

## Installation and Operating Instructions 0158

Lumiglas luminaire stainless steel ESL 55-LED-Ex



II 2G Ex d IIC T6

II 2D Ex tD A21 IP67 T80°C

### • Important, please note:



Sight glass luminaires are specifically designed and solely intended for mounting with or onto flanged sight glass fittings. Under no circumstances should sight glass luminaires be used as a substitute for the cover flange or to replace the complete sight/light port or as a lid or cover for vessel openings. Luminaires for use in potentially explosive environments must be mounted, installed and serviced by staff who have the relevant qualifications and have been properly trained for this type of work.

**Please observe the data set out in the EC type-examination certificate!**

### • General operating conditions:

- Independent of pressure/vacuum in the vessel
- Approved for use in Ex environments:  
Gas: Zones 1 and 2; dust: Zones 21 and 22
- **Approved for use in ambient temperatures of between -20°C and +40°C**

### • Electrical data, general:

- Voltage, power, temperature class and protection rating are shown on the type plate.
- Ex approval acc. to EC type-examination certificate:  
BVS 09 ATEX E 169  
 II 2G Ex d IIC T6  
 II 2D Ex tD A21 IP67 T80°C
- The feed voltage is converted to the operating voltage for the LED illuminant by way of a power board installed in the luminaire.
- Power supply: AC or DC
- The luminaire is protected by a 1A miniature fuse on the internal power board.
- 10% voltage tolerance is admissible.

### • Mechanical installation:

The Lumiglas luminaire ESL 55-LED-Ex is suitable for the following nominal sizes, using the appropriate mounting attachment:

Type of unit	from DN	Hinged bracket	Flanged adapter collar
Circular sight glass fitting			
DIN 28120	40	+	–
DIN 28121	40	+	–
Visual flow indicator	50	+	–
Screw-type sight glass fitting	65	–	+
	80	+	–
similar to DIN 11851	100	+	–
	125	+	–

### • Parameters/Temperature classification:

Type ESL 55-LED-Ex Variant	Nominal Voltage	Ambient temperature range -20°C ≤ T <sub>a</sub> ≤ +40°C	
(24 V) 11 W	24 ≈	2G T6	2D T80°C
(120 - 230 V) 11 W	120 - 230 ≈	2G T6	2D T80°C



Lumiglas luminaire ESL 55-LED-Ex

### • Mounting with hinged bracket:

The hinged bracket is used to secure the luminaire to the cover flange of a circular sight glass unit (also suitable for visual flow indicators). Alternatively, it can be attached to the slotted cover nut of screw-type sight glass fittings to DIN 11851.

The hinged bracket is fixed in place by turning the supplied M8 bolt into a blind hole which has previously been tapped in the pitch circle of the cover flange face. Alternatively, the bracket can be welded on.

### • Mounting with flanged adapter collar:

The flanged adapter collar is positioned between the glass lens and the slotted cover nut (DIN 11851):

- Place a suitable gasket between the glass lens and the flanged adapter collar.
- Tighten the slotted nut.
- Insert the luminaire in the flange.
- **Please note:** The Lumiglas luminaire for sterile technology applications is fitted over the adapter collar of the special flange for sterile technology.
- Tighten the side retention screws.

## • Electrical connection:

### a) ESL 55-LED-Ex with connecting cable

- The connecting cable has already been works-fitted in the luminaire so that it is ready for use.
- The external protective conductor (2) must be connected to a separate operational earth.
- The cable needs to be secured after max. 1 metre.
- Caution! When replacing the cable (e. g. by one with a different length), the internal terminals must be loosened before the cable entry gland can be unscrewed.

### Conditions/requirements:

This Ex-type luminaire has been manufactured with a permanently connected cable. The free ends of this lead must be installed in a category 2G/2D enclosure if connection is to be carried out in a potentially explosive environment.

The luminaire and the area around the place of installation should be cleared of dust prior to installation and in the course of maintenance work.

The dismantled parts should be protected against dirt, dust and contamination during installation or servicing work.

When closing the luminaire, special attention should be paid to ensure that the interior of the lamp is free of dust.

### b) ESL 55-LED-Ex with cable entry gland

- Select a connecting cable to fit the M20 x 1.5 cable entry gland.
- The minimum temperature resistance of the connecting cable is shown on the type plate (if relevant).

## • Caution:

The locking screws for the end cover (M4 x 12) and the light port lens (M4 x 25) must have a yield strength of  $\geq 240 \text{ N/mm}^2$  (A2-70).

## • Please note:

Fastening elements should be ordered separately, if required.

## • Replacement parts:

	Part No.
End cover	0821.011.00
Light port lens (light aperture)	1773.013.00
Cable entry gland (Ex d M20 x 1.5)	9103.124.00
O-ring seal	0862.090.00
Set screw	7446.075.00
Cylinder head screw M4x12 A2-70	6911.358.00
Cylinder head screw M4x25 A2-70	6911.218.00

Flared cable entry gland,	
complete with 2 m connecting cable	1084.021.00
complete with 10 m connecting cable	1084.024.00

## • Servicing:

- Keep luminaire clean.
- After opening the luminaire, the surfaces of the cylindrical gap between the end cover (5) and the light port lens (6) should be cleaned. Before assembling the luminaire again, check that the components are undamaged and relubricate them (e. g. with AEMA-SOL 6 B, from A.E. Matthes).
- Please use original replacement parts only.

