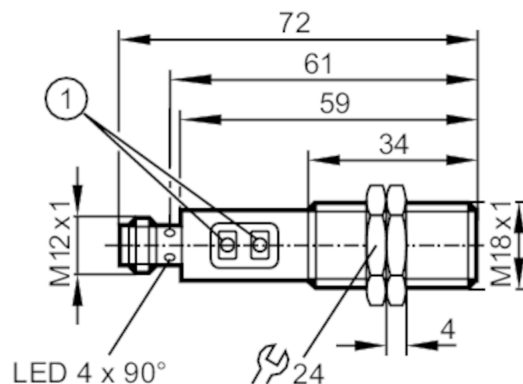


## Diffuse reflection sensor with background suppression

OGH-FPKG/US100



1 programming buttons



### Product characteristics

|                 |                  |
|-----------------|------------------|
| Type of light   | red light        |
| Housing         | threaded type    |
| Dimensions [mm] | M18 x 1 / L = 72 |

### 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/dark-on mode; (programmable) |
| Max. voltage drop switching output DC [V]            | 2.5                                   |
| Permanent current rating of switching output DC [mA] | 150; (200 (...60 °C))                 |
| Switching frequency DC [Hz]                          | 1000                                  |
| Factory setting                                      | light-on mode                         |
| Short-circuit protection                             | yes                                   |
| Type of short-circuit protection                     | pulsed                                |
| Overload protection                                  | yes                                   |



## Diffuse reflection sensor with background suppression

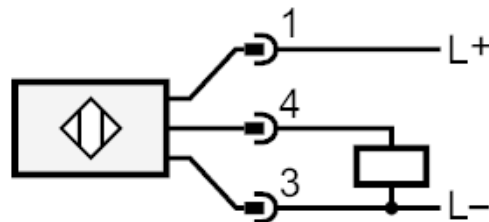
OGH-FPKG/US100

| Detection zone                                                                      |                  |                                                       |
|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------|
| Range                                                                               | [mm]             | 15...300; (white paper 200 x 200 mm 90% remission)    |
| Range on white object (90 % remission)                                              | [mm]             | 15...300                                              |
| Range on grey object (18 % remission)                                               | [mm]             | 15...290                                              |
| Range on black object (6 % remission)                                               | [mm]             | 15...190                                              |
| Range adjustable                                                                    |                  | yes                                                   |
| Max. light spot diameter                                                            | [mm]             | 25                                                    |
| Light spot dimensions refer to                                                      |                  | at maximum range                                      |
| Background suppression available                                                    |                  | yes                                                   |
| Operating conditions                                                                |                  |                                                       |
| Ambient temperature                                                                 | [°C]             | -25...80                                              |
| Protection                                                                          |                  | IP 67                                                 |
| Tests / approvals                                                                   |                  |                                                       |
| EMC                                                                                 |                  | EN 60947-5-2                                          |
| MTTF                                                                                | [years]          | 362                                                   |
| Mechanical data                                                                     |                  |                                                       |
| Weight                                                                              | [g]              | 61.1                                                  |
| Housing                                                                             |                  | threaded type                                         |
| Dimensions                                                                          | [mm]             | M18 x 1 / L = 72                                      |
| Thread designation                                                                  |                  | M18 x 1                                               |
| Materials                                                                           |                  | stainless steel (1.4404 / 316L); PA; LCP; EPDM; TPU   |
| Lens material                                                                       |                  | PMMA                                                  |
| Displays / operating elements                                                       |                  |                                                       |
| Display                                                                             | switching status | 1 x LED, yellow                                       |
| Accessories                                                                         |                  |                                                       |
| Items supplied                                                                      |                  | lock nuts: 2 x                                        |
| Remarks                                                                             |                  |                                                       |
| Remarks                                                                             |                  | operating voltage "supply class 2" according to cULus |
| Pack quantity                                                                       |                  | 1 pcs.                                                |
| Electrical connection                                                               |                  |                                                       |
| Connector: 1 x M12                                                                  |                  |                                                       |
|  |                  |                                                       |

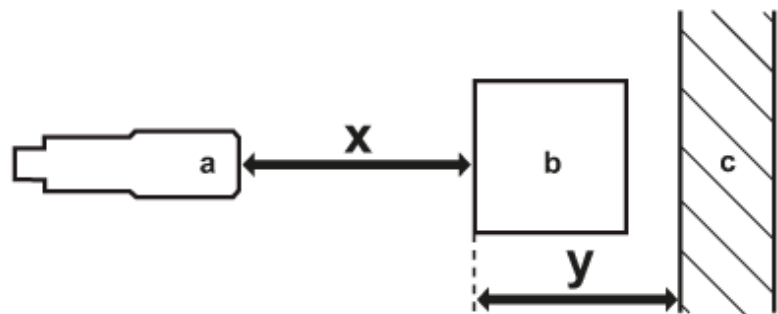
## Diffuse reflection sensor with background suppression

OGH-FPKG/US100

### Connection



### Diagrams and graphs



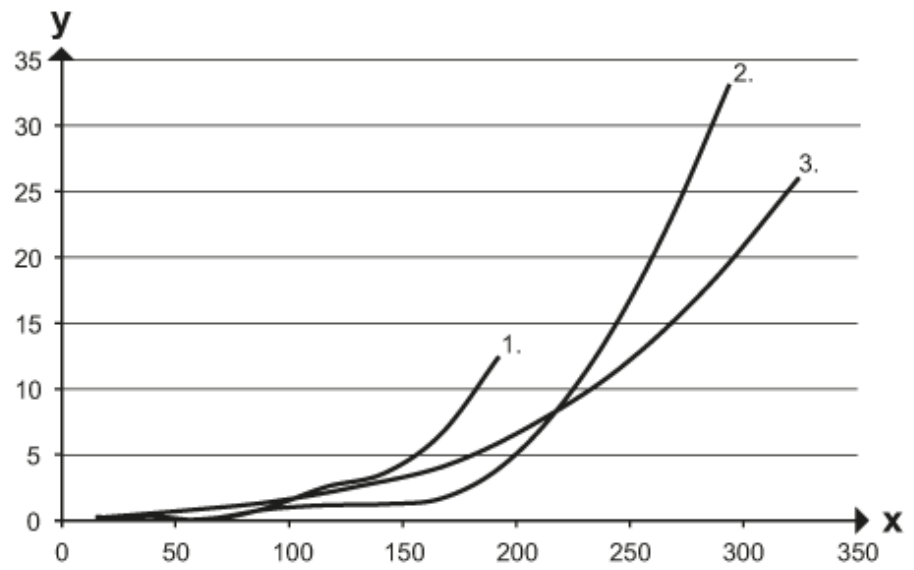
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensor with background suppression

OGH-FPKG/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)