

## PK170020

### LASER SENSORS • CONTRAST SCANNERS

Contrast scanners are capable to distinguish the the visual differences (e.g. reflectivity, brightness differences) between adjacent areas. In general, the devices project a light spot on an object's surface and analyze the reflected light. Fiber optic amplifier versions can be used in addition to the incident light mode also in the transmitted light mode. Contrast scanners are versatile. They can be used, among other things, for position control of printing or color marks, distinction of brightness variations or in the intensity control of luminous objects (like LEDs, displays etc.).



#### MECHANICAL DATA

Ambient temperature (MAX)	50 °C
Ambient temperature (MIN)	-10 °C
Degree of protection (IP)	IP67
Housing design	Cuboid
Housing material	Zinc die-cast
Material of optical surface	Glass
Sensor height	50 mm
Sensor length	50 mm
Sensor width	15.4 mm
With fiber optics connection	No
With interchangeable lens	No

#### ELECTRICAL DATA

Analogue output 0 mA ... 20 mA	No
Analogue output 0 V ... 10 V	No
Analogue output -10 V ... +10 V	No
Analogue output 4 mA ... 20 mA	Yes
Large sensing range	Yes
Max. output current	200 mA
No-load current	65 mA
Number of pins	4
Operating voltage (MAX)	30 V
Operating voltage (MIN)	12 V
Rated control supply voltage $U_s$ at DC (MAX)	30 V
Rated control supply voltage $U_s$ at DC (MIN)	12 V
Reverse polarity protection	Yes
Sensing range (MAX)	80 mm
Sensing range (MIN)	40 mm
Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Switching frequency	5000 Hz

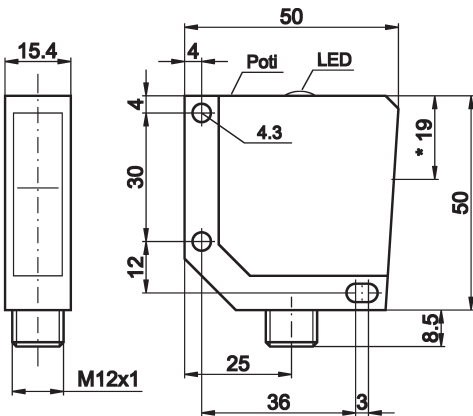
**ELECTRICAL DATA**

Type of electrical connection	Connector M12
Type of switching function	Normally open contact (NO)
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With blanking function	No
With LED display	Yes
With time function	No

**OPTICAL DATA**

Laser protection class	Class 1
Light source	Laser diode, red light
Nominal sensing range	250 mm
Small light beam diameter	Yes
Wavelength of the sensor	650 nm

**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!

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