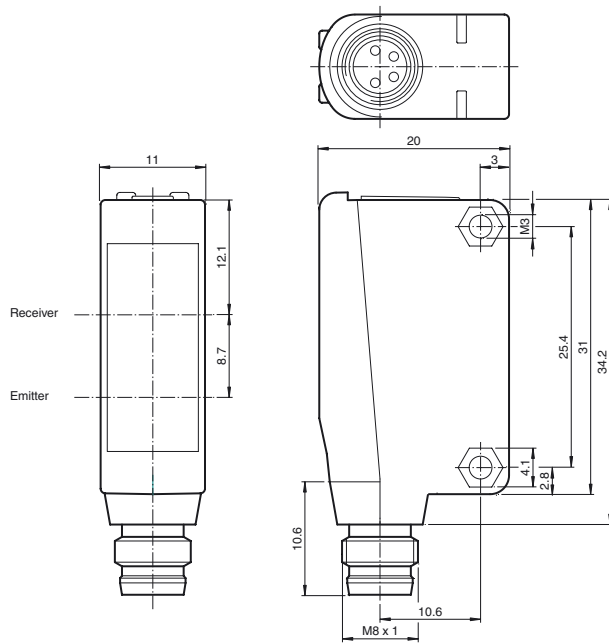CE c UL us LISTED

Model Number

ML100-8-HGU-100-IR/95/102/162

Convergent mode sensor
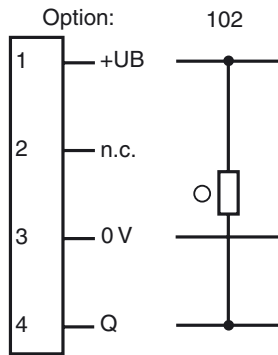with 4-pin, M8 x 1 connector

Features

- Miniature design
- Diffuse mode sensor with long, narrow light spot
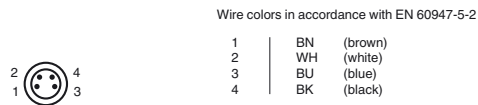- Easy to use
- Full metal thread mounting
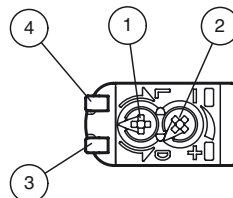
Dimensions

Electrical connection

Option: 102

1	+UB
2	n.c.
3	0 V
4	Q

○ = Light on
● = Dark on

Pinout

Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Indicators/operating means

1	Light-Dark-switching	
2	Sensitivity adjuster	
3	Signal display	yellow
4	Operating display	green

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 4411
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS
SENSING YOUR NEEDS

1

Technical data

General specifications

Detection range	7 ... 100 mm
Adjustment range	30 ... 100 mm
Reference target	standard white, 100 mm x 100 mm
Light source	LED
Light type	modulated infrared light
Polarization filter	no
Diameter of the light spot	approx. 7 mm x 50 mm at 100 mm
Angle of divergence	Emitter: 3.5 ° vertical ; 30 ° horizontal
Optical face	frontal
Ambient light limit	EN 60947-5-2:2007+A1:2012

Functional safety related parameters

$MTTF_d$	860 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED green: power on
Function indicator	LED yellow: lights when object is detected
Control elements	Sensing range adjuster
Control elements	Light-on/dark-on changeover switch

Electrical specifications

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

Output

Switching type		The switching type of the sensor is adjustable. The default setting is: light on
Signal output		1 NPN output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 100 mA , resistive load
Voltage drop	U_d	≤ 1.5 V DC
Switching frequency	f	500 Hz
Response time		1 ms

Ambient conditions

Ambient temperature	-30 ... 60 °C (-22 ... 140 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

Mechanical specifications

Housing width	11 mm
Housing height	31 mm
Housing depth	20 mm
Degree of protection	IP67
Connection	Connector M8 x 1 , 4-pin
Material	
Housing	PC (Polycarbonate)
Optical face	PMMA
Mass	approx. 10 g
Tightening torque, fastening screws	0.6 Nm

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 60947-5-2:2007+A1:2012
Standard conformity	
Standards	UL 60947-5-2

Approvals and certificates

UL approval	cULus Listed, Class 2 Power Source or listed Power Supply with a limited voltage output with (maybe integrated) fuse (max. 3.3 A according UL248), Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories

OMH-ML100-03
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

OMH-ML100-04
Mounting aid for ML100 series, Mounting bracket

OMH-ML100-05
Mounting aid for ML100 series, Mounting bracket

OMH-F10-ML100
Mounting aid for ML100 series

OMH-10
Mounting aid

V31-GM-2M-PUR
Female cordset, M8, 4-pin, PUR cable

V31-WM-2M-PUR
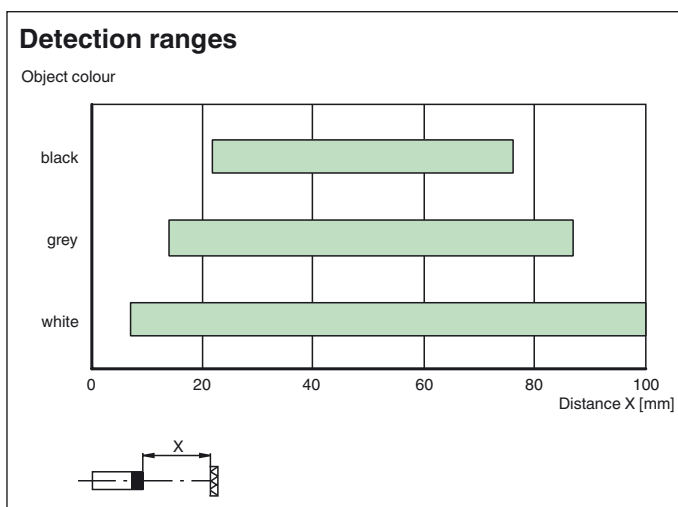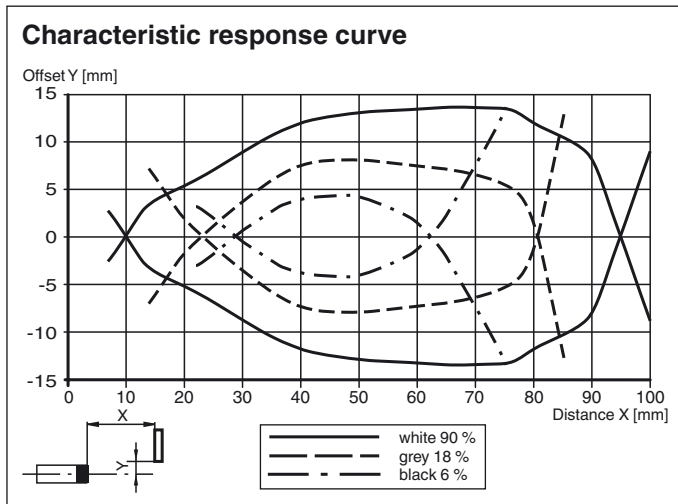Female cordset, M8, 4-pin, PUR cable

OMH-ML100-S1
Mounting bracket

OMH-ML100-08
Mounting aid for ML100 series, Snap-in

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

PEPPERL+FUCHS
SENSING YOUR NEEDS

Curves/Diagrams

Characteristic response curve

Offset Y [mm]

——	white 90 %
– – –	grey 18 %
–·–·–	black 6 %

Distance X [mm]

Detection ranges

Object colour

Distance X [mm]

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