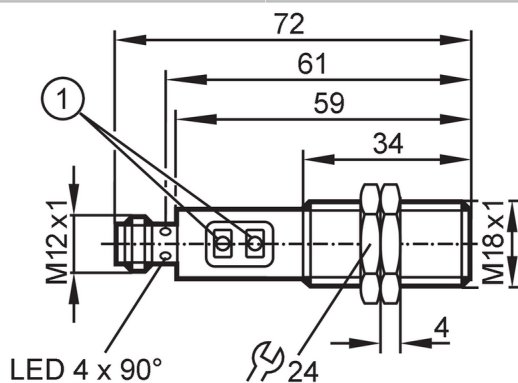




## Diffuse reflection sensors with background suppression

OGH-FPKG/US100



1 Programming buttons



### Product characteristics

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

### Application

|                    |                           |
|--------------------|---------------------------|
| Special feature    | Background suppression    |
| Function principle | Diffuse reflection sensor |
| Application        | Industrial applications   |

### 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                |      | yes (non-latching)                    |
| Overload protection                             |      | yes                                   |

### Monitoring range

|                                        |      |                                                     |
|----------------------------------------|------|-----------------------------------------------------|
| 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                                            |



## Diffuse reflection sensors with background suppression

OGH-FPKG/US100

|                                            |                  |
|--------------------------------------------|------------------|
| Range on black object (6 % remission) [mm] | 15...190         |
| Factory setting                            | light-on mode    |
| 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]         | 61.6                                                          |
| Housing            | Threaded type                                                 |
| Dimensions [mm]    | M18 x 1 / L = 72                                              |
| Thread designation | M18 x 1                                                       |
| Material           | stainless steel (1.4404 / 316L); PA; LCP; FKM; TPU (urethane) |
| Lens material      | front lens:glass                                              |

### Displays / operating elements

|         |                  |                 |
|---------|------------------|-----------------|
| Display | Switching status | 1 x LED, yellow |
|---------|------------------|-----------------|

### Accessories

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

### Remarks

|               |                                 |
|---------------|---------------------------------|
| Remarks       | cULus - Class 2 source required |
| Pack quantity | 1 pcs.                          |

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



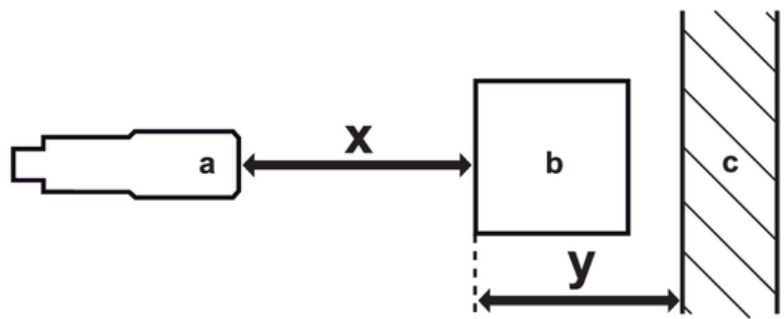
## Diffuse reflection sensors with background suppression

OGH-FPKG/US100

### Connection



### Diagrams and graphs



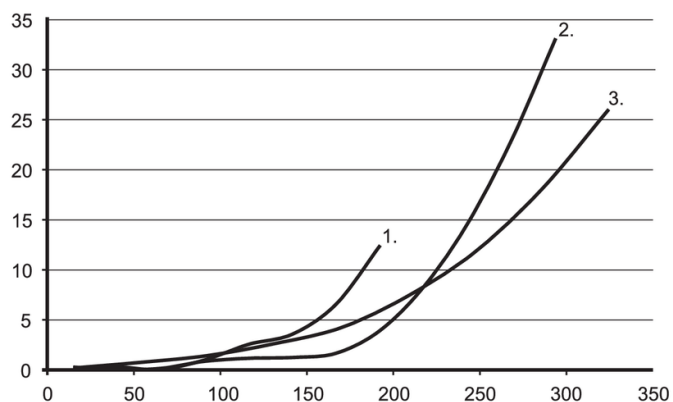
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

OGH-FPKG/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)