

## Technical data sheet

### Tower light

Part no.: 50149102

TL305-5MC-BZ-IOL-M12

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For illustration purposes only



## Technical data

### Basic data

|                   |                                   |
|-------------------|-----------------------------------|
| Series            | TL 305-IOL                        |
| Contains          | 1x M30 nut<br>1x rubber flat seal |
| Type of signaling | Optical and acoustic              |

### Optical data

|                            |                          |
|----------------------------|--------------------------|
| Adjustable light intensity | 10 ... 100%, via IO-Link |
|----------------------------|--------------------------|

### Electrical data

#### Performance data

|                           |                 |
|---------------------------|-----------------|
| Supply voltage $U_B$      | 18 ... 30 V, DC |
| Current consumption, max. | 305 mA          |

#### Inputs

|                                    |            |
|------------------------------------|------------|
| Number of digital switching inputs | 3 Piece(s) |
|------------------------------------|------------|

#### Switching inputs

|                              |                         |
|------------------------------|-------------------------|
| Type                         | Digital switching input |
| Switching voltage high, min. | 8 V                     |
| Switching voltage low, max.  | 5 V                     |
| Voltage type                 | DC                      |

#### Digital switching input 1

|          |   |
|----------|---|
| Function | External trigger mode: 8 color presets<br>Trigger 1 |
|----------|---|

#### Digital switching input 2

|          |   |
|----------|---|
| Function | External trigger mode: 8 color presets<br>Trigger 2 |
|----------|---|

#### Digital switching input 3

|          |   |
|----------|---|
| Function | External trigger mode: 8 color presets<br>Trigger 3 |
|----------|---|

### Interface

|                  |  |
|------------------|--|
| Type             | IO-Link  |
| <b>IO-Link</b>   |  |
| Function         | Four operating modes, color and buzzer configuration |
| COM mode         | COM2   |
| Min. cycle time  | COM2 = 5 ms  |
| Frame type       | TYPE_2_V   |
| Specification    | V1.1   |
| Device ID        | 5021   |
| SIO-mode support | Yes  |

### Connection

|                       |            |
|-----------------------|------------|
| Number of connections | 1 Piece(s) |
|-----------------------|------------|

### Connection 1

|                    |   |
|--------------------|---|
| Function           | IO-Link<br>Light color via control of pins (external trigger mode)<br>Signal IN<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                              | Cylindrical  |
| Dimension ( $\varnothing$ x L)      | 50.6 mm x 278 mm   |
| Thread size                         | M30 x 1.5 mm   |
| Housing material                    | Metal  |
| Metal housing                       | Aluminium, anodized  |
| Light area material                 | Polycarbonate/Plastic  |
| Net weight                          | 390 g  |
| Housing color                       | Gray   |
| Type of illuminant                  | LED/24V  |
| Lens modules                        | 5 pieces, ready-made   |
| Signal image                        | Continuous, blinking, flashing light   |
| Angle of radiation                  | 360°   |
| Sequence of the modules (ascending) | User defined via IO-Link: RGB color space, Factory settings: red, green, yellow, blue, white, orange, pink |

### Environmental data

|                                |             |
|--------------------------------|-------------|
| Ambient temperature, operation | 0 ... 50 °C |
| Ambient temperature, storage   | 0 ... 50 °C |

### Certifications

|                      |       |
|----------------------|-------|
| Degree of protection | IP 20 |
| Protection class     | III   |
| Approvals            | UL    |

### Acoustic data

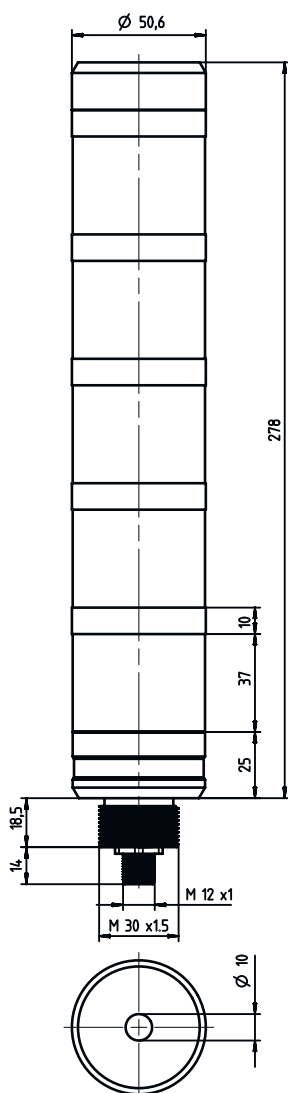
|                 |  |
|-----------------|--|
| Tone type       | Continuous tone, slow intermittent (1 Hz), rapid intermittent (2.5 Hz) |
| Sound pressure  | 80 dB  |
| Number of tones | 3 Piece(s)   |

## Technical data

|              |          |
|--------------|----------|
| ECLASS 5.1.4 | 27371230 |
| ECLASS 8.0   | 27371230 |
| ECLASS 9.0   | 27371230 |
| ECLASS 10.0  | 27371230 |
| ECLASS 11.0  | 27371230 |
| ECLASS 12.0  | 27371230 |
| ECLASS 13.0  | 27371230 |
| ECLASS 14.0  | 27371230 |
| ECLASS 15.0  | 27371230 |
| ETIM 5.0     | EC001042 |
| ETIM 6.0     | EC001042 |
| ETIM 7.0     | EC001042 |
| ETIM 8.0     | EC001042 |
| ETIM 9.0     | EC001042 |
| ETIM 10.0    | EC001042 |

## Dimensioned drawings

All dimensions in millimeters



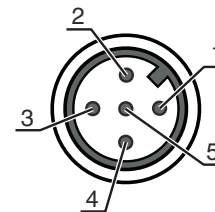
## Electrical connection

### Connection 1

|                    |   |
|--------------------|---|
| Function           | IO-Link   |
|                    | Light color via control of pins (external trigger mode) |
|                    | Signal IN   |
|                    | Voltage supply  |
| Type of connection | Connector   |
| Thread size        | M12   |
| Type               | Male  |
| Material           | Metal   |
| No. of pins        | 5 -pin  |
| Encoding           | A-coded   |

## Electrical connection

| Pin | Pin assignment      | Conductor color |
|-----|---------------------|-----------------|
| 1   | +                   | Brown           |
| 2   | Trigger 1           | White           |
| 3   | -                   | Blue            |
| 4   | Trigger 3 & IO-Link | Black           |
| 5   | Trigger 2           | Gray            |



## Diagrams




External Trigger Mode: Activation of the eight pre-sets via the three trigger inputs

| Trigger Inputs | Pre-Sets | Factory Settings |        |        |        |        |                        |        |        |        |        |                        |                 |  |
|----------------|----------|------------------|--------|--------|--------|--------|------------------------|--------|--------|--------|--------|------------------------|-----------------|--|
|                |          | TL305-5MC        |        |        |        |        | TL305-5MC-BZ           |        |        |        |        |                        |                 |  |
| 1              | 2        | 3                | Seg. 1 | Seg. 2 | Seg. 3 | Seg. 4 | Seg. 5                 | Seg. 1 | Seg. 2 | Seg. 3 | Seg. 4 | Seg. 5                 | Buzzer          |  |
| 0              | 0        | 0                | 1      | --     | --     | --     | --                     | --     | --     | --     | --     | --                     | --              |  |
| 1              | 0        | 0                | 2      | --     | --     | --     | Red                    | --     | --     | --     | --     | Red                    |                 |  |
| 0              | 1        | 0                | 3      | --     | --     | Green  | --                     | --     | --     | Green  | --     | --                     |                 |  |
| 1              | 1        | 0                | 4      | --     | --     | --     | Yellow                 | --     | --     | --     | Yellow | --                     |                 |  |
| 0              | 0        | 1                | 5      | --     | Blue   | --     | --                     | --     | --     | Blue   | --     | --                     |                 |  |
| 1              | 0        | 1                | 6      | White  | --     | --     | --                     | --     | --     | --     | --     | --                     |                 |  |
| 0              | 1        | 1                | 7      | --     | --     | --     | Red (slowly flashing)  | --     | --     | --     | --     | Red (slowly flashing)  | Buzzer (1 Hz)   |  |
| 1              | 1        | 1                | 8      | --     | --     | --     | Red (rapidly flashing) | --     | --     | --     | --     | Red (rapidly flashing) | Buzzer (2.5 Hz) |  |


All trigger inputs have a delay of ~50 ms. Pre-sets can be defined via IO-Link.

## Accessories


### Connection technology - Connection unit

|  | Part no. | Designation                 | Article        | Description   |
|--|----------|-----------------------------|----------------|---|
|  | 50138211 | MD 748i-11-82/L5-2222       | IO-Link master | Type: IO-Link master<br>Supply voltage: 20 ... 30 V<br>Current consumption, max.: 12,000 mA<br>Switching outputs for each sensor connection: 1 Piece(s)<br>Interface: IO-Link, PROFINET<br>Connections: 12 Piece(s)<br>Sensor connections: 8 Piece(s)<br>Connections for voltage supply: 2 Piece(s)<br>Interface connections: 2 Piece(s)<br>Degree of protection: IP 67   |
|  | 50138212 | MD 748iC-11-82/L5-2222 F001 | IO-Link master | Type: IO-Link master<br>Supply voltage: 20 ... 30 V<br>Current consumption, max.: 12,000 mA<br>Switching outputs for each sensor connection: 1 Piece(s)<br>Interface: OPC UA, IO-Link, PROFINET<br>Connections: 12 Piece(s)<br>Sensor connections: 8 Piece(s)<br>Connections for voltage supply: 2 Piece(s)<br>Interface connections: 2 Piece(s)<br>Degree of protection: IP 67   |
|  | 50144900 | MD 798i-11-82/L5-2222       | IO-Link master | Type: IO-Link master<br>Current consumption, max.: 11,000 mA<br>Switching outputs for each sensor connection: 1 Piece(s)<br>Switching output: Transistor, PNP<br>Interface: IO-Link, Automatic protocol detection, EtherNet IP, Modbus TCP, PROFINET<br>Connections: 12 Piece(s)<br>Sensor connections: 8 Piece(s)<br>Connections for voltage supply: 2 Piece(s)<br>Interface connections: 2 Piece(s)<br>Degree of protection: IP 67, IP 65, IP 69K |


## Accessories

|  | Part no. | Designation                  | Article         | Description  |
|--|----------|------------------------------|-----------------|--|
|  | 50121098 | SET MD12-US2-IL1.1<br>+ Zub. | Diagnostics set | Interface: USB<br>Connections: 2 Piece(s)<br>Degree of protection: IP 20 |




## Connection technology - Connection cables

|  | Part no. | Designation        | Article          | Description   |
|--|----------|--------------------|------------------|---|
|  | 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 |

## Connection technology - Interconnection cables

|   | Part no. | Designation                | Article               | Description   |
|---|----------|----------------------------|-----------------------|---|
|  | 50133298 | KDS U-M12-5A-M12-5A-V1-050 | Interconnection cable | Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin<br>Shielded: No<br>Cable length: 5,000 mm<br>Sheathing material: PVC |

## Mounting

|   | Part no. | Designation     | Article             | Description   |
|---|----------|-----------------|---------------------|---|
|  | 50149110 | TL305-AC.EP.100 | Tower light element | Design: Cylindrical<br>Diameter: 35 mm<br>Version: Extension pipe<br>Fastening, at system: Screw type |
|   | 50149111 | TL305-AC.MB1    | Tower light element | Design: L shape<br>Version: Angle, L-shape<br>Fastening, at system: Screw type                        |
|   | 50149109 | TL305-AC.MF.65  | Tower light element | Design: Cylindrical<br>Diameter: 98 mm<br>Version: Mounting base<br>Fastening, at system: Screw type  |

## Accessories

### Note



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