

## Technical data sheet

### Optical guidance sensor

Part no.: 50137472

OGS 600-280/CN-M12

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For illustration purposes only



CANopen **RS232**



## Technical data

### Basic data

|             |                                                                                            |
|-------------|--------------------------------------------------------------------------------------------|
| Series      | OGS 600                                                                                    |
| Application | Optical guidance                                                                           |
| Trace types | Dark trace on light background<br>Light trace on dark background<br>Retro-reflective trace |

### Optical data

|                                    |              |
|------------------------------------|--------------|
| Working range                      | 10 ... 70 mm |
| Light source                       | LED, Red     |
| Wavelength                         | 634 nm       |
| Transmitted-signal shape           | Pulsed       |
| Detection width for complete trace | 265 mm       |

### Measurement data

|                              |                                    |
|------------------------------|------------------------------------|
| Measurement value resolution | 1 mm, Working distance 35 mm       |
| Linearity error              | 0 ... 5 mm, Working distance 35 mm |
| Output value for edges       | 170 ... 2,830                      |
| Maximum output value         | 0 ... 3,000                        |

### Electrical data

|                    |                                                         |
|--------------------|---------------------------------------------------------|
| Protective circuit | Polarity reversal protection<br>Short circuit protected |
|--------------------|---------------------------------------------------------|

#### Performance data

|                           |                 |
|---------------------------|-----------------|
| Supply voltage $U_B$      | 18 ... 30 V, DC |
| Average power consumption | 4 W             |

#### Outputs

|                                     |            |
|-------------------------------------|------------|
| Number of digital switching outputs | 1 Piece(s) |
|-------------------------------------|------------|

#### Switching outputs

|                         |                                           |
|-------------------------|-------------------------------------------|
| Type                    | Digital switching output                  |
| Voltage type            | DC                                        |
| Switching current, max. | 100 mA                                    |
| Switching voltage       | high: $\geq(U_B - 2V)$<br>low: $\leq 2 V$ |

#### Switching output 1

|                     |                                                    |
|---------------------|----------------------------------------------------|
| Switching element   | Transistor, PNP                                    |
| Switching principle | Trace monitoring / contrast monitoring, adjustable |

### Time behavior

|            |       |
|------------|-------|
| Cycle time | 10 ms |
|------------|-------|

### Interface

|                    |                     |
|--------------------|---------------------|
| Type               | CANopen             |
| CANopen            |                     |
| Function           | Process             |
| Transmission speed | 10 ... 1,000 kBit/s |

### Service interface

|                    |               |
|--------------------|---------------|
| Type               | RS 232        |
| RS 232             |               |
| Transmission speed | 115,200 bit/s |

### Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 2 Piece(s) |
|-----------------------|------------|

#### Connection 1

|                    |                |
|--------------------|----------------|
| Function           | Data interface |
| Type of connection | Connector      |
| Thread size        | M12            |
| Type               | Female         |
| Material           | Metal          |
| No. of pins        | 5 -pin         |
| Encoding           | A-coded        |

#### Connection 2

|                    |                                                   |
|--------------------|---------------------------------------------------|
| Function           | Service interface<br>Signal OUT<br>Voltage supply |
| Type of connection | Connector                                         |
| Thread size        | M12                                               |
| Type               | Male                                              |
| Material           | Metal                                             |
| No. of pins        | 5 -pin                                            |
| Encoding           | A-coded                                           |

### Mechanical data

|                       |                            |
|-----------------------|----------------------------|
| Design                | Cubic                      |
| Dimension (W x H x L) | 34.5 mm x 47.5 mm x 360 mm |
| Metal housing         | Aluminum                   |
| Lens cover material   | Plastic                    |
| Net weight            | 405 g                      |
| Housing color         | Red                        |
| Type of fastening     | Supplied mounting bracket  |

### Operation and display

|                       |          |
|-----------------------|----------|
| Type of configuration | Software |
|-----------------------|----------|

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -15 ... 50 °C |
| Ambient temperature, storage   | -30 ... 60 °C |

### Certifications

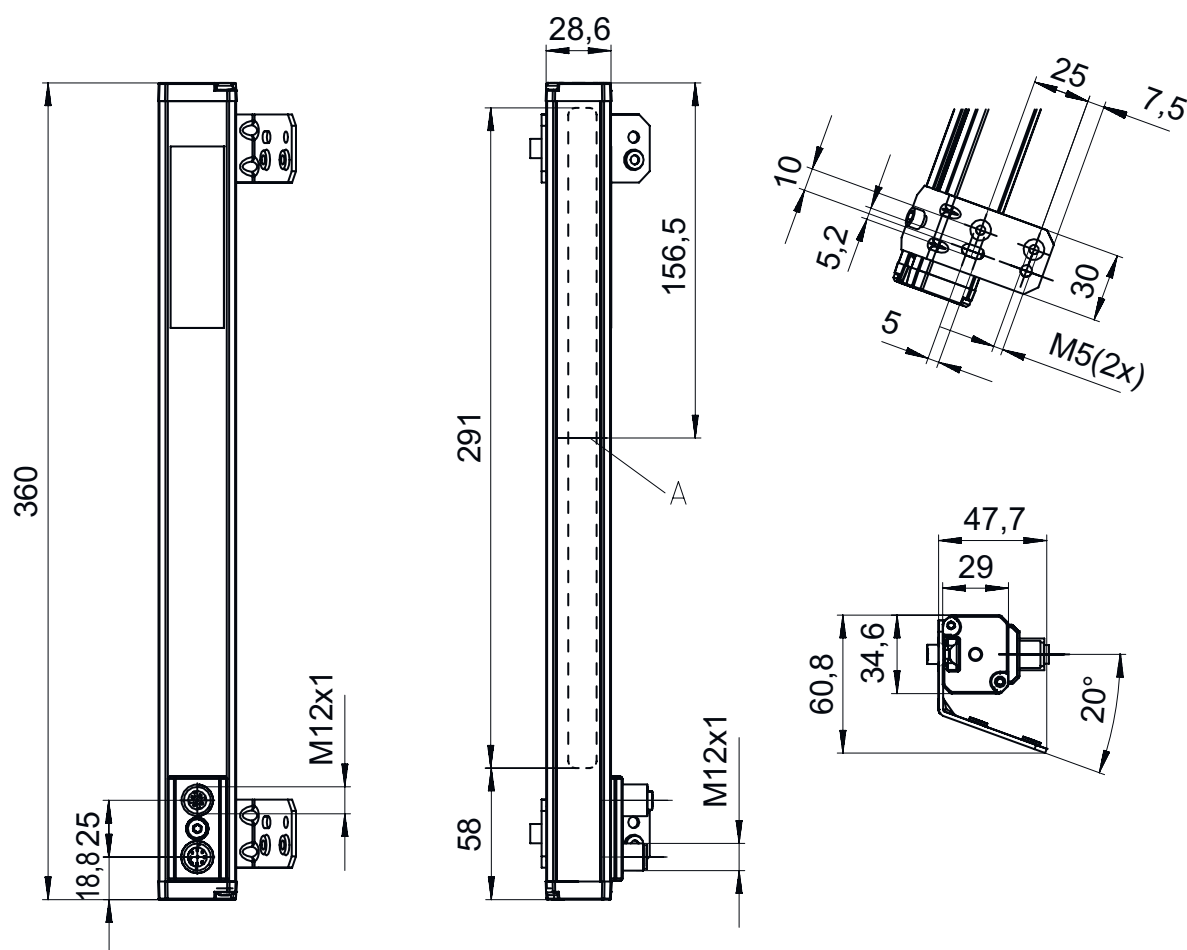
|                      |                           |
|----------------------|---------------------------|
| Degree of protection | IP 65                     |
| Protection class     | III                       |
| Approvals            | c UL US                   |
| Standards applied    | EN 60947-5-2:2007+A1:2012 |

## Technical data

|                       |          |
|-----------------------|----------|
| Customs tariff number | 85365019 |
| ECLASS 5.1.4          | 27270906 |
| ECLASS 8.0            | 27270906 |
| ECLASS 9.0            | 27270906 |
| ECLASS 10.0           | 27270906 |
| ECLASS 11.0           | 27270906 |
| ECLASS 12.0           | 27270906 |
| ECLASS 13.0           | 27270906 |
| ECLASS 14.0           | 27270906 |
| ECLASS 15.0           | 27270906 |
| ECLASS 16.0           | 27270906 |
| ETIM 5.0              | EC001820 |
| ETIM 6.0              | EC001820 |
| ETIM 7.0              | EC001820 |
| ETIM 8.0              | EC001820 |
| ETIM 9.0              | EC001820 |
| ETIM 10.0             | EC001820 |

## Dimensioned drawings

All dimensions in millimeters



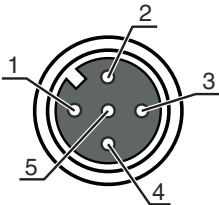
A Integrated illumination

Electrical connection

Connection 1

|                    |                |
|--------------------|----------------|
| Function           | Data interface |
| Type of connection | Connector      |
| Thread size        | M12            |
| Type               | Female         |
| Material           | Metal          |
| No. of pins        | 5 -pin         |
| Encoding           | A-coded        |

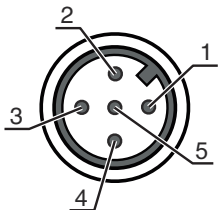
| Pin | Pin assignment |
|-----|----------------|
| 1   | CAN Shield     |
| 2   | n.c.           |
| 3   | CAN GND        |
| 4   | CAN H          |
| 5   | CAN L          |



Connection 2

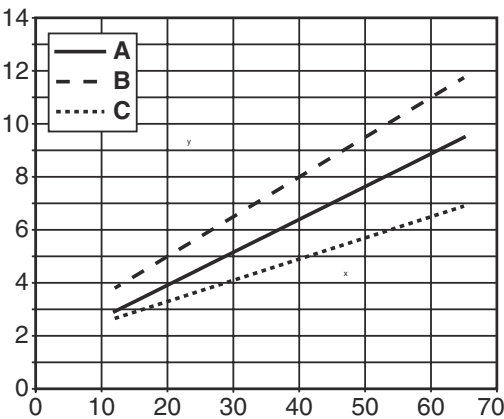
|                    |                   |
|--------------------|-------------------|
| Function           | Service interface |
|                    | Signal OUT        |
|                    | Voltage supply    |
| Type of connection | Connector         |
| Thread size        | M12               |
| Type               | Male              |
| Material           | Metal             |
| No. of pins        | 5 -pin            |
| Encoding           | A-coded           |

| Pin | Pin assignment |
|-----|----------------|
| 1   | V+             |
| 2   | RxD RS232      |
| 3   | GND            |
| 4   | OUT 1          |
| 5   | TxD RS 232     |



Diagrams

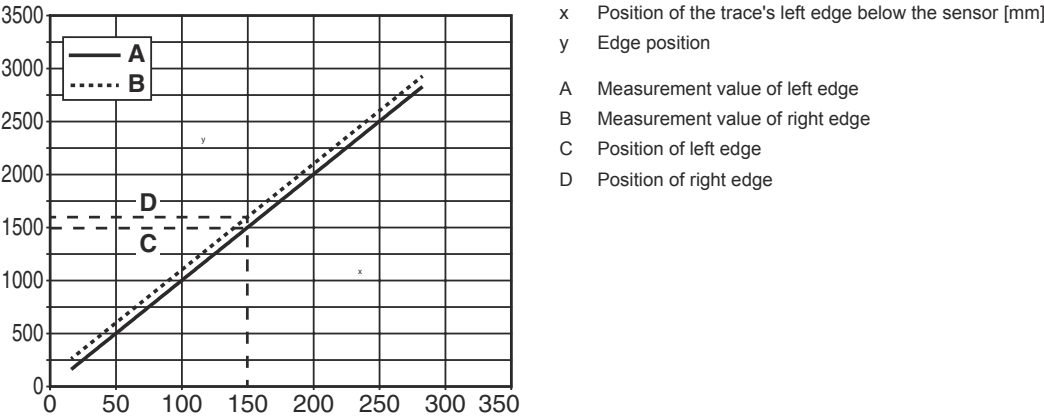
Typical value of characteristic curve: linearity error



x Floor-sensor distance [mm]  
y Linearity error [mm]  
A Typical value  
B max.  
C min.

Diagrams

Sensor characteristic curve with one trace



Notes

**Observe intended use!**

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with its intended use.

**For UL applications:**

- ⚠ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- ⚠ Max. ambient temperature: 50°C
- ⚠ Only for use in NFPA 79 applications
- ⚠ Only suitable for indoors

Accessories

Connection technology - Connection cables

|  | Part no. | Designation       | Article          | Description                                                                                                                                                                                                                                                                |
|--|----------|-------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50114693 | KB DN/CAN-2000 SA | Connection cable | Application: Oil and lubricant resistant<br>Suitable for interface: DeviceNet, CANopen<br>Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin<br>Connector, LED: No<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 2,000 mm<br>Sheathing material: PUR |
|  | 50114697 | KB DN/CAN-5000 SA | Connection cable | Application: Oil and lubricant resistant<br>Suitable for interface: CANopen, DeviceNet<br>Connection 1: Connector, M12, Axial, Male, A-coded, 5 -pin<br>Connector, LED: No<br>Connection 2: Open end<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR |

Accessories

|                                                                                   | Part no. | Designation        | Article          | Description                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------|----------|--------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50133839 | KD U-M12-5A-P1-020 | Connection cable | Application: Oil and lubricant resistant<br>Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connector, LED: No<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 2,000 mm<br>Sheathing material: PUR |
|                                                                                   | 50133841 | KD U-M12-5A-P1-050 | Connection cable | Application: Oil and lubricant resistant<br>Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connector, LED: No<br>Connection 2: Open end<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PUR |

Note



A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.