



## Thru-beam sensor M100/MV100-6757/95/103



- Miniature design
- Slit aperture to shape the light in miniature sensors
- Easy to use
- Very bright, highly visible light spot
- Full metal thread mounting
- Highly visible LEDs for Power ON and switching state
- Not sensitive to ambient light

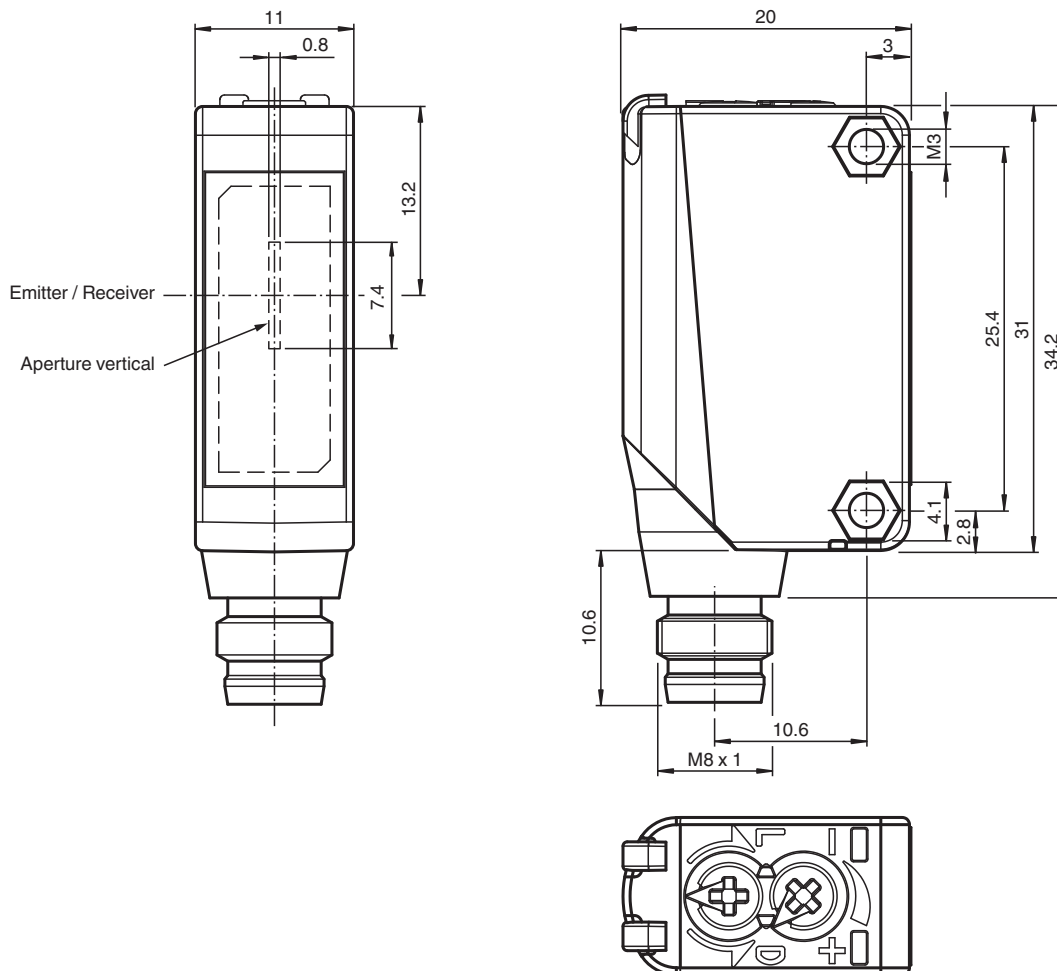
### Thru-beam sensor



### Function

The ML100 series is characterized by its miniature housing with integral, all-metal threaded bushings. All versions are equipped with a visible red transmitter LED. This greatly simplifies installation and commissioning. The switching states are easily visible from all directions thanks to the highly visible LEDs.

### Dimensions



## Technical Data

### System components

Emitter	M100-6757/95/76a
Receiver	MV100-6757/95/103

### General specifications

Effective detection range	0 ... 1.5 m
Threshold detection range	2 m
Light source	LED
Light type	modulated visible red light
Diameter of the light spot	approx. 0.14 m at a distance of 2 m
Angle of divergence	approx. 2 °
Optical face	frontal
Ambient light limit	EN 60947-5-2

### Functional safety related parameters

MTTF <sub>d</sub>	860 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Indicators/operating means

Operation indicator	LED green: power on
Function indicator	Receiver: LED yellow, lights up when light beam is free, flashes when falling short of the stability control ; OFF when light beam is interrupted
Control elements	sensitivity adjustment
Control elements	Light-on/dark-on changeover switch

### Electrical specifications

Operating voltage	U <sub>B</sub>	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	I <sub>0</sub>	Emitter: ≤ 15 mA Receiver: ≤ 8 mA

### Input

Test input	emitter deactivation at +U <sub>B</sub>
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### Output

Switching type		The switching type of the sensor is adjustable. The default setting is: light-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 , resistive load
Voltage drop	U <sub>d</sub>	≤ 1.5 V DC
Switching frequency	f	1000 Hz
Response time		0.5 ms

### Conformity

Product standard	EN 60947-5-2
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### 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

### Ambient conditions

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

### Mechanical specifications

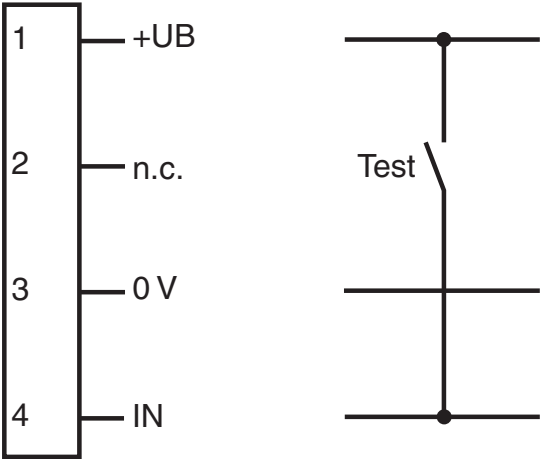
Housing width	11 mm
Housing height	31 mm
Housing depth	20 mm
Degree of protection	IP67
Connection	M8 x 1 connector, 4-pin
Material	
Housing	PC (Polycarbonate)

Technical Data

Optical face	PMMA
Mass	approx. 20 g (emitter and receiver)
Tightening torque, fastening screws	0.6 Nm

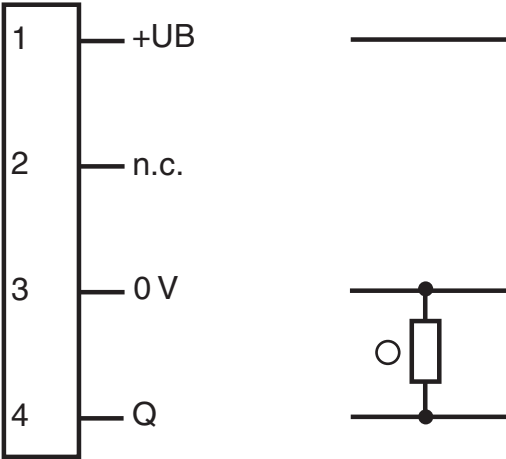
Connection Assignment

Transmitter



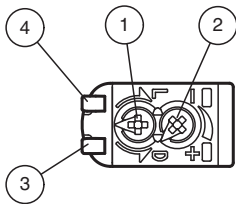
○ = Light on  
● = Dark on

Receiver



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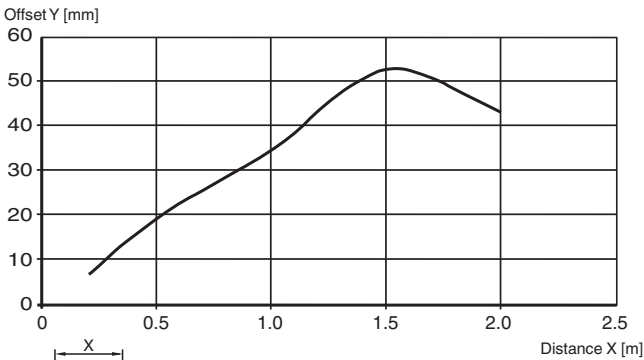
Assembly

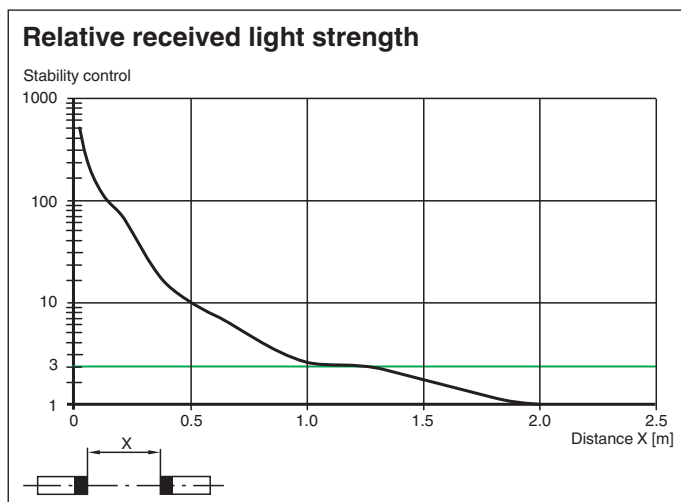


1	Light-Dark-switching	
2	Sensitivity adjuster	
3	Signal display	yellow
4	Operating display	green











Characteristic Curve

Characteristic response curve





## Accessories

	<b>OMH-ML100-S2</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-09</b>	Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-ML100-01</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-02</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-03</b>	Mounting aid for round steel $\varnothing$ 12 mm or sheet 1.5 mm ... 3 mm
	<b>OMH-ML100-04</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-ML100-05</b>	Mounting aid for ML100 series, mounting bracket
	<b>OMH-F10-ML100</b>	Mounting aid for ML100 series
	<b>OMH-10</b>	Mounting aid
	<b>OMH-ML100-S1</b>	Mounting bracket