









#### **Model Number**

#### ML6-8-H-120-RT/59/65a/115/136

Background suppression sensor with 2 m fixed cable

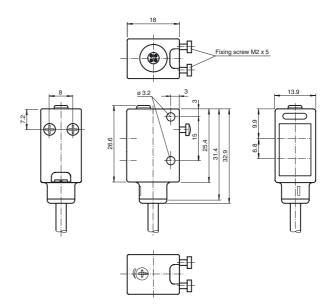
### **Features**

- Precise background suppression
- Adjustable background suppression
- Small, sharp light spot
- Very small black-white difference
- Highly visible LEDs for Power-On, switching status, short-circuit, and undervoltage
- Metal-reinforced fastening holes
- Push-pull output

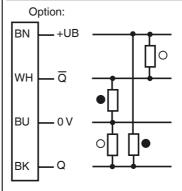
### **Product information**

The ML6 series is characterized by a robust, powerful and standard design in a miniature housing. The housing offers IP67/IP69K degree of protection, a food-grade lens, highly visible LEDs and robust all-metal bushings for mounting. Adjustable and tamper-proof sensors with a double push-pull output are available. The sensors have a high ambient light limit. Reflections from the background are suppressed. The unusually small, sharp light spot and the quick response time offer maximum switching precision on object edges. Clearly visible red light sources facilitates alignment. A high-performance fixed focus background suppressor is a useful feature. The sensors are suitable for precise object detection and open up a wide range of application fields.

#### **Dimensions**

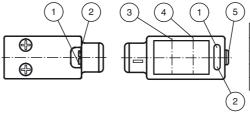


#### **Electrical connection**



- O = Light on
- = Dark on

# Indicators/operating means



1	operating display	green
2	indication of the switching state	yellow
3	receiver axis	
4	emitter axis	
5	detection range adjuster	

Technical data					
General specifications					
Detection range		15 120 mm			
Detection range min.		10 30 mm			
Detection range max.		18 120 mm			
Adjustment range		30 120 mm			
Reference target		standard white, 100 mm x 100 mm			
Light source		LED			
Light type		modulated visible red light , 660 nm			
Black/White difference (6 %/90 %	6)	< 10 %			
Diameter of the light spot		approx. 5 mm at detection range 120 mm			
Ambient light limit					
Continuous light		40000 Lux			
Modulated light		5000 Lux			
Functional safety related param	eters				
MTTF <sub>d</sub>		1940 a			
Mission Time (T <sub>M</sub> )		20 a			
Diagnostic Coverage (DC)		0%			
Indicators/operating means					
Operation indicator		LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz)			
Function indicator		LED yellow: lights when object is detected			
Control elements		Detection range adjuster			
Electrical specifications					
Operating voltage	U <sub>B</sub>	10 30 V DC , class 2			
Ripple	-6	max. 10 %			
No-load supply current	I <sub>0</sub>	< 25 mA			
Output	-0				
Switching type		light/dark on, programmable			
Signal output		2 push-pull (4 in 1) outputs, complementary, short-circuit proof, reverse polarity protected			
Switching voltage		max. 30 V DC			
Switching current		max. 100 mA			
Voltage drop	Ud	≤ 2.5 V DC			
Switching frequency	f	1000 Hz			
Response time		500 μs			
Ambient conditions					
Ambient temperature		-20 60 °C (-4 140 °F)			
Storage temperature		-40 75 °C (-40 167 °F)			
• •		10 70 0 ( 10 107 1 )			
Mechanical specifications  Degree of protection		IP67 / IP69K			
Connection		2 m fixed cable			
Material		2 m lixed cable			
		ADC			
Housing		ABS			
Optical face		PMMA			
Cable		PUR			
Mass		approx. 50 g			
Compliance with standards and ves	l directi	-			
Standard conformity					
Product standard		EN 60947-5-2:2007 IEC 60947-5-2:2007			
Shock and impact resistance		IEC / EN 60068. half-sine, 40 g in each X, Y and Z directions			
Vibration resistance		IEC / EN 60068-2-6. Sinus. 10 -150 Hz, 5 g in each X, Y and Z directions			
Approvals and certificates					
		cULus Listed			
UL approval		COLUS LISIEU			

# **Accessories**

### OMH-4.1

Mounting Clamp

### OMH-ML6

Mounting bracket

# OMH-ML6-U

Mounting bracket

# OMH-ML6-Z

Mounting bracket

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

FPEPPERL+FUCHS

CCC approval

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

# **Curves/Diagrams**

