**Important, please note:**

The Lumistar luminaire ‘Lumiflex’ can be mounted on sight glass fittings or used for illuminating individual objects, e.g. on machine tools. Ex-classified luminaires with light guide are also intended for observing processes in reactors, plants, vessels, etc., wherever the use of standard Ex-type luminaires is not possible due to space restrictions. Under no circumstances should a sight glass luminaire be utilised to replace the cover flange or the complete sight glass flange fitting or used on its own to cover a vessel port. Luminaires for potentially explosive areas must always be installed, connected and serviced by persons who have been specially trained and authorised to do this work.

**General operating conditions:**
- Independent of internal pressure/vacuum in the vessel in applications as a sight glass luminaire
- Approved for use in potentially explosive environments:
  - Gas: Zones 1 and 2; Dust: Zones 21 and 22
- Also suitable for illumination purposes in Zones 0 and 20 in combination with a sight glass
- To ensure faultless operation, the specified temperatures must be observed
- Approved for applications at ambient temperatures of between -20°C and +50°C
- Temperature-resistance of light guide: -20°C to +150°C

**Electrical data – general:**
- The voltage, output, temperature class and protection class are specified on the type plate
- Voltage and wattage: 24 V AC/DC or 120-230 V AC, 7 W
- IP65 and IP67 acc. to EN 60529/DIN VDE 0470 Part 1
- Ex approval acc. to EC type examination certificate:
  - II 2G Ex d IIC T6 Gb
  - II 2D Ex tb IIIC T80°C Db

**Electrical connection:**

a) ESL55LED-ALF-Ex with connecting cable
- The connecting cable has already been works-fitted in the luminaire so that it is ready for operation.
- The external protective terminal conductor (part 1.3) must be connected to a separate ground terminal.
- The connecting cable should be supported and fixed after a maximum distance of 1 metre.
- If the cable is being replaced, the inner terminals should be loosened prior to removing the cable entry gland.

b) ESL55LED-ALF-Ex with cable gland (sealing compound)
- Select a connecting cable to fit cable gland M20x1.5 and take account of the cable diameter (8-11 mm)
- The minimum temperature resistance of the connecting cable must be observed (-20°C+85°C)

c) ESL55LED-ALF-Ex (tested combination)
- The following cable glands and cables must be used in combination:

<table>
<thead>
<tr>
<th>Cable gland types</th>
<th>Installation torques</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSK-M-Ex-d, part no. 9103.124.00</td>
<td>7.0</td>
</tr>
<tr>
<td>M20x1.5 1.4404 (from Hummel)</td>
<td>2.5</td>
</tr>
<tr>
<td>KU18PM20-Ex-d-Alpha X, part no. 9103.131.00</td>
<td>6.0</td>
</tr>
<tr>
<td>M20x1.5, stainless steel (from RST)</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Cable types**
- EVA sheathed cable, Sinotherm 110, part no. 3403.017.00
  - 3x1.5 mm², Ø 8.5 mm
- Ölflex Heat 180, part no. 3403.045.00
  - 3x1.5 mm², Ø 8.9 mm
- Ölflex Heat 180, Silflex UR-AWG18, part no. 3403.044.00
  - 5x1.0 mm², Ø 10.3 mm
- Ölflex Classic 110 black, part no. 3403.051.00
  - 3x1.5 mm², Ø 10.1 mm

**Please note:**

The closure screws for the end cover (M4x12) and luminaire glass lens (M4x40) must have a yield strength of ≥ 240 N/mm² (material: A2-70).
• Mechanical installation:
- Caution: Avoid looking into the light source – risk of damage to the eyes!
- The light generator (1) is mounted at a suitable place on the reactor, apparatus, etc., using the fastening element provided. The light guide should be mounted free of tension or twisting with a bending radius of at least 170 mm and installed with the light guide head holder.
- The light guide head (2.3) is screwed to the place to be illuminated using the relevant stainless steel fastening unit.

• Installation position: as required

• Replacement parts and accessories:
- Please use original spare parts only
- Have the luminaire serviced by the manufacturer whenever necessary

• Maintenance:
- Keep the luminaire clean
- Once the luminaire has been opened, the thread of the end cover (1.4) should be greased again (e. g. with AEMA-SOL 6 B, made by A.E. Matthes)

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**Product** | **Part No.**
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Fastening for light generator | 0354.031.00
Fastening for light guide head | 1947.005.00
O-ring seal for light guide | 0862.082.00
Light guide 0.5 m | 3383.021.00
Light guide 1.0 m | 3383.022.00
Light guide 1.5 m | 3383.023.00
Light guide 2.0 m | 3383.024.00
Light guide 3.0 m | 3383.026.00
Connecting cable 2 m | 1084.021.00
Connecting cable 10 m | 1084.024.00

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**Replacement parts** | **Part No.**
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End cover | 0821.011.00
Glass lens of luminaire (light outlet) | 1773.013.00
Cable gland (Ex d M20 x 1.5) stainless steel | 9103.133.00
O-ring seal | 0862.090.00
Threaded pin | 7446.075.00
Cylinder head screw M4x12 A2-70 | 6911.358.00
Cylinder head screw M4x40 A2-70 | 6911.364.00

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Part 1. **Light generator (luminaire enclosure)**
1.1 Luminaire body 1.4404
1.2 Luminaire glass lens 1.4404
1.3 Protective conductor, external
1.4 End cover 1.4404
1.5 Cable entry gland M20 x 1.5 (Ex d)
1.6 Luminaire fastening

Part 2. **Light guide** stainless steel
2.1 Attachment piece on light generator
2.2 Protective hose
2.3 Light guide head