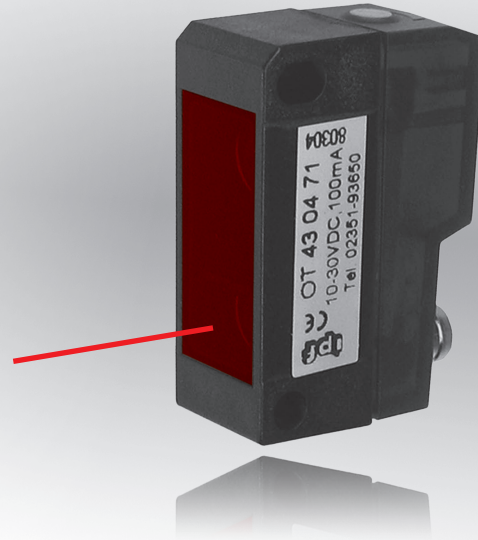
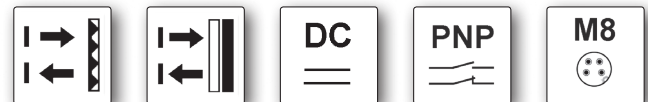


dimensions	<b>43 x 14.8 x 32.5mm</b>	
retro-reflective sensor	operating range	<b>7m</b>
dif. reflection sensors	sensing range	<b>5 to 600mm</b>

- ✓ **robust plastic housing**
- ✓ **high sampling frequency**
- ✓ **LED display for status and soiling**
- ✓ **high external light shielding**
- ✓ **connection with M8-connector, 4-pin**



**visible red light**  
**infinitely variable sensing range setting**



**description**

Retro-reflective sensors of the **OR43** series send a pulsed red light, which is reflected by a triple reflector or by a reflective film. The sensor switches when the light beam is interrupted. These devices detect objects regardless of their surface.

In the case of shiny metallic objects or highly reflecting objects, we recommend the use of a retro-reflective sensor with a polarizing filter.

The **OT43** series diffuse reflection sensors with background suppression have an accurately defined sensing range contrary to the retro-reflective sensors described above. Within this range, the devices recognize objects almost regardless of their surface and color.

Similarly, regardless of their surface all objects are ignored outside of the sharply-limited sensing range, i.e. in the background.

In the case of diffuse reflection sensors with intensity differentiation, the red light emitted from the sensed object is largely

reflected diffusely (in all directions). A very small part of this reflected light is picked up by the receiver. Provided that the sensed object is in the receiving range of the sensor, the light that is picked up causes the sensor to perform a switching operation.

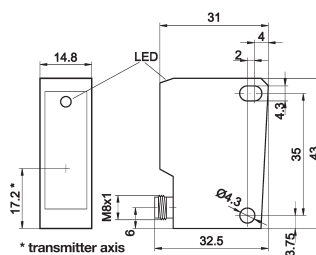
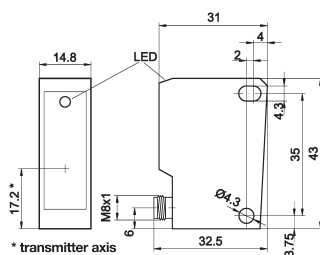
Optoelectronic sensors are indispensable components in all automated production processes.

Optical sensors 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**

- ▶ checking the presence of various objects
- ▶ avoiding collision, in the case of feeding movements
- ▶ monitoring object and stack heights
- ▶ limit switches, position switches and pulse generators

article-no.	<b>OR430370</b>	<b>OR430470</b>
version	<b>retro-reflective sensor for transparent objects</b>	<b>retro-reflective sensor polarizing filter</b>
output	<b>pnp, light-on/dark-on mode</b>	<b>pnp, light-on/dark-on mode</b>
operating range	<b>7m</b>	<b>7m</b>



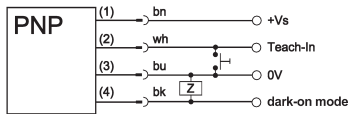
### TECHNICAL DATA

operating range	7m	7m
output signal	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
operating voltage	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	< 40mA	< 25mA
output current (max. load)	100mA	100mA
voltage drop (max. load)	2.2V DC	1.8V DC
transmitting element (pulsed)	LED, red light	LED, red light
wavelength	660nm	660nm
response/decay time	< 0.1ms	< 1.0ms
sampling frequency	5000Hz	500Hz
display (signal)	yellow LED	yellow LED
display (functional reserve)	-	yellow LED, flashing
sensitivity adjustment	teach-in	-
interference suppression	-	+
short-circuit protection	+	+
reverse polarity protection	+	+
dimensions	43x14.8x32.5mm	43x14.8x32.5mm
housing material	ASA	ASA
front screen material	PMMA	PMMA
operating temperature	-25 ... +65°C	-25 ... +65°C
degree of protection (EN 60529)	IP67	IP67
connection	M8-connector, 4-pin	M8-connector, 4-pin
connection accessories	e.g. <b>VK200375</b>	e.g. <b>VK200375</b>
mounting accessories (bracket)	<b>AO000082</b>	<b>AO000082</b>
mounting accessories (universal holder)	<b>AY000120</b>	<b>AY000120</b>

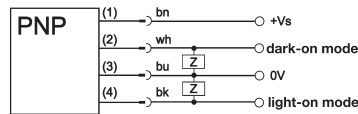
article-no.	OT430470	OT430471	OT430473
version	diffuse reflection sensor intensity differentiation	diffuse reflection sensor background suppression	diffuse reflection sensor background suppression
output	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
operating range	5 ... 600mm	20 ... 350mm	30 ... 500mm
<b>TECHNICAL DATA</b>			
sensing range	5 ...600mm	20 ...350mm	30 ...500mm
output signal	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode	pnp, light-on/dark-on mode
operating voltage	10 ... 30V DC	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	< 25mA	< 30mA	< 30mA
output current (max. load)	100mA	100mA	100mA
voltage drop (max. load)	1.8V DC	1.8V DC	1.8V DC
transmitting element (pulsed)	LED, red light	LED, red light	LED, red light
wavelength	660nm	660nm	660nm
response/decay time	< 1.0ms	< 1.0ms	< 5.0ms
sampling frequency	500Hz	500Hz	100Hz
display (signal)	yellow LED	yellow LED	yellow LED
display (functional reserve)	yellow LED, flashing	yellow LED, flashing	yellow LED, flashing
sensitivity adjustment	potentiometer 270°	mechanical, 10 revolutions	mechanical, 10 revolutions
interference suppression	+	+	+
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
dimensions	43x14.8x32.5mm	43x14.8x32.5mm	43x14.8x32.5mm
housing material	ASA	ASA	ASA
front screen material	PMMA	PMMA	PMMA
operating temperature	-25 ... +65°C	-25 ... +65°C	-25 ... +65°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. <b>VK200375</b>	e.g. <b>VK200375</b>	e.g. <b>VK200375</b>
mounting accessories (bracket)	<b>AO000082</b>	<b>AO000082</b>	<b>AO000082</b>
mounting accessories (universal holder)	<b>AY000120</b>	<b>AY000120</b>	<b>AY000120</b>

### connection

dark-on mode with teach-in

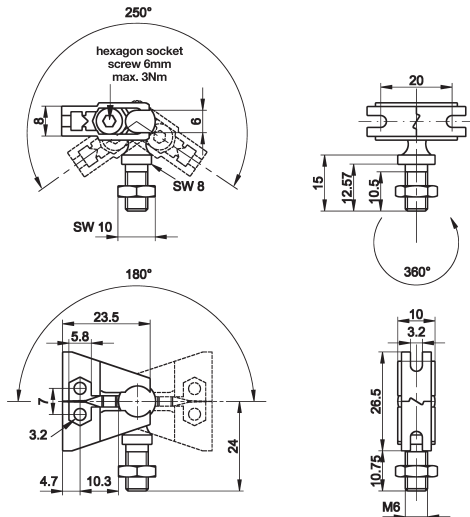


light-on/dark-on mode

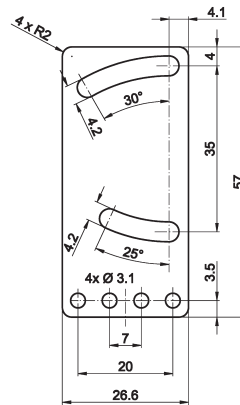


wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk = black (4)

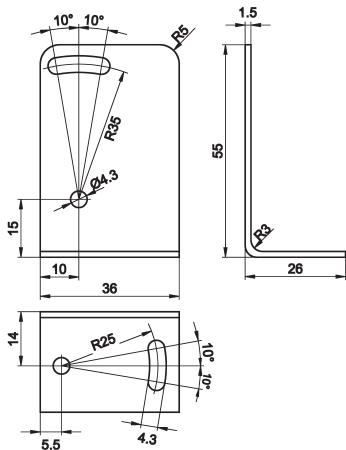
universal holder AY000120  
consisting of base module



... and fitting panel



mounting bracket AO000082



### ACCESSORIES

article-no.	description	note
AY000088	base module *	jaw: stainless steel, ball pin: galvanized steel
AY000120	mounting kit for sensors	stainless steel
AO000082	mounting bracket	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.

This data sheet as well as your personal contact can be found at [www.ipf-electronic.com](http://www.ipf-electronic.com)