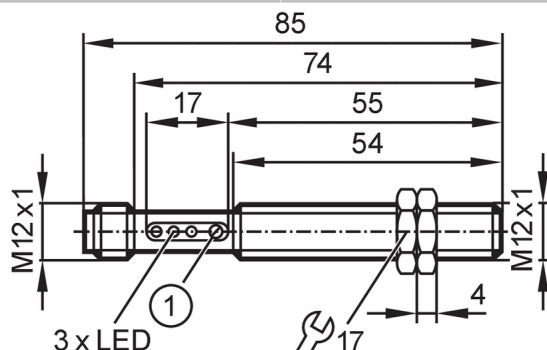


# OF5060



## Diffuse reflection sensor

OFB-FNKG/US-100



1 potentiometer



### Product characteristics

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

### Application

|                    |                           |
|--------------------|---------------------------|
| Special feature    | Function check output     |
| Function principle | Diffuse reflection sensor |
| Application        | Industrial applications   |

### Electrical data

|                             |      |                |
|-----------------------------|------|----------------|
| Operating voltage           | [V]  | 10...36 DC     |
| Current consumption         | [mA] | < 35           |
| Protection class            |      | II             |
| Reverse polarity protection |      | yes            |
| Type of light               |      | Infrared light |
| Wave length                 | [nm] | 880            |

### Outputs

|                                                 |      |                                       |
|-------------------------------------------------|------|---------------------------------------|
| Electrical design                               |      | NPN                                   |
| Output function                                 |      | light-on/dark-on mode; (programmable) |
| Max. voltage drop switching output DC           | [V]  | 2.5                                   |
| Function check output                           |      | yes                                   |
| Max. voltage drop of function check output      | [V]  | 3.5                                   |
| Max. current load for function check output     | [mA] | 10                                    |
| Permanent current rating of switching output DC | [mA] | 200                                   |
| Switching frequency DC                          | [Hz] | 320                                   |
| Short-circuit protection                        |      | yes                                   |
| Type of short-circuit protection                |      | yes (non-latching)                    |
| Overload protection                             |      | yes                                   |

### Monitoring range

|       |      |                                     |
|-------|------|-------------------------------------|
| Range | [mm] | 1...400; (white paper 200 x 200 mm) |
|-------|------|-------------------------------------|

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|                                |                  |
|--------------------------------|------------------|
| Range adjustable               | yes              |
| Max. light spot diameter [mm]  | 185              |
| Light spot dimensions refer to | at maximum range |

### Operating conditions

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

### Tests / approvals

|              |                    |                         |
|--------------|--------------------|-------------------------|
| EMC          | EN 60947-5-2       |                         |
|              | EN 55011           | class B                 |
| MTTF [years] | 601                |                         |
| UL approval  | Ta                 | < 40 °C                 |
|              | Enclosure type     | Type 1                  |
|              | voltage supply     | Limited Voltage/Current |
|              | UL approval number | E030                    |
|              | File number UL     | E174191                 |

### Mechanical data

|                    |                                    |
|--------------------|------------------------------------|
| Weight [g]         | 52                                 |
| Housing            | Threaded type                      |
| Dimensions [mm]    | M12 x 1 / L = 74                   |
| Thread designation | M12 x 1                            |
| Material           | housing: brass white bronze coated |
| Lens material      | front lens: PMMA                   |

### Displays / operating elements

|         |                  |                 |
|---------|------------------|-----------------|
| Display | Switching status | 1 x LED, yellow |
|         | Power            | 1 x LED, green  |
|         | Function         | 1 x LED, red    |

### Accessories

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

### Remarks

|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

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



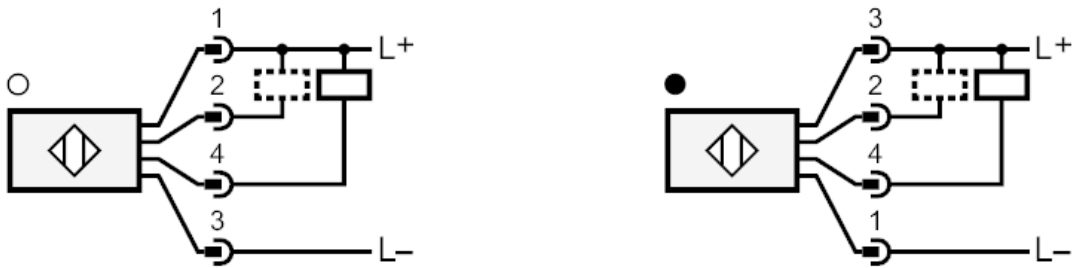
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### Connection



### 2 Function check output

#### Diagrams and graphs

excess gain graph

