

## Technical data sheet

### Optical data transmission

Part no.: 50106028  
DDLS 200/300.2-10-M12

#### Contents

- Technical data
- Electrical connection
- Operation and display
- Suitable transmitters
- Accessories



For illustration purposes only



## Technical data

### Basic data

|        |          |
|--------|----------|
| Series | DDLS 200 |
|--------|----------|

### Special version

|                 |                                                                           |
|-----------------|---------------------------------------------------------------------------|
| Special version | Not influenced by reflective surfaces<br>Operation of parallel light axes |
|-----------------|---------------------------------------------------------------------------|

### Optical data

|                        |                    |
|------------------------|--------------------|
| Working range          | 200 ... 300,000 mm |
| Light source           | LED                |
| Transmission frequency | F2                 |
| Opening angle          | 1 °                |

### Electrical data

#### Performance data

|                      |                 |
|----------------------|-----------------|
| Supply voltage $U_B$ | 18 ... 30 V, DC |
|----------------------|-----------------|

#### Inputs

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

#### Outputs

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

### Interface

|      |                     |
|------|---------------------|
| Type | PROFIBUS DP, RS 485 |
|------|---------------------|

#### PROFIBUS DP

|                    |                       |
|--------------------|-----------------------|
| Transmission speed | 0.0096 ... 1.5 Mbit/s |
|--------------------|-----------------------|

### Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 3 Piece(s) |
|-----------------------|------------|

#### Connection 1

|                       |           |
|-----------------------|-----------|
| Type of connection    | Connector |
| Designation on device | BUS IN    |
| Thread size           | M12       |
| Type                  | Male      |
| No. of pins           | 5 -pin    |
| Encoding              | B-coded   |

#### Connection 2

|                       |           |
|-----------------------|-----------|
| Type of connection    | Connector |
| Designation on device | Bus OUT   |
| Thread size           | M12       |
| Type                  | Female    |
| No. of pins           | 5 -pin    |
| Encoding              | B-coded   |

#### Connection 3

|                       |           |
|-----------------------|-----------|
| Type of connection    | Connector |
| Designation on device | PWR       |
| Thread size           | M12       |
| Type                  | Male      |
| No. of pins           | 5 -pin    |
| Encoding              | A-coded   |

### Mechanical data

|                       |                                |
|-----------------------|--------------------------------|
| Dimension (W x H x L) | 89.25 mm x 196.5 mm x 111.8 mm |
| Housing material      | Metal                          |
| Net weight            | 1,245 g                        |

### Operation and display

|                 |                  |
|-----------------|------------------|
| Type of display | Bar graph<br>LED |
|-----------------|------------------|

### Environmental data

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -5 ... 50 °C  |
| Ambient temperature, storage   | -30 ... 70 °C |

### Certifications

|                                                            |                                        |
|------------------------------------------------------------|----------------------------------------|
| Degree of protection                                       | IP 65                                  |
| Approvals                                                  | c UL US                                |
| Test procedure for EMC in accordance with standard         | EN 61000-6-2:2005<br>EN 61000-6-4:2001 |
| Test procedure for noise in accordance with standard       | EN 60068-2-64                          |
| Test procedure for oscillation in accordance with standard | EN 60068-2-6                           |
| Test procedure for shock in accordance with standard       | EN 60068-2-27<br>EN 60068-2-29         |

### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 84718000 |
| ECLASS 5.1.4          | 19039001 |
| ECLASS 8.0            | 19179090 |
| ECLASS 9.0            | 19179090 |
| ECLASS 10.0           | 19170506 |
| ECLASS 11.0           | 19170506 |
| ECLASS 12.0           | 19170506 |
| ECLASS 13.0           | 19170506 |
| ECLASS 14.0           | 19170506 |
| ECLASS 15.0           | 19170506 |
| ETIM 5.0              | EC000515 |
| ETIM 6.0              | EC000515 |
| ETIM 7.0              | EC000515 |
| ETIM 8.0              | EC000515 |
| ETIM 9.0              | EC000515 |
| ETIM 10.0             | EC000515 |

Electrical connection

| Connection 1       |           | BUS IN |
|--------------------|-----------|--------|
| Function           | BUS IN    |        |
| Type of connection | Connector |        |
| Thread size        | M12       |        |
| Type               | Male      |        |
| Material           | Metal     |        |
| No. of pins        | 5 -pin    |        |
| Encoding           | B-coded   |        |

| Pin | Pin assignment |
|-----|----------------|
| 1   | n.c.           |
| 2   | A (N)          |
| 3   | GND            |
| 4   | B (P)          |
| 5   | n.c.           |

| Connection 2       |           | Bus OUT |
|--------------------|-----------|---------|
| Function           | BUS OUT   |         |
| Type of connection | Connector |         |
| Thread size        | M12       |         |
| Type               | Female    |         |
| Material           | Metal     |         |
| No. of pins        | 5 -pin    |         |
| Encoding           | B-coded   |         |

| Pin | Pin assignment |
|-----|----------------|
| 1   | VCC            |
| 2   | A (N)          |
| 3   | GND            |
| 4   | B (P)          |
| 5   | n.c.           |

| Connection 3       |                | PWR |
|--------------------|----------------|-----|
| Function           | 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   | VIN            |
| 2   | OUT WARN       |
| 3   | GND            |
| 4   | IN 1           |
| 5   | FE             |

Operation and display

| LED | Display | Meaning        |
|-----|---------|----------------|
| 1   | Green   | Operating mode |
| 2   | Green   | PWR            |

## Operation and display

| LED | Display | Meaning            |
|-----|---------|--------------------|
| 3   | Green   | TRANSMIT DATA (Tx) |
| 4   | Green   | RECEIVE DATA (Rx)  |

## Suitable transmitters

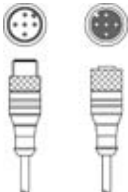
|                                                                                   | Part no. | Designation           | Article                   | Description                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|----------|-----------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50106027 | DDLS 200/300.1-10-M12 | Optical data transmission | Special version: Operation of parallel light axes, Not influenced by reflective surfaces<br>Working range: 200 ... 300,000 mm<br>Transmission frequency: F1<br>Interface: PROFIBUS DP, RS 485<br>Connection: Connector, M12 |

## Accessories

### Connection technology - Connection cables

|                                                                                    | Part no. | Designation         | Article          | Description                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------|----------|---------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | 50135243 | KD PB-M12-4A-P3-050 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-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 |
|  | 50132079 | KD U-M12-5A-V1-050  | Connection cable | 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: PVC                                         |
|  | 50135248 | KS PB-M12-4A-P3-050 | Connection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Male, B-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   |

### Connection technology - Interconnection cables

|                                                                                    | Part no. | Designation                 | Article               | Description                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------|----------|-----------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50135254 | KDS PB-M12-4A-M12-4A-P3-050 | Interconnection cable | Suitable for interface: PROFIBUS DP<br>Connection 1: Connector, M12, Axial, Female, B-coded, 5 -pin<br>Connection 2: Connector, M12, Axial, Male, B-coded, 4 -pin<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR |

Accessories

| Note                                                                             |                                                                                                                                  |
|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|  | <p>A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.</p> |