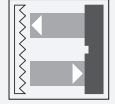# Retroreflective sensor

ML17-54/115b/136

- 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
- 4-in-1 output (push-pull)

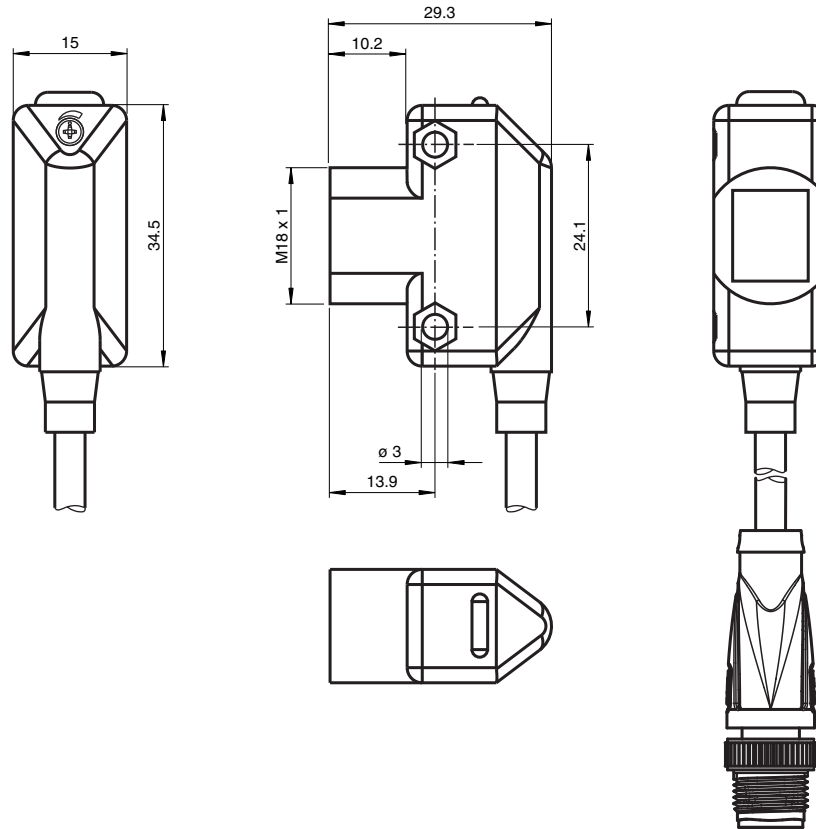Retroreflective sensor with polarization filter

Function

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.

Application

- Presence monitoring
- Target sensors
- Congestion monitoring
- Track loading
- Completeness checks

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

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Dimensions

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

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Technical Data

Voltage drop	U_d	≤ 2 V DC
Switching frequency	f	500 Hz
Response time		≤ 1 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
EAC conformity		TR CU 020/2011
UL approval		cULus
CCC approval		CCC approval / marking not required for products rated ≤36 V
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		150 mm PVC cable with 4-pin, M12 connector
Material		
Housing		ABS
Optical face		Acrylic
Mass		approx. 23 g

Connection

○ = Light on
● = Dark on

Connection Assignment

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Germany: +49 621 776 1111
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Singapore: +65 6779 9091
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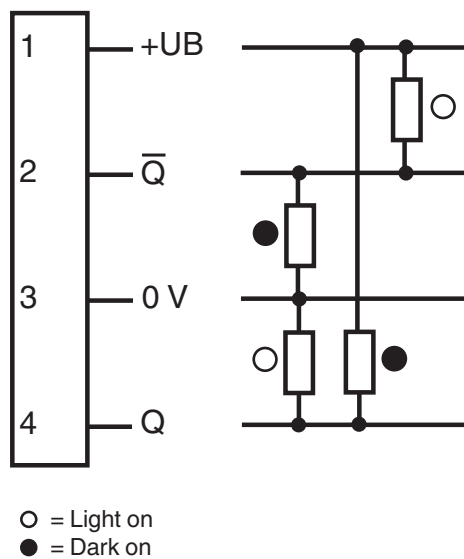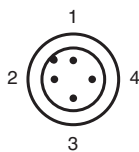
Wire colors in accordance with EN 60947-5-2

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

Assembly
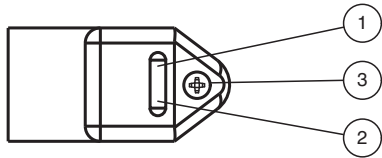
1	Signal display	yellow
2	Operating display	green
3	Sensitivity adjustment	

Characteristic Curve
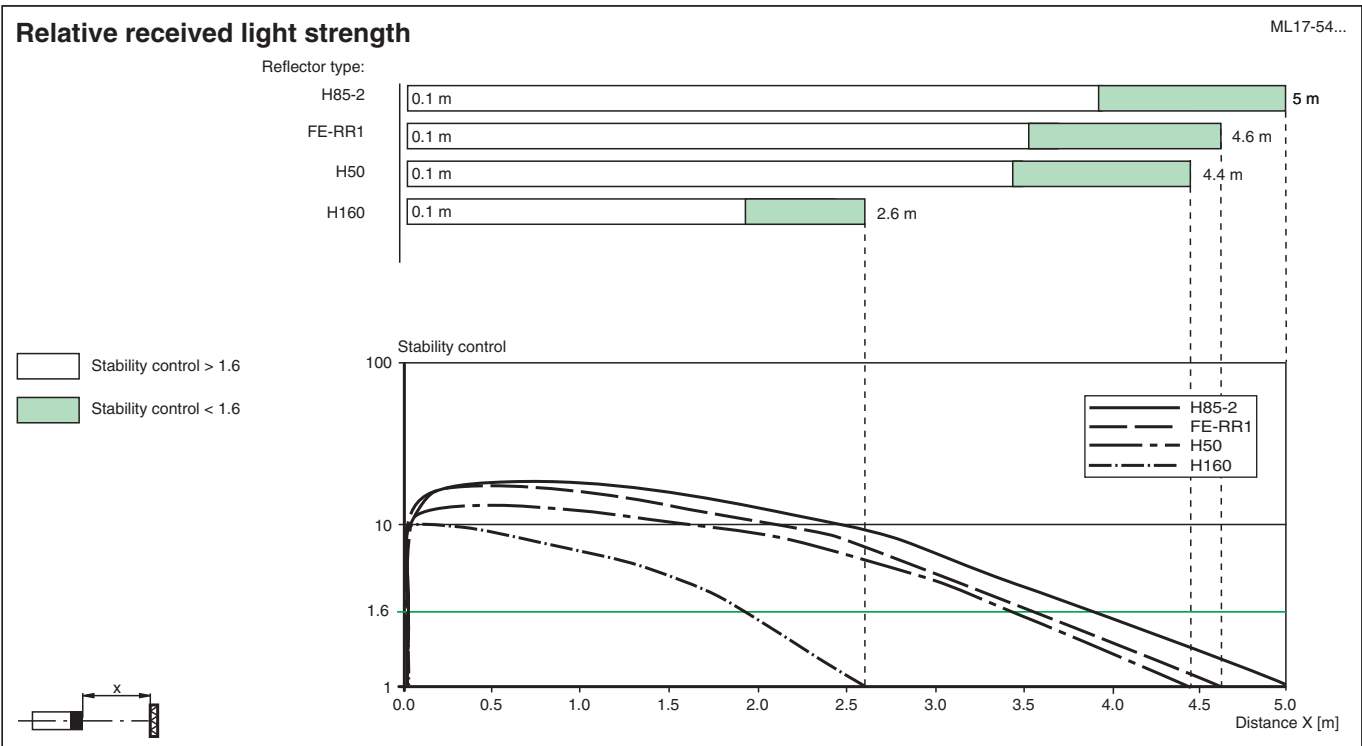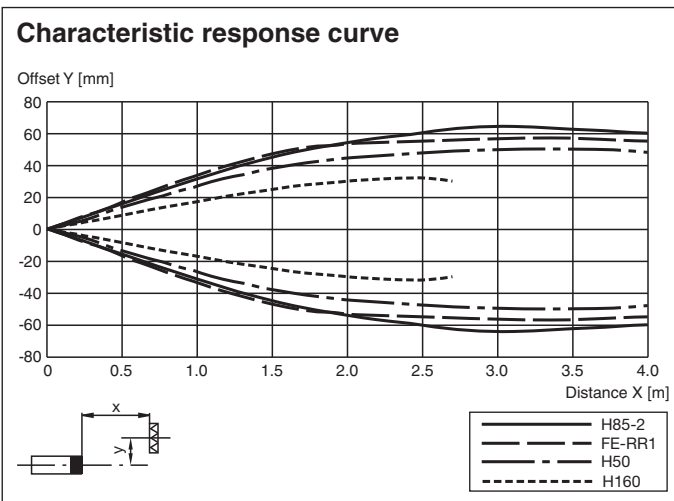
Characteristic response curve

Offset Y [mm]

Distance X [m]

- H85-2
- FE-RR1
- H50
- H160

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

- H85-2
- FE-RR1
- H50
- H160

Distance X [m]

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Application

Accessories

	OMH-ML17	Mounting bracket
	OMH-ML17-1	Mounting bracket
	V1-G-2M-PUR	Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey
	V1-W-2M-PUR	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey

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fa-info@us.pepperl-fuchs.com
Germany: +49 621 776 1111
fa-info@de.pepperl-fuchs.com
Singapore: +65 6779 9091
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