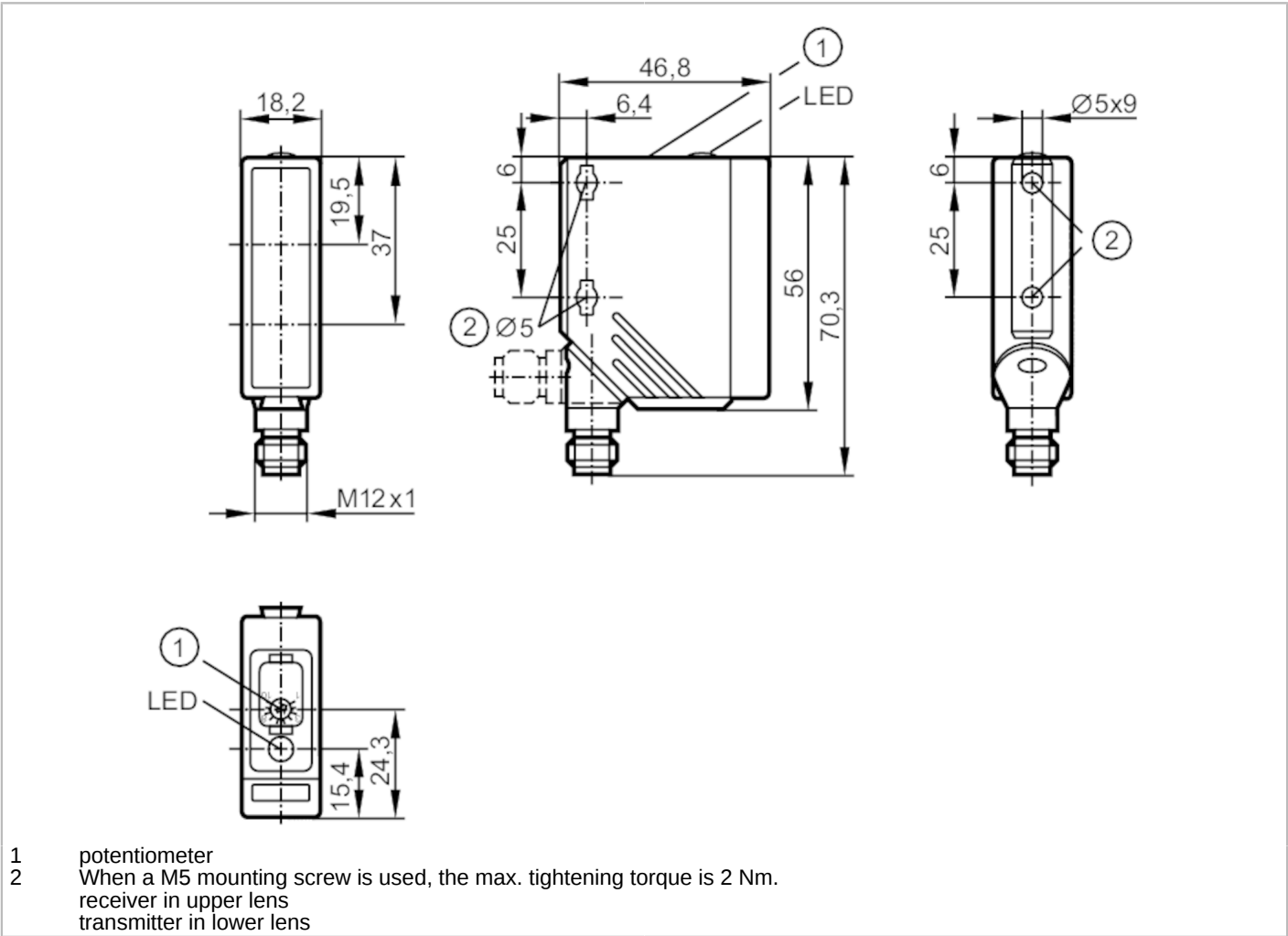


# O5H201



## Diffuse reflection sensor with background suppression

O5H-HNKG/US100



### Product characteristics

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

### 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 | NPN           |
| Output function   | light-on mode |



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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                |      | pulsed |
| Overload protection                             |      | yes    |

| Detection zone                   |      |                                                     |
|----------------------------------|------|-----------------------------------------------------|
| Range                            | [mm] | 50...1400; (white paper 200 x 200 mm 90% remission) |
| Range adjustable                 |      | yes                                                 |
| Max. light spot diameter         | [mm] | 50                                                  |
| Light spot dimensions refer to   |      | Range                                               |
| Background suppression available |      | yes                                                 |

| Operating conditions |      |          |
|----------------------|------|----------|
| Ambient temperature  | [°C] | -25...60 |
| Protection           |      | IP 65    |

| Tests / approvals |         |              |
|-------------------|---------|--------------|
| EMC               |         | EN 60947-5-2 |
| MTTF              | [years] | 336          |

| Mechanical data |      |                                                              |
|-----------------|------|--------------------------------------------------------------|
| Weight          | [g]  | 62.5                                                         |
| Housing         |      | rectangular                                                  |
| Dimensions      | [mm] | 56 x 18.2 x 46.8                                             |
| Materials       |      | housing: PA; bezel: stainless steel; operator interface: TPE |
| Lens material   |      | PMMA                                                         |
| Lens alignment  |      | side lens                                                    |

| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | switching status | 1 x LED, yellow |
| Operating elements            |                  | potentiometer   |

| Remarks       |  |                                                       |
|---------------|--|-------------------------------------------------------|
| Remarks       |  | operating voltage "supply class 2" according to cULus |
| Pack quantity |  | 1 pcs.                                                |

## Electrical connection

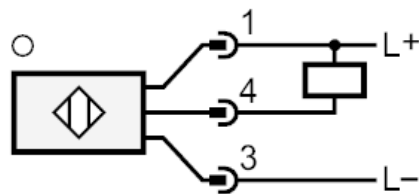
Connector: 1 x M12; coding: A



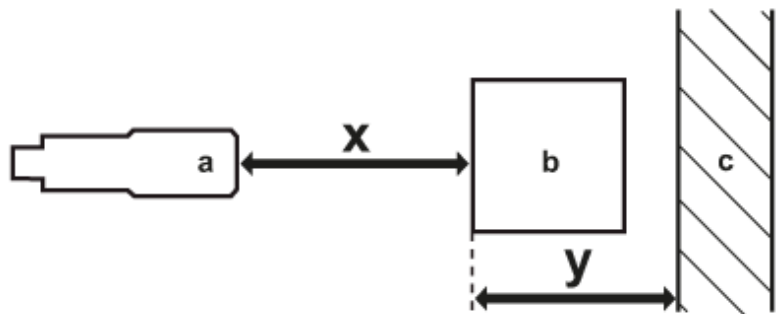
## Diffuse reflection sensor with background suppression

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### Connection



### Diagrams and graphs



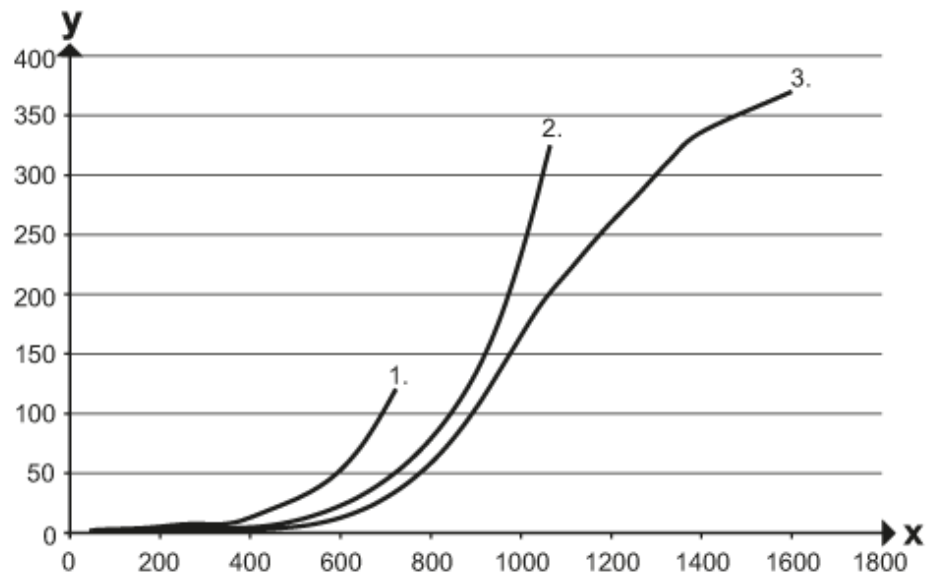
- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]



## Diffuse reflection sensor with background suppression

O5H-HNKG/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)