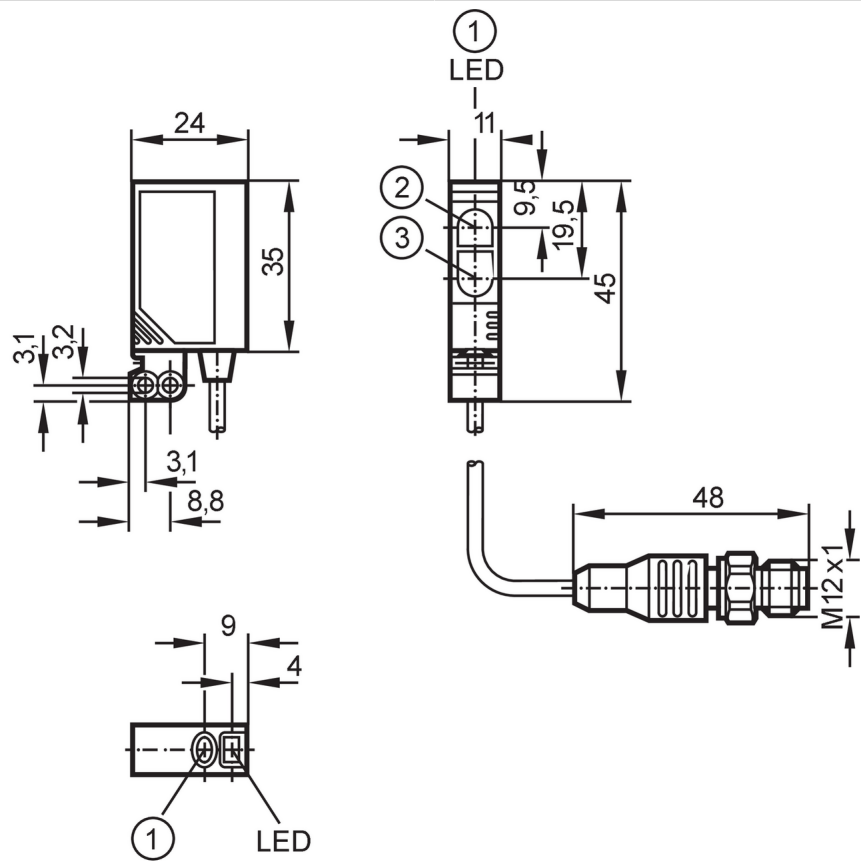




Diffuse reflection sensors with background suppression

OJH-FPKG/SO/0,15M/US



- 1 pushbutton
- 2 receiver
- 3 transmitter



| Product characteristics     |      |                                                                |
|-----------------------------|------|----------------------------------------------------------------|
| Type of light               |      | red light                                                      |
| Housing                     |      | rectangular                                                    |
| Application                 |      |                                                                |
| Special feature             |      | gold-plated contacts; Background suppression                   |
| Function principle          |      | Diffuse reflection sensor                                      |
| Application                 |      | For applications in robotics, assembly and handling technology |
| Electrical data             |      |                                                                |
| Operating voltage           | [V]  | 10...30 DC                                                     |
| Current consumption         | [mA] | 25                                                             |
| Protection class            |      | III                                                            |
| Reverse polarity protection |      | yes                                                            |
| Type of light               |      | red light                                                      |
| Wave length                 | [nm] | 660                                                            |
| Outputs                     |      |                                                                |
| Electrical design           |      | PNP                                                            |
| Output function             |      | light-on/dark-on mode; (programmable)                          |



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

| Monitoring range                 |      |                                                     |
|----------------------------------|------|-----------------------------------------------------|
| Range                            | [mm] | 15...400; (white paper 200 x 200 mm 90 % remission) |
| Range adjustable                 |      | yes                                                 |
| Max. light spot diameter         | [mm] | 18                                                  |
| Light spot dimensions refer to   |      | Range                                               |
| Background suppression available |      | yes                                                 |

| Operating conditions |      |          |
|----------------------|------|----------|
| Ambient temperature  | [°C] | -25...60 |
| Protection           |      | IP 67    |

| Tests / approvals |         |              |
|-------------------|---------|--------------|
| EMC               |         | EN 60947-5-2 |
| MTTF              | [years] | 556          |

| Mechanical data |      |                                                                         |
|-----------------|------|-------------------------------------------------------------------------|
| Weight          | [g]  | 40.6                                                                    |
| Housing         |      | rectangular                                                             |
| Dimensions      | [mm] | 35 x 11 x 24                                                            |
| Material        |      | housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS |
| Lens material   |      | front lens:PMMA                                                         |
| Lens alignment  |      | Side sensing                                                            |

| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | Switching status | 1 x LED, yellow |
|                               | Power            | 1 x LED, green  |
| Electronic lock               |                  | yes             |

| Accessories    |  |                          |
|----------------|--|--------------------------|
| Items supplied |  | Basic clip: 1, E20964    |
|                |  | screws: 2 x (M3 x 16 mm) |
|                |  | spring washers: 2        |
|                |  | Nuts: 2                  |

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



## Diffuse reflection sensors with background suppression

OJH-FPKG/SO/0,15M/US

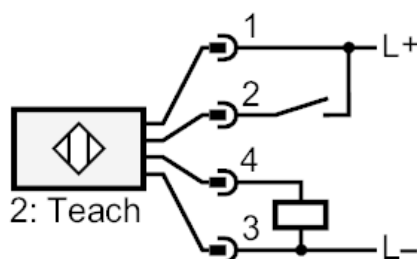
### Electrical connection

Cable: 0.15 m, PVC

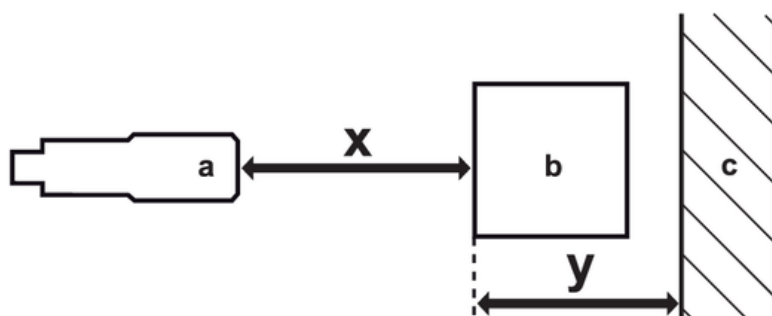
Connector: 1 x M12; coding: A; Contacts: 4, gold-plated; Moulded body: Hytrel 8068; Locking: stainless steel (1.4404 / 316L)



### Connection



### Diagrams and graphs



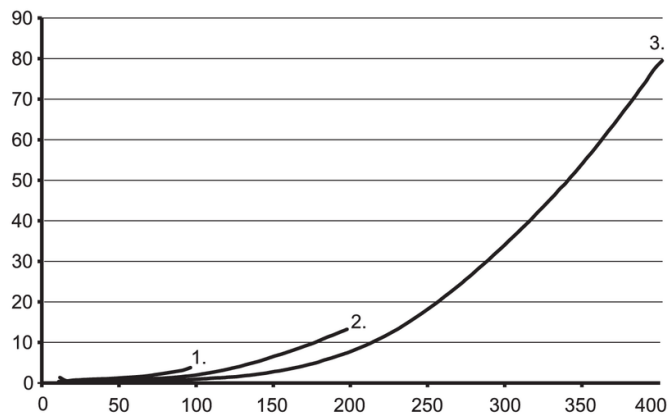
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensors with background suppression

OJH-FPKG/SO/0,15M/US

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)