Model Number

ML17-54/136/143

Retroreflective sensor
with 4-pin, M8 x 1 connector

Features

- Compact series in universal housing for standard applications
- Miniature design
- Front mounting with M18-threads or side mounting holes
- 360° high visibility LEDs
- Time-saving mounting with quick clamp system
- Version with polarized filters detect shiny objects

Product information

The ML17 sensor family offers diverse connection and installation options, which means that it can adapt to the most varied automation tasks. In addition to the usual fitting method using M4 screws, these sensors can also be installed by means of M18 threaded insert. All devices are equipped with a green Power On display and a yellow function display. These displays are arranged in such a way that they are clearly visible from different directions.

Dimensions
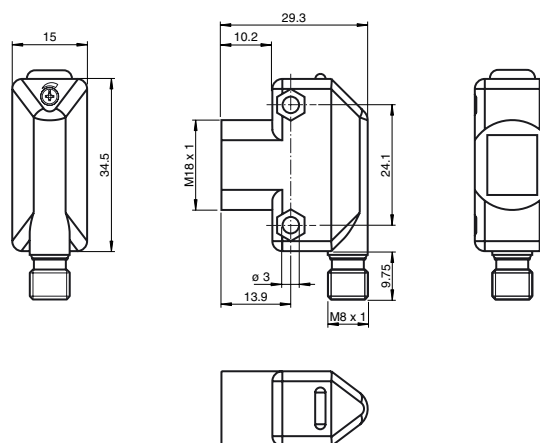
Electrical connection
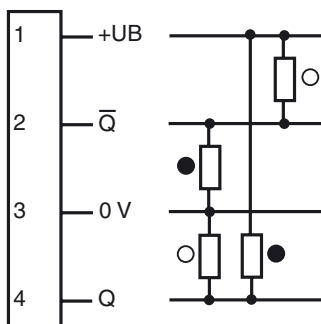
O = Light on
● = Dark on

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
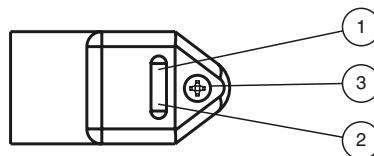
1	Signal display	yellow
2	Operating display	green
3	Sensitivity adjustment	

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 1111
fa-info@de.pepperl-fuchs.com

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

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Technical data

General specifications

Effective detection range	0 ... 3.5 m
Reflector distance	50 ... 3500 mm
Threshold detection range	5 m
Reference target	FE-RR1 reflector
Light source	LED
Light type	modulated visible red light , 626 nm
Polarization filter	yes
Ambient light limit	≤ 10000 Lux

Indicators/operating means

Operation indicator	LED green
Function indicator	LED yellow, lights up with receiver lit
Control elements	sensitivity adjustment

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC , class 2
Ripple		max. 10 %
No-load supply current	I_0	< 25 mA
Operating current	I_B	100 mA max per output
Time delay before availability	t_v	≤ 200 ms

Output

Switching type		light/dark on
Signal output		2 push-pull (4 in 1)outputs, short-circuit protected, reverse polarity protected, overvoltage protected
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Voltage drop	U_d	≤ 2 V DC
Switching frequency	f	500 Hz
Response time		≤ 1 ms

Conformity

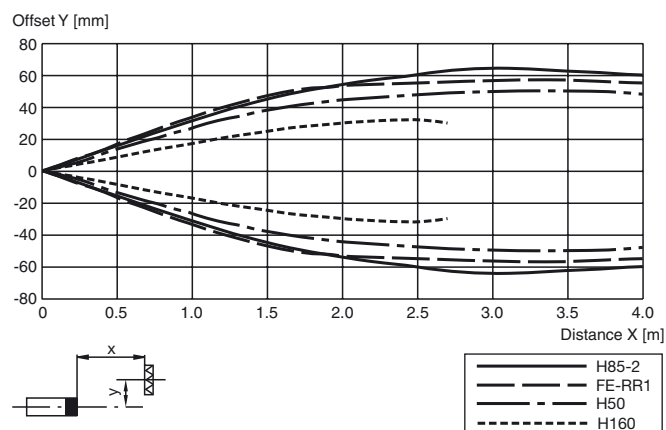|	
Product standard	EN 60947-5-2

Ambient conditions

Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-20 ... 70 °C (-4 ... 158 °F)

Mechanical specifications

Housing width	15 mm
Housing height	34.5 mm
Degree of protection	IP67
Connection	M8 x 1 connector, 4-pin
Material	
Housing	ABS
Optical face	Acrylic
Mass	approx. 8.5 g

Approvals and certificates

UL approval	cULus
CCC approval	CCC approval / marking not required for products rated ≤36 V

Accessories

OMH-ML17-EZ
Mounting bracket

OMH-ML17
Mounting bracket

OMH-ML17-1
Mounting bracket

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

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

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

Curves/Diagrams

Characteristic response curve

Offset Y [mm] vs Distance X [m]

Legend: H85-2, FE-RR1, H50, H160

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

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www.pepperl-fuchs.com   fa-info@us.pepperl-fuchs.com   fa-info@de.pepperl-fuchs.com   fa-info@sg.pepperl-fuchs.com

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Relative received light strength

ML17-54...

Reflector type:

H85-2	0.1 m	**5 m**
FE-RR1	0.1 m	4.6 m
H50	0.1 m	4.4 m
H160	0.1 m	2.6 m

☐ Stability control > 1.6

▨ Stability control < 1.6

Stability control

Legend:
- H85-2
- FE-RR1
- H50
- H160

Distance X [m]

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

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| www.pepperl-fuchs.com | fa-info@us.pepperl-fuchs.com | fa-info@de.pepperl-fuchs.com | fa-info@sg.pepperl-fuchs.com |

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