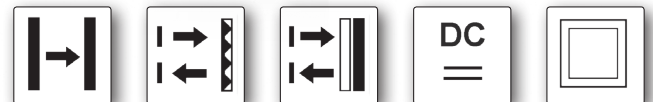


dimensions	12 x 31.5 x 20mm	
through-beam sensors	range	12m
retro-reflective sensors	range	6m
dif. reflection sensors	sensing range	0.03 to 0.1m



- ✓ dif. reflection sensors with background suppression
- ✓ retro-reflective sensors with polarizing filter
- ✓ simple adjustment
- ✓ high switching distances
- ✓ light-on and dark-on mode
- ✓ fast response time
- ✓ LED display of the switching signal
- ✓ degree of protection IP67
- ✓ connection with M8-connector

universal mini sensor, visible red light, economically priced version



description

Optoelectronic sensors are essential components in all automated manufacturing processes. They are used everywhere parts need to be contactlessly, reliably and quickly detected, counted, measured or positioned.

The through-beam sensors operate over a range of up to 12m; the retro-reflective sensors (with built-in polarizing filter) up to 6m. Diffuse reflection sensors are available with background suppression through triangulation.

For the version with background suppression, objects are reliably detected independent of their color, since their position is calculated from the angle of the reflected light.

The retro-reflective sensors are equipped with a polarizing filter. The reliable detection of reflective objects is thereby ensured.

The sensors operate with visible red light, which allows for an easy alignment with the object to be detected and a comfortable adjustment.

The light-on/dark-on mode is programmed for all devices via the remote input. The **OT31** can also be programmed via this

input with fixed sensing range or as background suppression. The yellow LED display lights up if the output is securely switched.

Optical sensors are frequently used in combination with a programmable logic controller (PLC). Suitable mounting brackets and slit diaphragms are available as accessories.

With the rectangular slit diaphragms, the intensity and the emission angle are reduced in order to prevent optical interference of sensors that are mounted directly adjacent to one another as well as to constrict the light beam so that smaller target objects can be detected.

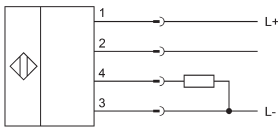
application examples

- ▶ reliable positioning tasks in automation technology
- ▶ presence checking by detection of different objects
- ▶ monitoring and edge detection of object and stacking heights
- ▶ contactless position recognition of small and large parts

article-no.	OY310370	OR310370	OT310371
version	through-beam sensor	retro-reflective sensor with polarizing filter	dif. reflection sensor background suppression
connection	M8-connector	M8-connector	M8-connector
range	12m	6m	-
sensing range	-	-	0.1m
	<p>transmitter axis*, receiver axis**</p>	<p>transmitter axis*, receiver axis**</p>	<p>transmitter axis*, receiver axis**</p>
TECHNICAL DATA			
range	12m	6m	-
sensing range	-	-	0.1m
output signal	PNP, NO / NC	PNP, NO / NC	PNP, NO / NC
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 20mA	≤ 20mA	≤ 20mA
output current (max. load)	100mA	100mA	100mA
voltage drop (max. load)	2.0V DC	2.0V DC	2.0V DC
transmitting element (pulsed)	LED, infrared light	LED, red light	LED, red light
wavelength (transmitter)	860nm	632nm	632nm
switching frequency	250Hz	500Hz	500Hz
response/decay time	2ms/2ms	1ms/1ms	1ms/1ms
display (signal)	yellow LED, receiver only	yellow LED	yellow LED
display (operation)	green LED, only transmitter	-	-
setting	-	-	-
test input	-	-	-
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	12x31.5x20mm	12x31.5x20mm	12x31.5x20mm
housing material	plastic	plastic	plastic
front screen material	plastic PMMA	plastic PMMA	plastic PMMA
operating temperature	-20 ... +55°C	-20 ... +55°C	-20 ... +55°C
degree of protection (EN 60529)	IP67	IP67	IP67
connection	M8-connector, 4-pin	M8-connector, 4-pin	M8-connector, 4-pin
connection accessories	e.g. VK200375	e.g. VK200375	e.g. VK200375
mounting accessories (bracket)	e.g. AY000118	e.g. AY000118	e.g. AY000118

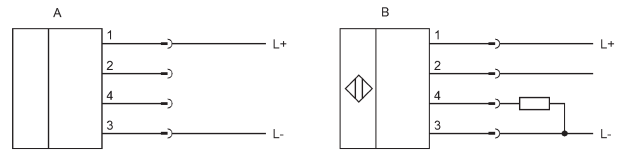
connection

OR31, OT31



1 = L+, 2 = remote, 3 = L-, 4 = PNP NO/NC

OY31

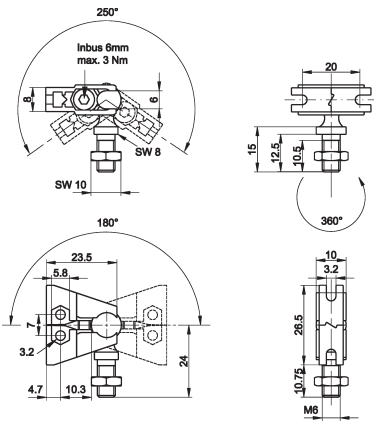


A: 1 = L+, 2 = n. c., 3 = L-, 4 = n. c.

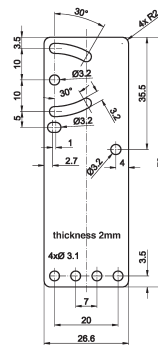
B: 1 = L+, 2 = remote, 3 = L-, 4 = PNP NO/NC

wire colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

universal mounting AY000118
consisting of base module ...



and fitting panel



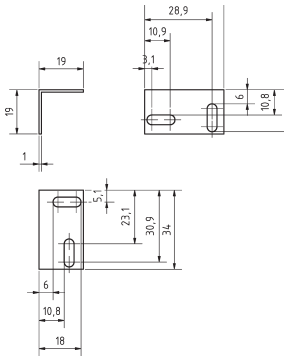
ACCESSORIES

article-no.	description	note
AY000088	base module*	jaws: stainless steel, ball pin: galvanized steel
AY000118	mounting kit for sensors Ox31	stainless steel

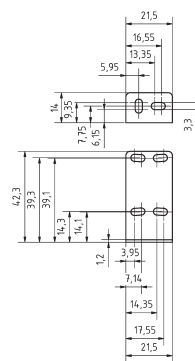
* The **AY000088** base module is contained in every mounting kit.
Material of bolts and nuts: galvanized steel

accessories - brackets

AO000473

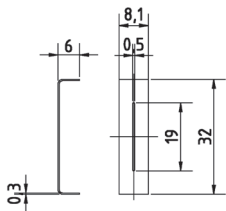


AO000474

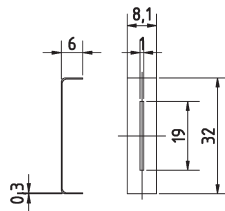


accessories - brackets

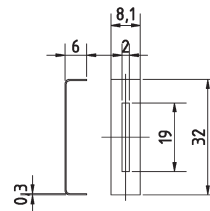
AO000475



AO000476



AO000477



ACCESSORIES

article-no.	description	note
AO000473	accessories bracket 31	lateral mounting
AO000474	accessories bracket 31	lateral L-shaped mounting
AO000475	accessories optical aperture 31 slit	0.5mm x 19mm
AO000476	accessories optical aperture 31 slit	1.0mm x 19mm
AO000477	accessories optical aperture 31 slit	2.0mm x 19mm

This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the "accessories" section of the catalog under **ipf-SENSORFLEX®** "cable sockets" or in the search window on our homepage www.ipf-electronic.com (using the search term "VK").

Warning: Never use these devices in applications where the safety of a person depends on their functionality.

You also find this data sheet, as well as contact details under www.ipf-electronic.com