

## 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 |

## 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                     | pulsed                                |
| Overload protection                                  | yes                                   |

## Detection zone

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

# OF5060



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

### Mechanical data

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

### Displays / operating elements

|         |                  |                 |
|---------|------------------|-----------------|
| Display | switching status | 1 x LED, yellow |
|         | operation        | 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



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### Connection



2 Function check output

### Diagrams and graphs

excess gain graph

