 P3K-TSSL
	120	144 x 90 x 12		■			45	Ø 0,8	2.0	2.000	0,2	0,06	20.000			OGU 121 P3K-TSSL
	Fork light barriers in stainless steel casing															
	30	50 x 60 x 10	Poti	■			30	Ø 0,5	2,8	4.000	0,25	0,02	30.000	M8	TK …	OGU 031 P3K-TSSL/V4A
	50	70 x 80 x 10					30	Ø 0,5	2,8	4.000		0,04	15.000			OGU 051 P3K-TSSL/V4A
	80	100 x 80 x 10					30	Ø 0,5	2,8	4.000		0,06	25.000			OGU 081 P3K-TSSL/V4A
	120	144 x 90 x 12					45	Ø 0,8	2,0	2.000		0,06	20.000			OGU 121 P3K-TSSL/V4A
	Fork light barriers with teach function															
	30	50 x 60 x 10	Teach	■			30	Ø 0,3	2,0	3.000	0,1	0,03	20.000	M8	TK …	OGUTI 031 P3K-TSSL
	50	70 x 80 x 10					30	Ø 0,3		3.000	0,1	0,03	20.000			OGUTI 051 P3K-TSSL
	80	100 x 80 x 10					30	Ø 0,3		3.000	0,1	0,03	12.000			OGUTI 081 P3K-TSSL
	120	144 x 90 x 12					50	Ø 0,7		1.500	0,15	0,05	15.000			OGUTI 121 G3K-TSSL
	Fork light barriers with teach function, dynamic evaluation and adjustable pulse streching 5 … 150 ms															
	30	50 x 60 x 10	Teach	■			30	Ø 0,15	2,0	100	–	–	10.000	M8	TK …	OGUTID 031 P3K-TSSL [1]
	50	70 x 80 x 10														OGUTID 051 P3K-TSSL [1]
	80	100 x 80 x 10														OGUTID 081 P3K-TSSL [1]
	Differential fork light barriers															
	30	50 x 70 x 10	Poti		■		35	Ø 0,07	2,5	5.000	0,2	0,01	–	M8	TK …	ODG 30 P3K-TSSL [1]
	50	70 x 90 x 10						Ø 0,1								ODG 50 P3K-TSSL [1]
	90	110 x 115 x 10						Ø 0,25								ODG 90 P3K-TSSL [1]
	Laser fork light barriers ⚠															
	30	60 x 60 x 10	Poti			■	30	Ø 0,05	2,8	3.000	0,02	0,01	100.000	M8	TK …	LGU 031 P3K-TSSL
	50	80 x 80 x 10														LGU 051 P3K-TSSL
	80	110 x 80 x 10														LGU 081 P3K-TSSL
	120	150 x 90 x 12														LGU 121 P3K-TSSL
	High performance fork light barriers see page 12 until 13															

* Excerpt from our delivery programme

[1] without UL-approval

Frame & Ring Light Barriers

The optimum solution for detecting metallic and non-metallic parts, for counting small parts or for checking ejection or removal of workpieces in press and stamping plants.



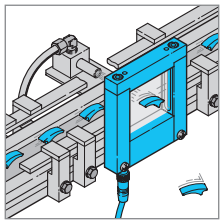


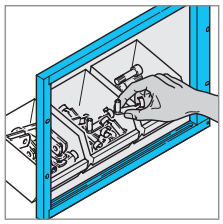
Frame light barriers

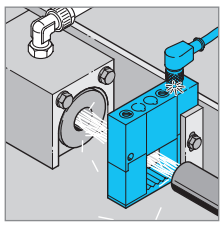
- Detachable corrugated crossbar
- Patented baffle protection for protected optics
- Invariable resolution even in the border area
- Resolution 0,7 mm
- Very short response time
- Adjustable pulse stretching
- Switchable static/dynamic operating principle
- Integrated blow-off ports
- Robust metal casing

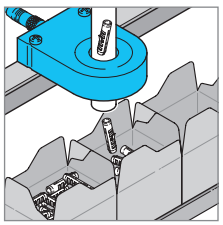
Ring light barriers

- Resolution 1 mm
- Short response time
- Adjustable pulse stretching
- Switchable static/dynamic operating principle









CE



Technical data (typ.)	+20 °C, 24 V DC
Emitted light	Infrared light 880 nm
Response time	0,1 ms
Release time	0,1 … 150 ms (only OGWSD …)
Pulse stretching	0,1 ... 150 ms (only OGWSD …)
	1 ... 150 ms (only ORSD …)
Ambient temperature	0 … 60 °C
Protection class	IP 67
Insulation voltage endurance	500 V
Casing material	Aluminium, anodised (only OGWSD …)
	Plastic PA (only ORSD ...)

	Active zone/Ring diameter (mm)	Size (mm)	Functional principles Static (S)/Dynamic (D)	Switching output	Internal power consumption (mA)	Resolution, dynamic mode (mm)	Resolution, static mode (mm)	Ambient light immunity (Lux)	Service voltage (V DC)	External amplifier	Connector	Connecting cable	Product-ID*
Frame light barriers													
	25 x 23	60 x 60 x 15	S/D	pnp, 200 mA, NO/NC	25	Ø 0,7	Ø 1,0	30.000	10 … 35		M8	TK …	OGWSD 25 P3K-TSSL
	40 x 49	85 x 80 x 15			30	Ø 0,7	Ø 1,0	20.000	18 … 35	■			OGWSD V 4055 P3K-TSSL
	40 x 49	80 x 125 x 20			30	Ø 0,7	Ø 1,0	20.000	18 … 35				OGWSD 4055 P3K-TSSL
	70 x 62	110 x 123 x 20			30	Ø 1,5	Ø 2,0	20.000	18 … 35				OGWSD 70 P3K-TSSL
	100 x 92	140 x 153 x 20			35	Ø 2,5	Ø 3,0	20.000	18 … 35				OGWSD 100 P3K-TSSL
	150 x 142	190 x 203 x 20			45	Ø 3,0	Ø 5,0	20.000	18 … 35				OGWSD 150 P3K-TSSL
	250 x 242	290 x 303 x 20			45	Ø 5,0	Ø 8,0	10.000	22 … 26				OGWSD 250 P3K-TSSL
	300 x 397,5	340 x 458,5 x 20			50	Ø 5,0	Ø 10,0	8.000	22 … 26				OGWSD 300 P3K-TSSL
Ring light barrier													
	20,6	60 x 85 x 20	S/D	pnp, 200 mA, NO	30	Ø 1,5	Ø 1,5	5.000	10 … 35		M12	VK …	ORSD 20 P2K-IBS

* Excerpt from our delivery programme

Fibre-optic Cables/- Amplifiers

Glass fibre-optic cables are used for narrow spaces at extreme temperatures. Thanks to their small casing design, plastic fibre-optic cables can be used in even the narrowest spaces.





Glass fibre-optic cables

- High-quality glass fibre-optic cables
- Silicone, metal or PU coating
- Bendable probes
- High temperature resistance
- Robust, highly flexible construction
- Special designs

Plastic fibre-optic cables

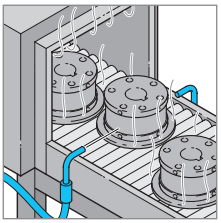
- High resolution
- Large operating distances
- Fine internal fibres
- Auxiliary optics
- Bendable sensor probe
- Versions with coaxial arrangement

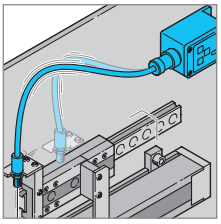
Amplifiers for glass fibre-optic cables

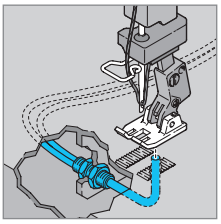
- High switching frequency
- Analog and digital outputs
- Infrared, red and green light, clocked
- Potentiometer or teach function
- Robust metal casing

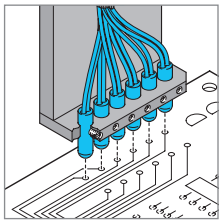
Amplifiers for plastic fibre-optic cables

- Digital LED display
- High operating frequency
- Timer function
- Potentiometer or teach function
- High operating distance
- Functional reserve output







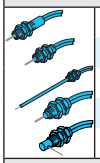
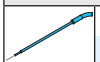




CE

Technical data (typ.)	+20 °C, 24 V DC
Switching output	Transistor, pnp, 200 mA
Ambient temperature	–25 … +55 °C (only OLVK 31 …/OLVKxx 61 …)
	0 … +60 °C (only OLVK 41 …) / –10 … +60 °C (only OLVxx 4x …)
Casing material	PBTP (Crastin) / Polyester (only OLVK 41 …) / Die-cast zinc (only OLV 4x …/OLVTI 4x …)

	Size (mm)	Sensitivity adjustment by means of	Service voltage (V)	Operating frequency (Hz)	Infrared light, clocked	Red light, clocked	NO/NC switchable	Antivalent	Switching hysteresis (%)	Temperature drift (%/K)	Ambient light immunity (Lux)	Protection class	Internal power consumption (mA)	Connector	Connecting cable	Product-ID*
	Amplifiers for plastic fibre-optic cables															
	30 x 30 x 15	Poti	10 … 36	1.000		■		■	10	0,3	10.000	IP 67	15	M8	TK … /4	OLVK 31 P4K-TSSL
	40 x 36 x 12	Poti	12 … 35	750		■	■		15	0,3	30.000	IP 65	36	M8	TK …	OLVK 41 P3K-TSSL
	60 x 31 x 10	Poti	10 … 30	1.500		■	■		10	0,2	10.000	IP 64	15	M8	TK …	OLVK 61 P3K-TSSL/3
															TK … /4	OLVK 61 P3FK-TSSL
	60 x 31 x 10	Teach	10 … 30	1.500		■	■		10	0,2	10.000	IP 64	25	M8	TK … /4	OLVKTI 61 P3FK-TSSL
				4.000					5				30			OLKTD 61 P3-T4 [1]
	65 x 31 x 10	Teach	12 … 24	4.000		■	■		–	0,2	3.000	IP 40	30	M8	TK … /4	OLKTD 71 P3-T4 [1]
	Amplifiers for glass fibre-optic cables															
	40 x 41 x 75	Poti	12 … 35	1.500	■		■		10	0,3	20.000	IP 65	55	M12	VK … /4	OLV 40 P3K-IBS
						■			15							OLV 41 P3K-IBS
	40 x 41 x 75	Teach	10 … 35	1.500	■		■		12	0,1	50.000	IP 65	45	M12	VK … /4	OLVTI 40 P3K-IBS
						■			12	0,25						OLVTI 41 P3K-IBS

	Application as diffuse sensor	Application as through beam sensor	Operating distance up to … (mm) depending on amplifier	Sensor probe	Thread sleeves (brassnickel-plated)	Thread sleeves (VA)	Mounting	Coating cable (PE)	Coating cable (silicone metal coating)	Lenght fibre-optic cable [1] (mm)	Temperature resistance (°C)	Protection class	Product-ID*
	Plastic fibre-optic cables (PMMA)												
	■		70	–	■		M3						WRBT 2000 K-M3-0.5
	■		140	–		■	M5						WRBT 2000 K-M5-Z8
	■		150	VA	■		M6	■		2.000 [2]	–25 … +70	IP 67	WRBT 2000 KBF-M6-1.0
	■		200	–	■		M6						WRBT 2000 K-M6-1.0
		■	1.700	–	■		M6						WRBE 2000 KR-M6-1.0
	Glass fibre-optic cables												
	■		20	VA			Ø 5 x 15						WRB 120SB 2.0-1.0
		■	150										WRB 220SB 2.0-1.0
	■		70	VA			Ø 8 x 35						WRB 120SR-8.0-2.5
		■	800										WRB 220SR-8.0-2.5
	■		85	VA			Ø 8 x 15		■	600 [3]	–40 … +180	IP 67	WRB 120S-8-2.5
		■	1.000										WRB 220S-8-2.5
	■		85	VA			M4 x 20						WRB 120S-M4-2.5
		■	1.800										WRB 220S-M4-2.5
	■		85	AL			30 x 16 x 10						WRB 120SQ-90-10-0.6
		■	650										WRB 220SQ-90-10-0.3

* Excerpt from our delivery programme

[1] with digital display / [2] cut to length / [3] further lengths available

Light Curtains

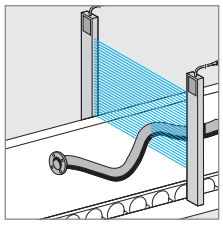
Specified areas for checking individual parts are safely monitored with invisible, infrared light beams in di-soric light curtains.

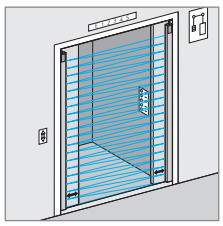


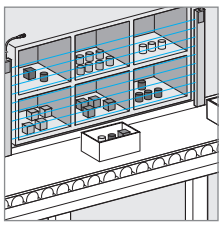
Light curtains

- Transistor outputs or relay outputs
- Integrated or external evaluation electronics
- Alarm output for contamination
- Light beam interspace from 12,5 to 112 mm
- Monitoring heights from 35 to 5.775 mm
- Compact design
- Aluminium casing
- Simple mounting



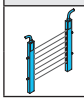






Technical data (typ.)	+20 °C, 24 V DC
	LA .../LA-D ...
Operating distance	0,7 ... 4,0 m / factory present to 4,0 m
Emitted light	Infrared light 880 nm, clocked
Service voltage	20,4 ... 28,8 V DC
Switching output	Transistor pnp (switching and alarm output)
Maximum rating	200 mA, short-circuit-proof
Ambient temperature	–10 ... +45 °C
Protection class	IP 54
EMC directives	EN 61000-6-3:2001/EN 61000-6-1:2001
Casing material	Aluminium, rod profile (24 x 12 mm)

Product-ID* light curtains LA .../LA–D ...

	Light beam evaluation LA ... = Horizontal LA-D ... = Diagonal	Nos. of beams	Light beam interspace (mm)	Monitored height H (mm)	Profile length L ca. (mm)	Mounting	H = Light switching D = Dark switching
	LA LA-D	8	– 12.5	– 88	– 260	I–	H D

Ordering example:

Light curtains with horizontal light beam evaluation,
Nos. of beams = 8,
Light beam interspace = 12,5 mm,
Monitored height = 88 mm,
Profile length = 260 mm, light switching

LA 8 – 12.5 – 88 – 260 I–H

Operating distance 12,5 mm			Operating distance 12,5 mm			Operating distance 25 mm			Operating distance 50/112 mm		
LA LA-D	8 – 12.5 – 88 – 260 I–	H D	LA	72 – 12.5 – 888 – 1060 I–	H D	LA LA-D	8 – 25 – 175 – 360 I–	H D	LA LA-D	8 – 50 – 350 – 560 I–	H D
LA LA-D	16 – 12.5 – 188 – 360 I–	H D	LA	80 – 12.5 – 988 – 1160 I–	H D	LA LA-D	16 – 25 – 375 – 560 I–	H D	LA LA-D	16 – 50 – 750 – 960 I–	H D
LA LA-D	24 – 12,5 – 288 – 460 I–	H D	LA	88– 12.5 – 1088 – 1260 I–	H D	LA LA-D	24 – 25 – 575 – 760 I–	H D	LA LA-D	24 – 50 – 1150 – 1360 I–	H D
LA LA-D	32 – 12.5 – 388 – 560 I–	H D	LA	96 – 12.5 – 1188 – 1360 I–	H D	LA LA-D	32 – 25 – 775 – 960 I–	H D	LA LA-D	32 – 50 – 1550 – 1760 I–	H D
LA LA-D	40 – 12.5 – 488 – 660 I–	H D	LA	104 – 12.5 – 1288 – 1460 I–	H D	LA LA-D	40 – 25 – 975 – 1160 I–	H D	LA LA-D	40 – 50 – 1950 – 2160 I–	H D
LA LA-D	48 – 12.5 – 588 – 760 I–	H D	LA	112 – 12.5 – 1388 – 1560 I–	H D	LA LA-D	48 – 25 – 1175 – 1360 I–	H D	LA LA-D	8 – 112 – 783 – 1050 I–	H D
LA LA-D	56 – 12.5 – 688 – 860 I–	H D	LA LA-D	–	H D	LA LA-D	56 – 25 – 1375 – 1560 I–	H D	LA LA-D	16 – 112 – 1677 – 1950 I–	H D
LA LA-D	64 – 12.5 – 788 – 960 I–	H D	LA LA-D	–	H D	LA LA-D	64 – 25 – 1575 – 1760 I–	H D	LA LA-D	24 – 112 – 2571 – 2840 I–	H D

* Excerpt from our delivery programme / npn-types are available upon request

Colour Sensors

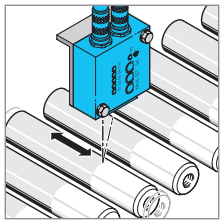
These high-quality sensors detect shades in changes to colour or surface structures and are frequently used in quality testing.

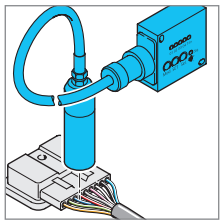


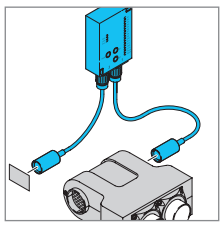


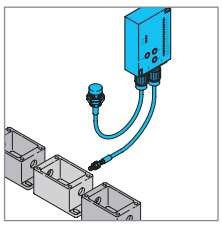
Colour sensors

- Perceptive operating mode (depending on sensitivity)
- Measurement in colorimetric colour spaces e. g. L*a*b and L*u*v
- Differentiation of very small colour nuances (ΔE <1)
- Up to 350 channels
- 2-channel differential evaluation
- Adjustable colour tolerance
- Very short response time
- High ambient light compensation
- Reflection compensation
- Exportable measured values for PC applications (.xls, .csv)
- Extensive setting options via PC
- Surface structure checking
- Separate evaluation of brightness and colouring
- Illumination with aging-compensated white light LED
- Key lock function
- Fixed optics or fibre-optic cable adaption
- Fibre-optic cable with various auxiliary optics
- Visualisation of chrominance values with PC software
- FS software included in the scope of delivery







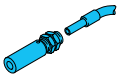
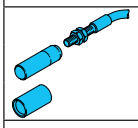
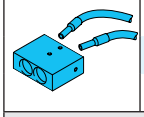




Technical data (typ.)	+20 °C, 24 V DC		
Emitting light source	White light LED, can be switched off		
Colour resolution	DE Lab < 1		
Response time / Scan frequency	0,2 ms	5.000 Hz:	up to 350 colous evaluable
	0,1 ms	10.000 Hz:	up to 30 colous evaluable
	0,05 ms	20.000 Hz:	3 colous evaluable

	Colour sensors	Operating distance (mm)	Number of sensing channels	Teach-In colour channels (nos.)	Colour channels with binary coding (nos.)	Fibre-optic cable adapter	Fixed optics	Colour memory internal	4x npn + pnp (Push-pull)	12x npn + pnp (Push-pull)	Illumination with age compensating white light LED	Profibus	Service voltage (VDC)	Internal power consumption (mA)	Protection class	Product-ID
	see fibre-optic cables	1	4	15	■		350	■		■			18 … 28	500	IP 54	FS 12-50 M G3-B8
	30 … 60					■										FS 50 M 60 G3-B8
	see fibre-optic cables	1	12	350	■		350		■	■			18 … 28	500	IP 54	FS 12-100-1 M G8-B8[1]
		2							■	■ [3]						FS 12-100-2 M G8-B8[1]
		2								■ [3]	■					FS 12-100-2 M G8-B8-PB[2]
	Adapter cable 0,25 m (USB/RS232)															RS232S-0.25-USB
	Connecting cable 5 m															BSHM-Z-5/8-A
	Connecting cable 2 m (USB)															BSHM-Z-2/4-USB
	Connecting cable 2 m (RS232)															BSHM-Z-2/4-RS232K

[1] Versions with CANopen and fast Ethernet Feldbus interface available upon request / [2] Profibus / [3] with stabilization target

	Fibre-optic cables and focus optics for colour sensors with fiber-optic cable adapter	Focus optics	Fibre-optic cable to be used as diffuse sensor	Fibre-optic cable to be used as through beam sensor	Measuring spot Ø (mm)	Active Ø (mm)	Opening angle	Working distance (mm)	Scanning distance (mm)	Size (mm) Dimensions sensor probe (mm)	Mounting fibre-optic cable / focus optics	Material focus optics Aluminium, anodised	Material sensor probe stainless steel	Protection class	Product-ID
			■		–	2,5	67°	–	–	Ø 4,5 x 12	Ø 4,5		■	IP 67	WRB 120 S-SG-4.5-2.5
		■			2,0	–	–	10	10 … 15	Ø 15 x 60	Ø 4,5	■		–	VO-M12/10-4.5-2.5
			■		–	2,5	67°	–	–	M4 x 20	M4		■	IP 67	WRB 120 S-SG-M4-2.5
			■		–	2,5	67°	–	–	M6 x 30	M6		■	IP 67	WRB 120 S-SG-M6x30-2.5
		■			6,0	–	–	35	30 … 60	Ø 22 x 63	M6	■		–	VO-M6/35-M6x30-2.5
		■			6,0	–	–	50	35 … 60	Ø 22 x 39	M6	■		–	VO-M6/50-M6x30-2.5
				■	–	2,5	67°	–	–	Ø 4,5 x 12	Ø 4,5		■	IP 67	WRB 220 S-4.5-2.5
		■			14	–	–	90	70 … 150	40 x 50 x 22	Ø 4,5	■		–	VO-F/90-4.5-2.5
	Stabilisation target for external drift stabilisation and matching fibre-optic cable														
	Target colours: RAL 9003 / RAL 7046 / black				–	–	–	–		M6	■			–	FS-STAB
	Fibre-optic cable 300 mm				67°	–	–	M6 x 20		M6			■	IP 67	WRB 110 S-M6-2.5

Further information and types will be found under **www.di-soric.com**

Ring- & Tube Sensors

This series is featured by an easy mounting for safe detection of guided, small metal parts like, springs or screws. Versions for wire break detection complete our range.



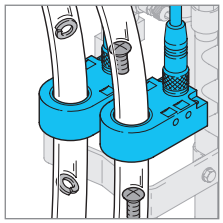


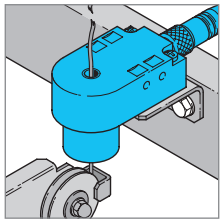
Inductive ring sensors/
Wire break sensors

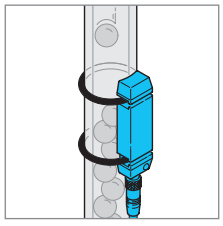
- High resolution:
  - Steel ball ø 0,5 to 10 mm
  - Copper wire from ø 0,1 mm
- Static or dynamic operating principle
- Sensitivity adjustment
- Short response time
- Adjustable pulse stretching
- Switchable NO/NC function
- Ring diameter from 4 to 150 mm
- Insensitivity to dirt
- Protection class IP 67

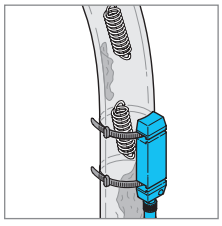
Inductive tube sensors

- High resolution
- Short response time
- Static or dynamic operating principle
- Universal mounting
- Low weight
- Compact design
- Automatic elimination of metalliferous contamination
- Protection class IP 67





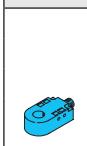






CE c UL us LISTED

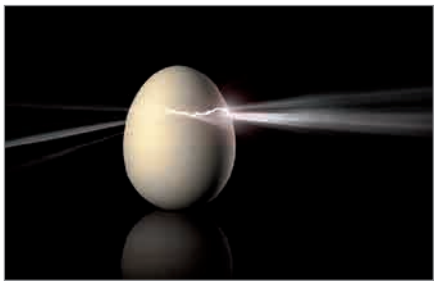
Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 35 V DC
Sensitivity adjustment	Potentiometer (only IRx …)
Voltage drop	2,0 V
Shock/vibration loading	30 g_n/10 … 55 Hz, 1 mm (only ISx …)
Speed of parts	< 35 m/s
Ambient temperature	–25 … 70 °C
Protection class	IP 67
Insulation voltage endurance	500 V (1.000 V only IRx …/IRDB …)
Display LED	Output yellow, operation green (only ISx 70 …)
Casing material	Polyamide, ring POM (only IRx …/IRDBx 6 …)
	Polyamide, ring POM, ceramic insert (only IRDBx 4 …)
	Polycarbonate (only ISx …)

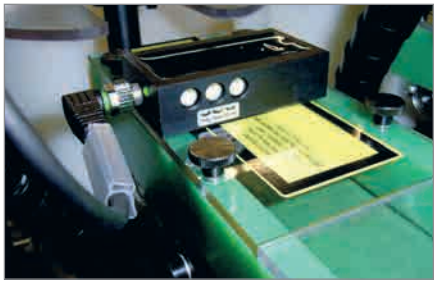
	Ring diameter (mm)	Evaluation: Static (S)/Dynamic (D)	Internal power consumption (mA)	Resolution, steel ball (mm)	Resolution copper wire (mm)	Switching output	Pulse stretching	Connector	Connecting cable	Versions with radial plug connection … RIBS available	Product-ID*
Inductive ring sensors											
	6,1	S	11	1,0	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…	■	IR 6 PSOK-IBS
		D	20	0,5	–						IRD 6 PSOK-IBS
	10,1	S	11	1,5	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…	■	IR 10 PSOK-IBS
		D	20	0,6	–						IRD 10 PSOK-IBS
	15,1	S	11	2,0	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…	■	IR 15 PSOK-IBS
		D	20	0,8	–						IRD 15 PSOK-IBS
	20,1	S	11	2,5	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…	■	IR 20 PSOK-IBS
		D	20	1,0	–						IRD 20 PSOK-IBS
	25,1	S	11	3,0	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…	■	IR 25 PSOK-IBS
		D	20	1,2	–						IRD 25 PSOK-IBS
	35,2	S	11	4,5	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…		IR 35 PSOK-IBS
		D	20	2,0	–		0,1 … 150 ms				IRD 35 PSOK-IBS
	51,0	S	11	6,0	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…		IR 50 PSOK-IBS
		D	20	2,5	–		0,1 … 150 ms				IRD 50 PSOK-IBS
	101,0	S	15	10,0	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…		IR 100 PSOK-IBS
		D	20	5,0	–		0,1 … 150 ms				IRD 100 PSOK-IBS
	151,0	S	15	19,0	–	pnp, 200 mA, NO/NC	10 … 150 ms	M12	VK…		IR 150 PSOK-IBS
		D	20	10,0	–		0,1 … 150 ms				IRD 150 PSOK-IBS
Wire break sensors											
	4,0	S	11	–	0,2	pnp, 200 mA, NO/NC	0,1 … 150 ms	M12	VK…		IRDB 4 PSOK-IBS
		D	20	–	0,1						IRDBD 4 PSOK-IBS
	6,1	S	11	–	0,2	pnp, 200 mA, NO/NC	0,1 … 150 ms	M12	VK…		IRDB 6 PSOK-IBS
		D	20	–	0,1						IRDBD 6 PSOK-IBS
Inductive tube sensors											
	–	S	15	**	–	pnp, 200 mA, NO/NC	100 ms	M8	TK…		IS 70 PSK-TSSL
					–			M12	VK…		IS 70 PSLK-K-BS
	–	D	25	**	–	pnp, 200 mA, NO/NC	100 ms	M8	TK…		ISDP 70 PSK-TSSL
					–			M12	VK…		ISDP 70 PSLK-K-BS

* Excerpt from our delivery programme / ** depending on the feeding hose used

Optical Movement Sensors

Movements will be safely and contactless detected or measured with optical movement sensors. Radar sensors are used for larger distances and for outdoor use.



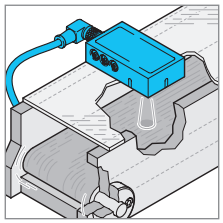


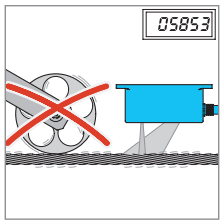
Optical movement sensors

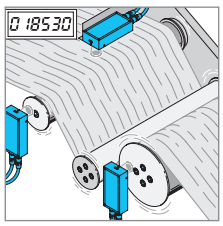
- Incremental outputs for measuring speed, length and rpm
- Two detection axes (along and across the casing)
- Direction detection
- Detection of movement or standstill
- OBS software included in the scope of delivery
- Adjustable pulse stretching
- High protection class
- Robust metal casing

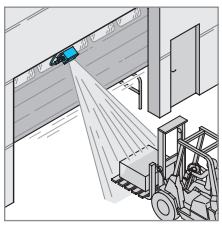
Radar sensors

- Detection range up to 6 m
- Non-contact object detection depending on the direction of movement
- Adjustable detection area and pulse stretching
- Can be fitted behind non-metallic materials
- Wear-free switching outputs
- Switch outputs for approach and remote detection
- High protection class IP 67 for outdoor use
- Robust metal casing











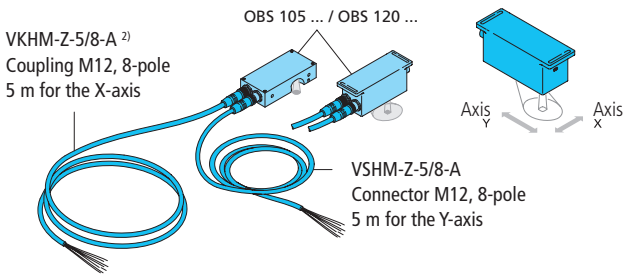
Technical data (typ.)	+20 °C, 24 V DC
Pulse stretching	2 … 1.000 ms adjustable (only OBS 60 …)
	1 … 100 ms adjustable (only OBS 105 …/OBS 120 …)
	0,1 … 30 sec. adjustable (only RS …)
Laser class (EN 60825-1)	1M (only OBS 60 …/OBS 105 …)
Ambient temperature	+5 … +45 °C (only OBS …) / –20 … +60 °C (only RS …)
Protection class	IP 67 / IP 65 (only OBS 105 …)
Casing material	Aluminium, black anodized (only OBS …) / die-cast zinc, black lacquered (only RS …)

	Working distance, Material dependent (mm)	Speed (m/s)	Service voltage (V DC)	Internal power consumption (mA)	Red light 650 nm	Infrared laser 850 nm	Radar 24,125 GHz	Switching output	Switching output 1: +UB, 100 mA, pnp/npn (push-pull), configurable	Switching output 2: +UB, 100 mA, pnp/npn (push-pull), configurable	1 switching output for approaching and moving away detection	1 switching output for approaching- and 1 switching output for distance detection	Connector	Connecting cable	Product-ID
Optical movement sensor with switching output ⚠															
	30 ± 10	< 1	10 … 35	70		■		pnp, 200 mA, NO/NC					M8	TK …	OBS 60 M 30 P3K-TSSL
Optical movement sensors with incremental- and two configurable switching outputs for smooth surfaces ⚠															
	30 ± 5	< 4	10 … 30	50		■		Push-Pull	■	■			M12	VxHM …	OBS 105 M 30 INC-3 [2]
								RS 422							OBS 105 M 30 INC-4 [2]
Optical movement sensor with incremental- and two configurable switching outputs for rough surfaces															
	40 ± 4	< 4	10 … 30	250	■			Push-Pull	■	■			M12	VxHM …	OBS 120 M 40 INC-1 [2]
								RS 422							OBS 120 M 40 INC-2 [2]
Radar sensors															
	500 … 6.000 [1]	> 0,1	10 … 35	35			■	1x push-pull, 200 mA, NO/NC			■		M12	VK …	RS 40 M 6000 G3L-IBS
								2x push-pull, 200 mA, NO/NC				■		VK …/4	RS 40 M 6000 G8L-IBS

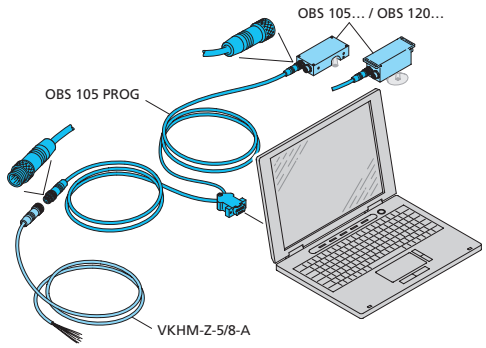
[1] measured on walking speed. Distance depends on reflection and speed of object.

Accessories for OBS 105 … and OBS 120 …		
	Connecting cable for X-axis and supply votage, length 5 m, coupling M12	VKHM-Z-5/8-A [2]
	Connecting cable for Y-axis and switching outputs, length 5 m, connector M12	VSHM-Z-5/8-A
	Programming adapter to connect to RS-232 interface Length 2.5 m, RS 232, coupling M12, connector M12	OBS 105 PROG [3]

Evaluation of X and Y-axis:
Connection through connecting cable (VKHM-Z-5/8-A coupling / VSHM-Z-5/8-A connector)



Evaluation of X-axis:
Connection through programming adapter OBS 105 PROG to RS-232 interface



[2] VKHM-Z-5/8-A mandatory for connection of the OBS ...

[3] OBS 105 PROG is only necessary for connecting OBS 105 ... / OBS 120 … to a RS-232 interface

Inclination Sensors

di-soric inclination sensors are designed to reliably detect changes in angle. Analog/switching outputs, different detection ranges on the evaluation of the x- and y-axis offer diverse fields of application. Thanks to the high protection class and the robust metal casing, these devices can also be perfectly used in harsh industrial environmental conditions as well as outdoors.



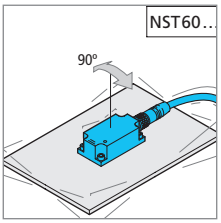


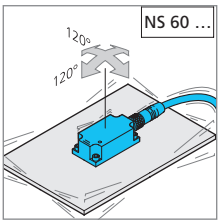
Inclination sensors NS 60 …

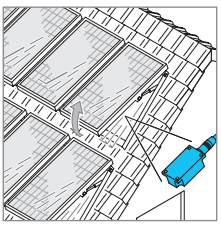
- Independent evaluation of two axes at the same time
- Measuring range ±60°
- Teach-in for zero position
- Two analog outputs 0 … 10 V or 4 … 20 mA
- Robust metal casing

Inclination sensors NST 60 …

- Measuring range ±45°
- Teach-in for analog range and switching output
- Two definable ranges of switching outputs
- Analog outputs 0 … 10 V or 4 … 20 mA
- Robust metal casing



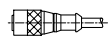
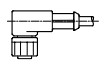






Technical data (typ.)	+20 °C, 24 V DC
Service voltage	12 … 30 V DC
Internal power consumption	< 40 mA (NST 60 M 45 …)
	< 25 mA plus 2 x 20 mA under load (NS 60 M 60 …)
Inverse polarity protection present	Present (on all connection cables)
Shock resistance	< 30g
Temperature stability	± 0,05 °/ K (NST 60 M 45 …)
	± 0,03 °/ K (NS 60 M 60 …)
Cross-sensitivity to the other axis	± 3 % (NS 60 …)
Remote teach entry	UB (> 6V) = start teach-in process immediately, open = normal mode (NS 60 M 60 …)
Readiness delay	< 100 ms (NST 60 M 45 …)
	< 300 ms (NS 60 M 60 …)
Ambient temperature	-25 … +70 °C
Protection class	IP 67
Protection degree	III, operation on protective low voltage

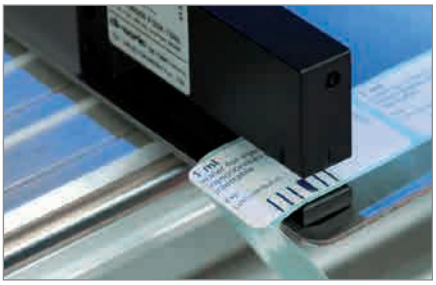
	Inclination sensors	Detection area (per axis)	Detection axis	Resolution	Reproducibility	Size (mm)	Switching output push-pull 100 mA	Analog output 0 … 10 V, linearised	Analog output 4 … 20 mA, linearised	Output signal at 0°	Casing material	Connecting cable	Product-ID
		±45°	Y	0,1°	0,2°	32 x 20 x 60	2 x	■		5 V	Aluminium, anodized	VK …/5	NST 60 M 45Y-U-B5
									■	12 mA			NST 60 M 45Y-I-B5
		±60°	X/Y	0,3°	0,5°	32 x 20 x 60	–	■		5 V	Aluminium, anodized	VK …/5	NS 60 M 60XY-U-B5
									■	12 mA			NS 60 M 60XY-I-B5

	Connecting cable	Size	Socket	Cable length (m)	Metal coupling ring	Maximal allowed service voltage (V AC/DC)	Connector material	Cable material PVC, PU cladding	Protection class	Product-ID
		M12, 5-poled	straight	3	■	max. 125	PU	■	IP 67	VKHM-Z-3/5
				5						VKHM-Z-5/5
				10						VKHM-Z-10/5
		M12, 5-poled	angled	3	■	max. 125	PU	■	IP 67	VKHM-W-3/5
				5						VKHM-W-5/5
				10						VKHM-W-10/5

Label Sensors

Are you a labelling machine manufacturer or do you work with labels and want to position them exactly on a product? di-soric label sensors detect all label materials and have a high repeat accuracy.



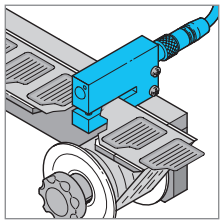


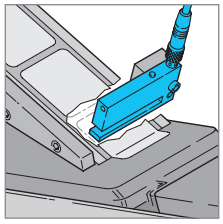
Capacitive label sensors

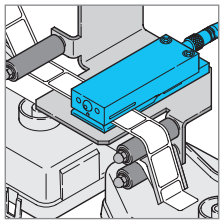
- Detection of all label materials, including metallized ones
- High switching frequency
- Autoteach during ongoing processes
- Remote teach possibilities with key-lock function
- Signalling for the teaching process using LEDs
- Temperature and air humidity compensation
- Separable casing for cleaning the sensor slot

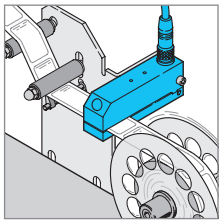
Optical label sensors

- Can be integrated directly on the dispenser edge
- Autoteach during ongoing processes
- Remote teach possibilities with key-lock function
- Signalling for the teaching process using LEDs
- Detection of the most diverse labels



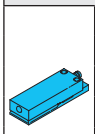
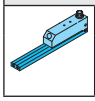








Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 35 V DC
Operating frequency	< 3.000 Hz (only OGUTI …)
Switching hysteresis	0,1 mm (only OGUTI 00x …/OGUTI 005/100 …)
	0,15 mm (only OGUTI 005/50 …)
	Material dependent (only KSSTI …)
Ambient temperature	–10 … +60 °C (only OGUTI …)
	0 … +60 °C (only KSSTI …)
Protection class	IP 67 (only OGUTI …)
	IP 65 (only KSSTI …)
Casing material	Die-cast zinc, lacquered (only OGUTI …)
	Aluminium / black anodized (only KSSTI …)

	Fork-/slot width (mm)	Slot depth (mm)	Infrared light 880 nm, clocked	Switching output	Internal power consumption (mA)	Voltage drop (V)	Ambient light immunity (Lux)	Sensitivity adjustment by means of teach key	Sensitivity adjustment by means of teach key and remote teach	Connector	Connecting cable	
Optical contrast diffuse sensors												**Product-ID***
	2	40	■	pnp, 200 mA, NO/NC	35	2,0	> 100.000	■		M8	TK …	OGUTI 002 P3K-TSSL
									■		TK …/4	OGUTI 002 FP3K-TSSL
	5	40	■	Push-pull, 200 mA, NO/NC	35	2,0	> 100.000	■		M8	TK …	OGUTI 005 G3K-TSSL
									■		TK …/4	OGUTI 005 FG3K-TSSL
	5	50	■	Push-pull, 200 mA, NO/NC	35	2,0	> 100.000	■		M8	TK …	OGUTI 005/50 G3K-TSSL
									■		TK …/4	OGUTI 005/50 FG3K-TSSL
	5	100	■	pnp, 200 mA, NO/NC	35	2,0	> 100.000	■		M8	TK …	OGUTI 005/100 P3K-TSSL
									■		TK …/4	OGUTI 005/100 FP3K-TSSL
Capacitive label sensors												
	0,4	50		Push-pull, 200 mA, NO/NC	70	2,5	–	■		M8	TK …	KSSTI 400 G3K-TSSL
									■		TK …/4	KSSTI 400 FG3K-TSSL
	0,6	50		Push-pull, 200 mA, NO/NC	70	2,5	–	■		M8	TK …	KSSTI 600 G3K-TSSL
									■		TK …/4	KSSTI 600 FG3K-TSSL
	1,0	50		Push-pull, 200 mA, NO/NC	70	2,5	–	■		M8	TK …	KSSTI 1000 G3K-TSSL
									■		TK …/4	KSSTI 1000 FG3K-TSSL
	0,6	85		Push-pull, 200 mA, NO/NC	70	2,5	–		■	M12	VK …/4	KSSTI 600/80 FG3LK-IBS [1]
	1,0								■			KSSTI 1000/80 FG3LK-IBS [1]
	0,6	85		Push-pull, 200 mA, NO/NC	70	2,5	–		■	M12	VK …/4	KSSTI 600/80 FG3LK-AIBS [1]
	1,0								■			KSSTI 1000/80 FG3LK-AIBS [1]
Accessories												
	Bottom part for mounting on KSSTI xx/80 … for label widths up to 175 mm.											KSSTI 1000/80-U190
	Bottom part for mounting on KSSTI xx/80 … for label widths up to 215 mm.											KSSTI 1000/80-U270

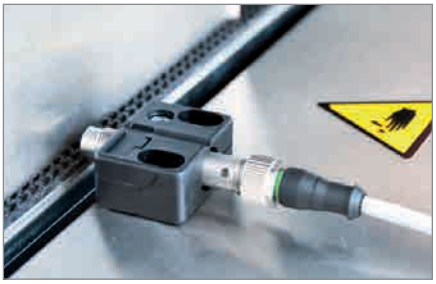
* Excerpt from our delivery programme

[1] suitable for metalized label material

Proximity Switches

Depending on the functional principle, proximity switches detect metallic or non-metallic materials. Various designs and versions offer a diverse range of possible applications.



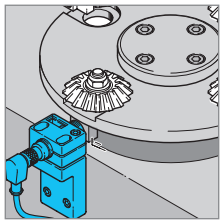


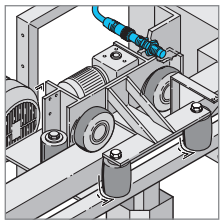
Inductive proximity switches

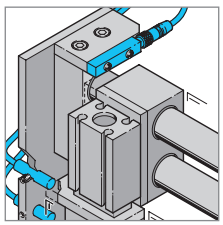
- High temperature-resistant versions up to 230 °C
- Pressure-resistant versions up to 500 bar
- Versions with closed VA sleeve
- Sensing distances up to 4 times more than normal switching distance
- Versions with analog output
- Versions resistant to food and sea water
- Designs ø 3 mm up to M30
- Cuboid designs from 5 x 5 to 41 x 80 x 100 mm

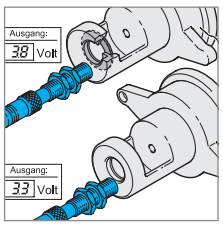
Capacitive proximity switches

- Detection of: fluid, powdery, solid, electrically conductive and non-conductive materials
- Sensing distances adjustable up to 30 mm
- Probe for level measurement
- Designs ø 6,5 mm to M30
- Disk design ø 50 x 10 mm
- Cuboid form 34 x 16 x 8 mm



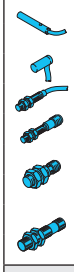
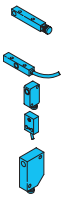
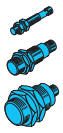
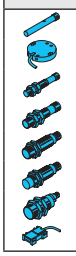








Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 30 V DC
	some versions with extended service voltage range 10 … 35 V DC
Internal power consumption	< 6 … 15 mA
Protection class	IP 67
Ambient temperature	–25 … +70 °C

	Size (mm)	Switching output	Casing material	Connector	Connecting cable	Operating distance (mm)	Flush-fitted (b)/ non flush-fitted (nb)/quasi flush-fitted (qb)	Operating frequency (Hz)	Product-ID*	Operating distance (mm)	Flush-fitted (b)/ non flush-fitted (nb)/quasi flush-fitted (qb)	Operating frequency (Hz)	Product-ID*
Inductiv proximity switches in cylindrical designs													
	Ø 3 x 22	pnp, 100 mA, NO	VA	–	2 m, PUR	0,6	b	5.000	DCC 3.0 V 0.6 PSLK	1,0	b	3.000	DCC 3.0 V 1.0 PSLK
	Ø 4 x 25	pnp, 200 mA, NO	VA	–	2 m, PVC	0,8	b	5.000	DCC 4.0 V 0.8 PSLK	1,5	b	3.000	DCC 4.0 V 1.5 PSLK
	Ø 6.5 x 16	pnp, 200 mA, NO	VA	–	2 m, PVC	1,5	b	5.000	DCCKR 6.5 V 1.5 PSLK	2	b	3.000	DCCKR 6.5 V 02 PSLK
	M4 x 0,5	pnp, 100 mA, NO	VA	M8	TK …	0,6	b	5.000	DCC 04 M 0.6 PSK-K-TSL	1,0	b	3.000	DCC 04 V 1.0 PSK-K-TSL
	M5 x 0,5	pnp, 200 mA, NO	VA	M8	TK …	1,5	b	3.000	DCC 05 V 1.5 PSK-TSL	2,5	b	800	DCC 05 V 2.5 PSK-TSL
	M8 x 1	pnp, 200 mA, NO	VA	M8	TK …	1,5	b	5.000	DCCK 08 M 1.5 PSK-TSL	2	b	3.000	DCC 08 M 02 PSK-TSL/29
	M8 x 1	pnp, 200 mA, NO	MS	M8	TK …	3	qb	1.000	DCC 08 M 03 PSK-TSL	6	nb	500	DCC 08 M 06 PSK-TSL
	M12 x 1	pnp, 200 mA, NO	MS	M12	VK …	6	qb	800	DCC 12 M 06 PSK-IBSL	8	qb	300	DCC 12 M 08 PSK-IBSL
	M12 x 1	pnp, 200 mA, NO	MS	M12	VK …	2	b	3.000	DCC 12 M 02 PSK-IBSL	10	nb	400	DCC 12 M 10 PSK-IBSL
Inductiv proximity switches in rectangular designs													
	5 x 5 x 25	pnp, 200 mA, NO	MS	–	2 m, PUR	0,8	b	5.000	DCCQ 05 M 08 PSLK	1,5	b	3.000	DCCQ 05 M 1.5 PSLK
	8 x 8 x 40	pnp, 200 mA, NO	AL	–	2 m, PUR	–	–	–	–	1,5	b	2.000	DCQZ 08 M 1.5 PSLK
	8 x 8 x 59	pnp, 200 mA, NO	MS	M8	TK …	2,0	b	3.000	DCCQ 08 M 02 PSK-TSL	3,0	qb	1.000	DCCQ 08 M 03 PSK-TSL
	28 x 16 x 10	pnp, 200 mA, NO	Ks	M8	TK …	–	–	–	–	2,0	b	2.000	DCR 30 K 02 PSK-TSL
	30 x 20 x 11,5	pnp, 200 mA, NO	AL	M8	TK …	–	–	–	–	1,5	b	3.000	DCR 20 M 1.5 PSK-K-TSL
	40 x 26 x 12	pnp, 200 mA, NO	Ks	M8	TK …	2,0	b	2.000	DCR 40 K02 PSK-TSL	4,0	nb	2.000	DCR 40 K04 PSK-TSL
Inductiv proximity switches with stainless steel casing													
	M8 x 1	pnp, 200 mA, NO	VA	M8	TK …	3	b	1.000	D7C 08 V 03 PSK-TSL	6	nb	700	D7C 08 V 06 PSK-TSL
	M12 x 1	pnp, 200 mA, NO	VA	M12	VK …	6	b	400	D7C 12 V 06 PSK-IBSL	10	nb	400	D7C 12 V 10 PSK-IBSL
	M18 x 1	pnp, 200 mA, NO	VA	M12	VK …	10	b	200	D7C 18 V 10 PSK-IBSL	20	nb	200	D7C 18 V 20 PSK-IBSL
	M30 x 1,5	pnp, 200 mA, NO	VA	M12	VK …	20	b	100	D7C 30 V 20 PSK-IBSL	40	nb	100	D7C 30 V 40 PSK-IBSL
Capacitive proximity switches													
	Ø 6.5 x 54	pnp, 50 mA, NO	VA	M8	TK …	1,5	b	100	KDC 6.5 V 1.5 PSK-TSL	3,0	nb	100	KDC 6.5 V 03 PSK-TSL
	Ø 50 x 10	pnp/npn, 150 mA, NO/NC	Ks	–	2 m, PUR	25	b	50	KDC 50 K 25 PNSOLK	–	–	–	–
	M8 x 1	pnp, 50 mA, NO	VA	M8	TK …	1,5	b	100	KDC 08 V 1.5 PSK-TSL	3,0	nb	100	KDC 08 V 03 PSK-TSL
	M12 x 1	pnp, 200 mA, NO	VA	M12	VK …	4	b	100	KDC 12 M 04 PSK-IBSL	–	–	–	–
	M18 x 1	pnp, 200 mA, NO	VA	M12	VK …	8	b	100	KDC 18 M 08 PSK-IBSL	–	–	–	–
	M18 x 1	pnp, 200 mA, NO	Ks	M12	VK …	–	–	–	–	15	nb	100	KDC 18 K 15 PSK-IBSL
	M30 x 1,5	pnp, 300 mA, NO/NC	VA	M12	VK …	20	b	100	KDC 30 M 20 PSOK-BSL	–	–	–	–
	34 x 16 x 8	pnp, 50 mA, NO	Ks	–	2 m, PUR	8	b	100	KDCR 16 K 08 PSLK	8	nb	2	KDCR 16 K 08S PSLK

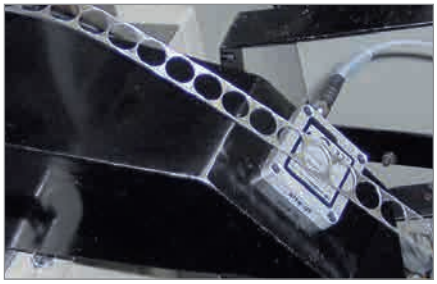
Flush mounting (b)	**Quasi-flush mounting** (qb)	**Non-flush mounting** (nb)
These proximity switches can be mounted in all materials (metallic/non-metallic), so that the sensing face is flush with the front of the surrounding material. They have the following advantages: - Flush mounting (see installation notes) in conductive materials (metals) - Protection of the active zone from mechanical damage - Lower influence of external interference fields - Lower lateral distance to the next proximity switch	These proximity switches possess a higher operating distance than proximity switches for flush-mounting. They may be mounted into conductive materials only quasi-flush mounted, i. e. not completely flush mounted. The proximity switches must exceed a little bit over the installation surface (see installation notes). Flush mounting in non-conductive materials is permissible.	These proximity switches must not be flush-mounted with the surface of conductive materials. They have the greatest possible operating distance. Special installation notes are applicable for these proximity switches. Flush mounting in non-conductive materials is permissible.

* Excerpt from our delivery programme

Contact Sensors

Striking parts produce structure-borne noise, which is converted into a standard output signal.



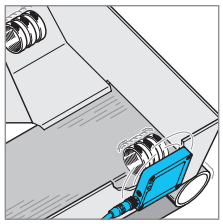


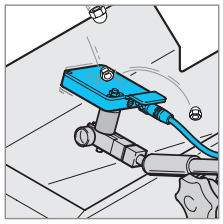
Contact and vibration sensors

- Detects with direct contact to ejected parts or parts in free fall
- For screws, studs, springs and non-metallic parts
- Adjustable suppression of multiple pulses
- Up to 100 parts can be detected per second
- Long service life thanks to replaceable baffle plate
- Functional assurance even under the most extreme conditions

di-kus®





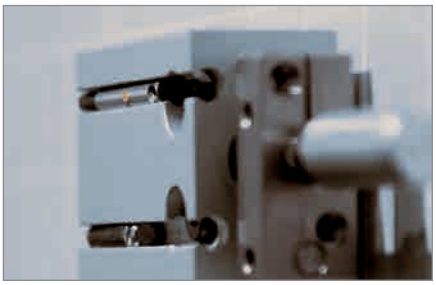


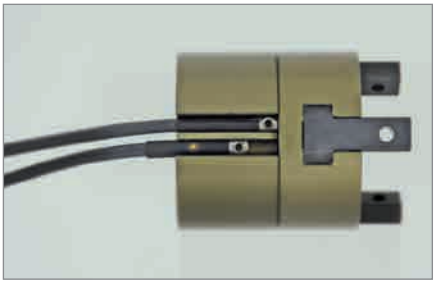
Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 35 V DC
Sensitivity adjustment	Steel ball ⌀ 3 mm from 20 mm height
Pulse stretching	1 … 30 ms
Ambient temperature	–25 … +70 °C
Protection class	IP 67
Internal power consumption	> 15 mA
Operating frequency	< 100 Hz

		Size (mm)	Switching output	Casing material	Connector	Connecting cable	Product-ID
	Contact sensors						**Product-ID**
	Sensor incl. baffle plate	50 x 75 x 14	pnp, 200 mA, NO	Aluminium	M8	TK …	KUSP 50 M 100 PSK-TSL
				Heat-treatable steel	–	–	
	Sensor	50 x 55 x 10	pnp, 200 mA, NO	Aluminium	M8	TK …	KUS 50 M 100 PSK-TSL
	Accessories						
	Baffle plate	50 x 75 x 4	–	Heat-treatable steel	–	–	P-KUS 50
	Damper set for mounting	–	–	–	–	–	D-KUS 50

Cylinder Sensors

Cylinder sensors are designed for pneumatic cylinders with integrated magnets. The piston position is detected through the cylinder wall.



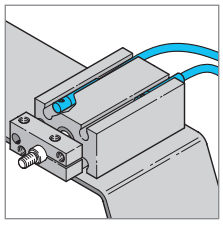


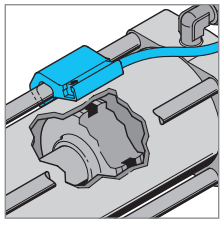
Cylinder sensors

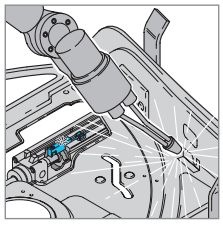
- For all common pneumatic cylinders
- Versions which can be fitted from above
- High reproducibility
- Vibration-resistant
- Robust metal casing or shock-proof plastic casing
- Fastening elements made from metal
- High protection class
- Weld-proof versions

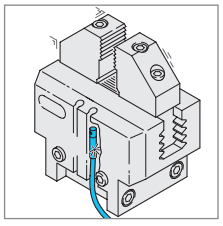
Sensors for gripper systems

- Specially aligned magnetic field for using on gripping tongs
- High reproducibility
- Short construction
- Fastening element made from stainless steel
- Vibration-resistant
- High protection class











Technical data (typ.)	+20 °C, 24 V DC
Service voltage	10 … 30 V DC
Switching output	Transistor pnp / NO
Voltage drop	2,0 V
	2,5 V only MZEx 9-xx …
Operating frequency	1.000 Hz
Ambient temperature	–25 … +70 °C
	–25 … +80 °C (only MZEx 9-xx …)
Insulation voltage endurance	500 V
Casing material	Die-cast zinc
	Plastic and V2A (only MZEC 3.7 …/MZES 3.9 …)
	V2A (only MZEC 4.0 …)
	Polyamide, mounting excentric stainless steel (only MZEx 9-xx …)

	Size (mm)	Type of mounting	Flush-fitted (b)/non flush-fitted (nb)	Current-carrying capacity	Short-circuit-proof	Polarity-safe	Internal power consumption	Reproducibility	Protection class	Cable length (mm)	Connector	Matching connecting cable	Connecting cable PUR, Welding spark resistant	Product-ID*
	Cylinder sensors for C-shaped groove													
	Ø 3,7 x 21		b	100 mA		■	11 mA	0,1 mm	IP 67	2.500	–	–	■	MZEC 3.7 PSL
										300	M8	TK…		MZEC 3.7 PS-K-TSSL
	Ø 4,0 x 25		b	100 mA		■	11 mA	0,1 mm	IP 67	2.500	–	–	■	MZEC 4.0 PSL
										300	M8	TK…		MZEC 4.0 PS-K-TSSL
	2,8 x 7,7 x 17,5		nb	100 mA	■	■	10 mA	0,2 mm	IP 67	2.000	–	–		MZEC 9-18 PSL
										300	M8	TK…		MZEC 9-18 PSL-K-TSS
	2,8 x 5 x 25,8		nb	100 mA	■	■	10 mA	0,2 mm	IP 67	2.000	–	–		MZEC 9-26 PSL
										300	M8	TK…		MZEC 9-26 PSL-K-TSS
	Cylinder sensors for T-shaped groove													
	6,1 x 5 x 25		b	200 mA	■	■	10 mA	0,1 mm	IP 67	2.500	–	–	■	MZET 25 PSLK
										300	M8	TK…		MZET 25 PSK-K-TSSL
	6,1 x 5 x 25		nb	200 mA	■	■	10 mA	0,1 mm	IP 67	2.500	–	–	■	MZET 28 PSLK
										300	M8	TK…		MZET 28 PSK-K-TSSL
	5 x 7 x 20		nb	200 mA	■	■	10 mA	0,1 mm	IP 67	–	M8	TK…		MZERT 20 PSK-TSSL
	5,2 x 5 x 25		b	200 mA	■	■	10 mA	0,1 mm	IP 67	2.500	–	–	■	MZEK 25 PSLK
										300	M8	TK…		MZEK 25 PSK-K-TSSL
	5 x 6,5 x 25		b	100 mA	■	■	10 mA	0,2 mm	IP 67	2.000	–	–		MZET 9-25 PSL
										300	M8	TK…		MZET 9-25 PSL-K-TSS
										300	M12	VK…		MZET 9-25 PSL-K-IBS
	Sensors for gripper systems for C-shaped groove													
	Ø 3,9 x 21		b	100 mA		■	12 mA	0,1 mm	IP 67	2.500	–	–	■	MZES 3.9 PSL
										5.000	–	–	■	MZES 3.9 PSL/5
										300	M8	TK…		MZES 3.9 PS-K-TSSL
										600	M8	TK…		MZES 3.9 PS-K0.6-TSSL
	Sensors for gripper systems for T-shaped groove													
	6,1 x 5 x 25		b	100 mA		■	12 mA	0,1 mm	IP 67	2.500	–	–	■	MZES 25 PSL
										300	M8	TK…		MZES 25 PS-K-TSSL
										2.500	–	–	■	MZEKS 25 PSL
										300	M8	TK…		MZEKS 25 PS-K-TSSL

* Excerpt from our delivery programme

 Mounting longitudinal in the groove

 To be inserted in the groove from above

Ultrasonic Sensors

Ultrasonic sensors are used to measure distance in automation tasks. These sensors measure the duration of the noise and can thereby detect even transparent, fluid and powdery objects.





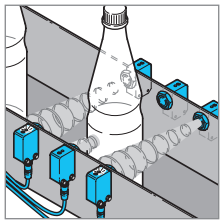
Ultrasonic sensors

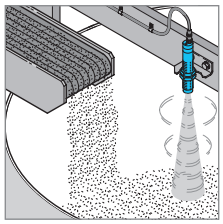
- Dirt resistant
- Insensitive to noise interference
- High resolution
- High cycle speed
- Measures independent of surface
- Operational range up to 6 m
- Synchronisation input/release input
- Analog/digital output

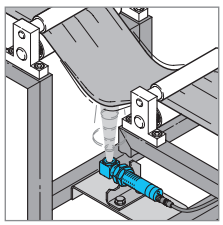
Ultrasonic fork sensors

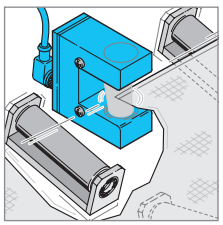
- Large linearized analog range
- Very high repeatability
- Web edge control also with transparent materials
- Dirt resistant
- Robust metal casing





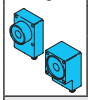








Technical data (typ.)	+20 °C, 24 V DC
Service voltage	18 … 30 V DC
	some versions are available with advanced operating range of 12 … 36 V DC

	Scanning distance (mm) / Fork opening / Measuring range (mm)	Size (mm)	Sound output	Switching output (Transistor pnp)	Analog output	Repeat accuracy	Ambient temperature (°C)	Protection class	Casing material	Connector	Connecting cable	Product-ID*
Ultrasonic distance sensors												
	20 … 150	M12 x 91	Axial	100 mA, NO/NC	–	0,5 %	–25 … 70	IP 65	Brassnickel-plated	M12	VK…/4	USTI 12 MFB 150 PSOK-IBSL
				–	0 … 10 V							USTI 12 MFB 150 A-IBSL
				–	4,0 … 20 mA							USTI 12 MFB 150 I-IBSL
	20 … 200	M12 x 70	Axial	100 mA, NO/NC	–	0,5 %	–25 … 70	IP 65	Brassnickel-plated	M12	VK…/4	USTI 12 M 200 PSOK-IBSL
				–	0 … 10 V							USTI 12 M 200 A-IBSL
				–	4,0 … 20 mA							USTI 12 M 200 I-IBSL
	180 … 1.000	M18 x 90	Axial	100 mA, NO	–	2 %/Sn max.	–20 … 50	IP 67	Polyamide	Cable 2,0 m		US 18 K 1003 PSLK
		M18 x 96	Radial									US 18 KR 1003 PSLK
	180 … 1.000	M18 x 90	Axial	100 mA, NO	1,6 … 10 V	2 %/Sn max.	–20 … 50	IP 67	Polyamide	M8	TK…/4	US 18 K 1003 PSAK-TSSL
		M18 x 96	Radial									US 18 KR 1003 PSAK-TSSL
	180 … 1.000	M18 x 90	Axial	100 mA, NO	1,8 … 10 V	2 %/Sn max.	–20 … 50	IP 67	V2A	M8	TK…/4	US 18 V 1003 PSAK-TSSL
	100 … 700	M18 x 63,5	Axial	150 mA, NO	–	1 mm	–25 … 70	IP 67	Brassnickel-plated	M12	VK…/4	USCTI 18 M 700 FPSK-BSL
		M18 x 81,5	Radial									USCTI 18 MR 700 FPSK-BSL
	150 … 1.000	M18 x 101	Axial	150 mA, NO	–	2 mm	–25 … 70	IP 67	Brassnickel-plated	M12	VK…/4	USC 18 M 1000 IPSK-IBSL
				–	4,0 … 20 mA							USC 18 M 1000 I4/20-IBSL
	200 … 1.300	M30 x 131	Axial	300 mA, NO	–	2 mm	–25 … 70	IP 65	Brassnickel-plated	M12	VK…/4	USC 30 M 1300 IPSK-BSL
	600 … 6.000	M30 x 153			0 … 10 V	9 mm					VK/5 …	USC 30 M 6000 I0/10PSK-BSL
	600 … 6.000	M30 x 153			4,0 … 20 mA	9 mm					VK/5 …	USC 30 M 6000 I4/20PSK-BSL
	120 … 500	46 x 30 x 18	Radial	100 mA, NO	–	–	–20 … 50	IP 67	Polyamide V2A	M8	TK …	US 46 K 500 PSK-TSSL
	80 … 500	60 x 41 x 32	Radial	100 mA, 2 x NO	–	1 %/Sn max.	–20 … 50	IP 67	Polyamide	M8	TK…/4	US 60 K 500 PSS-TSSL
	250 … 2.500	60 x 41 x 33		100 mA, NO	5,6 … 20 mA							US 60 K 2500 PSI-TSSL
	400 … 5.000	60 x 41 x 38		100 mA, NO	5,3 … 20 mA							US 60 K 5000 PSI-TSSL
Ultrasonic retroreflective sensors												
	0 … 200	M18 x 63,5	Axial	150 mA, NO	–	–	–25 … 70	IP 67	Brassnickel-plated	M12	VK…/4	USCRTI 18 M 200 FPSK-BSL
	0 … 700	M18 x 81,5	Radial	150 mA, NO	–	–	–25 … 70	IP 67	Brassnickel-plated	M12	VK…/4	USCRTI 18 MR 700 FPSK-BSL
Ultrasonic through beam sensors												
	0 … 1.500	Receiver	Radial	100 mA, NO	–	–	–20 … 50	IP 67	Polyamide V2A	M8	TK …	USE 46 K 1500 PSKT-TSSL
		Transmitter		–	–	–						USS 46 K 1500-TSSL
Ultrasonic fork sensors												
	30/8	74 x 30 x 65	–	–	10 … 0 V	0,15 mm [1]	0 … 60	IP 67	Aluminium anodised	M12	VK…/4	USGT 30/8 A-B4
	40/13	92 x 39 x 80	–	–								USGT 40/13 A-B4
	60/8	104 x 30 x 65	–	–								USGT 60/8 A-B4
	70/13	122 x 39 x 80	–	–								USGT 70/13 A-B4

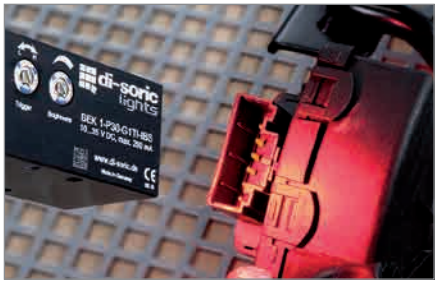
* Excerpt from our delivery programme

[1] at 50% coverage

Lighting

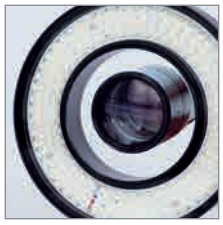
di-soric provides an extensive range of lightings for machine vision as well as inspection tasks. Unique technical features in combination with extremely robust casings and a high protection class feature di-soric lights.

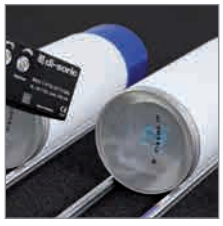


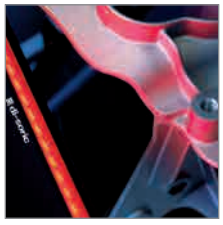


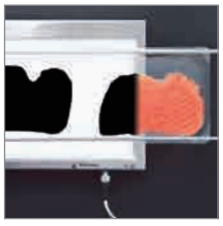
Lighting

- Internal control of power output
- Homogeneous luminous field
- High Protection class up to IP 69K
- External trigger input
- High efficiency
- Low levels of heat produced
- Adjustable light intensity
- Various options of mounting
- Different light colours
- Sturdy casing design
- Standard M12-Connector





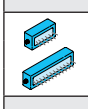






Technical data (typ.)	+20 °C, 24 V DC
Trigger input low level	0 … < 2,8 V
Trigger input high level	> 3,3 … 35 V
Shock/vibration loading	30 g / 10 – 55 Hz, 1 mm
Ambient temperature	0 … +50 °C

Colour code		Example
Infrared	…-G**0**TI-…	BEK 1-A300-G**0**TI-IBS
Red	…-G**1**TI-…	BEK 1-A300-G**1**TI-IBS
Green	…-G**2**TI-…	BEK 1-A300-G**2**TI-IBS
Blue	…-G**3**TI-…	BEK 1-A300-G**3**TI-IBS
White	…-G**5**TI-…	BEK 1-A300-G**5**TI-IBS
[1] Version clear		BEK-R70/30-GxTI-IBS-**CLR**
[1] Version diffuse		BEK-R70/30-GxTI-IBS-**DIF**
[1] Version polarized		BEK-R70/30-GxTI-IBS-**POL**

	Illuminated area / lenght (mm)	Angle of reflected beam (°)	Size (mm)	Service voltage (V DC)	Integrated power output control	Light intensity can be adjusted	Trigger pnp/npn switchable	Protection class	Casing material	Connector	Connecting cable	Light colour (refer to colour code)	Product-ID*
	Backlights												
	50 x 50	–	80 x 110 x 15	10 … 35	■	■	■	IP 67	Aluminium	M12	VK…	…-GxTI-…	BEK-F50/50-G**x**TI-IBS
	100 x 100	–	130 x 160 x 15										BEK-F100/100-G**x**TI-IBS
	150 x 150	–	180 x 210 x 15										BEK-F150/150-G**x**TI-IBS
	200 x 200	–	230 x 260 x 18										BEK-F200/200-G**x**TI-IBS
	Barlights SMD-LED												
	65	120°	16 x 20 x 84	24				IP 20	Aluminium	M12	VK…	…-GxTI-…	BE 1-A65/120-G**x**-K-BS
	120		16 x 20 x 144										BE 1-A120/120-G**x**-K-BS
	240		16 x 20 x 254										BE 1-A240/120-G**x**-K-BS
	Barlights												
	130	–	16 x 20 x 144	24				IP 20	Aluminium	M12	VK…	…-GxTI-…	BE 1-A130-G**x**-K-BS
	240	–	16 x 20 x 254										BE 1-A240-G**x**-K-BS
	100	–	40 x 40 x 145	15 … 35	■	■	■	IP 65	Aluminium	M12	VK…	…-GxTI-…	BEK 1-A100-G**x**TI-IBS
	300	–	40 x 40 x 345										BEK 1-A300-G**x**TI-IBS
	500	–	40 x 40 x 545										BEK 1-A500-G**x**TI-IBS
	Spotlights												
	–	10°	30 x 32 x 60	10 … 35	■	■	■	IP 67	Aluminium	M12	VK…	UV	BEK 1-P10-G7TI-IBS
	–	14°	30 x 32 x 60	10 … 35	■	■	■	IP 67	Aluminium	M12	VK…	…-GxTI-…	BEK 1-P14-G**x**TI-IBS
	–	30°											BEK 1-P30-G**x**TI-IBS
	–	60°											BEK 1-P60-G**x**TI-IBS
	Ringlights												
	Ø 70	120°	Ø 130 x 29	18 … 35	■	■	■	IP 67	Aluminium	M12	VK…	Weiß	BEK-R70/120-G5TI-IBS-**xxx**[1]
	Ø 70	30°	Ø 130 x 29	18 … 35	■	■	■	IP 67	Aluminium	M12	VK…	…-GxTI-…	BEK-R70/30-G**x**TI-IBS-**xxx**[1]
	Darkfield lights												
	Ø 120	–	170 x 200 x 15	10 … 35	■	■	■	IP 67	Aluminium	M12	VK…	…-GxTI-…	BEK 1-D120-G**x**TI-IBS
	Coaxial lights												
	50 x 50	–	62 x 58 x 103,5	18 … 35	■	■	■	IP 20	Aluminium	M12	VK…	…-GxTI-…	BEK-K50/50-G**x**TI-IBS
	Backlights with stainless steel casing												
	50 x 50	–	70 x 70 x 15	10 … 35	■	■	■	IP 69K	Stainless steel	M12	VK…	…-GxTI-…	BEE-F50/50V-G**x**TI-IBS
	70 x 100	–	90 x 120 x 15										BEE-F70/100V-G**x**TI-IBS
	Barlights with stainless steel casing												
	100	–	40 x 40 x 145	15 … 35	■			IP 69K	Stainless steel	M12	VK…	…-GxTI-…	BEK 1-A100V-G**x**TE-IBS
	300	–	40 x 40 x 345										BEK 1-A300V-G**x**TE-IBS
	500	–	40 x 40 x 545										BEK 1-A500V-G**x**TE-IBS
	Spotlights with stainless steel casing												
	–	10°	30 x 32 x 60	10 … 35	■			IP 69K	Stainless steel	M12	VK…	UV	BEK-P10V-G7T-IBS
	–	14°	30 x 32 x 60	10 … 35	■			IP 69K	Stainless steel	M12	VK…	…-GxTI-…	BEK-P14V-G**x**T-IBS
	–	30°											BEK-P30V-G**x**T-IBS
	–	60°											BEK-P60V-G**x**T-IBS

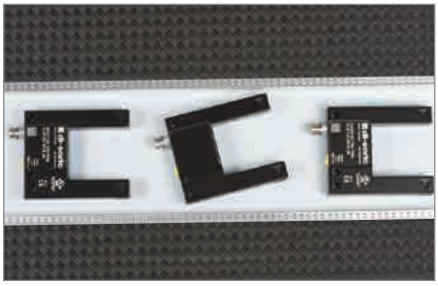
***** Excerpt from our delivery programme

Further information and types will be found under **www.di-soric.com**

Vision Sensors

Checker is the universal vision sensor for all industries. Fastest processes will be safely detected, inspected and verified.





Vision sensors

- di-soric Checker software included in the scope of delivery
- Internal Trigger with patented part detection technology
- Different inspection sensors
- Integrated exchangeable lighting
- Integrated „Ladder-Logic" allows logical linking of multiple inspection sensors
- User-friendly software
- Polarization possible / filters possible
- Profinet / Ethernet / IP







CHECKER



Technical data (typ.)	+20 °C, 24 V DC
Service voltage	24 V DC (22 – 26 V DC)
Internal power consumption	250 mA max.
Protection class	IP 67
Dimensions	67 x 41 x 60 mm
Ambient temperature	0 … 50 °C
Shock	80 G at 5 ms on each axis (per IEC 68-2-2)
Vibration resistance	10 G (10-500 Hz, per IEC 68-2-6)
External trigger input / Job control inputs	
Input ON	> 10 V DC (> 6 mA)
Input OFF	< 2 V DC (< 1,5 mA)
Protection	Opto-isolated, pole-protected

Outputs	
Output	Optocoupler
	100 mA, 24 V DC
Max voltage drop	3,5 V DC at 100 mA
Max. load	100 mA
Protection	Opto-isolated, short-circuit-proof,
	pole-protected / overcurrect protected
Encoder inputs	
Encoder type	300 kHz (max.) Quadratur-Encoder
	Open collector and differential output
ON/OFF	50 % nominal
Load	50 % encoder max.

	Vision sensors	Section recognition	Inspection: Presence	Inspection: Measurement	Inspection: Positioning	Different inspections can be combined	Number of possible inspections	Mode of operation: Internal trigger	Mode of operation: External trigger input	Mode of operation: Free running	Input	Encoder was based section pursuit	Logic for user-defined outputs	Max. inspection rate (ppm)	Resolution (128 x 101 pixel)	Resolution (752 x 480 pixel)	Ethernet / TCP / IP	Profinet	Lighting changeable	Product-ID
		■	■	■	■		–	■	■	■	32	■	■	6.000	■		■	■	■	C4G1-24G-E00
		■	■				4		■	■	32			1.800		■			■	C4G7-24S-E00
		■	■	■	■		–	■	■	■	32	■	■	3.750		■	■	■	■	C4G7-24G-E00
		■	■	■	■	■	–	■	■	■	32	■	■	3.750		■	■	■	■	C4G7-24X-E00

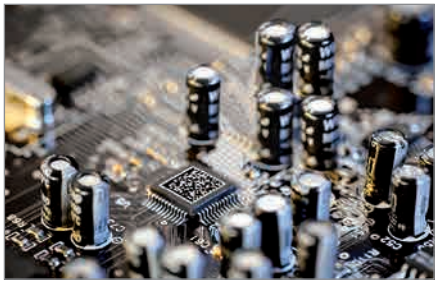
	Accessories				Product-ID*
	Lenskit	Lenskit includes 4 lenses with a focal distance of 3.6 / 8 / 16 and 25 mm			CKR-200-LENSKIT
	Daylight cutoff-filter	–			CKR-TLS 2
	Bandpass filter	Infrared, 850 nm ±5%			CKR-BP 850
		Red, 635 nm ±5%			CKR-BP 635
		Green, 525 nm ±5%			CKR-BP 525
		Blue UV, 470 nm ±5%			CKR-BP 470
		Orange, 590 nm ±5%			CKR-BP 590
	Polarized lenscover	To reduce reflections in combination with polarized light			CKR-WINDOW-POL
	Internal ring lights	Infrared			CKR-IRRL-00
		Red			CKR-RDRL-00
		Green			CKR-GNRL-00
		Blue			CKR-BLRL-00
		UV			CKR-UVRL-00
	Adjustable mounting bracket	Adjustable bracket for mounting the checker, with holes for mounting of metric and inch threads			CKR-200-BKT
	Repairkit	Lens cover			CKR-4G-REPAIRKIT
		Locking rings			
		- For 5.8 mm and 25 mm lens (blue)			
		- For 3.6, 8.0 and 16 mm lens (black)			
		Lens (5.8 mm)			
		IP 67 cap for Ethernet port			
	Ethernet-cabel	Ethernet, connector straight	Protection class IP 67	Cable length 2 m	VKHM-Z-2/RJ45
				Cable length 5 m	VKHM-Z-5/RJ45
				Cable length 10 m	VKHM-Z-10/RJ45
	I/O-cable	I/O, connector straight	Protection class IP 67	Cable length 5 m	VKHM-Z-5/12-A
		I/O, connector straight, flexible chain	Protection class IP 67	Cable length 5 m	VKSM-Z-5/12-A
	I/O-extension cable	I/O, connector straight	Protection class IP 67	Cable length 5 m	VSM-Z-5/VKM-Z/12-A
		I/O, connector angled	Protection class IP 67	Cable length 5 m	VSM-Z-5/VKM-W/12-A

* Excerpt from our delivery programme

Vision Systems

di-soric offers a wide range of vision systems for the industrial use. From All-In-One-Systems in the size of a matchbox up to high resolution C-Mount Systems; we have the perfect solution for your application. Thanks to a scaleable system even very demanding image processing applications can be easily solved.





VS-05

- di-soric VS software included in the scope of delivery
- Extended software set optionally available
- Autofocus with wide angle optics
- Integrated lighting
- Compact design
- USB- and serial interface

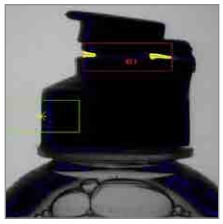
VS-06 C-Mount

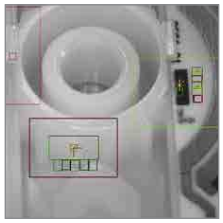
- di-soric VS software included in the scope of delivery
- Extended software set optionally available
- Industry proven machine vision tools
- C-Mount model
- Ethernet and serial interface
- Access via web browser possible

VS-06 with liquid lens

- di-soric VS software included in the scope of delivery
- Extended software set optionally available
- Industry proven machine vision tools
- Fully integrated with processor, lens and illumination
- Liquid lens autofocus
- Ethernet and serial interface
- Integrated lighting
- Access via web browser possible











CE

	CMOS, 752 x 480 pixel	CMOS, 1280 x 1024 pixel	CCD, 1280 x 960 pixel	CMOS, 2048 x 1088 pixel	Standard density	High density	Autofocus	Liquid lens autofocus	Optics	Sensor size	Extended toolset	Images/s (max.)	Rolling shutter	Global shutter	Service voltage (V DC)	Outputs 1, 2 and 3 (V DC)	Protection class	RS 232	USB	Ethernet	Product-ID*
Smart camera																					
	■				■		■		fixed	1/2"	■	60		■	5,0	5 … 28	IP 54	■	■		VS-05-BM2-2-US
																					VS-05E-BM2-2-US
	■					■	■		fixed	1/2"	■	60		■	5,0	5 … 28	IP 54	■	■		VS-05-BM2-3-US
																					VS-05E-BM2-3-US
		■			■		■		fixed	1/2"	■	15	■		5,0	5 … 28	IP 54	■	■		VS-05-BM3-2-US
																					VS-05E-BM3-2-US
		■				■	■		fixed	1/2"	■	15	■		5,0	5 … 28	IP 54	■	■		VS-05-BM3-3-US
																					VS-05E-BM3-3-US
	■							■	15°	1/3"		60		■	5,0 … 28	1,0 … 28	IP 65 + IP 67	■		■	VS-06-BM2-15-ES
									30°												VS-06-BM2-30-ES
									45°												VS-06-BM2-45-ES
	■							■	15°	1/3"	■	60		■	5,0 … 28	1,0 … 28	IP 65 + IP 67	■		■	VS-06E-BM2-15-ES
									30°												VS-06E-BM2-30-ES
									45°												VS-06E-BM2-45-ES
			■					■	15°	1/3"		20		■	5,0 … 28	1,0 … 28	IP 65 + IP 67	■		■	VS-06-BC3-15-ES
									30°												VS-06-BC3-30-ES
									45°												VS-06-BC3-45-ES
			■					■	15°	1/3"	■	20		■	5,0 … 28	1,0 … 28	IP 65 + IP 67	■		■	VS-06E-BC3-15-ES
									30°												VS-06E-BC3-30-ES
									45°												VS-06E-BC3-45-ES
	■								C-Mount	1/3"		60		■	5,0 … 28	1,0 … 28	IP 65 [1]	■		■	VS-06-BM2-00-ES
											■										VS-06E-BM2-00-ES
			■						C-Mount	1/3"		20		■	5,0 … 28	1,0 … 28	IP 65 [1]	■		■	VS-06-BC3-00-ES
											■										VS-06E-BC3-00-ES
				■					C-Mount	2/3"		48		■	5,0 … 28	1,0 … 28	IP 65 [1]	■		■	VS-06-BM4-00-ES
											■										VS-06E-BM4-00-ES

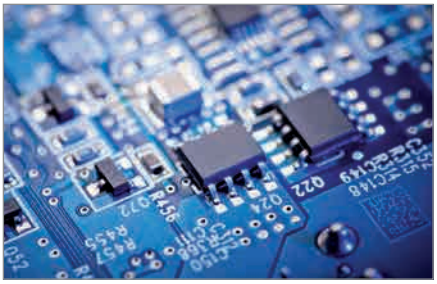
* Excerpt from our delivery programme

[1] IP 65 +IP 67 when operating with VSID-LP-C-xx

ID Systems

di-soric offers a wide range of laser and image-based ID systems for nearly all applications. Most different 1D and 2D codes will be safely detected independently of the marking method – our systems guarantee an absolute traceability.





Laser-Scanner

- Up to 1.400 scans per second
- Reading distance 25 to 940 mm
- di-soric ID software included in the scope of delivery
- X-Mode technology
- Visual display
- Real-time control
- Compact design
- High protection class
- Various interfaces

Image based ID-Reader

- Up to 60 decodes per second
- Autofocus & modular zoom
- di-soric ID software included in the scope of delivery
- Integrated lighting
- C-Mount Ausführung
- X-Mode technology
- Compact design
- High protection class
- Various interfaces













	CMOS	CCD	640 x 480 pixel	752 x 480 pixel	1280 x 960 pixel	Single-Line	Raster-Line	Low density	Standard density	High density	Extremely high density	Optics	Decoding / s (max.)	Service voltage (V DC)	Outputs 1, 2 and 3 (V DC)	Protection class	RS 232	RS 422	RS 485	USB	Ethernet	Product-ID
Laser-Scanner																						
						■		■		■		–	300 … 1.000	5,0	3 … 24	IP 54	■	■	■			ID-01-LL-1-S
						■				■		–										ID-01-LL-3-S
							■	■				–	300 … 1.000	5,0	3 … 24	IP 54	■	■	■			ID-01-LR-1-S
							■			■		–										ID-01-LR-3-S
						■		■				–	300 … 1.400	10 … 28	4,5 … 28	IP 65	■	■	■		■	ID-02-LL-1-ES
									■			–										ID-02-LL-2-ES
										■		–										ID-02-LL-3-ES
								■				–	300 … 1.400	10 … 28	4,5 … 28	IP 65	■	■	■		■	ID-02-LR-1-ES
							■		■			–										ID-02-LR-2-ES
										■		–										ID-02-LR-3-ES
								■				–	300 … 1.400	10 … 28	4,5 … 28	IP 65	■	■	■		■	ID-03-LR-1-ES
									■			–										ID-03-LR-2-ES
										■		–										ID-03-LR-3-ES
Image based ID-Reader																						
	■		■					■		■		fixed	10	5,0	5 … 29,9	IP 54	■	■				ID-04-IM1-1-S
																						ID-04-IM1-2-S
	■		■					■			■	fixed	10	5,0	5 … 29,9	IP 54				■		ID-04-IM1-1-U
																						ID-04-IM1-2-U
	■			■					■			fixed	60	5,0	5 … 28	IP 54	■	■				ID-05-IM2-2-S
																						ID-05-IM2-4-S
	■			■					■		■	fixed	60	5,0	5 … 28	IP 54				■		ID-05-IM2-2-U
																						ID-05-IM2-4-U
	■				■				■			fixed	20	5,0	5 … 28	IP 54	■	■				ID-05-IM3-2-S
										■												ID-05-IM3-3-S
											■											ID-05-IM3-4-S
	■				■				■			fixed	20	5,0	5 … 28	IP 54				■		ID-05-IM3-2-U
										■												ID-05-IM3-3-U
											■											ID-05-IM3-4-U
	■			■								15°	60	5,0 … 28	4,5 … 28	IP 65 + IP 67	■	■	■		■	ID-06-IM2-15-ES
												30°										ID-06-IM2-30-ES
												45°										ID-06-IM2-45-ES
		■			■							15°	20	5,0 … 28	4,5 … 28	IP 65 + IP 67	■	■	■		■	ID-06-IC3-15-ES
												30°										ID-06-IC3-30-ES
												45°										ID-06-IC3-45-ES
	■			■								C-Mount	60	5,0 … 28	4,5 … 28	IP 65 [1]	■	■	■		■	ID-06-IM2-00-ES
		■											20									ID-06-IC3-00-ES
ID-Handheld																						
	■				■							fixed	10	5,0	–	–	■			■		ID-07-IM3-2-US

[1] IP 65 +IP 67 bei Betrieb mit Optik-Schutzgehäuse VSID-LP-C-xx

Accessories

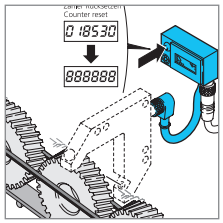
A comprehensive range of accessories rounds off the wide range of sensors and offers you virtually all the options possible.

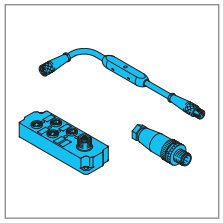


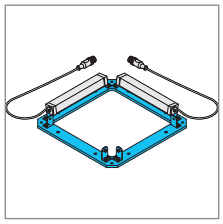


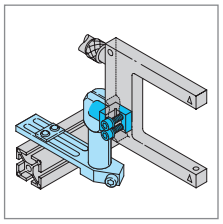
Accessories

- Adapter plugs
- Connector
- M8 and M12 multifunctional adapter:
  - pnp threshold switch
  - npn/pnp converter, pnp/npn converter
  - pnp inverter
  - pnp antivalent signal
  - pnp pulse stretcher
- Counting module with reset function in M8 and M12 versions
- Logic distributor
- Reflectors
- Assembly systems
- Connecting cables
- Sensor tester
- Sensor clamp
- Power supply with relay
- Optical accessories

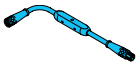
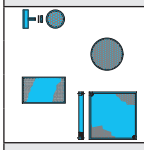
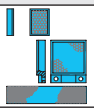




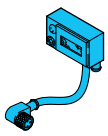






	Size (mm)	Coupling / nos. of pins	Connection diagram	Connector / nos. of pins	Mounting	Switching frequency (Hz)	Switching output	Pulse stretching 1 ... 150 ms	Max. voltage supply (V)	Max. current-carrying capacity (A)	Heat resistant up to ... (°C)	
Connector												**Product-ID***
	–	M8-3		M8-4	–	–	–		24	4,0	–	M8K3/M8S4
	–	M8-4		M8-3	–	–	–		24	4,0	–	M8K4/M8S3
	–	M8-3		M12-3	–	–	–		24	4,0	–	M8K/M12S
	–	M8-4		M12-4	–	–	–		24	4,0	–	M8K/M12S/4
	–	M12-3		M8-3	–	–	–		24	4,0	–	M12K/M8S
	–	M12-4		M8-4	–	–	–		24	4,0	–	M12K/M8S/4
Pulse stretching												
	–	M8-3	–	M8-3	clamp	< 500 Hz	pnp	■	–	–	–	TKHM-Z/TSM-Z/T
	–	M12-3	–	M12-3	clamp	< 500 Hz	pnp	■	–	–	–	VKHM-Z/VSM-Z/T
Reflectors for infrared and red light												
	Ø 19 x 6	–	–	–	M3 x 9	–	–		–	–	80	R 21 M3
	Ø 50 x 8	–	–	–	adhesive	–	–		–	–	80	R 50
	50 x 80 x 7	–	–	–	adhesive	–	–		–	–	80	R 50 x 80
	100 x 100 x 9	–	–	–	Ø 3,8 (2x)	–	–		–	–	80	R 100 x 100
Reflectors and reflective foil for laser light												
	13 x 17 x 4	–	–	–	adhesive	–	–		–	–	80	RL 13 x 17
	42 x 35 x 8,4	–	–	–	Ø 3,3 (2x)	–	–		–	–	80	RL 42 x 35
	50 x 230	–	–	–	adhesive	–	–		–	–	80	RFPL 50 x 230

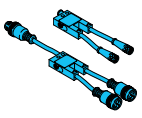
Counting module with reset function



Service voltage	10 ... 35 V DC	Counting frequency	10.000 Hz
Display	6 lines LCD display	Protection class	IP 40
Input	pnp/npn	Casing material	Aluminium, black anodized

Typ	Product-ID
Counting module with reset button, connector / socket M8, 3-poled	ZR 06B-TSSL
Counting module with reset button and remote reset, connector / socket M12, 4-poled	ZRR 06B-IBS

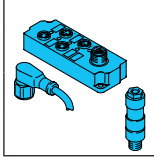
Logic distributor, 2 options



Supply voltage	10 ... 35 V	Switching output	pnp, 200 mA, And / ODER
		Protection class	IP 67

Typ	Product-ID
Logic distributor M8, AND / OR switchable	AV2-AND/OR-PS-TS
Logic distributor M12, AND / OR switchable	AV2-AND/OR-PS-IBS

Logic distributor, 4 options

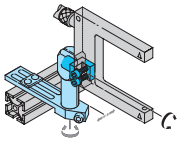
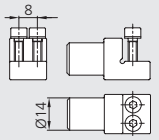
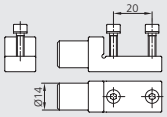
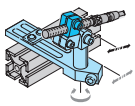
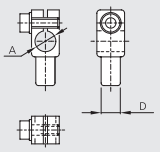
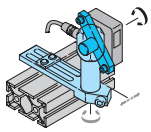
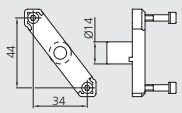
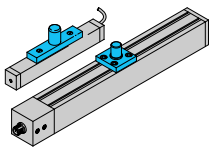
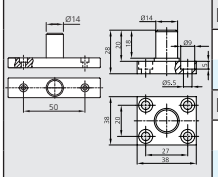
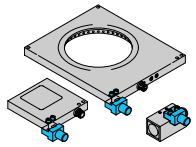
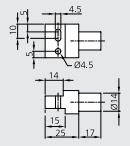


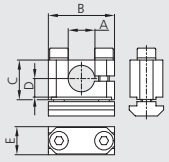
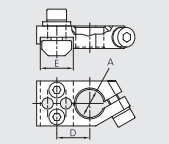
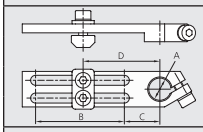
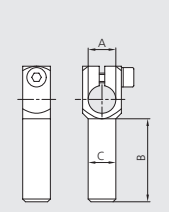
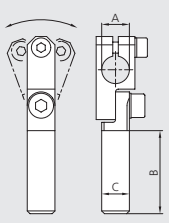
Supply voltage	10 ... 30 V	Switching outputs	pnp 4x, pnp-AND 1x, pnp-OR 1x
Current-carrying capacity AND/OR	per 300 mA / logic contact	Protection class	IP 67 (with all slots occupied)

Typ	Product-ID
Logic distributor M8, 4 options	AV4-AND/OR
Connecting cable angled 5 m / 8-poled	VKHM-W-5/8
AND-M8 open connection socket	BS-Z-8-AND

* Excerpt from our delivery programme

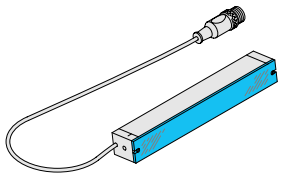
	Size	Nos/ wires	Socket	Cable length (m)	Metal nut	Maximal allowed service voltage (VAC/DC)	Connector material	Cable material PVC, PU cladding	Cable material PUR	Protection class	Product-ID*
Connecting cable											
	M8	3	straight	2,5	■	60	PU	■		IP 67	TKHM-Z-2,5
				5,0							TKHM-Z-5
		4		2,5							TKHM-Z-2,5/4
				5,0							TKHM-Z-5/4
	M8	3	angled	2,5	■	60	PU	■		IP 67	TKHM-W-2,5
				5,0							TKHM-W-5
		4		2,5							TKHM-W-2,5/4
				5,0							TKHM-W-5/4
	M12	4	straight	2,5	■	250	TPU		■	IP 68 IP 69K	VKHM-Z-2,5/4
				5,0							VKHM-Z-5/4
				10,0							VKHM-Z-10/4
	M12	4	angled	2,5	■	250	TPU		■	IP 68 IP 69K	VKHM-W-2,5/4
				5,0							VKHM-W-5/4
				10,0							VKHM-W-10/4

Holders				Product-ID*
		For fork-/angled light barriers hole spacing 8 mm		
				SH-UGU-08-14
		For fork light barriers hole spacing 20 mm		
				SH-UGU-20-14
		For cylindrically designed casings		
		A	D	SH…
		4	10	SH-4-10
		5	10	SH-5-10
		6,5	10	SH-6.5-10
		8	10	SH-8-10
		12	10	SH-12-10
		For photoelectric sensors series 50		
				SH-S50-34-44-14
		For barlight BE 1-A…		
				SH-BE 1-A
		For barlight BEK 1-A…		
				SH-BEK 1-A
		For back- spot- and darkfield light		
		BEK 1 F…/BEK 1-P…/BEK 1-D 120…		
				SH-BEK

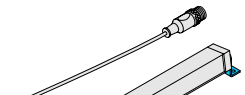
System holders						Product-ID*
	Cross connector					
	A	B	C	D	E	
	10	25	14	7	10	SH-KVB-L-10
	14	32	18	9	12	SH-KVB-X-14
	20	38	27	12,5	15	SH-KVB-X-20
	Angle clamp					
	A	B	C	D	E	
	10	–	–	16	18	SH-WST-L-10-U
	14	–	–	18	18	SH-WST-L-14-U
	20	–	–	25	40	SH-WST-JU-20-U
	A	B	C	D	E	
	10	40	16	–	–	SH-WSL-L-10-40-U
	14	40	18	–	–	SH-WSL-L-14-40-U
	20	60	24	–	–	SH-WSL-X-20-60-U
	Angle arm					
	A	B	C	D	E	
	10	30	10	–	–	SH-WKA-10-10-30
	10	60	10	–	–	SH-WKA-10-10-60
	10	90	10	–	–	SH-WKA-10-10-90
	14	80	14	–	–	SH-WKA-14-14-80
	14	120	14	–	–	SH-WKA-14-14-120
	Articulated arm					
	A	B	C	D	E	
	10	30	10	–	–	SH-GLA-10-10-30
	10	60	10	–	–	SH-GLA-10-10-60
	10	90	10	–	–	SH-GLA-10-10-90
	14	80	14	–	–	SH-GLA-14-14-80
	14	120	14	–	–	SH-GLA-14-14-120

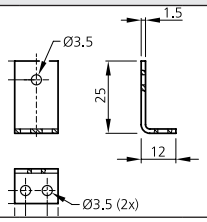
* Excerpt from our delivery programme

Accessories for barlights BE 1-A …			
Optical accessories		Length (mm)	**Product-ID***
▪ PMMA ▪ Material thickness 3 mm	Diffusor	65	BE 1-A65-DIF
	Polarisator	65	BE 1-A65-POL
	Diffusor	130	BE 1-A130-DIF
	Polarisator	130	BE 1-A130-POL
	Diffusor	240	BE 1-A240-DIF
	Polarisator	240	BE 1-A240-POL

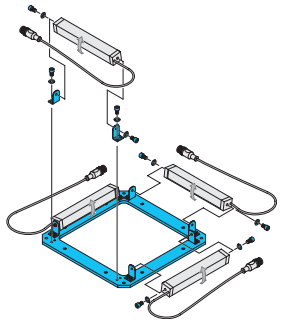


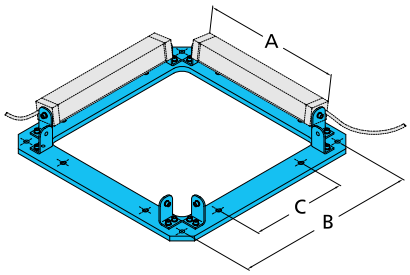
Mounting bracket		
▪ Smooth adjustment		
		BW-BE 1-A (2 pieces)



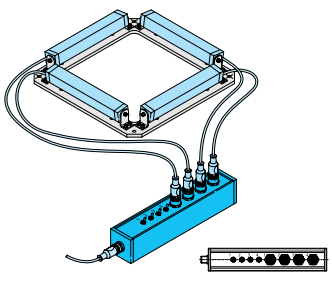


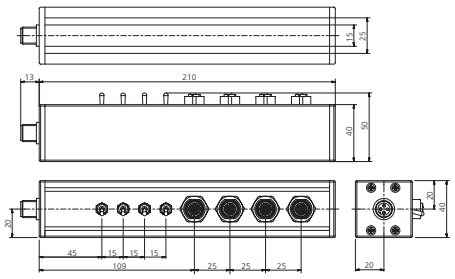
Mounting frame for up to four BE 1-A 130 …					
▪ Smooth adjustment ▪ Mounting bracket for four illuminations included					
Typ	**A**	**B**	**C**		
For up to four BE1-A 65 …	84,4	129	50		BE1-A65-FRAMESET
For up to four BE1-A 130 …	144,4	189	100		BE1-A130-FRAMESET
For up to four BE1-A 240 …	254,4	299	200		BE1-A240-FRAMESET





Distributor box, switchable for connection of up to four bar lights BE 1-A … / BEK …		
▪ M12 sockets, individually switchable ▪ Trigger signal looped		
Service voltage	24 V	
Current carrying capacity	4.000 mA	
Protection class	IP 30	
Shock/vibration loading	30g / 10 - 55 Hz, 1 mm	
Ambient temperature	0 … +60 °C	
Casing material	Aluminium, anodised	
For up to four BE1-A …		BEV-200/4-IBS





Extension cable for connection of lighting element BE1-A …, BEK … and distributor box BEV …		
	Length 0.6 m, connector / coupling M12	VSHM-Z-0.6/VKM-Z/4



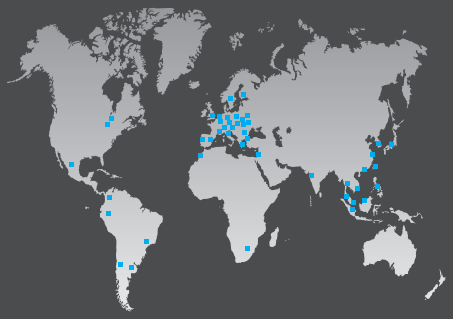
* Excerpt from our delivery programme

Notes

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

www.di-soric.com

Subsidiaries



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 / 72 405
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.
119 Verde Crescent
Singapore 688459
Singapore
Fon: +65 / 65 23 80 65
Fax: +65 / 65 23 80 67
info.sg@di-soric.com

© di-soric | KK_001.0712e