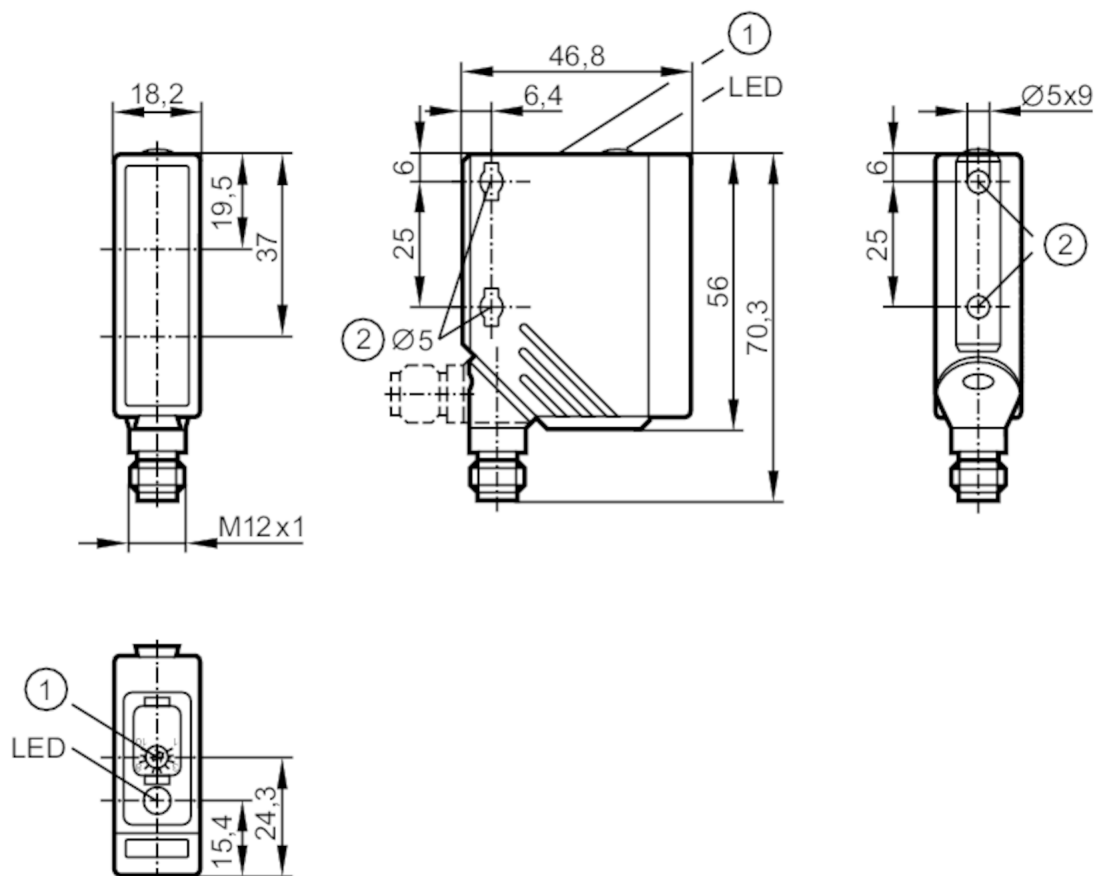


## Diffuse reflection sensor with background suppression

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

|                    |                           |
|--------------------|---------------------------|
| Special feature    | Background suppression    |
| Function principle | Diffuse reflection sensor |

## Electrical data

|                             |      |                                         |
|-----------------------------|------|-----------------------------------------|
| Operating voltage           | [V]  | 10...36 DC; ("supply class 2" to cULus) |
| 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 sensor 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                |      | pulsed |
| Overload protection                             |      | yes    |

| Detection zone                         |      |                                                     |
|----------------------------------------|------|-----------------------------------------------------|
| 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                                             |
| Materials       |      | housing: PA; bezel: stainless steel; operator interface: TPE |
| Lens material   |      | PMMA                                                         |
| Lens alignment  |      | side lens                                                    |

| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | switching status | 1 x LED, yellow |
| Operating elements            |                  | potentiometer   |

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

## Diffuse reflection sensor with background suppression

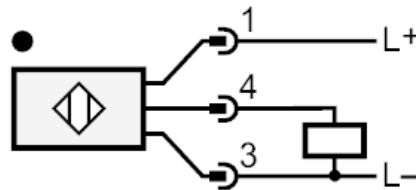
O5H-DPKG/US100

### Electrical connection

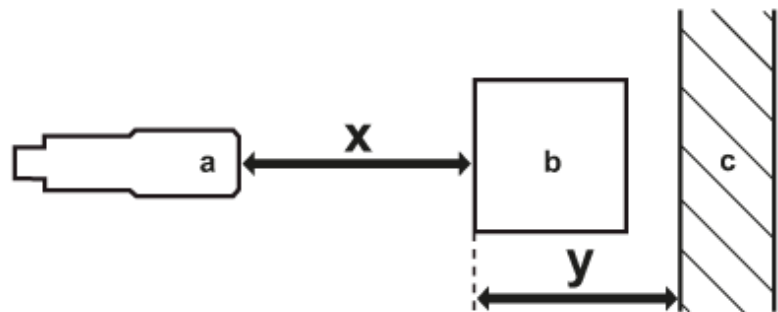
Connector: 1 x M12; coding: A



### Connection



### Diagrams and graphs



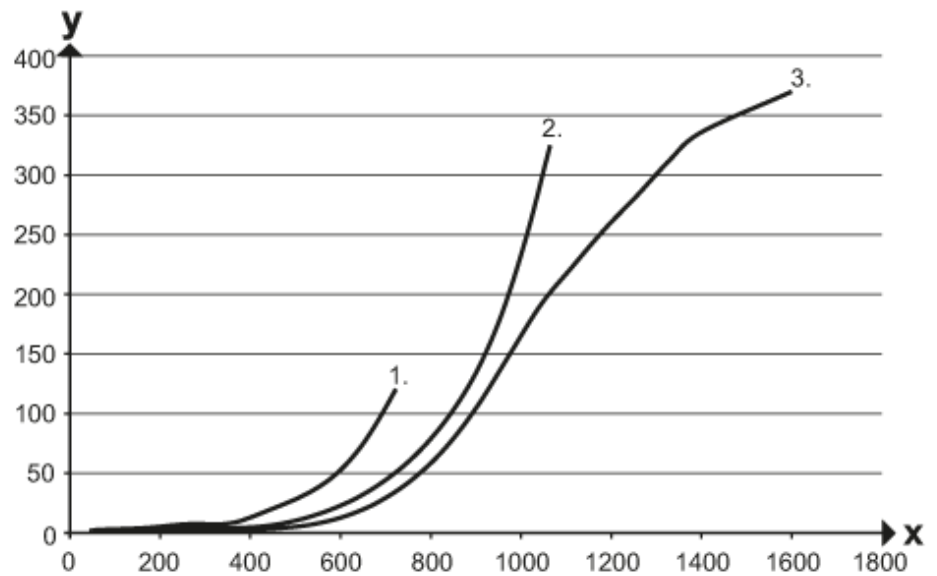
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensor with background suppression

O5H-DPKG/US100

accuracy graph



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)