Diffuse mode sensor

MLV13-8-400/32/40b/115

with 2 m fixed cable

$C\epsilon$

- ◆ **Visible red light**

- ◆ **Pre-fault indication**

- ◆ **Control input for light-/dark switching**

- ◆ **Protection degree IP67**

General specifications

Detection range	5 ... 400 mm , adjustable
Light source	LED
Approvals	CE
Reference target	standard white, 100 mm x 100 mm
Light type	red, modulated light
Ambient light limit	10000 Lux

Indicators/operating means

Function display	switching state: LED yellow pre-fault indicator: LED red
Operating elements	sensitivity adjuster

Electrical specifications

Operating voltage	10 ... 30 V DC
Ripple	10 %
No-load supply current I_0	$\leq$ 25 mA
Time delay before availability t_v	$\leq$ 30 ms

Input

Control input	Light ON: +UB Dark ON: 0 V

Output

Switching type	light/dark switching
Signal output	1 PNP output, short-circuit proof, protected from reverse polarity, open collector
Switching voltage	max. 30 V DC
Switching current	max. 200 mA
Voltage drop U_d	$\leq$ 2.5 V DC
Switching frequency f	$\leq$ 500 Hz
Response time	$\leq$ 1 ms

Standard conformity

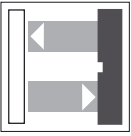|	
Standards	EN 60947-5-2

Ambient conditions

Ambient temperature	-25 ... 70 °C (248 ... 343 K)
Storage temperature	-40 ... 70 °C (233 ... 343 K)

Mechanical specifications

Protection degree	IP67
Connection	fixed cable 2 m
Material	
Housing	ABS
Optical face	scratch resistant plastic pane
Mass	40 g

Curves/Diagrams

Detection ranges

Object colour

grey

white

0   50   100   150   200   250   300   350   400   450

Distance X [mm]

x

Characteristic response curve

MLV13-8-400

Offset Y [mm]

15
10
5
0
-5
-10
-15

0   200   400   600

Distance X [mm]

X

-Y | Y

Dimensions

38

3.2

3.5

LED

4

45

3.2

4

3.5

4

18

Center of receiver optical axis

Center of emitter optical axis

26

18

Sensivity adjuster

Electrical connection

Option:

WH	IN
BN	+UB
BK	Q
BU	0 V

●

○
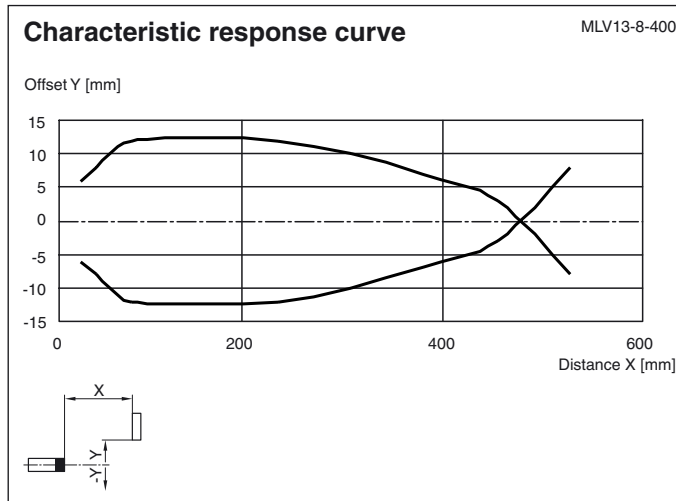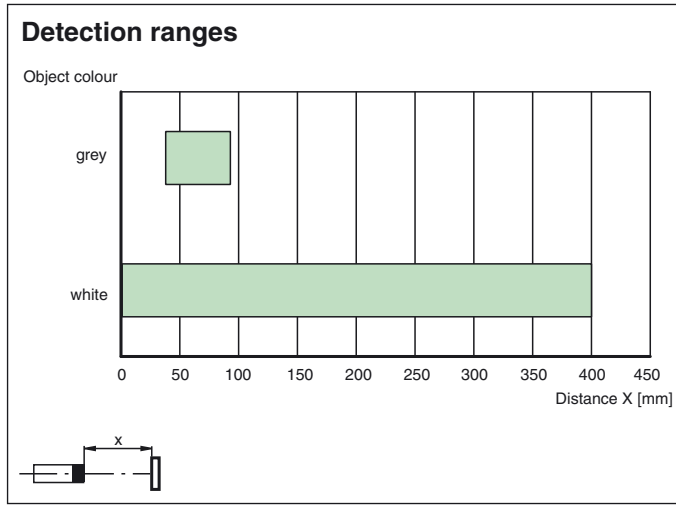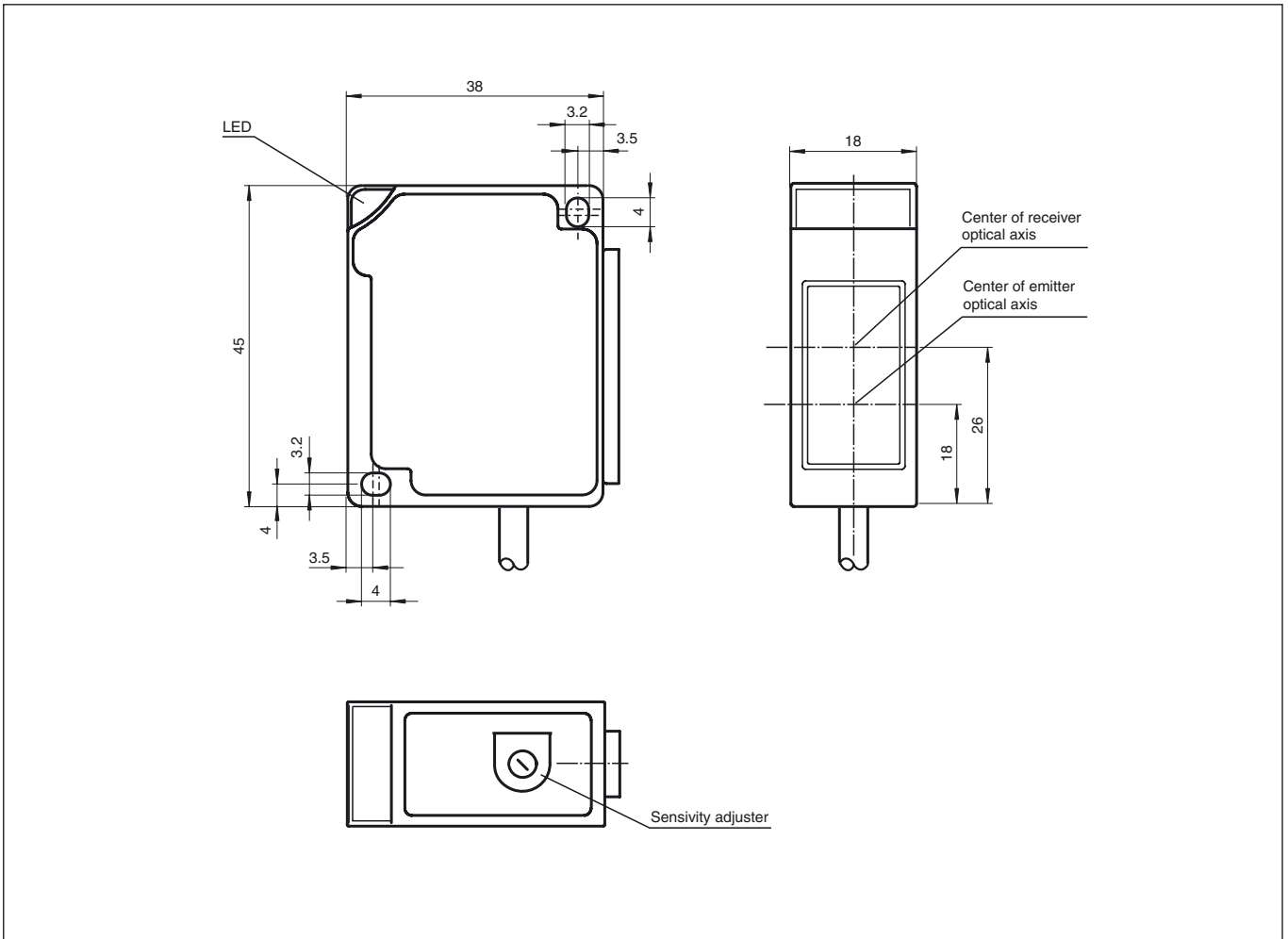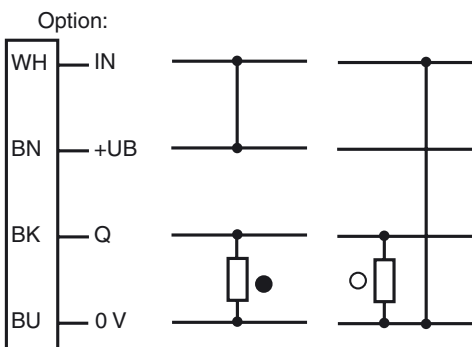
○ = light on, ● = dark on

Additional Information

Conventional use:

The reflex light scanner contains the emitter and receiver in a single housing. The light from transmitter is beamed back from the recorded object is evaluated by the receiver. The detection range depend on the object colour. With dark or very small objects the detection range reduces.

Mounting instructions:

The sensor can be fastened over the through-holes directly or with the included mounting bracket.
The base surface must be flat to avoid distorting the housing during mounting. It is advisable to secure the bolts and screws with washers so that the sensor does not become misaligned.

Instructions for adjustment:

Adjust the sensor on the background. If the yellow LED illuminates, the detection range needs to be reduced with the detection range adjuster, until the yellow LED goes off.

Object detection check:

Position the object into the light beam. Position light spot on object. If the object is detected, the yellow LED illuminated. If it does not light up, further to adjust the detection range with the potentiometer, until the yellow LED lights up.
The red LED flashes if reception deteriorates (e.g. soiled lenses or by maladjustment) and when falling short of the stability control.

Iustration:

We recommend that you clean the optical interfaces and check the plug-in connections and screw connections at regular intervals.

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