

## Lumistar Luminaire USL 05-Ex, USL 05-LED-Ex



II 2G Ex db IIC T3/T4/T6 120°C Gb  
II 2D Ex tb IIIC T80/T120/T130/T195°C Db

### • For mounting on sight glass fittings:

This Ex-type sight glass luminaire is designed for universal applications in potentially explosive environments. It is ideal for use in combined sight and light-glass arrangements, 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 screw-type sight glass fittings in compliance with DIN 11851, and in visual flow indicators.

### • Optimal design of screw-type lens ensures max. light efficiency.

• **Application:** For illuminating the interior of tanks, hoppers, silos, agitators and other - normally closed - vessels and reactors as well as visual flow indicators in potentially **explosive environments**.

**Gas: Zones 1 and 2, Dust: Zones 21 and 22.**  
Suitable for use in food processing industries.

### • Protection: IP 65 and IP 67 to DIN EN 60529

### • Operating conditions:

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

### • Lumistar luminaires of this series 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 Enclosures 'd'  
Explosion group: IIC (includes IIA und IIB)  
Temperature class: T3/T4/T6/120°C (depending on wattage)

#### b) Dust

EN 60079-0: 2009 General Requirements  
EN 60079-31: 2009 Protection by Enclosures 't'  
Explosion group: IIIC (includes IIIA und IIIB)  
Temperature class: T80/T120/T130/T195°C (depend. on wattage)

### • Certification: EU Type-Examination Certificate BVS 08 ATEX E 133



II 2G Ex db IIC T3/T4/T6 120°C Gb  
II 2D Ex tb IIIC T80/T120/T130/T195°C Db

### • Voltage: Alternating/direct current, depending on lamp

### • Operating voltage:

#### Without integrated transformer:

|          |                |             |
|----------|----------------|-------------|
| 12 V...  | Halogen lamp   | 5 W or 20 W |
| 24 V...  | Halogen lamp   | 20 W        |
| 230 V... | LED illuminant | 4 W         |

#### With integrated transformer; PTC-protected:

|          |              |          |
|----------|--------------|----------|
| 120 V... | Halogen lamp | 12 V/5 W |
| 230 V... | Halogen lamp | 12 V/5 W |

### • Convenient lamp replacement thanks to optimised screw-type opening

• **Connecting cable:** Works-fitted encapsulated pressure-tight power lead with screwed cable gland, optionally 2 m (standard), 5 m, 20 m, or externally tested and approved cable entry gland M 20 x 1.5

CE 0158

3755.177 g



Lumistar luminaire USL 05-LED-Ex



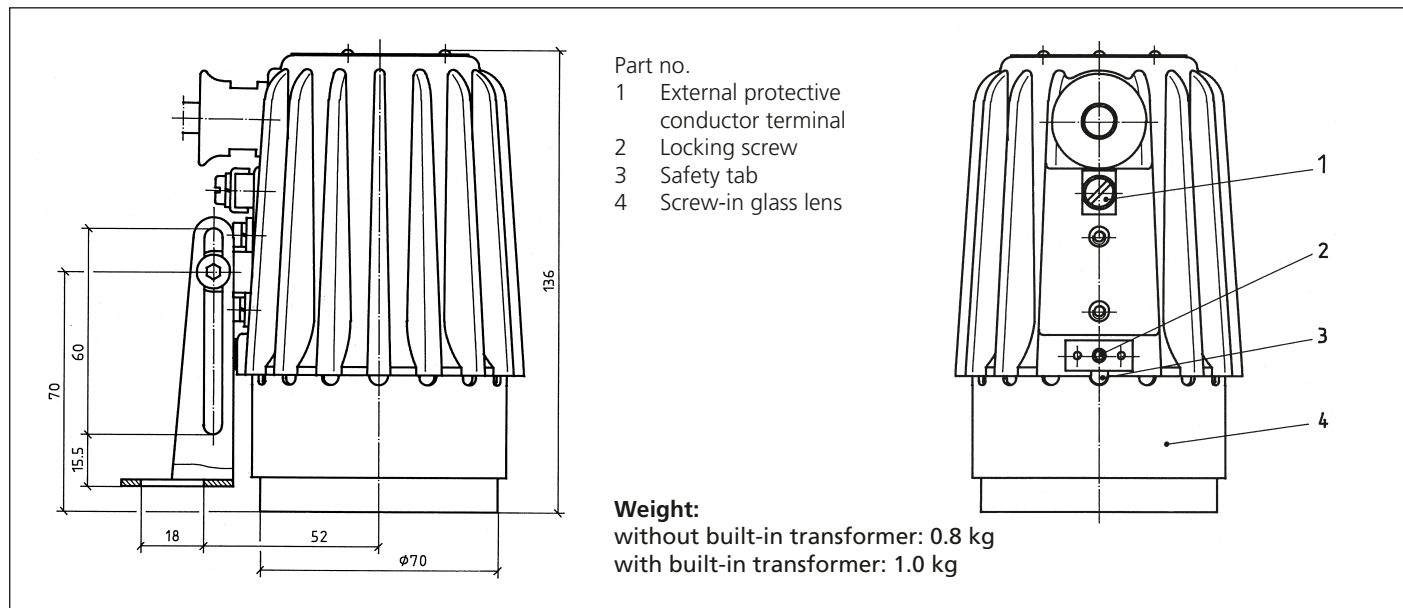
Combined light and sight glass assembly on a sight glass fitting acc. to DIN 28120; luminaire is mounted on a hinged bracket

### • Simple installation by means of special bracket.

### • Type USL 05-Ex fits the following nominal sizes:

- Circular sight glass fittings to DIN 28120, DIN 28121 and flow indicators; for attachment to cover flange: from DN 25 up.
- Screw-type sight glass fittings similar to DIN 11851; for attachment on or below the slotted nut:
  - DN 65, 80: by way of flanged adapter collar
  - DN 65, 80, 100, 125: by way of hinged bracket

## • Dimensions and electrical data for Lumistar luminaires USL 05-Ex and USL 05-LED-Ex:



## • Components, design and materials:

- Body of luminaire: Corrosion-resistant die-cast aluminium alloy, GK-ALSi10Mg
- Cable gland with pressure-tight resin-cast connecting cable, Sinotherm 110 H05GG-F 3G, 1.5 mm<sup>2</sup>, standard cable length: 2 m
- Protective conductor terminal: Internal terminal already connected, additional external protective conductor terminal on enclosure
- Light exit: Bonded unit made of aluminium ring and glass; Viton seal
- Fastening components: See accessories

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

| No. | USL 05-Ex/<br>USL 05-LED-Ex | Part no.    | Voltage | Built-in<br>trans-<br>former | Halogen lamp<br>or LED illuminant |      | Ambient temperature range |           |                                |           |
|-----|-----------------------------|-------------|---------|------------------------------|-----------------------------------|------|---------------------------|-----------|--------------------------------|-----------|
|     |                             |             |         |                              |                                   |      | Voltage                   | Socket    | -20°C ≤ T <sub>a</sub> ≤ +40°C |           |
| 1   | (12 V) 5 W                  | 3540.031.00 | 12 ≈    | without                      | 12 V/5 W                          | G4   | 2G T6                     | 2D T80°C  | 2G T4                          | 2D T130°C |
| 2   | (120 V/12 V) 5 W            | 3540.032.00 | 120 ~   | with                         | 12 V/5 W                          | G4   | 2G T6                     | 2D T80°C  | 2G T4                          | 2D T130°C |
| 3   | (230 V/12 V) 5 W            | 3540.033.00 | 230 ~   | with                         | 12 V/5 W                          | G4   | 2G T6                     | 2D T80°C  | 2G T4                          | 2D T130°C |
| 4   |                             |             |         |                              |                                   |      |                           |           |                                |           |
| 5   | (12 V) 20 W                 | 3540.035.00 | 12 ≈    | without                      | 12 V/20 W                         | G4   | 2G T4                     | 2D T130°C | 2G T3                          | 2D T195°C |
| 6*  | (24 V) 20 W                 | 3540.037.00 | 24 ≈    | without                      | refl. 24 V/20 W                   | G4   | 2G T4                     | 2D T130°C | 2G T3                          | 2D T195°C |
| 7   | (24 V) 20 W                 | 3541.945.00 | 24 ≈    | without                      | 24 V/20 W                         | G4   | 2G T4                     | 2D T130°C | 2G T3                          | 2D T195°C |
| 8   |                             |             |         |                              |                                   |      |                           |           |                                |           |
| 9   | (230 V) 4 W-LED             | 3540.059.00 | 230 ≈   | without                      | 230 V/4 W-LED                     | GZ10 | -                         | -         | 2G T6                          | 2D T80°C  |

\* replaced by No. 7

## • Order data:

e. g. Lumistar luminaire USL 05-Ex, 12 V/20 W, part no. 3540.035.00; with accessories: hinged bracket, part no.: 0354.014.00 and claw spanner, part no. 6816.001.00

## • Accessories:

| No. | Component   | Part No.    |
|-----|---|-------------|
| 1   | Luminaire mounting, hinged bracket, stainless steel                         | 0354.014.00 |
| 2   | Luminaire mounting, flanged adapter collar, stainless steel                 | 1356.010.00 |
| 3   | Lumiglas timer module, Ex-timer switch, external, for timed light switching | on request  |
| 4   | Claw spanner for screw-in lens, for opening the lamp                        | 6816.001.00 |

All dimensions in mm unless stated otherwise. Subject to change without prior notice. 07.20