

## Technical data sheet

### Tower light

Part no.: 50149102

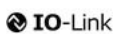
TL305-5MC-BZ-IOL-M12

#### Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Accessories



For illustration purposes only



Technical data

Basic data

|                   |                      |
|-------------------|----------------------|
| Series            | TL 305-IOL           |
| Contains          | 1x M30 nut           |
|                   | 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 <sub>B</sub> | 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 |
|          | Trigger 1                              |

Digital switching input 2

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

Digital switching input 3

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

Interface

|      |         |
|------|---------|
| Type | IO-Link |
|------|---------|

IO-Link

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

Mechanical data

|                                     |                                                                                                            |
|-------------------------------------|------------------------------------------------------------------------------------------------------------|
| Design                              | Cylindrical                                                                                                |
| Thread size                         | M30 x 1.5 mm                                                                                               |
| Dimension (Ø x L)                   | 50.6 mm x 278 mm                                                                                           |
| Housing material                    | Metal                                                                                                      |
| Metal housing                       | Aluminium, anodized                                                                                        |
| Light area material                 | PolycarbonatePlastic                                                                                       |
| 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   |
| Certifications       | UL    |

Acoustic data

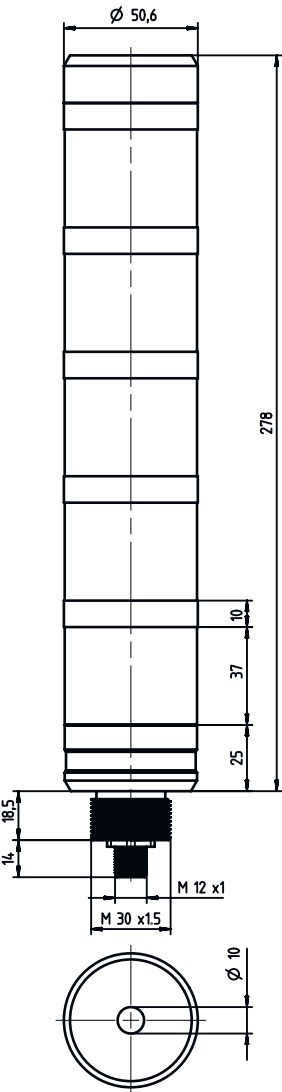
|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| Tone type       | Continuous tone, slow intermittent (1 Hz), rapid intermittent (2.5 Hz) |
| Sound pressure  | 80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

Classification

|              |          |
|--------------|----------|
| 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 |
| ETIM 5.0     | EC001042 |
| ETIM 6.0     | EC001042 |
| ETIM 7.0     | EC001042 |
| ETIM 8.0     | EC001042 |
| ETIM 9.0     | 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            | --     | --     | --     | --                     | 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 |

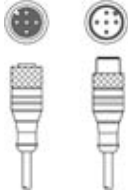
## Accessories

|                                                                                  | 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 technology - Other

|                                                                                     | 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 |

## Muting - Mounting systems

|                                                                                    | Part no. | Designation  | Article             | Description                                                                    |
|------------------------------------------------------------------------------------|----------|--------------|---------------------|--------------------------------------------------------------------------------|
|  | 50149111 | TL305-AC.MB1 | Tower light element | Design: L shape<br>Version: Angle, L-shape<br>Fastening, at system: Screw type |

Accessories

Mounting

|                                                                                  | Part no. | Designation    | Article             | Description                                                                                          |
|----------------------------------------------------------------------------------|----------|----------------|---------------------|------------------------------------------------------------------------------------------------------|
|  | 50149109 | TL305-AC.MF.65 | Tower light element | Design: Cylindrical<br>Diameter: 98 mm<br>Version: Mounting base<br>Fastening, at system: Screw type |

Note



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