



**Model Number**

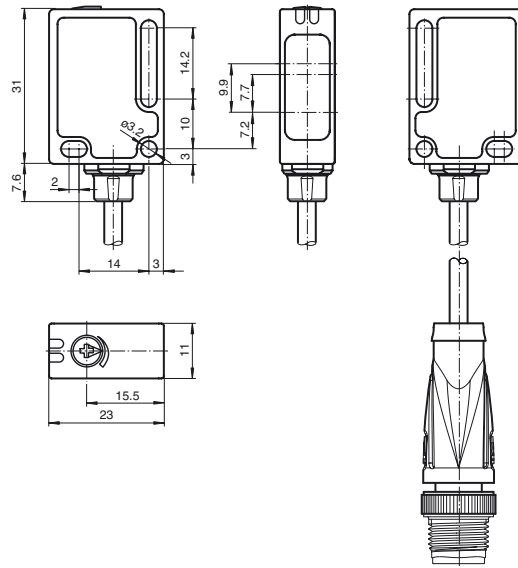
**ML8-8-H-140-RT/59/65a/103/115b**

Background suppression sensor with fixed cable and M12 connector, 4-pin

**Features**

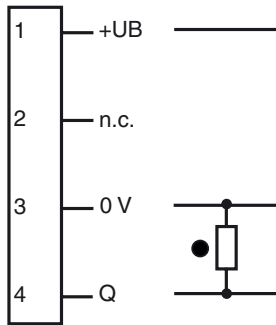
- Miniature design
- Minimal black/white difference
- Flexible mounting possibilities due to slotted hole
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

**Dimensions**



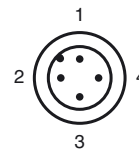
**Electrical connection**

Option: 103

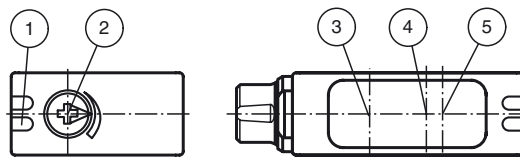


○ = Light on  
● = Dark on

**Pinout**



**Indicators/operating means**



1	Functional display	yellow
2	Detection range adjuster	
3	Optical axis Emitter	
4	Optical axis Receiver min.	
5	Optical axis Receiver max.	

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Subject to modifications without notice

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**Technical data****General specifications**

Detection range	5 ... 140 mm
Detection range min.	5 ... 25 mm
Detection range max.	13 ... 140 mm
Adjustment range	25 ... 140 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated visible red light
Black/White difference (6%/90%)	< 15 %
Diameter of the light spot	approx. 5 mm at detection range 120 mm
Ambient light limit	30000 Lux

**Functional safety related parameters**

MTTF <sub>d</sub>	2090 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Function display	LED yellow: lights when object is detected
Controls	Detection range adjuster

**Electrical specifications**

Operating voltage	U <sub>B</sub>	10 ... 30 V DC, class 2
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	< 20 mA

**Output**

Switching type	dark on	
Signal output	1 PNP output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 100 mA	
Switching frequency	f	200 Hz
Response time		2.5 ms

**Ambient conditions**

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

**Mechanical specifications**

Protection degree	IP65
Connection	fixed cable 300 mm with M12 connector, 4-pin
Material	
Housing	PC (glass-fiber-reinforced Makrolon)
Optical face	PMMA
Mass	approx. 50 g

**Compliance with standards and directives**

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2:2007
Protection degree	EN 60529
Standards	EN 50178, UL 508

**Approvals and certificates**

Protection class	II, rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

**Accessories****Montagekit OMH-ML7-01**

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

**Montagekit OMH-ML7-02**

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

**OMH-ML7-01**

Mounting bracket

**OMH-ML7-02**

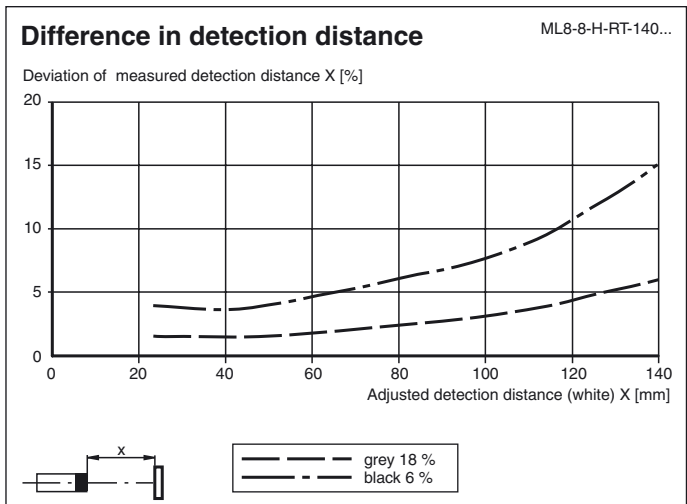
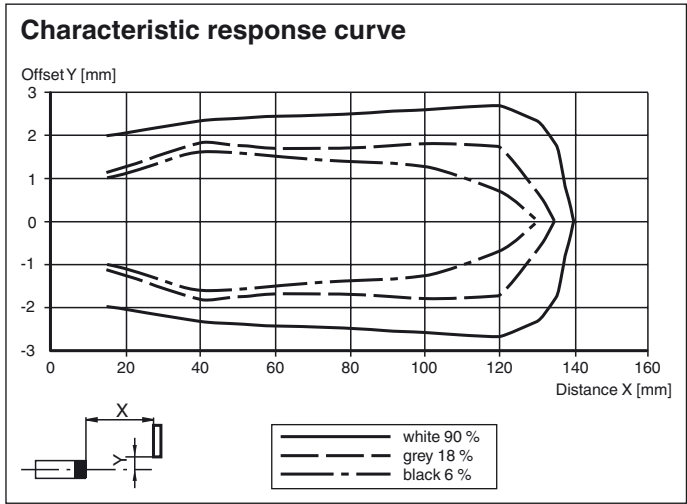
Mounting bracket

**OMH-ML7-03**

Fixing plate

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

Curves/Diagrams



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