

dimensions **50 x 15 x 40mm**  
diffuse reflection sensor operating range **30 up to 40mm**



- ✓ high switching frequency (up to 4kHz)
- ✓ 5 tolerance levels
- ✓ 10 bit processing of the RGB signals
- ✓ programmable pulse delay and pulse stretching
- ✓ connection via a rotatable M12 plug

**3-channel color sensor  
white light LED, teach in**

Colour

DC  
—

3 x  
PNP  
—

**description**

The *ipf* color sensor is able to detect differences in color, even when, at high speeds, only a fraction of a second is available to determine the shade.

The devices have three color teach channels with independent outputs. As such, up to three different shades can be programmed. Each of the three channels is available as a separate evaluation output.

Using the intuitive keypad with three keys, the sensor is very easy to use.

If the sensor re-detects a color in the measuring mode, it activates the corresponding output. Selectable tolerances allow

you to detect large or subtle color differences.

Although slight color differences are easily detected when small tolerances are set, some color variations can be accepted with higher tolerances.

With the *ipf* color sensor, you can now use the criterion of color in your sorting, quality control, and automation processes.

**application examples**

- ▶ quality checks
- ▶ recognizing label and color markings
- ▶ color measurement in printing machines

article-no.

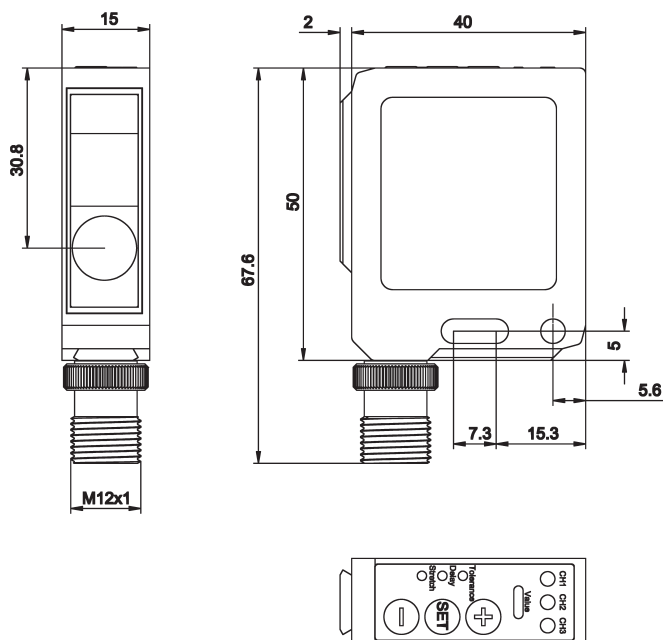
OF210120

operating range

30 ... 40mm

output signal

3 x pnp, light-on mode

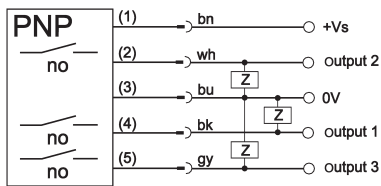


### TECHNICAL DATA

sensing range	30 ... 40mm
output signal	3 x pnp, light-on mode
measuring spot size	Ø 4mm with sensing range 35mm
operating voltage	10 ... 30V DC
current consumption (w/o load)	≤ 35mA
output current (max. load)	200mA per channel
voltage drop (max. load)	2.0V DC
transmitting element (pulsed)	white LED
readiness delay	220msec
turn-on/-off delay	10/50/100/200/500msec
sampling frequency	tolerance 3, 4, 5: ≤ 4kHz / tolerance 1, 2: ≤ 1,25kHz
display (signal)	3 x yellow LED
setting	tolerance: 5-levels adjustable
short-circuit protection	+
reverse polarity protection	+
dimensions	50 x 15 x 40mm
material (housing)	PBTB
material (front screen)	glass
operating temperature	-5 ... +55°C
storage temperature	
system of protection (EN 60529)	IP67
connection	M12-connector, 5-pin, 90° rotatable
connection accessories	e.g. VK205625
mounting accessories	dovetail mounting

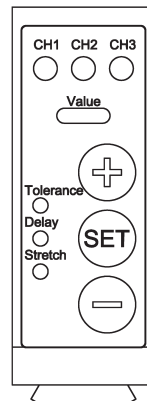
**connection**

connection version

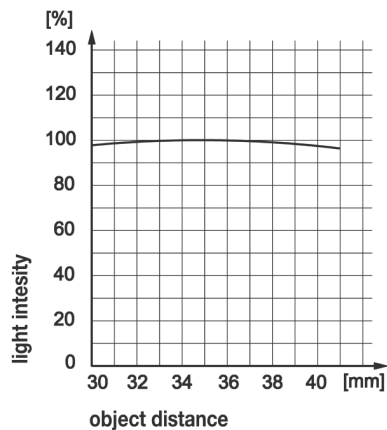


**wire colors:** bn = brown (1), wh = white (2), bu = blue (3),  
bk = black (4), gy = grey (5)

operator control and indicating element

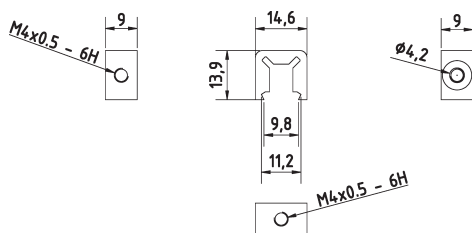


Variation of the received light intensity as the function of the object distance



PIN	color	assignment
1	brown	TD +
2	white	RD +
3	blue	TD -
4	black	TD -

dovetail fixing



**ACCESSORIES**

article-no.	description	material
	dovetail fixing (enclosed)	aluminum black anodized

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.

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.