SENSOR WITH UV LED EMISSION AND PLASTIC HOUSING

LUMINESCENCE SENSORS

- *High sensitivity and powerful UV LED emission*
- *Fast switching frequency and low response time*
- *Easy sensor setting by means of two pushbuttons Up/Down*
- *Sturdy plastic housing with standard dimensions and fixing holes*

LD50 SERIES

LD50 luminescence sensor line offers the best solution for all the applications where a cost reduction is requested, without compromising the excellent detection performances.

The optimised optics of these sensors, together with the powerful UV LED emission and the high receiving sensitivity of visibile light, allow the detection of the weakest luminescence level, like in case of small flourescent markings, with the highest immunity from the surface colour or reflectivity variations.

Thanks to only two pushbuttons 'Up' and 'Down' for sensitivity increase and decrease, the sensor setting is very easy and intuitive. Furthermore, different luminescence levels present on the same surface can be distinguished.

LD50 sensors can find typical applications on packaging machinery for food, cosmetic or pharmaceutical goods, for the detection of papermade luminescent targets, like labels on reflective surface or sheets placed inside transparent or semi-open boxes.

Other frequent applications can be found in ceramic, wood, textile or mechanical industries, always for fluorescent parts or marks detection.

Thanks to the compact dimensions and multiple fixing holes with metallic inserts present in standard positions, the sturdy ABS plastic housing is fully compatible and can replace the most of traditional luminescent sensors, also offering an appreciable cost reduction.

DATASENSOR
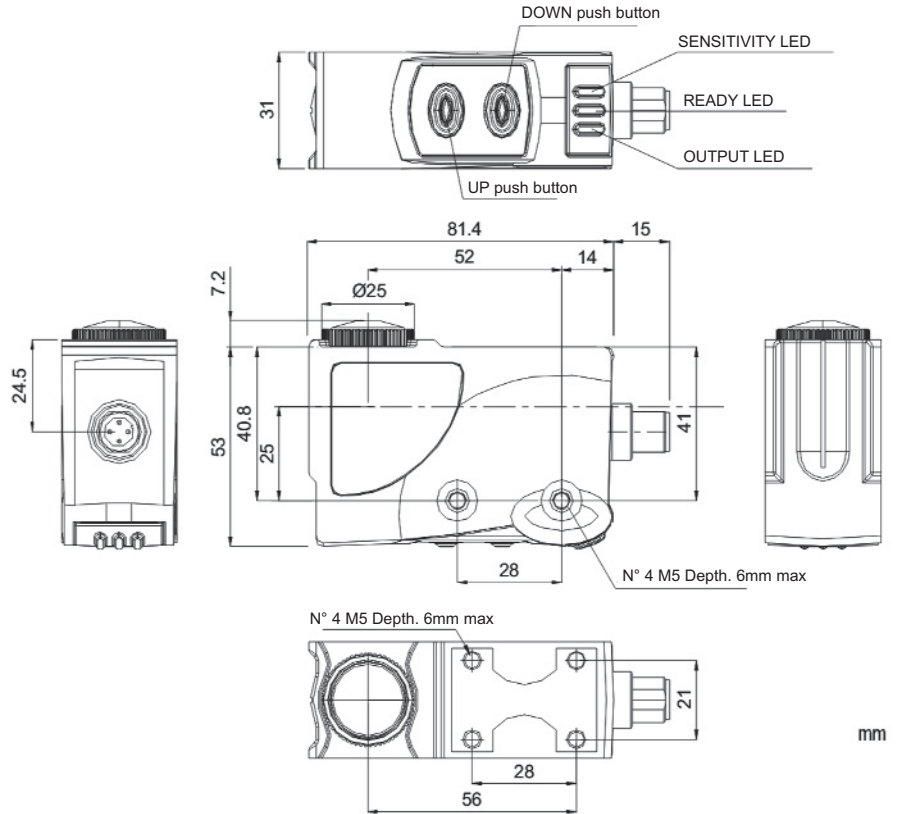value through detection

LD50 SERIES

SETTING

The sensitivity of the sensor can be adjusted, in order to detect objects with different luminescence levels.

By means of UP or DOWN pushbuttons it is possible to increase or decrease step by step the sensitivity level.
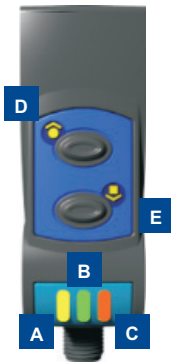
The orange LED blinks with a frequency which is proportional to the sensitivity level.

The maximum sensitivity can be set by pressing both the UP and DOWN pushbuttons at the same time, in this case the orange LED turns on without blinking.

DIMENSIONS

DOWN push button
SENSITIVITY LED
READY LED
OUTPUT LED
UP push button

81.4
52
15
14
7.2
Ø25
24.5
53
40.8
25
41
28
N° 4 M5 Depth. 6mm max

N° 4 M5 Depth. 6mm max
31
21
28
56

mm

INDICATORS AND PUSH-BUTTONS

D

E

B

A   C

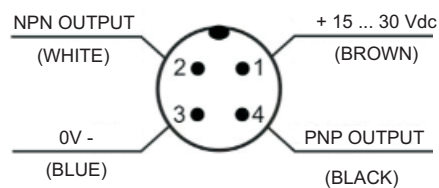|	
A yellow OUTPUT LED	**D** UP push button
B green READY LED	**E** DOWN push button
C orange SENSITIVITY LED	

ACCESSORIES

For d**edicated accessories** refer to the **ACCESSORIES** section of this catalogue.

Refer also to **Connectors** of the **General Catalogue**.
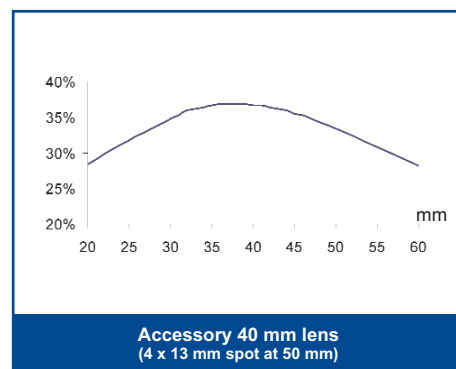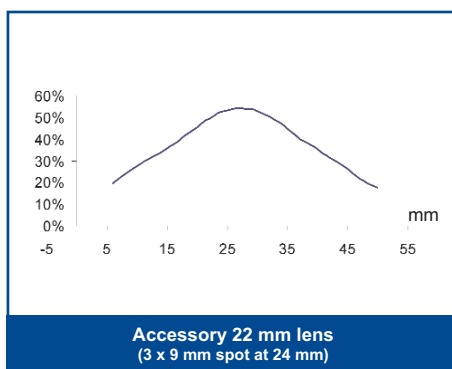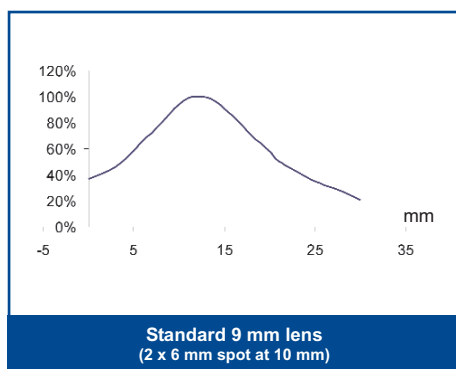
CONNECTIONS

M12 CONNECTOR

NPN OUTPUT
(WHITE)

+ 15 ... 30 Vdc
(BROWN)

2   1
3   4

0V -
(BLUE)

PNP OUTPUT
(BLACK)

DATASENSOR

TECHNICAL DATA

Power supply:	15 … 30 Vdc, reverse polarity protection
Consumption:	50 mA max at 24 Vdc
Light emission:	LED UV, 375 nm [1]
Spot dimension:	2 x 6 mm at 10 mm
Operating distance:	10 … 20 mm
Setting:	manual using UP and DOWN push-buttons
Indicators:	yellow OUTPUT LED
	green READY LED
	orange SENSITIVITY LED
Output type:	1 NPN output
	1 NPN output
Output current:	100 mA max.
Saturation voltage:	≤ 2 V
Response time:	250 µs
Switching frequency:	2 kHz
Operating mode:	light
Connections:	M12 4-pole connector [2]
Insulation:	>20Mohm
Mechanical protection:	IP67
Protection devices:	A, B [3]
Housing material:	ABS
Lens material:	glass
Weight:	180 g max.
Operating temperature:	-10…55°C
Storage temperature:	-20…70°C
Reference standard:	EN 60947-5-2

CE 〈Ex〉 II3D

TECHNICAL NOTES

[1] Average life of 100.000 h with T_A = +25 °C

[2] Connector block rotatable on 4 positions

[3] A - reverse polarity protection
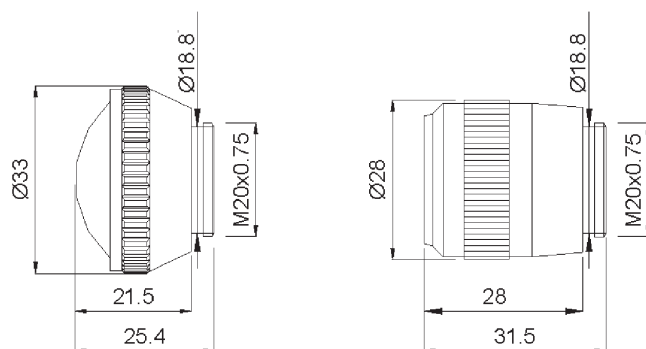B - overload and short-circuit protection

DETECTION DIAGRAMS

Standard 9 mm lens
(2 x 6 mm spot at 10 mm)

Accessory 22 mm lens
(3 x 9 mm spot at 24 mm)

Accessory 40 mm lens
(4 x 13 mm spot at 50 mm)

DATASENSOR

MODEL SELECTION AND ORDER INFORMATION

MODEL	OPERATING DISTANCE	ORDER N°
LD50-U-715	10 - 20 mm	955251000

ACCESSORY LENSES

DIMENSIONS

Lens 40 mm glass   Lens 22 mm glass

mm

ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	ORDER N°
Lens No.22 glass	glass lens with 22 mm focus	95ACC1100
Lens No.40 glass	glass lens with 40 mm focus	95ACC1220

*Please refer also to **Sensor Accessories***

LUMINESCENCE SENSORS