

# OF210120

## Optical sensors • Color sensors

sensor optical, color, 50x40x15mm, White light, Sn: 30-40, 10-30V DC, 3x PNP NO (NO), Connector M12 5pin, IP67, PBTP+Glass, 4kHz, 3 colors

including Screw



The functioning of the color sensors is based on the evaluation of the red, green and blue components of the light reflected by the objects to be measured, or from the emitted radiation of the 'self-luminous' object (for example, LEDs, automobile tail lights, halogen lamps, fluorescent lamps, etc.). For this purpose, a so-called 3-fold receiver is integrated in the unit next to an on / off switchable white light or UV-light. This receiver works according to the True Color principle. This means that the evaluation of the light hitting the receiver is similar to the color perception of the human eye. This is a prerequisite for the reliable differentiation of objects or luminous objects by their color and brightness. For testing fluorescent materials the use of sensors with UV-light source is recommended. The use under adverse environmental conditions is possible through the use of additional fiber optics. The interaction between a precise detection and a high switching frequency distinguishes the devices. Thus, they are an ideal tool for process and quality control.

### Electrical features

Number of switching outputs	3
Display	LED display
Type of switching function	Normally open contact (NO)
Type of electrical connection	Connector M12
Type of switching output	PNP
Rated switching current	200 mA
Setting procedure	Teach-In
No-load current	180 mA
Number of pins	5
Switching frequency	4000 Hz
Protection class	III
Reverse polarity protection	Yes
Overload protection	Yes
Operating voltage (DC)	10 - 30 V
Measuring range	30 - 40 mm
Time function	Yes

**Mechanical features**

Design	Cuboid
Width	15 mm
Height	50 mm
Length	40 mm
Degree of protection (IP)	IP67
Active area material of sensor	glass
Housing material	PBT
Number of colors	3
Ambient temperature	-5 - 55 °C

**Optical features**

Light source	White light
Measuring method for color detection	Active tristimulus method
Nominal operating distance	35 mm
Number of colors	3
focus	35 mm
Light spot diameter at focal point	4 mm

**Other features**

Reference distance	35
--------------------	----

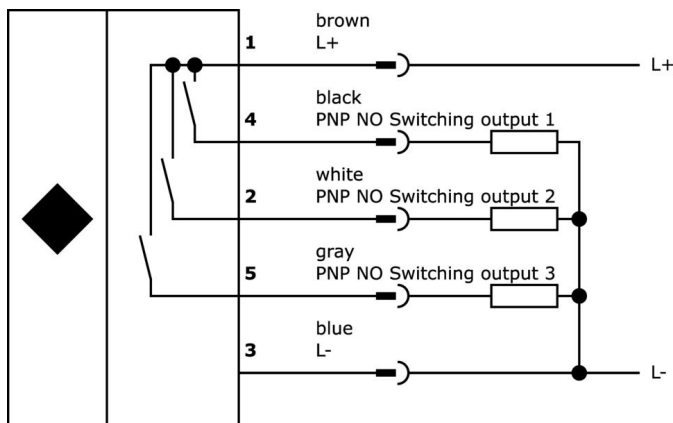
**Classification**

ETIM 8	EC001817 Color probe
--------	----------------------

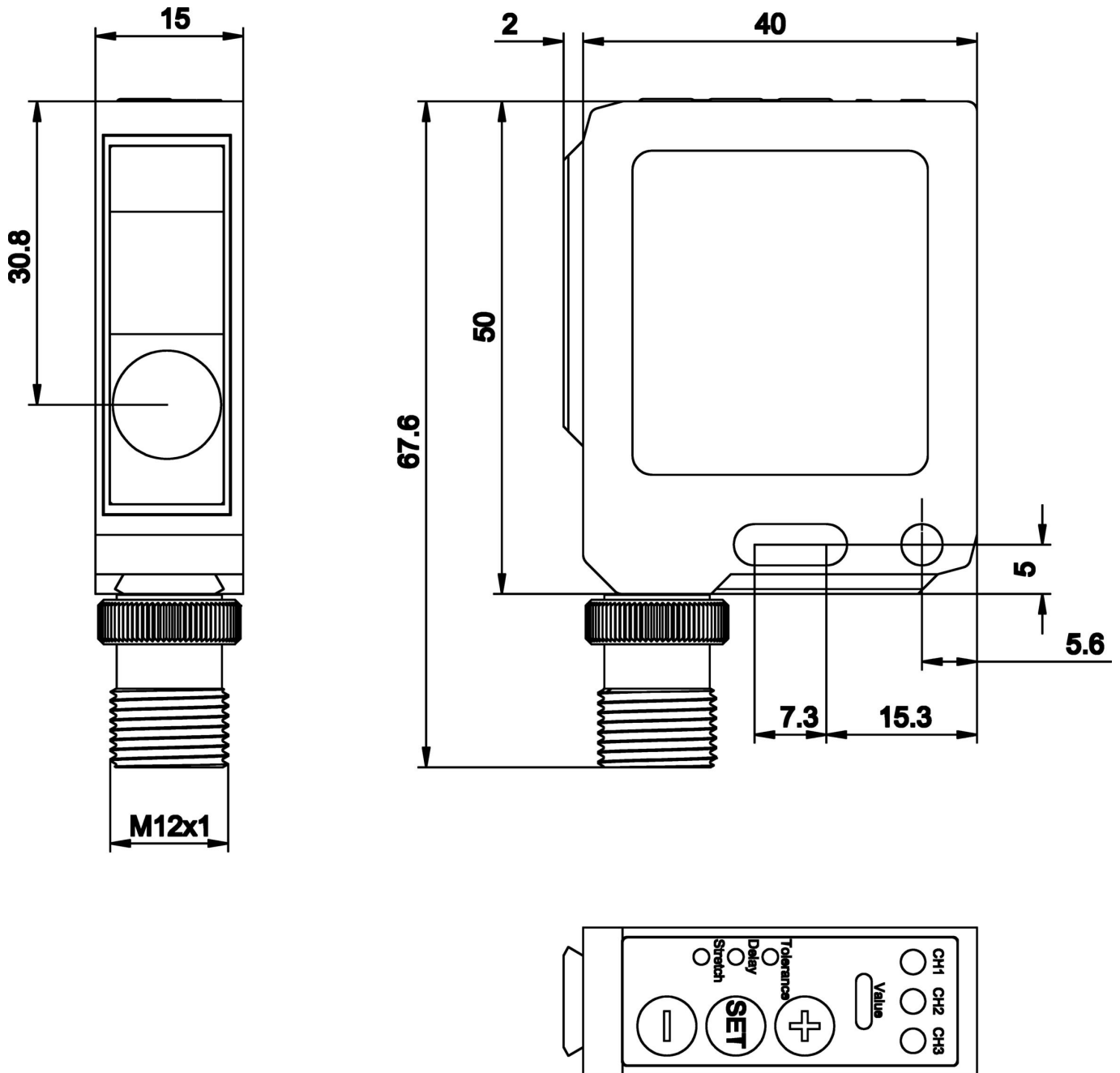
**More**

IPF Product Group	104 color sensors
packaging dimensions	210 x 185 x 15 mm
gross weight	46 g
Customs tariff number	85365019
WEEE number	40951076
Reach-compliant	Yes
RoHS-compliant	Yes

**Connection**




**Dimensional drawing**




**Extract accessories program**

**VK205621**




Connection cable, 2m, M12  
Female (socket) 5pin Angular, Free conductor end, 5x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø6mm, 60V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-free

**VK205625**



Connection cable, 2m, M12  
Female (socket) 5pin Straight, Free conductor end, 5x0.34mm<sup>2</sup>, PUR (Polyurethane), Ø6mm, 60V, -25-90°C, IP67, Shielded, Suitable for trailing chain and torsion resistant, Oil and cooling lubricants, Welding area, Silicone-...

**VK000041**



Adaption, M12 Female (socket) 4pin Straight, M8 Male (connector) 4pin Straight, 24V, -25-85°C, IP67, Oil and cooling lubricants, Welding area

You can find further accessories on our homepage

**Installation**

Mounting / installation may only be carried out by a qualified electrician!

**Disposal**

WEEE number according to § 6 para. 3  
ElektroG: 40951076

**Safety warnings**

- / Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.
- / Never use these devices in applications where the safety of a person depends on their functionality.