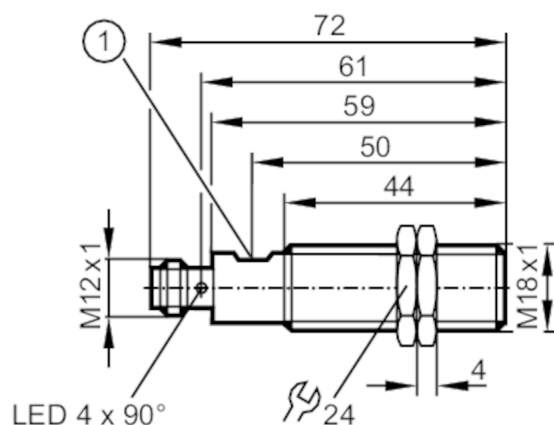


## Diffuse reflection sensor with background suppression

OGH-HPKG/US100



1 potentiometer



### Product characteristics

|               |               |
|---------------|---------------|
| Type of light | red light     |
| Housing       | threaded type |

### Application

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

### Electrical data

|                             |      |            |
|-----------------------------|------|------------|
| Operating voltage           | [V]  | 10...36 DC |
| Current consumption         | [mA] | 25         |
| Protection class            |      | II         |
| Reverse polarity protection |      | yes        |
| Type of light               |      | red light  |
| Wave length                 | [nm] | 624        |

### Outputs

|                                                 |      |               |
|-------------------------------------------------|------|---------------|
| Electrical design                               |      | PNP           |
| Output function                                 |      | light-on mode |
| Max. voltage drop switching output DC           | [V]  | 2.5           |
| 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] | 15...250; (white paper 200 x 200 mm 90% remission) |
| Range on white object (90 % remission) | [mm] | 15...250                                           |
| Range on grey object (18 % remission)  | [mm] | 15...230                                           |



## Diffuse reflection sensor with background suppression

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|                                            |                  |
|--------------------------------------------|------------------|
| Range on black object (6 % remission) [mm] | 15...160         |
| Range adjustable                           | yes              |
| Max. light spot diameter [mm]              | 21               |
| Light spot dimensions refer to             | at maximum range |
| Background suppression available           | yes              |

### Operating conditions

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

### Tests / approvals

|              |              |
|--------------|--------------|
| EMC          | EN 60947-5-2 |
| MTTF [years] | 339          |

### Mechanical data

|                    |                                                   |
|--------------------|---------------------------------------------------|
| Weight [g]         | 53.1                                              |
| Housing            | threaded type                                     |
| Dimensions [mm]    | M18 x 1 / L = 72                                  |
| Thread designation | M18 x 1                                           |
| Materials          | housing: stainless steel; operator interface: TPE |
| Lens material      | PMMA                                              |

### Displays / operating elements

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

### Accessories

|                |              |
|----------------|--------------|
| Items supplied | lock nuts: 2 |
|----------------|--------------|

### Remarks

|               |                                                       |
|---------------|-------------------------------------------------------|
| Remarks       | operating voltage "supply class 2" according to cULus |
| Pack quantity | 1 pcs.                                                |

### Electrical connection

Connector: 1 x M12; coding: A



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### Connection



### Diagrams and graphs



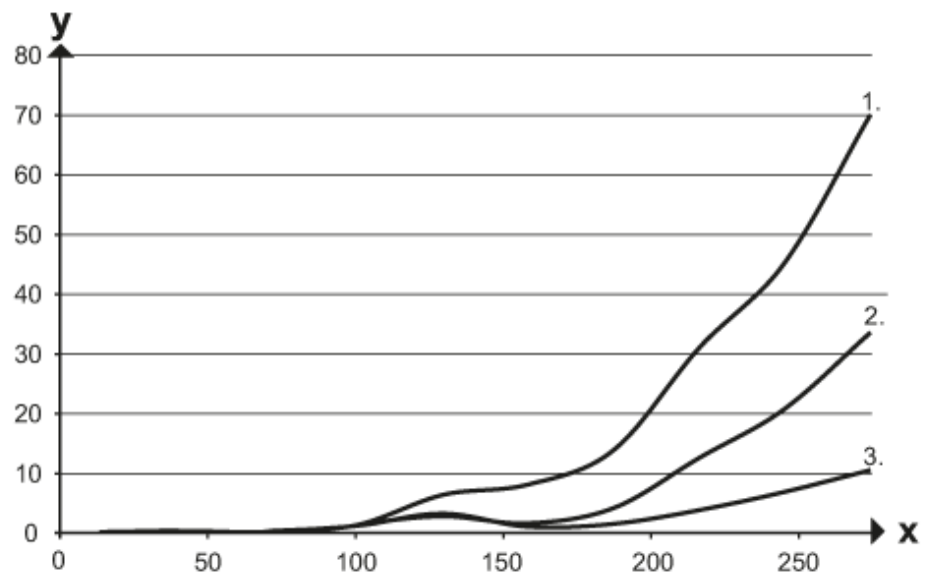
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



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OGH-HPKG/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)