

## Lumistar Luminaire ESL 25-Ex, Stainless Steel

CE 0158

3755.194 b



II 2G Ex d IIC T4/T6 Gb  
II 2D Ex tb IIIC T80/T130°C Db

- **For mounting on sight glass fittings**  
Designed for universal applications, this Ex-type sight glass luminaire has been developed for use in potentially explosive environments. It is ideal for combined sight glass and light assemblies, either as a single-flange version or with two separate flanged ports.
- **Compact yet powerful:**  
Dazzle-free illumination, for use with circular sight glass fittings to DIN 28120/DIN 28121 or similar, with screwed sight glass units in compliance with DIN 11851, and in visual flow indicators.
- **Large light aperture and convenient lamp replacement thanks to optimised screw-in lens design.**
- **Application:** For illuminating visual flow indicators, pipelines, laboratory mixers, bioreactors as well as the interior of pressure vessels, tanks, agitators and other – normally closed – processing vessels in **potentially explosive environments**.  
**Gas: Zones 1 and 2; Dust: Zones 21 and 22.**

- **Particularly suitable for use in sterile environments.**

- **Protection:** IP 65 und IP 67 nach DIN EN 60529

- **Operating conditions:** Independent of the internal pressure/ vacuum in vessel. Under no circumstances should a sight glass luminaire be used to replace the cover flange or the sight glass/ luminaire assembly or on its own to close a vessel port.

- **Lumistar luminaires of this type are approved for use in ambient temperatures of up to 60°C, depending on the lamp bulb fitted.**

- **Technical data Ex protection:**

This luminaire meets the essential safety and health requirements by complying with the regulations for

**a) Gas**

EN 60079-0: 2009 General Requirements  
EN 60079-1: 2007 Flame-proof Enclosure 'd'  
Explosion group: IIC (includes II A and II B)  
Temperature class: up to T6 (depending on wattage)

**b) Dust**

EN 00079-0: 2009 General Requirements  
EN 60079-31: 2009 Protection by Enclosures 't'  
Explosion group: IIIC (includes III A and III B)  
Temperature class: T80/T130°C (depending on wattage)

- **EC type-examination certificate:** BVS 08 ATEX E 137



II 2G Ex d IIC T4/T6 Gb  
II 2D Ex tb IIIC T80/T130°C Db

- **Voltage type:** AC/DC, depending on lamp

- **Operating voltage:**

**without integrated transformer:**

12 V... Halogen lamp 5 W, 10 W, 20 W  
24 V... Halogen lamp 20 W

**with integrated transformer:**

120 V... Halogen lamp 12 V/5 W/10 W  
230 V... Halogen lamp 12 V/5 W/10 W  
5 W = PTC protection, 10 W = thermal fuse



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- **Straightforward electrical connection via integrated cable tail or Ex d cable entry gland.**

- **Electrical connection**

**Connecting cable options:**

- Works-fitted cable tail (2 m standard length), resin cast into trumpet cable entry gland, heat-resistant up to 110°C.  
5 m, 10 m and 20 m lengths are also available.
- Without works-fitted cable: connecting cable to fit the cable entry gland (M20 x 1.5) to be provided by operating company.

If ambient temperatures are greater than 40°C, heat-resistant cable, e. g. Sinotherm 110 H05GG-F 3G 1.5 mm<sup>2</sup> should be used.

- **Mounting options:**

With circular sight glass fittings and flow indicators the luminaire is secured to the cover flange by means of the hinged bracket. With screw-type sight glass units the luminaire is mounted on the slotted cover nut.

**The Lumistar luminaire ESL 25-Ex fits the following nominal sizes:**

- Circular sight glass fittings to DIN 28120: from DN 50
- Circular sight glass fittings to DIN 28121: from DN 40
- Flow indicators: from DN 50
- Screwed sight glass units in line with DIN 11851:
  - With DN 65, mounting is by way of separate flange adapter collar
  - From DN 80 up, the hinged bracket is used

- **For sterile applications, a version of this Lumistar luminaire is available with a sleeve that fits over a raised lip on the cover flange.**

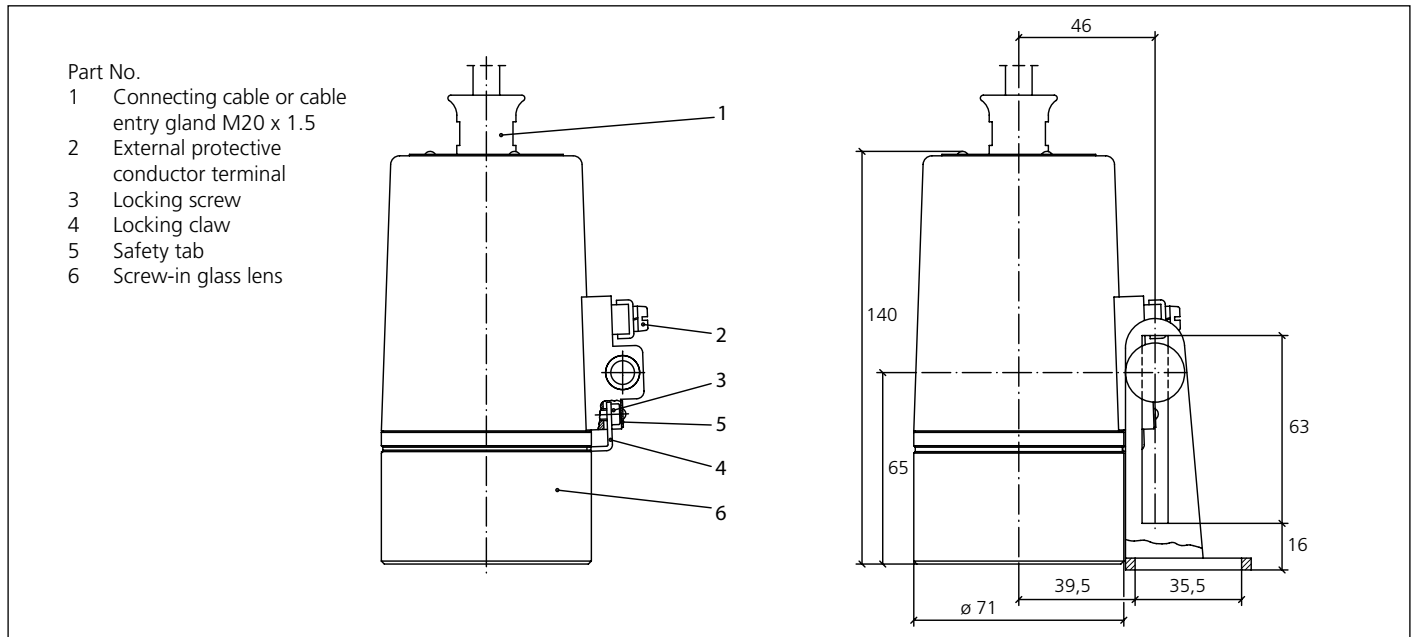
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## • Dimensions and electrical data for Lumistar luminaire ESL 25-Ex:



## • Components and materials:

- Body of luminaire: Stainless steel 1.4404, polished
- Fastening components: Stainless steel 1.4301 (see 'Accessories')
- Cable entry gland: M20 x 1.5

## • Weight (without connecting cable):

- without integrated transformer: 1.8 kg
- with integrated transformer: 2.2 kg

## • Connecting data: Temperature classification and electrical parameters (see also EC Type-Examination Certificate)

| No. | Type ESL 25-Ex<br>Version | Part No.<br>ESL 25-Ex with<br>connecting cable | Part No.<br>ESL 25-Ex/1<br>without con. cable | Voltage<br>Volt | Integr.<br>trans-<br>former | Halogen lamp |           | Ambient temperature range                               |           |   |           |
|-----|---------------------------|--|---|-----------------|-----------------------------|--------------|-----------|---|-----------|---|-----------|
|     |                           |  |   |                 |                             | Socket       | Voltage   | $-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ |           | $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ |           |
| 1   | (12 V) 5 W                | 3540.902.00                                    | 3540.922.00                                   | 12 ≈            | without                     | G4           | 12 V/5 W  | 2G T6   | 2D T80°C  | -   | -         |
| 2   | (120 V/12 V) 5 W          | 3540.904.00                                    | -   | 120 ~           | with                        | G4           | 12 V/5 W  | 2G T6   | 2D T80°C  | -   | -         |
| 3   | (230 V/12 V) 5 W          | 3540.906.00                                    | -   | 230 ~           | with                        | G4           | 12 V/5 W  | 2G T6   | 2D T80°C  | -   | -         |
| 4   | (12 V) 10 W               | 3540.907.00                                    | 3540.927.00                                   | 12 ≈            | without                     | G4           | 12 V/10 W | 2G T4   | 2D T130°C | 2G T4   | 2D T130°C |
| 5   | (120 V/12 V) 10 W         | 3540.908.00                                    | -   | 120 ~           | with                        | G4           | 12 V/10 W | 2G T4   | 2D T130°C | 2G T4   | 2D T130°C |
| 6   | (230 V/12 V) 10 W         | 3540.910.00                                    | -   | 230 ~           | with                        | G4           | 12 V/10 W | 2G T4   | 2D T130°C | 2G T4   | 2D T130°C |
| 7   | Cold-light (12 V) 20 W    | 3540.912.00                                    | 3540.932.00                                   | 12 ≈            | without                     | GU4          | 12 V/20 W | 2G T4   | 2D T130°C | -   | -         |
| 8   | (12 V) 20 W               | 3540.914.00                                    | 3540.934.00                                   | 12 ≈            | without                     | G4           | 12 V/20 W | 2G T4   | 2D T130°C | -   | -         |
| 9   | (24 V) 20 W               | 3540.916.00                                    | 3540.936.00                                   | 24 ≈            | without                     | G4           | 24 V/20 W | 2G T4   | 2D T130°C | -   | -         |

## • Accessories:

| No. | Component  | Part No.    |
|-----|--|-------------|
| 1   | Hinged bracket mounting for luminaire  | 0354.019.00 |
| 2   | Flanged adapter collar mounting for luminaire                                | 1356.010.00 |
| 3   | Mounting for sterile applications for luminaire without integrated reflector | 1774.050.00 |
| 4   | Mounting for sterile applications for luminaire with integrated reflector    | 1774.051.00 |
| 5   | Peg spanner for screw-in lens  | 6816.001.00 |
| 6   | Timer module, ex version   | on request  |
| 7   | Connecting cable   | on request  |

## • Order data: e. g.

- Lumistar luminaire ESL 25-Ex (230 V/12 V) 5 W, Ex d IIC T6 with 2 m connecting cable, part no. 3540.906.00
- Lumistar luminaire ESL 25-Ex/1 (24 V) 20 W, Ex d IIC T4 without connecting cable, part no. 3540.936.00