

Lumistar Luminaire ESL55LED-Ex



II 2G Ex db IIC T6 Gb

II 2D Ex tb IIIC T80°C Db

• **For mounting on sight glass fittings:**

This sight glass luminaire is designed for universal applications and is ideal for use in combined sight and light ports (single-flange version) or with two separate ports (2-flange version).

• **The special advantages of Lumiglas LED technology:**

- vibration-proof
- long service life and operational reliability
- continuous LED operation up to around 50,000 hours
- optimal for fittings that are difficult to access
- no heat radiation in the light aperture (cold light)
- no unwanted additional heat in chemical or biological processes
- extremely high-contrast illumination

• **Compact design, powerful light output:**

Glare-free illumination; suitable for circular sight glass fittings to

DIN 28120/DIN 28121 or similar, for screw-type sight glass fittings similar to DIN 11851 and for sight glass fittings on flow indicators.

• **Application:**

For illuminating visual flow indicators, pipelines, laboratory mixers, bio-reactors as well as the interior of tanks, hoppers, silos, agitators and other, normally closed, vessels and reactors in potentially explosive environments.

Gas: Zones 1 and 2, Dust: Zones 21 and 22.

Ideal for applications in sterile areas

• **Protection class:** IP 65 and IP 67 according to DIN EN 60529

• **Operating conditions:**

Independent of the internal pressure/vacuum in the vessel.

On no account should a sight glass luminaire be used as a substitute

for the cover flange or instead of the complete sight glass flange assembly or on its own to close a vessel port.

• **Attention:** Do not look into light – danger of impaired eyesight!

• **Lumistar luminaires of this type are approved for use in ambient temperatures of between -20°C and +40°C.**

• **Technical data Ex protection:**

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

a) **Gas**

EN 60079-0: 2012 + A11: 2013	General Requirements
EN 60079-1: 2014	Flame-proof Enclosures, d'
Explosion group:	IIC (includes IIA and IIB)
Temperature class:	T6

b) **Dust**

EN 60079-0: 2012 + A11: 2013	General Requirements
EN 60079-31: 2014	Protection by Enclosures, t'
Explosion group:	IIIC (includes IIIA and IIIB)
Temperature class:	T80°C

• **EU-Type Examination Certificate:** BVS 09 ATEX E 169



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II 2D Ex tb IIIC T80°C Db

• **Operating voltage:**

24VAC/DC – 11 W/15 W

120-230 V AC/DC LED – 11 W/15 W

Protected by 1A miniature fuse

Equipped with 4 or 7 high-power LED



Lumistar luminaire ESL55LED-Ex

Voltage and beam angle	Luminous flux	Colour temperature
11 W – 26°	520 lm	5700 K
11 W – 11°	630 lm	5700 K
15 W – 26°	930 lm	5700 K
15 W – 11°	1100 lm	5700 K

• **Simple electrical connection via integrated cable or via Ex d cable gland**

• **Electrical connection options:**

- Works-fitted connection cable (2 m standard length), resin-cast in screwed cable gland for pressure-tight cable entry, temperature-resistant up to 110°C. Other length available on request: 10 m
- By way of screwed cable gland acc. to EN 60079-14
- Other types of cable glands and cables are shown in the table overleaf.

• **Fastening options:**

Luminaires for sight glasses on circular fittings and visual flow indicators are mounted on the cover flange by means of the hinged bracket. With screw-type sight glass fittings, the luminaire is attached to the slotted cover nut.

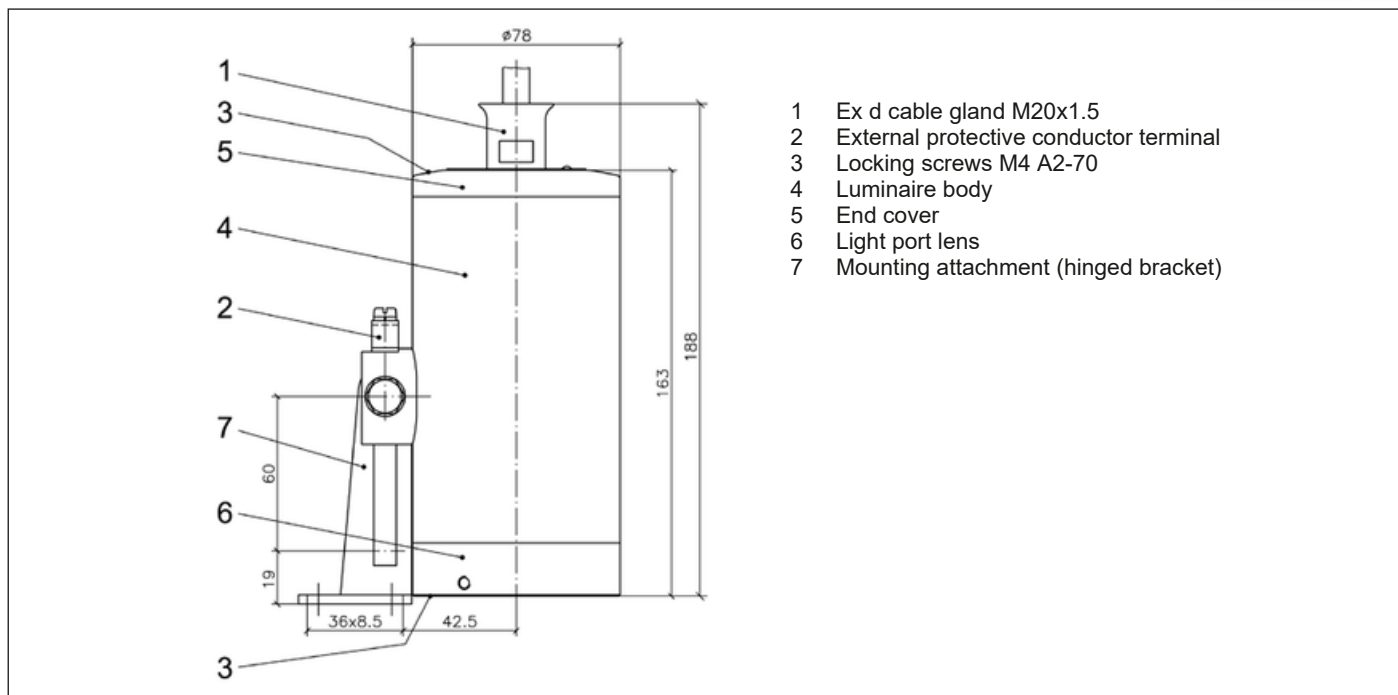
• **The Lumistar luminaire ESL55LED-Ex fits the following nominal sizes:**

- Circular sight glass fitting acc. to DIN 28120: from DN 40 up
- Circular sight glass fitting acc. to DIN 28121: from DN 40 up
- Sight glasses in flow indicators: from DN 50 up
- Screw-type sight glass fittings similar to DIN 11851:
 - from DN 50 up, the unit is mounted by way of a separate flange attachment
 - from DN 80 up, the unit is secured using a hinged bracket

• **In sterile environments the Lumistar luminaire is fitted over the raised edge of the cover flange.**

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• Dimensions and electrical data for Lumistar luminaire ESL55LED-Ex:



• Components and materials:

- Luminaire body (4) and endcover (5): stainless steel 1.4404, polished
- Lightport lens (6): unit consisting of ring flange (stainless steel 1.4404, polished) and borosilicate glass

- Hinged mounting bracket (7): stainless steel 1.4301 (see accessories)
- Cable gland (1): M20x1.5

• **Weight (with 2 m connecting cable):** 3.8 kg

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

No.	ESL55LED-Ex Variant	Part No.	Voltage Volt	Illuminant	Ambient temperature range -20°C ≤ T ≤ +40°C	
1	(24 V) 11 W	3541.581.00	24	4 LED	2G T6	2D T80°C
2	(120-230 V) 11 W	3541.582.00	120-230	4 LED	2G T6	2D T80°C
3*	(24 V) 15 W	3541.591.00	24	7 LED	2G T6	2D T80°C
4*	(120-230 V) 15 W	3541.592.00	120-230	7 LED	2G T6	2D T80°C

*Versions possible: red, blue, ultraviolet, infrared

• Only combinations of the following cable entry glands and cables should be used:

Cable gland types	Cable types
HSK-M-Ex-d, part no. 9103.124.00 M20x1.5, 1.4404 (by Hummel)	EVA flexible sheathed cable, Sinotherm 110, part no. 3403.017.00, 3x1.5 mm ² , Ø 8.5 mm
KU1BPM20-Ex-d-Alpha X part no. 9103.131.00 M20x1.5, stainless steel (by RST)	Ölflex Heat 180, part no. 3403.045.00, 3x1.5 mm ² , Ø 8.9 mm
	Ölflex Heat 180, Silflex UR-AWG18, part no. 3403.044.00, 5x1.0 mm ² , Ø 10.3 mm
	Ölflex Classic 110 black, Part No. 3403.051.00, 3x1.5 mm ² , Ø 10.1 mm

• Accessories:

No.	Component	Part No.
1	Luminaire mounting bracket (hinged)	0354.025.00
2	Luminaire mounting attachment, flanged adapter collar MV65	1356.039.00
3	Ex-Timer switch	on request
4	Connecting cable	on request

• Order data:

e.g. Lumistar luminaire ESL55LED-Ex, (24 V) 11 W, Ex db IIC T6, 4 LED, with 2 m connecting cable, part no. 3541.581.00

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