OF98A302

OPTICAL SENSORS • COLOR SENSORS

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.

MECHANICAL DATA

Ambient temperature	-20 °C ... 55 °C
Degree of protection (IP)	IP64
For damp environments	Yes
Housing design	Cuboid
Housing material	Aluminium
Material of optical surface	Glass
Sensor height	50 mm
Sensor length	50 mm
Sensor width	17 mm

ELECTRICAL DATA

Equipment protection class	Protection class 3
Max. number of measurements for averaging	32768
Max. output current	100 mA
No-load current	160 mA
Number of pins	8
Number of pins of the communication interface	4
Number of switching outputs	3
Operating voltage	12 V ... 28 V
Overload protection	Yes
Rated control supply voltage Us at DC	12 V ... 28 V
Response/decay time	10 ms
Reverse polarity protection	Yes
Setting procedure	Teach-In
Switching frequency	60000 Hz
Type of electrical connection	Connector M12
Type of switching function	Normally open contact (NO)

ELECTRICAL DATA

Type of switching output	PNP
Voltage type	DC
With time function	Yes

OPTICAL DATA

Alternating light operation	Yes
Light source	White light
Light spot	12.57 mm²
Light spot diameter	4 mm
Max. ambient light	5000 lx
Measuring method for color detection	Active tristimulus method

DIMENSIONAL DRAWING

INSTALLATION

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

DISPOSAL

SAFETY WARNINGS

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

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