



**Model Number**

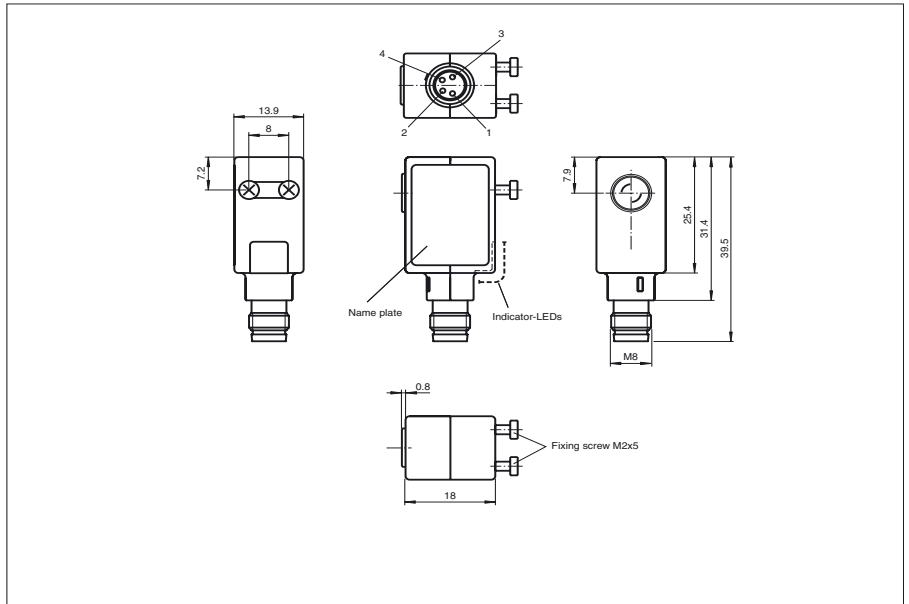
**ML4.1-54-F/40b/95/110**

Retro-reflective sensor with polarisation filter  
with M8, 4-pin metal connector

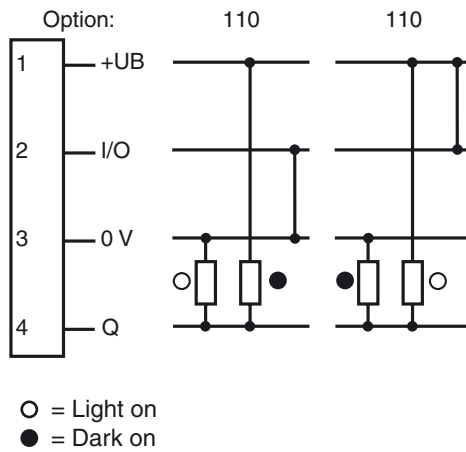
**Features**

- Miniature design
- Small light beam diameter for detection of small parts
- Visible red light
- Powerful push-pull output
- Coaxial optical system - no unusable area
- Glare protected with polarisation filter
- Not sensitive to ambient light, even with switched energy saving lamps

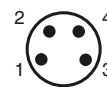
**Dimensions**



**Electrical connection**



**Pinning according**



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Additional accessories can be found in the Internet.

Subject to reasonable modifications due to technical advances.

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## Technical data

### General specifications

Effective detection range	0 ... 400 mm
Reflector distance	0 ... 400 mm
Threshold detection range	1000 mm (with H60 reflector)
Light source	LED
Approvals	CE, cULus
Light type	red, modulated light
Diameter of the light spot	20 mm
Angle of divergence	approx. 3 °
Ambient light limit	40000 Lux

### Indicators/operating means

Operating display	LED, green
Function display	LED yellow, lights up when light beam is free, flashes when falling short of the stability control

### Electrical specifications

Operating voltage	10 ... 30 V DC
Ripple	10 %
No-load supply current	$I_0$ 25 mA

### Output

Switching type	Light/dark on selectable electrically switchable
Signal output	Push-pull output, short-circuit proof, protected against reverse polarity
Switching voltage	max. 30 V DC
Switching current	max. 200 mA
Switching frequency	f 500 Hz
Response time	1 ms

### Standard conformity

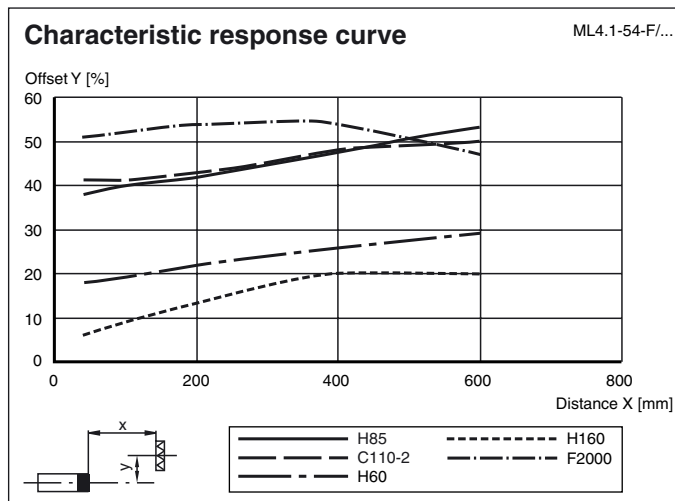
Standards	EN 60947-5-2
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### Ambient conditions

Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Storage temperature	-20 ... 75 °C (253 ... 348 K)

### Mechanical specifications

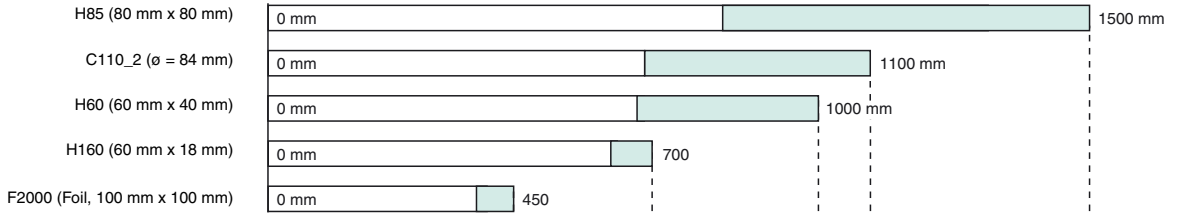
Protection degree	IP65
Connection	M8 connector, 4-pin
Material	
Housing	ABS GV5
Optical face	glass
Mass	15 g



Relative received light strength

ML4.1-54-F

Reflector type:



Stability control > 3  
 Stability control < 3

Stability control

