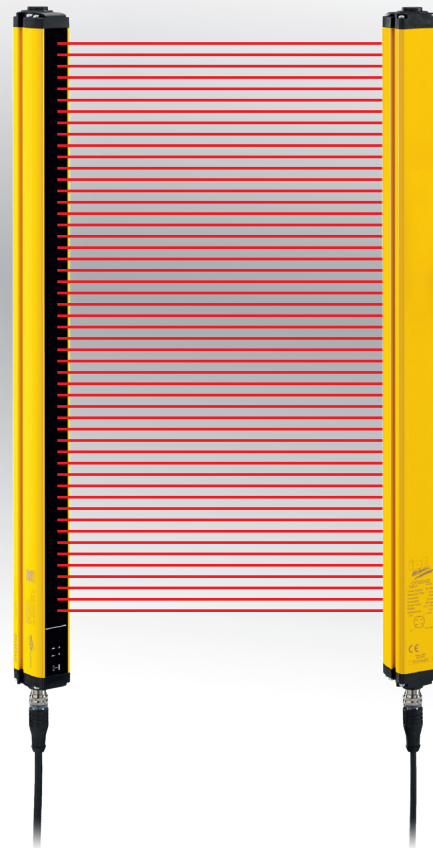


dimensions	32 x 233 x 37mm	
	to	
	32 x 1883 x 37mm	
finger protection	protection field height	150mm 300mm 450mm 600mm 750mm 900mm 1050mm 1200mm 1350mm 1500mm 1650mm 1800mm

- ✓ **danger point security**
- ✓ **14mm 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**



**finger 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 finger 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 14mm and a range of up to 6m.

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.

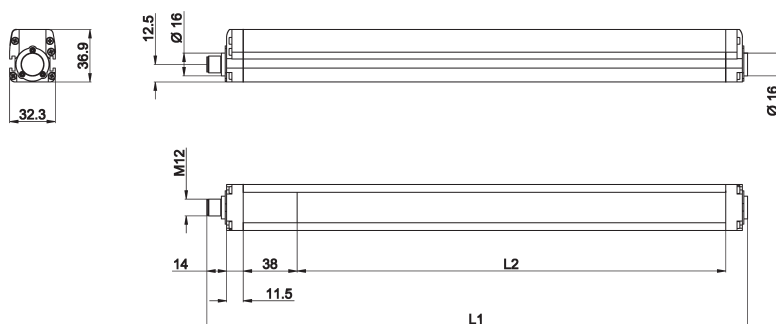
Application examples

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.	OY320130	OY320131	OY320132	OY320133	OY320134	OY320135
number of beams	16	32	48	64	80	96
response time	11msec	15msec	18msec	22msec	25msec	29msec
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.	OY320136	OY320137	OY320138	OY320139	OY32013A	OY32013C
number of beams	112	128	144	160	172	192
response time	33msec	36msec	40msec	43msec	47msec	50msec
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

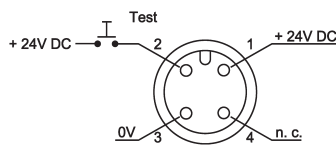


TECHNICAL DATA

resolution	14mm
sensing range	0.2 ... 6m
output signal	2 x pnp, no
operating voltage	24V DC ±20%
current consumption (transmitter)	max. 110mA
current consumption (w/o load)	receiver: max. 150mA
output current (max. load)	500mA at each output
Sendeelemente (getaktet)	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 x L1 x 37
housing material	aluminium 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 AO000138 included in the scope of delivery (Ø14mm for finger protection)
mounting accessories (bracket)	AO000106 included in the scope of delivery - further information see separate data sheet

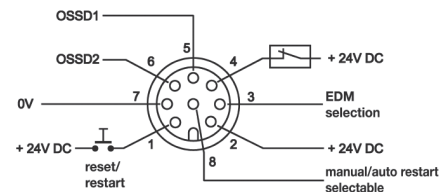
connection

transmitter



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

receiver

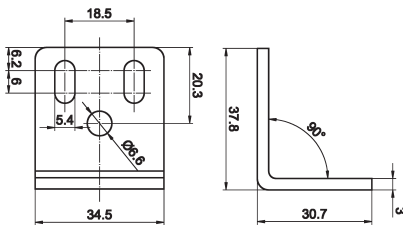


- 1 = restart
- 2 = +24V DC
- 3 = EDM selection
- 4 = EDM
- 5 = OSSD1
- 6 = OSSD2
- 7 = 0 V
- 8 = manual/automatic restart selectable

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

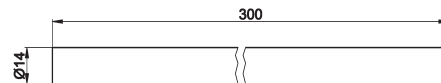
accessories bracket AO000106

sufficient number for light curtain included in the scope of delivery



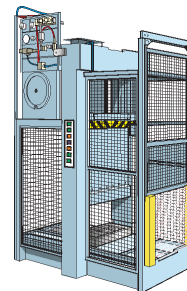
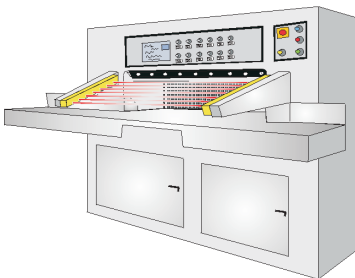
test bar AO000138

Ø 14mm included in the scope of delivery



application example

danger point security (finger 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 ⁻⁹
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

NOTES

A large grid area for taking notes, consisting of a 20x30 grid of small squares. The grid is empty and occupies the majority of the page below the 'NOTES' header.