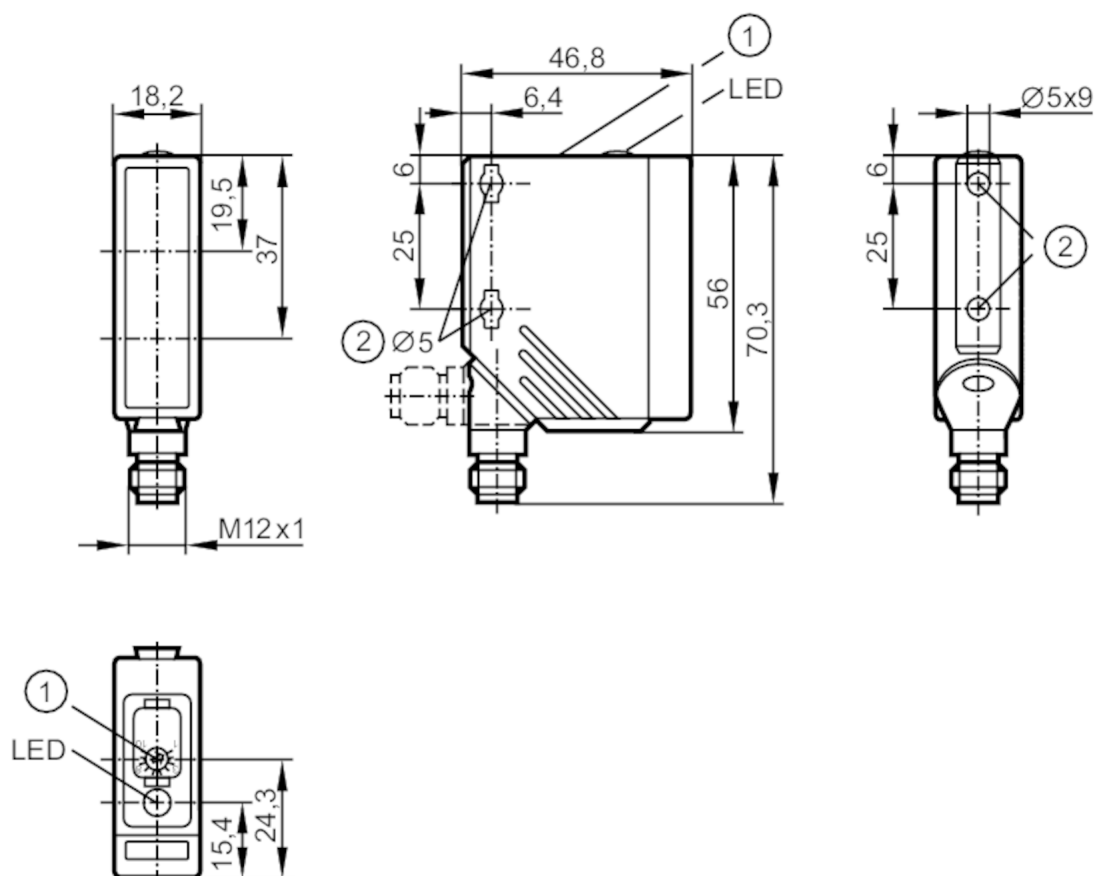




## Diffuse reflection sensors with background suppression

O5H-DPKG/US100



- 1 potentiometer  
 2 When a M5 mounting screw is used, the max. tightening torque is 2 Nm.  
 Receiver in upper lens  
 transmitter in lower lens



### Product characteristics

|               |             |
|---------------|-------------|
| Type of light | red light   |
| Housing       | rectangular |

### Application

|                    |                           |
|--------------------|---------------------------|
| System             | Background suppression    |
| Function principle | Diffuse reflection sensor |

### Electrical data

|                             |      |                                               |
|-----------------------------|------|-----------------------------------------------|
| Operating voltage           | [V]  | 10...36 DC; (cULus - Class 2 source required) |
| Current consumption         | [mA] | 25                                            |
| Protection class            |      | II                                            |
| Reverse polarity protection |      | yes                                           |
| Type of light               |      | red light                                     |

### Outputs

|                                       |     |              |
|---------------------------------------|-----|--------------|
| Electrical design                     |     | PNP          |
| Output function                       |     | dark-on mode |
| Max. voltage drop switching output DC | [V] | 2.5          |



## Diffuse reflection sensors with background suppression

O5H-DPKG/US100

|                                                 |      |                    |
|-------------------------------------------------|------|--------------------|
| Permanent current rating of switching output DC | [mA] | 200                |
| Switching frequency DC                          | [Hz] | 1000               |
| Short-circuit protection                        |      | yes                |
| Type of short-circuit protection                |      | yes (non-latching) |
| Overload protection                             |      | yes                |

### Monitoring range

|                                        |      |                                                      |
|----------------------------------------|------|------------------------------------------------------|
| Range                                  | [mm] | 50...1400; (white paper 200 x 200 mm 90 % remission) |
| Range on white object (90 % remission) | [mm] | 50...1400                                            |
| Range on grey object (18 % remission)  | [mm] | 50...800                                             |
| Range on black object (6 % remission)  | [mm] | 50...550                                             |
| Range adjustable                       |      | yes                                                  |
| Max. light spot diameter               | [mm] | 50                                                   |
| Light spot dimensions refer to         |      | Range                                                |
| Background suppression available       |      | yes                                                  |

### Operating conditions

|                     |      |          |
|---------------------|------|----------|
| Ambient temperature | [°C] | -25...60 |
| Protection          |      | IP 65    |

### Tests / approvals

|      |         |              |
|------|---------|--------------|
| EMC  |         | EN 60947-5-2 |
| MTTF | [years] | 331          |

### Mechanical data

|                |      |                                                                        |
|----------------|------|------------------------------------------------------------------------|
| Weight         | [g]  | 63                                                                     |
| Housing        |      | rectangular                                                            |
| Dimensions     | [mm] | 56 x 18.2 x 46.8                                                       |
| Material       |      | housing: PA; Front framework: stainless steel; operator interface: TPE |
| Lens material  |      | PMMA                                                                   |
| Lens alignment |      | Side sensing                                                           |

### Displays / operating elements

|                    |                  |                 |
|--------------------|------------------|-----------------|
| Display            | Switching status | 1 x LED, yellow |
| Operating elements |                  | potentiometer   |

### Remarks

|               |  |        |
|---------------|--|--------|
| Pack quantity |  | 1 pcs. |
|---------------|--|--------|



## Diffuse reflection sensors with background suppression

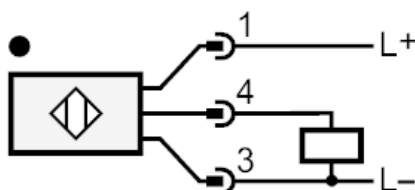
O5H-DPKG/US100

### Electrical connection

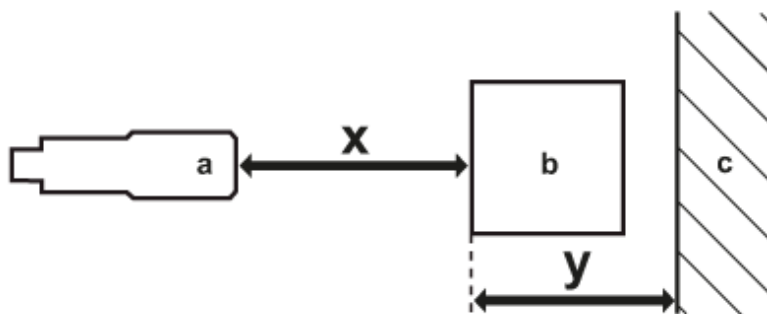
Connector: 1 x M12; coding: A



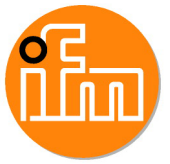
### Connection



### Diagrams and graphs



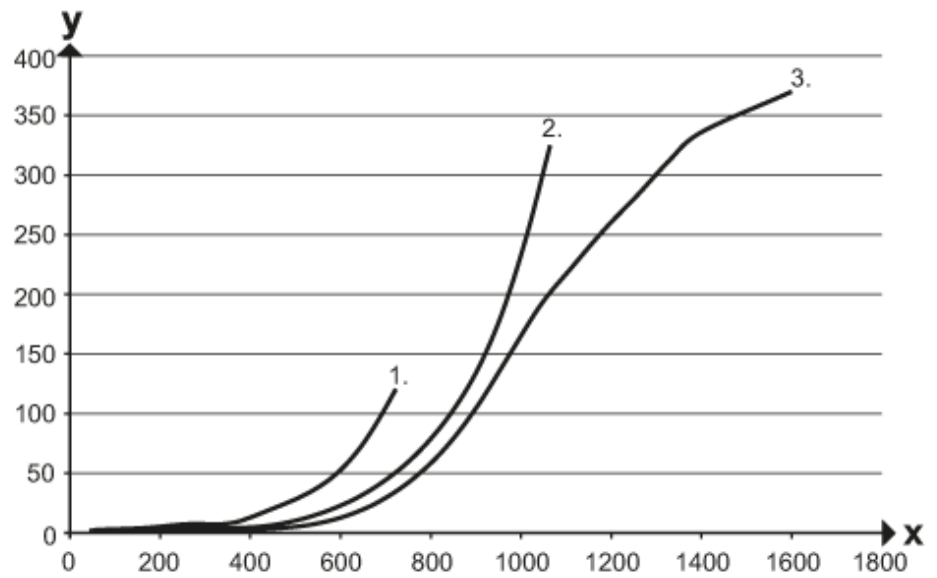
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

O5H-DPKG/US100

Background suppression chart



x: distance sensor/object [mm]

y: min. distance object/background [mm]

1 = object black (6 % remission) , Background white (90 % remission)

2 = object grey (18 % remission) , Background white (90 % remission)

3 = object white (90 % remission) , Background white (90 % remission)