Background suppression sensor

Model Number
RL29-8-H-1200-RT/73c/136
Background suppression sensor with 4-pin, M12 x 1 plastic connector

Features
- Highly visible LED
- Good alignability due to red transmission LED
- Minimal black-white difference
- Powerful push-pull output
- Optimal price/power ratio
- Protection class II

Dimensions
- Sensing range adjuster
- LED indicator: switching state

Electrical connection
- Option:
  - 1: +UB
  - 2: Q2
  - 3: 0 V
  - 4: Q1

Pinout
- 1
- 2
- 3
- 4

Option:
- O = Light on
- ● = Dark on
## Technical data

**General specifications**
- **Detection range**: 30 ... 1200 mm, adjustable
- **Detection range min.**: 20 ... 200 mm
- **Detection range max.**: 30 ... 1200 mm
- **Background suppression**: max. + 10 % of the upper limit of the detection range
- **Light source**: LED 660 nm
- **Light type**: modulated visible red light
- **Black/White difference (6 %/90 %)**: < 35 % at 1200 mm sensor range
- **Diameter of the light spot**: approx. 25 mm at a distance of 1200 mm
- **Angle of divergence**: Emitter: 1.2 °, Receiver: 2 °
- **Ambient light limit**: 50000 Lux

**Functional safety related parameters**
- **MTTFd**: 720 a
- **Mission Time (TM)**: 20 a
- **Diagnostic Coverage (DC)**: 0 %

**Indicators/operating means**
- **Function indicator**: LED yellow: switching state
- **Control elements**: Detection range adjuster

**Electrical specifications**
- **Operating voltage** ($U_B$): 10 ... 30 V DC, class 2
- **Ripple**: 10 %
- **No-load supply current** ($I_0$): ≤ 40 mA

**Output**
- **Switching type**: light 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
- **Switching frequency** ($f$): 125 Hz
- **Response time**: 4 ms

**Ambient conditions**
- **Ambient temperature**: -25 ... 60 °C (-13 ... 140 °F)
- **Storage temperature**: -40 ... 75 °C (-40 ... 167 °F)

**Mechanical specifications**
- **Degree of protection**: IP65
- **Connection**: Plastic connector M12 x 1, 4-pin
- **Material**: Housing Plastic ABS
- **Optical face**: plastic
- **Mass**: 70 g

**Compliance with standards and directives**

**Approvals and certificates**
- **Protection class**: II, rated voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1
- **UL approval**: E87056, cULus Listed, class 2 power supply, type rating 1

## Accessories

**OMH-05**
Mounting aid for round steel Φ 12 mm or sheet 1.5 mm ... 3 mm

**OMH-07**
Mounting aid for round steel Φ 12 mm or sheet 1.5 mm ... 3 mm

**OMH-21**
Mounting bracket

**OMH-22**
Mounting bracket

**OMH-MLV11-K**
dove tail mounting clamp

**OMH-RL29-HW**
Mounting bracket for rear wall mounting

**OMH-RL28-C**
Weld slag cover model

**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
Curves/Diagrams

Characteristic response curve

Distance X [mm]

Offset Y [mm]

white 90 %
grey 18 %
black 6 %

RL29-8-H1200-RT

Difference in detection distance

Adjusted detection distance X [mm]

Measured detection distance X [mm]

white 90 %
grey 18 %
black 6 %

RL29-8-H-1200-RT