Dimensions

Model Number

ML7-8-H-140-IR/59/65a/115/136

Background suppression sensor
with 2 m fixed cable
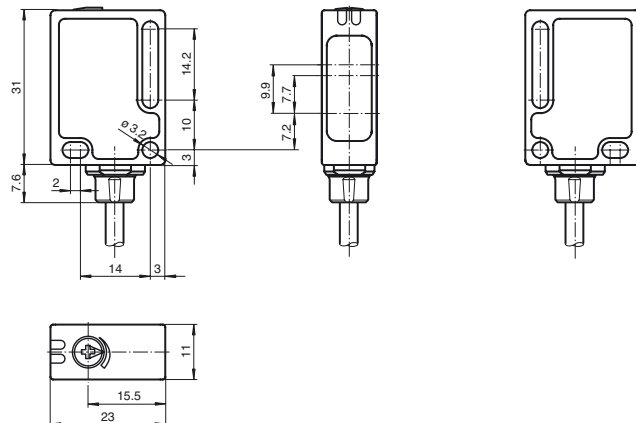
Features

• Miniature design

• Reliable detection of all surfaces, in-
  dependent of color and structure

• Minimal black-white difference

• Precision background suppression,
  adjustable

• Clearly visible function indicators

• Short circuit and low voltage indicator

• Certified by ECOLAB

Electrical connection

Option:
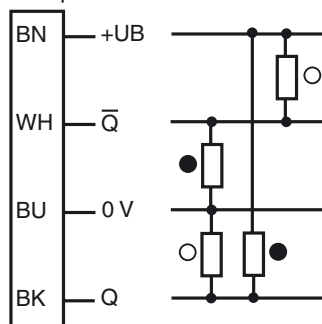

○ = Light on
● = Dark on

Product information

Small, robust, effective, and reliable - these
are the properties of the ML7 sensor series.
Due to their small size, number of versions,
and two different lens positions, they are par-
ticularly suited for installation in tight spaces.
The robust design and high quality of Pep-
perl+Fuchs mean they can also be used
under harsh environmental conditions. The
efficient technology, switching frequencies up
to 1000 Hz, high resistance to ambient light,
and 4-in-1 output make the series suitable for
non-contact object detection.

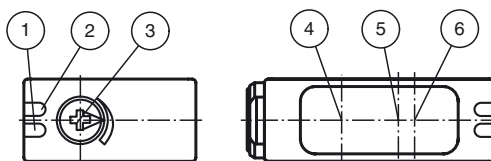## Indicators/operating means

1	Operating display	green
2	Signal display	yellow
3	Sensing range adjuster	
4	Emitter	
5	Receiver TW min.	
6	Receiver TW max.	

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

| Pepperl+Fuchs Group | USA: +1 330 486 0001 | Germany: +49 621 776 4411 | Singapore: +65 6779 9091 |
| www.pepperl-fuchs.com | fa-info@us.pepperl-fuchs.com | fa-info@de.pepperl-fuchs.com | fa-info@sg.pepperl-fuchs.com |

PEPPERL+FUCHS
SENSING YOUR NEEDS

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Technical data

General specifications

Detection range	4 ... 140 mm
Detection range min.	4 ... 25 mm
Detection range max.	12 ... 140 mm
Adjustment range	25 ... 140 mm
Reference target	standard white, 100 mm x 100 mm
Light source	IRED
Light type	modulated infrared light
Black/White difference (6 %/90 %)	< 6 %
Diameter of the light spot	approx. 5 mm at detection range 120 mm

Functional safety related parameters

$MTTF_d$	1580 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)
Function indicator	LED yellow: lights when object is detected
Control elements	Detection range adjuster

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC , class 2
Ripple		max. 10 %
No-load supply current	I_0	< 20 mA

Output

Switching type		light/dark on
Signal output		2 push-pull (4 in 1) outputs, complementary, short-circuit proof, reverse polarity protected
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Switching frequency	f	1 kHz
Response time		500 μs

Ambient conditions

Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-40 ... 75 °C (-40 ... 167 °F)

Mechanical specifications

Degree of protection	IP67 / IP69K
Connection	2 m fixed cable
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Mass	approx. 10 g

Compliance with standards and directives

Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

Protection class	II, rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval	cULus
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories

Montagekit OMH-ML7-01
Mounting set consisting of bracket OMH-ML-01 sheet OMH-ML7-03, and fastening material

Montagekit OMH-ML7-02
Mounting set consisting of bracket OMH-ML-02 sheet OMH-ML7-03, and fastening material

OMH-ML7-01
Mounting bracket
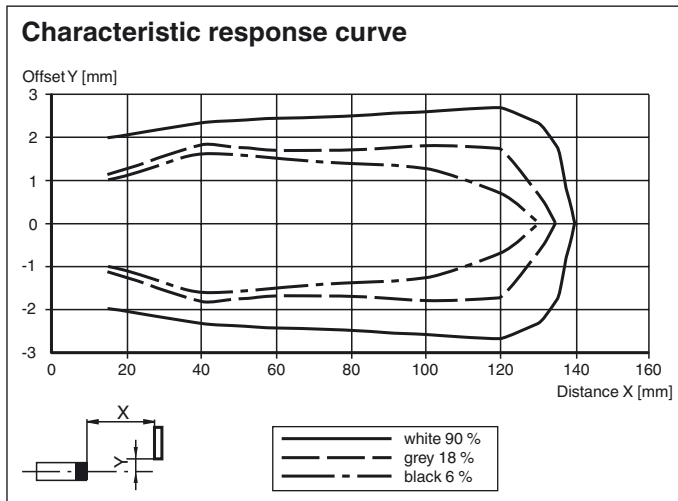
OMH-ML7-02
Mounting bracket

OMH-ML7-03
Fixing plate

Other suitable accessories can be found at www.pepperl-fuchs.com

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Curves/Diagrams

Characteristic response curve

Offset Y [mm]

Distance X [mm]

white 90 %
grey 18 %
black 6 %

Curves/Diagrams

Difference in detection distance

ML7-8-H-...IR...

Deviation of measured detection distance X [%]

Adjusted detection distance (white) X [mm]

grey 18 %
black 6 %

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

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