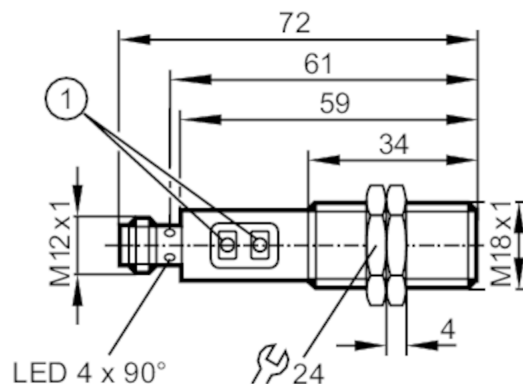




## Diffuse reflection sensor with background suppression

OGH-FPKG/US100



1 programming buttons



### Application

|                    |                           |
|--------------------|---------------------------|
| 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                                  |
| Short-circuit protection                        |      | yes                                   |
| Type of short-circuit protection                |      | pulsed                                |
| Overload protection                             |      | yes                                   |



## Diffuse reflection sensor with background suppression

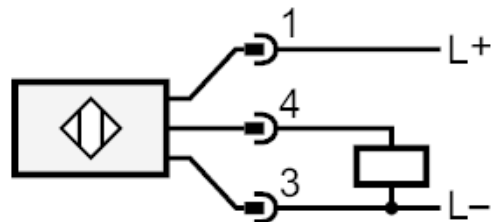
OGH-FPKG/US100

| 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                                              |
| Factory setting                        | dark-on mode     |                                                       |
|                                        | Range            | : 130 mm ± 5 %                                        |
| 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]              | 60                                                    |
| 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                            |                  |                                                       |
| Accessories (supplied)                 |                  | lock nuts: 2 x                                        |
| Remarks                                |                  |                                                       |
| Remarks                                |                  | operating voltage "supply class 2" according to cULus |
| Notes                                  |                  | discontinued article                                  |
| Pack quantity                          |                  | 1 pcs.                                                |
| Electrical connection                  |                  |                                                       |
| Connector: 1 x M12                     |                  |                                                       |
|                                        |                  |                                                       |

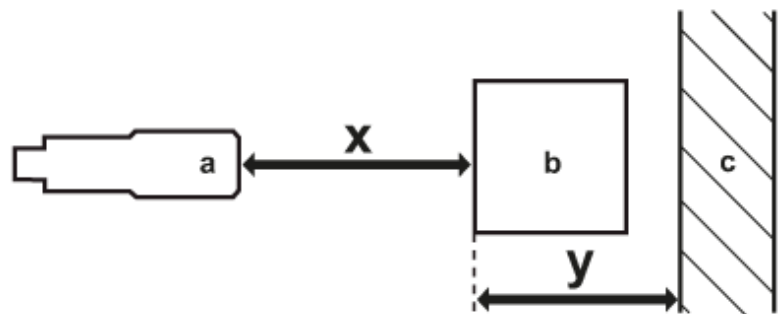
## Diffuse reflection sensor with background suppression

OGH-FPKG/US100

### Connection



### Diagrams and graphs



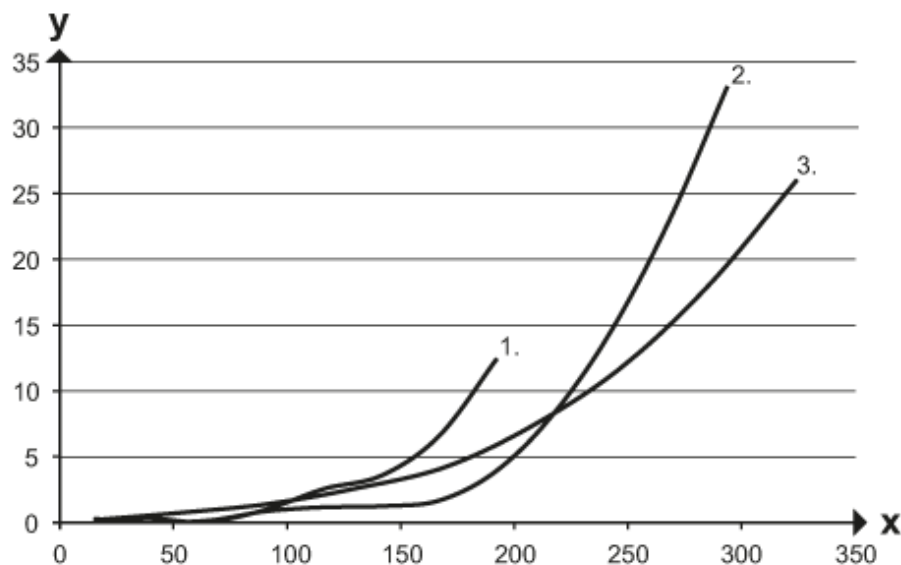
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## 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)