

dimensions	32 x 233 x 37mm to 32 x 1883 x 370mm	
hand protection	protection field height	150mm 300mm 450mm 600mm 750mm 900mm 1050mm 1200mm 1350mm 1500mm 1650mm 1800mm

- ✓ danger point security
- ✓ 30mm resolution
- ✓ integrated EDM-function
- ✓ manual or automatic restart
- ✓ integrated alignment mark
- ✓ short response time
- ✓ simple installation and setup
- ✓ compact section measurements
- ✓ automatic self-test
- ✓ connection with M12-connector

**hand protection, performance level e,  
safety integrity level 3, category 4**

**description**

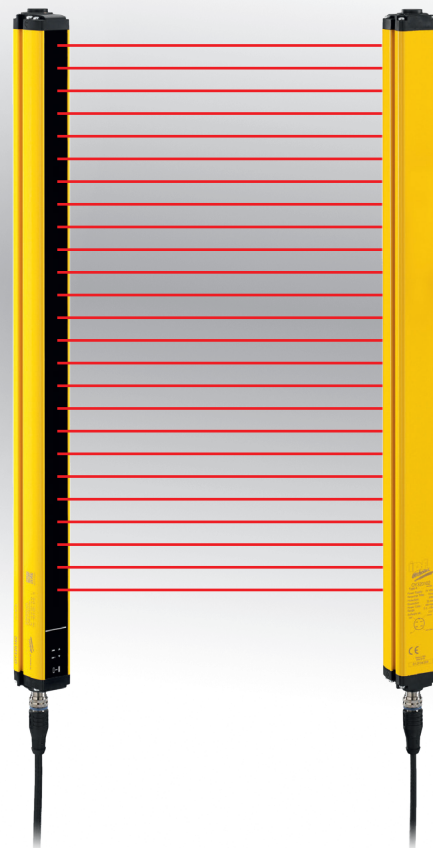
Corresponding with the applicable standards, these light curtains for securing danger zones are especially suited to situations where hand protection is required for the operator. Twelve different models are available, with protection field heights of approx. 150 to 1800mm. Each of these models has a resolution of 30mm and a range of up to 19m.

Via the 8-pin M12-connector, it is possible to connect the wiring for the EDM function and the manual / automatic restart.

A new feature is the EDM function with which the function of the signal convertor can be monitored.

For this reason, there is also a new safety relay with an additional break contact, which is available under number **AO000299**. The system can be configured according to the safety requirements.

The 7 segment display attached to both units makes the product easier to use, as the diagnosis messages are easy to



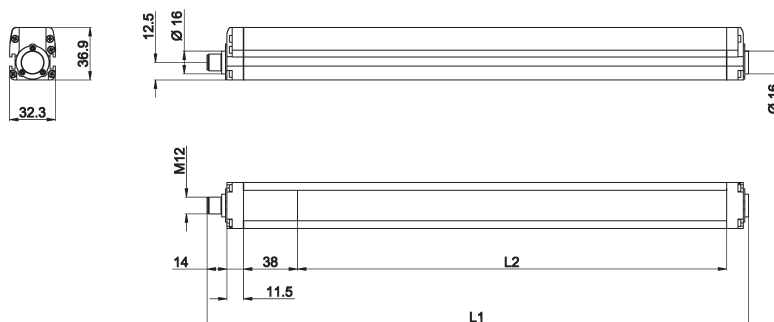
understand via single character, alphanumeric codes. The transmitting and receiving units are optically synchronized. Along with all control switching circuits, all inputs and outputs are located inside the housing. Thanks to the compact dimensions as well as the simple connection and installation systems, the light curtains in this series offer the user optimum protection in all industrial safety applications.

**Application examples**

Protects fingers in the danger zones of ...

- ▶ welding robots
- ▶ uncoiling stations
- ▶ pallet feeders
- ▶ turning machines and rotary jars
- ▶ press brakes
- ▶ packing and cutting machines

article-no.	OY320100	OY320101	OY320102	OY320103	OY320104	OY320105
number of beams	8	16	24	32	40	48
response time	9msec	11msec	13msec	14msec	16msec	18msec
protection field height	150mm	300mm	450mm	600mm	750mm	900mm
overall length L1	233mm	383mm	533mm	683mm	833mm	983mm
optical range L2	153mm	303mm	453mm	603mm	753mm	903mm
article-no.	OY320106	OY320107	OY320108	OY320109	OY32010A	OY32010C
number of beams	56	64	72	80	88	96
response time	19msec	21msec	23msec	25msec	26msec	28msec
protection field height	1050mm	1200mm	1350mm	1500mm	1650mm	1800mm
overall length L1	1133mm	1283mm	1433mm	1583mm	1733mm	1883mm
optical range L2	1053mm	1203mm	1353mm	1503mm	1653mm	1803mm

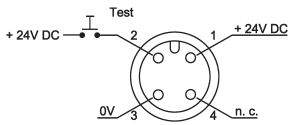


### TECHNICAL DATA

resolution	30mm
sensing range	up to 19m
output signal	2 x pnp, no
operating voltage	24V DC $\pm$ 20%
current consumption	transmitter: max.105mA
current consumption (w/o load)	receiver: max. 150mA
output current (max. load)	max. 500mA at each output
transmitting element (pulsed)	infrared LED, 950nm
functions	test; manual/automatic reset; EDM; reset
display (transmitter)	'normal OP' LED: green, 'transmitter on' LED: yellow 7 segment display for fault diagnosis
display (receiver)	'normal OP' LED: green, 'break' LED: red, 'alignment' 2 LED: yellow 7 segment display for fault diagnosis
short-circuit protection	1.4A max.
reverse polarity protection	+
dimensions	32.3 x L1 x 36.9
housing material	aluminum painted
material (screen)	PMMA
operating temperature	0 ... +55°C
storage temperature	-25 ... +70°C
humidity	15 ... 95%, non condensing
system of protection (EN 60529)	IP65
safety category	type 4
protection class	class 1
connection	transmitter: M12-connector, 4-pin / receiver: M12-connector, 8-pin
connection accessories	transmitter: e.g. VK205325 / receiver: e.g. VK205A25
accessories	test bar AO000139 included in the scope of delivery ( $\varnothing$ 30mm for hand protection)
mounting accessories (bracket)	AO000106 included in the scope of delivery - further information see separate data sheet

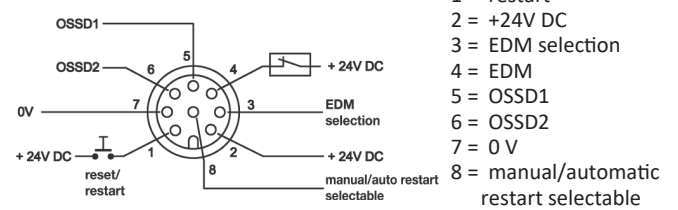
**connection**

**transmitter**



**wire colors:** bn = brown (1), wh = white (2), bu = blue (3),  
bk = black (4)

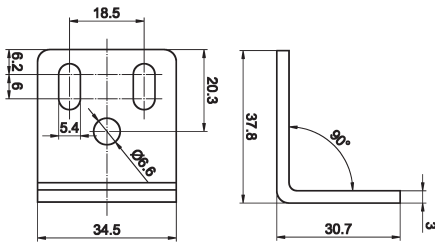
**receiver**



**wire colors:** wh = white (1), bn = brown (2), gr = green (3),  
ye = yellow (4), gy = grey (5), pk = pink (6),  
bu = blue (7), rd = red (8)

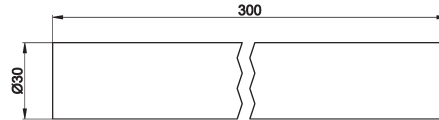
**accessories bracket AO000106**

sufficient number for light curtain included in the scope of delivery



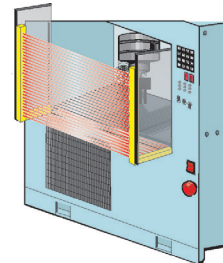
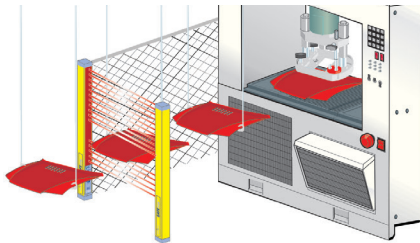
**test bar AO000139**

Ø 30mm included in the scope of delivery



**application example**

danger point security (hand protection) at metal processing machines



**STANDARDS**

IEC 61496-1	safety of machines part 1	
IEC 61496-2	safety of machines part 2	
EN ISO 13849-1	PL	e
EN 954-1	CAT	4
EN IEC 61508	SIL	3
EN IEC 62061	SIL CL	3
probability of dangerous failure per hour	PFHd min (1/h)	2.64 x 10 <sup>-9</sup>
life / mission time	T1 (years)	20
mean value operating time without dangerous failure	MTTFd (years)	444
diagnostic coverage	DC	98.80%
safe failure fraction	SFF	99.30%
hardware fault tolerance	HFT	1

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets **ipf-SENSORFLEX®**" or search our Website for "VK".

You also find this data sheet, as well as contact details under [www.ipf-electronic.com](http://www.ipf-electronic.com)

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**NOTES**

A large grid area for taking notes, consisting of a 30x30 grid of small squares. The grid is empty and occupies the majority of the page below the 'NOTES' header.