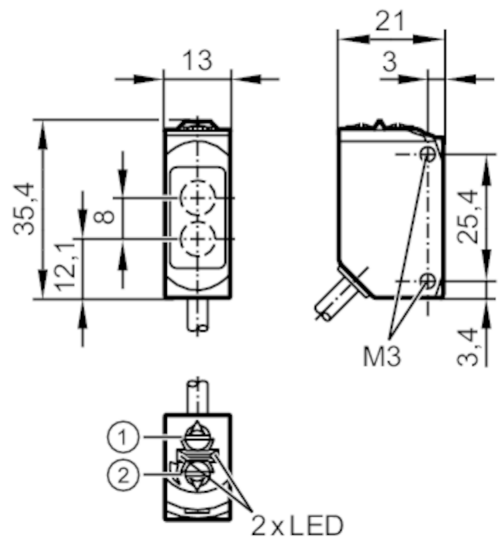


# O6H200



## Diffuse reflection sensors with background suppression

O6H-FPKG



- 1: output function switch  
2: potentiometer sensitivity  
Receiver in upper lens  
transmitter in lower lens



### Product characteristics

|               |             |
|---------------|-------------|
| Type of light | red light   |
| Housing       | rectangular |

### Application

|                    |                           |
|--------------------|---------------------------|
| System             | Background suppression    |
| Function principle | Diffuse reflection sensor |

### Electrical data

|                             |      |              |
|-----------------------------|------|--------------|
| Operating voltage           | [V]  | 10...30 DC   |
| Current consumption         | [mA] | 22; ((24 V)) |
| Protection class            |      | III          |
| Reverse polarity protection |      | yes          |
| Type of light               |      | red light    |
| Wave length                 | [nm] | 633          |

### Outputs

|                                                 |      |                                     |
|-------------------------------------------------|------|-------------------------------------|
| Electrical design                               |      | PNP                                 |
| Output function                                 |      | light-on/dark-on mode; (selectable) |
| Max. voltage drop switching output DC           | [V]  | 2.5                                 |
| Permanent current rating of switching output DC | [mA] | 100                                 |
| Switching frequency DC                          | [Hz] | 1000                                |
| Short-circuit protection                        |      | yes                                 |
| Type of short-circuit protection                |      | yes (non-latching)                  |

# O6H200



## Diffuse reflection sensors with background suppression

O6H-FPKG

| Monitoring range                       |                                 |                                     |
|----------------------------------------|---------------------------------|-------------------------------------|
| Range                                  | [mm]                            | 2...200; (white paper 200 x 200 mm) |
| Range on white object (90 % remission) | [mm]                            | 2...200                             |
| Range on grey object (18 % remission)  | [mm]                            | 4...200                             |
| Range on black object (6 % remission)  | [mm]                            | 8...200                             |
| Range adjustable                       |                                 | yes                                 |
| Max. light spot diameter               | [mm]                            | 8                                   |
| Light spot dimensions refer to         |                                 | at maximum range                    |
| Background suppression available       |                                 | yes                                 |
| Operating conditions                   |                                 |                                     |
| Ambient temperature                    | [°C]                            | -25...60                            |
| Protection                             |                                 | IP 65; IP 67                        |
| Tests / approvals                      |                                 |                                     |
| EMC                                    | EN 60947-5-2                    |                                     |
| MTTF                                   | [years]                         | 683                                 |
| UL approval                            | Ta                              | -25...60 °C                         |
|                                        | Enclosure type                  | Type 1                              |
|                                        | voltage supply                  | Class 2                             |
|                                        | UL approval number              | E008                                |
| Mechanical data                        |                                 |                                     |
| Weight                                 | [g]                             | 59.8                                |
| Housing                                |                                 | rectangular                         |
| Dimensions                             | [mm]                            | 35.4 x 13 x 21                      |
| Material                               |                                 | housing: ABS; PPSU; sealing: EPDM   |
| Lens material                          |                                 | PMMA                                |
| Lens alignment                         |                                 | Side sensing                        |
| Tightening torque                      | [Nm]                            | 0.5                                 |
| Displays / operating elements          |                                 |                                     |
| Display                                | Switching status                | 1 x LED, yellow                     |
|                                        | Power                           | 1 x LED, green                      |
| Remarks                                |                                 |                                     |
| Remarks                                | cULus - Class 2 source required |                                     |
| Pack quantity                          | 1 pcs.                          |                                     |



## Diffuse reflection sensors with background suppression

O6H-FPKG

### Electrical connection

Cable: 2 m, PUR; 3 x 0.25 mm<sup>2</sup>

### Connection



Core colors :  
 BN = brown  
 BK = black  
 BU = blue

### 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

O6H-FPKG

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)