









# **Model Number**

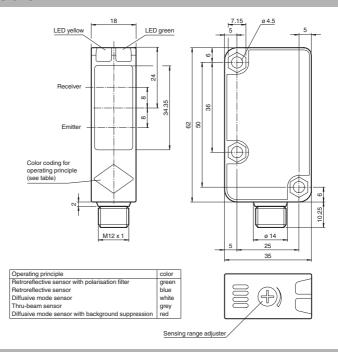
# RL31-8-H-800-IR/73c/136

Background suppression sensor with 4-pin, M12 x 1 connector

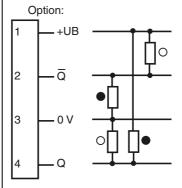
### **Features**

- Cost-optimized series for standard tasks
- Large construction with small housing
- · High-visibility indicator LEDs
- · Low sensitivity to target color

# **Dimensions**



# **Electrical connection**



O = Light on

= Dark on

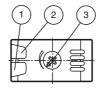
### **Pinout**

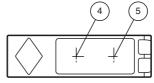
Wire colors in accordance with EN 60947-5-2



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

# Indicators/operating means





1	Operating display green		
2	Signal display yellow		
3	Sensing range adjuster		
4	Emitter		
5	Receiver		

Technical data			
General specifications			
Detection range		50 800 mm	
Detection range min.		50 100 mm	
Detection range max.		50 800 mm	
Adjustment range		100 800 mm	
Reference target		standard white, 100 mm x 100 mm	
Light source		LED	
Light type		modulated infrared light	
Black/White difference (6 %/90 %)		< 5 %	
Diameter of the light spot		approx. 30 mm at a distance of 800 mm	
Angle of divergence		approx. 2.5 °	
Ambient light limit		20000 Lux	
Functional safety related parame	ters		
MTTF <sub>d</sub>		580 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; ON: object inside the sensing range; OFF: object outside the sensing range	
Control elements		Sensing range adjuster	
Electrical specifications			
Operating voltage	$U_B$	10 30 V DC	
Ripple		max. 10 %	
No-load supply current	I <sub>0</sub>	max. 25 mA at 24 V supply voltage	
Output			
Switching type		dark on	
Signal output		2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected	
Switching voltage		max. 30 V DC	
Switching current		max. 100 mA	
Voltage drop	U <sub>d</sub>	≤2 V DC	
	f	200 Hz	
Response time		2.5 ms	
Conformity			
Product standard		EN 60947-5-2	
Ambient conditions			
Ambient temperature		-30 55 °C (-22 131 °F)	
Storage temperature		-40 70 °C (-40 158 °F)	
Mechanical specifications			
Housing width		18 mm	
Housing height		62 mm	
Housing depth		35 mm	
Degree of protection		IP67	
Connection		4-pin, M12 x 1 connector	
Material			
Housing		Polycarbonate	
Optical face		PMMA	
Mass		25 g	
Approvals and certificates			
Protection class		II , rated insulation voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1	
UL approval		cULus Listed 57M3 (Only in association with UL Class 2 power supply; Type 1 enclosure)	

### **Accessories**

### OMH-RL31-01

Mounting bracket

### OMH-RL31-02

Mounting bracket narrow

### OMH-RL31-03

Mounting bracket narrow

### OMH-RL31-04

Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

#### OMH-RL31-05

Mounting bracket for mounting on flat surfaces with 2 M4 screws

#### OMH-RL31-06

Stainless steel mounting bracket with adjustable half clamp on the side

#### V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

#### V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

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

power supply; Type 1 enclosure)