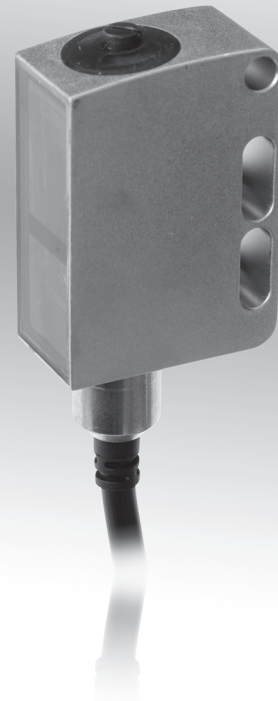| dimensions	**14 x 35.5 x 25mm**

dif. reflection sensors   sensing range   **5 to 400mm**

✓ **dif. reflection sensors with background suppression**

✓ **wide, rectangular line for the reliable detection of objects with openings, bores and grooves**

✓ **scratch- and diffusion-resistant front screen**

✓ **push-pull switching outputs**

✓ **active suppression of external light**

✓ **setting of the sensing range with 8-turn spindle**

✓ **connection via M12 cable connector**

stainless steel housing enclosed optics design

DC	Push Pull	IP69k	M12

description

The devices feature a stainless steel housing and are often used in connection with a PLC for automatic production processes and machines, even in the food industry. For example, they detect objects made from metal, glass, plastic, wood and paper.

The **OT370525** has a rectangular beam spot. This can be used to detect objects with bores, openings and grooves. Although the distance of the devices can be set using a mechanical setting unit, the high degree of protection (IP69k, only in combination with a fixed M12-connector) is maintained.

Objects are reliably recognized, regardless of their color. The functional principle behind these sensing devices is based on triangulation principle, in which the position of the object is determined by the light reflected from it.

The sensors all work with visible red light and consequently, enable reliable and simple adjustment. The optics are made of scratch- and diffusion-resistant plastic.

The yellow LED display lights up if the output is securely switched.

Even with very fast production processes (1kHz sampling frequency of sensor), the sensor enables very exact detection of objects directly at the process.

Optoelectronic sensors are indispensable components in all automated production processes.

They are used in all applications where parts are to be detected, counted, measured or positioned in a way which does not involve contact and which is reliable and fast.

application examples

▶ highly accurate and color-independent positional measurement

▶ precise detection of deviations in position

article-no.	OT370520	OT370525
sensing range	**5 ... 400mm**	**5 ... 100mm**
version	**standard**	**rectangular beam spot**

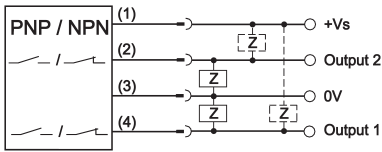**TECHNICAL DATA**

sensing range	white 90%: 5 ... 400mm gray 18%: 10 ... 300mm black 6%: 15 ... 200mm	white 90%: 5 ... 100mm gray 18%: 5 ... 90mm black 6%: 5 ... 80mm
output signal	push-pull [1]	push-pull [1]
operating voltage	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	≤ 15mA	≤ 15mA
output current (max. load)	100mA	100mA
transmitting element	LED, red light, pulsed	LED, red light, pulsed
wavelength	620nm	620nm
light spot size	focused at 100mm, approx. 5x5mm	3x40mm at sensing range 50mm
readiness delay	< 300ms	< 300ms
response time	< 0.5ms	< 0.5ms
sampling frequency	1kHz	1kHz
display (signal)	yellow LED	yellow LED
display (operation)	green LED	green LED
switch-point setting	potentiometer	potentiometer
short-circuit protection	+	+
reverse polarity protection	+	+
dimensions	14x35.5x25mm	14x35.5x25mm
housing material	stainless steel	stainless steel
front screen material	PMMA, scratch and diffusion resistant	PMMA, scratch and diffusion resistant
operating temperature	-30 ... +70°C	-30 ... +70°C
storage temperature	-30 ... +70°C	-30 ... +70°C
degree of protection (EN 60529)	IP67, IP69k [2]	IP67, IP69k [2]
connection	M12-connector, 4-pin	M12-connector, 4-pin
connection accessories	e.g. **VK200325**	e.g. **VK200325**
mounting accessories	**AY000119**	**AY000119**

[1] the push-pull switching outputs must not be connected in parallel

[2] only in combination with permanently connected M12 connector
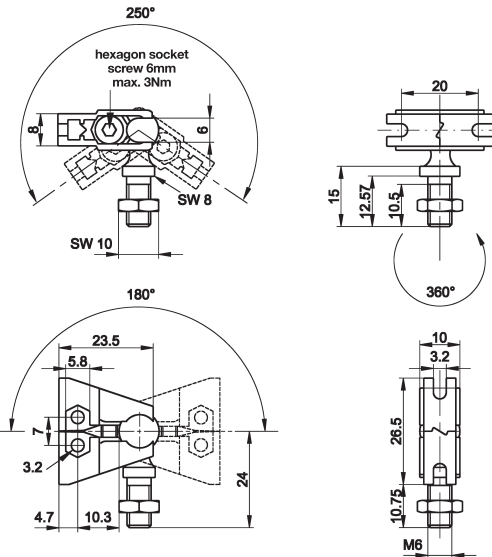
connection

OT37052x
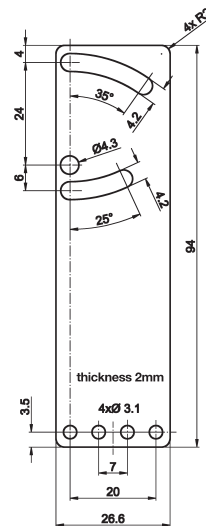
output 1: pnp light-on mode, npn dark-on mode

output 2: pnp dark-on mode, npn light-on mode

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

universal holder AY000119
consisting of **base module ...**

... and **fitting panel**

ACCESSORIES

article-no.	description	note
AY000088	base module *	jaw: stainless steel, ball pin: galvanized steel
AY000119	mounting kit for sensors	stainless steel

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

This data sheet contains the standard versions only. Kindly request the availability of other output- and connection functions.

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".

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

1950   diffuse reflection sensors

notes