

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

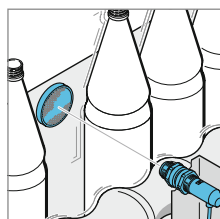
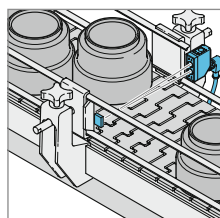
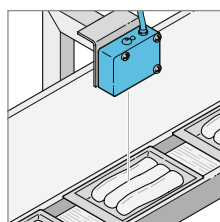
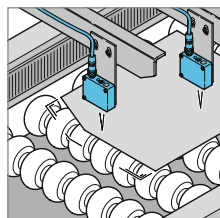
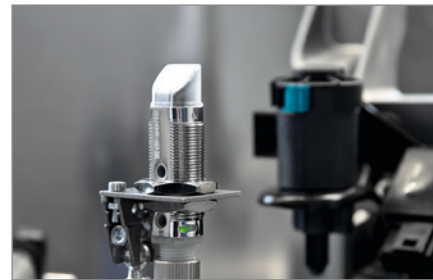
- High resolution
- Ranges up to 20 m
- Alignment aid
- Versions with stainless steel casing and high protection class

Retroreflective sensors

- High resolution
- Ranges up to 10 m
- Potentiometer or teach function
- Versions with stainless steel casing and high protection class

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
- Versions with stainless steel casing and high protection class



Technical data (typ.)
+20 °C, 24 VDC

Service voltage

10 ... 30 VDC – some versions with extended service voltage range 10 ... 35 VDC

	Operating distance, Setting range (mm)	Size (mm)	Sensitivity adjustment by means of		Transmitter (S)/Receiver (E)		Switching output	Ambient temperature (°C)	Protection class	Casing material	Connector / cable length	Connecting cable	Product-ID*
			Red light, clocked	Infrared light, clocked	White light								
Diffuse sensors, energetic													Product-ID*
	... 10	Ø 4,0	–	–	n		pnp, 100 mA, NO	0 ... +55	IP 67	Stainless steel V2A	2 m	–	OTV 4.0 V 10 P1K
	... 10	M5	–	–	n		pnp, 100 mA, NO	0 ... +55	IP 67	Stainless steel V2A	M8	TK ...	OTV 05 V 10 P1K-TSSL
	6 ... 14	22x10x8	Poti	–	n		pnp, 50 mA, NO	–25 ... +55	IP 67	Plastics	2 m	–	OTV 22 K 14 P1K
	... 20	M5	–	–	n		pnp, 100 mA, NO	0 ... +55	IP 67	Stainless steel V2A	M8	TK ...	OTV 05 V 20 P1K-TSSL
	... 20	40x5x7	–	–	n		pnp, 100 mA, NO	0 ... +55	IP 67	Stainless steel V2A	2 m	–	OTV Q5 M 20 P1LK
	... 50	M5	–	–	n		pnp, 100 mA, NO	0 ... +55	IP 67	Stainless steel V2A	M8	TK ...	OTV 05 V 50 P1K-TSSL
	70 ... 300	M12	Poti	–	n		pnp, 200 mA, NO	–25 ... +55	IP 67	Metal	M12	VK ...	OTV 12 M 300 P1K-IBSL
	... 400	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +50	IP 66	Plastics	M12	VK ... /4	OT 6-18 KR 400 P3K-BSL
	... 400	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +45	IP 67	Metal	M12	VK ... /4	OT 18 FM 400 P3-B4
	100 ... 500	50x40x15	Poti Teach	–	n		pnp, 200 mA, NO/NC	–10 ... +60	IP 67	Metal	M12	VK ...	OTV 51 M 500 P3K-IBS OTVTI 51 M 500 P3K-IBS
	10 ... 600	38x27x15	Poti	–	n		pnp, 100 mA, NO	–25 ... +60	IP 67	Plastics	M8	TK ...	OT 6-41 K 0.6 P1-T3
	... 800	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +55	IP 67	Plastics	M12	VK ... /4	OT 18 FK 800 P3-B4
	... 1.000	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Metal	M12	VK ... /4	OT 18 M 1000 P4-B4
	100 ... 1.000	41x31,5x16	Teach	–	n		Push-pull, 200 mA, NO/NC	–20 ... +60	IP 67	Metal	M8	TK ...	OTT 41 M 1 G3-T3
Diffuse sensors with background suppression													
	30 ... 130	M18	Poti	–	n		pnp, 100 mA, antivalent	–25 ... +70	IP 67	Metal	M12	VK ... /4	OH 18-1 M 130 P4-B4
	30 ... 200	31x21x13	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Plastics	M8	TK ... /4	OH 31 K 200 P3-T4
	30 ... 400	31x21x13	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Plastics	M8	TK ...	OH 30 K 400 P3-K-T3
	200 ... 2.000	68x40x20	Poti	–	n		pnp, 100 mA, NO/NC	–20 ... +55	IP 67	Plastics	M12	VK ...	OHT 68 K 2000 P3K-BSL
Optical contrast diffuse sensor													
	30 ± 3	50x40x15	Teach	–		n	Push-pull, 200 mA, NO/NC	–10 ... +60	IP 67	Metal	M12	VK ... /4	OKTTI 55 M 30 FG3LK-IBS
Retroreflective sensors													
	50 ... 1.500	31x21x13	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Plastics	M8	TK ... /4	OR 31 K 1500 P3-T4
	40 ... 2.000	50x40x15	Poti Teach	–	n		pnp, 200 mA, NO/NC	–10 ... +60	IP 67	Metal	M12	VK ...	ORV 51 M 2000 P3K-IBS
	... 3.000 ¹⁾	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Metal	M12	VK ... /4	OR 18-1 M 3000 P4-B4
	... 3.600 ¹⁾	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +55	IP 66	Metal	M12	VK ... /4	OR 18-1 FMR 3600 P3-B4
	20 ... 5.000	31x21x13	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Plastics	M8	TK ... /4	OR 31 K 5000 P3-T4
	... 5.700 ¹⁾	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +55	IP 66	Metal	M12	VK ... /4	OR 18-1 FM 5700 P3-B4
	40 ... 9.000 ¹⁾	38x27x15	Poti	–	n		pnp, 100 mA, NO	–25 ... +60	IP 67	Plastics	M8	TK ...	OR 6-41 K 4 P2-T3
Through beam sensors													
	... 8.000	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +55	IP 67	Plastics	M12	VK ... /4	OES 18 FKR 8000 P3-B4
	... 10.000	M18	Poti	–	n		pnp, 100 mA, NO/NC	–25 ... +55	IP 67	Plastics	M12	VK ... /4	OES 18 FK 10000 P3-B4
	0 ... 10.000	50x40x15	Poti	S	n		–	–25 ... +60	IP 67	Metal	M12	VK ...	OSV 51 M 10000-IBS OEV 51 M 10000 P3K-IBS
	0 ... 20.000	31,2x21x12,8	Poti	S/E	n		pnp, 100 mA, NO/NC	–25 ... +70	IP 67	Plastics	M8	TK ... /4	OES 31 K 20000 P3-T4

*Excerpt from our delivery programme

¹⁾ Referring reflector: R84

NEW
NEW

Laser Photoelectric Sensors

Laser light barriers and diffuse sensors are used for the precise detection of small parts in all areas of automation. The barriers count small parts at great speed, with no contact or wear and with great precision. Furthermore, they precisely determine their position and completeness, and deliver trigger signals for camera systems and system controls – all satisfying laser class 1 requirements.

Laser photoelectric sensors

- Collimated red light laser
- With various working principles
- Resolution 0,2 mm
- High switching frequency

Laser line retroreflective sensors

- Red light laser, clocked
- Fan-shaped laser beam with auto collimation principle
- Detects small parts in the entire active zone

Laser diffuse sensor with foreground and background suppression

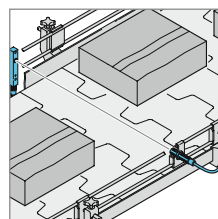
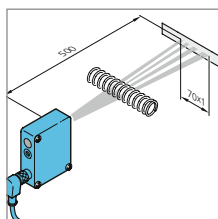
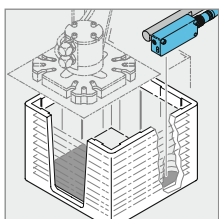
- Red light laser with small laser point
- Large detection range
- Automatic readjustment of the transmit power
- Teach key + remote teach with key-lock function
- Push-pull, pnp + npn switchable
- Light/dark switching

Laser line diffuse sensor with background suppression

- Red light laser
- Detection of objects with irregular blow-out, opening or drill holes
- Laser line 30 x 1,5 at scanning distance 200 mm
- Automatic readjustment of the transmit power

Laser diffuse sensors with background suppression

- Red light laser
- Optical or electronic background suppression
- Vibration-safe 6-way setting for very fine adjustment
- High resolution, switching accuracy and frequency
- Automatic readjustment of the transmit power



Technical data (typ.)	+20 °C, 24 VDC
Emitted light	Red light laser, clocked
Service voltage	10 ... 35 VDC / 10,8 ... 26,4 VDC (LLT 21 ... / LRT 21 ... / LES 21 ...) / 18 ... 30 V DC (LVHT 51 ...)
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 (Lx)	Casing material	Connector	Connecting cable	Product-ID*
Laser diffuse sensors ⚠													Product-ID*
	75 ... 200	50x40x15	Poti	–	pnp, 200 mA, NO/NC	2.000	30	-10 ... +50	8	Metal	M12	VK ...	LTV 51 M 200 P3K-IBS
	45 ... 300	22x13x8,5	Poti	–	pnp, 50 mA, NO/NC	1.000	15	-10 ... +55	3	Plastics	2 m M8	– TK ... /4	LT 21 K 300 P3 LT 21 K 300 P3-K-T4
	100 ... 600	50x40x15	Poti	–	pnp, 200 mA, NO/NC	500	30	-10 ... +50	5	Metal	M12	VK ...	LTV 51 M 600 P3K-IBS
Laser diffuse sensors with background suppression ⚠													
	40 ... 200	41x31,5x16	Teach	–	Push-pull, 200 mA, NO/NC	500	40	0 ... +50	50	Metal	M8	TK ...	LHT 41 M 0.2 G3-T3 ¹⁾
	50 ... 200	50x40x15	Poti	–	Push-pull, 200 mA, NO/NC	500	25	-10 ... +50	5	Metal	M12	VK ...	LHT 51 M 200 G3-B4 ¹⁾
	30 ... 350	40x30x15	Poti	–	Push-pull, 200 mA, NO/NC Antivalent	1.000	25	-10 ... +50	20	Metal	M8	TK ... /4	LH 41 M 350 G4L-T4 ¹⁾
	40 ... 400	76x30x18	Poti	–	Push-pull, 200 mA, NO/NC	1.000	30	-10 ... +60	5	Metal	M12	VK ... /4	LHT 81 M 300 G4L-IBS ²⁾
Laser diffuse sensor with foreground and background suppression ⚠													
	50 ... 400	50x50x16	Teach, Remote teach	–	Push-pull, 200 mA, NO/NC	100	60	0 ... +50	5	Aluminium	M12	VK ... /4	LVHT 51 M 400 G3-B4
Laser retroreflective sensors ⚠													
	100 ... 1.000	50x40x15	Poti	–	pnp, 200 mA, NO/NC	2.000	40	0 ... +50	5	Metal	M12	VK ...	LRV 51 M 1000 P3K-IBS
	200 ... 2.000	41x31,5x16	Teach	–	Push-pull, 200 mA, NO/NC	1.000	40	0 ... +50	50	Metal	M8	TK ...	LRT 41 M 2 G3-T3
	200 ... 2.000	50x40x15	Poti	–	pnp, 200 mA, NO/NC	2.000	40	0 ... +50	5	Metal	M12	VK ...	LRV 51 M 2000 P3K-IBS
	0 ... 4.000	22x13x8,5	Poti	–	pnp, 50 mA, NO/NC	1.000	15	-10 ... +55	3	Plastics	2 m M8	– TK ... /4	LR 21 K 4000 P3 LR 21 K 4000 P3-K-T4
	1.000 ... 10.000	50x40x15	Poti	–	pnp, 200 mA, NO/NC	2.000	40	0 ... +50	5	Metal	M12	VK ...	LRV 51 M 10000 P3K-IBS
Laser line retroreflective sensor ⚠													
	50 ... 500	50x40x15	Teach	–	pnp, 200 mA, NO/NC	750	30	5 ... +50	15	Metal	M12	VK ...	LLRV 51 M 500 P3K-IBS
Laser line diffuse sensor with background suppression ⚠													
	50 ... 200	50x40x15	Teach	–	pnp, 200 mA, NO/NC	500	25	-10 ... +50	5	Metal	M12	VK ...	LLH 51 M 200 G3-B4
Laser through beam sensors ⚠													
	0 ... 500	10x10x60	–	S	–	2.000	30	0 ... +50	–	Metal	M8	TK ...	OLS Q 10 M 500-TSSL
E				pnp, 200 mA, NO	5								OLE Q 10 M 500 P2K-TSSL
	0 ... 1.000	19x12x8,5	–	S/E	pnp, 50 mA, NO/NC	1.000	10	-10 ... +55	3	Plastics	2 m M8	– TK ... /4	LES 21 K 1000 P3
E				pnp, 200 mA, NO	5								LES 21 K 1000 P3-K-T4
	0 ... 2.000	M8x70	–	S	–	2.000	30	0 ... +50	–	Stainless Steel	M8	TK ...	OLS 08 V 2000-TSSL
E				pnp, 200 mA, NO	5								OLE 08 V 2000 P2K-TSSL
	500 ... 2.000	10x10x60	–	S	–	2.000	30	0 ... +50	–	Metal	M8	TK ...	OLS Q 10 M 2000-TSSL
E				pnp, 200 mA, NO	5								OLE Q 10 M 2000 P2K-TSSL

* Excerpt from our delivery programme

¹⁾ electronic background suppression / ²⁾ optical background suppression

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