

**Lumiglas Luminaire Series USL 06-EX**



**II 2G Ex de IIC T3/T4**  
**II 2D Ex tD A21 IP67 T195/T130°C**

**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:**

Glare-free illumination; for use with circular sight glass fittings to DIN 28120 or similar, with weld-neck type MV sight glass fittings, with ANSI flange type, and in visual flow indicators.

**Optimum screw-in lens design ensures maximum light efficiency and simplifies lamp replacement**

**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.  
On no account should a sight glass luminaire be used on its own to close a vessel port or replace the cover flange or the sight glass/luminaire assembly.

**Lumiglas 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 which comply with the regulations for

**a) Gas**

EN 60079-0: 2006 General Requirements  
EN 60079-1: 2007 Flame-proof Enclosures  
EN 60079.7: 2007 Increased Safety (relates to terminal box)  
Explosion group: IIC (includes IIA und IIB)  
Temperature Class: T3 to T4 (depending on wattage)

**b) Dust**

EN 61241-0: 2006 General Requirements  
EN 61241-1: 2004 Protection by Enclosures  
Temperature Class: T195/T130°C (depend. on wattage)

**EC Type-Examination Certificate:**

BVS 08 ATEX E 135



**II 2G Ex d IIC T3/T4**  
**II 2D Ex tD A21 IP67 T195/T130°C**

**Electrical data and equipment:** acc. to EC Type-Examination Certificate and Table on page 3

**Voltage type:** Alternating/direct current, depending on lamp

**Operating voltage:**

**Without integrated transformer:**

12 V...	Halogen lamp	20 W, 35 W or 50 W
24 V...	Halogen lamp	20 W or 50 W
230 V...	LED illuminant	50 W

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

120 V...	Halogen lamp	12 V/20 W
230 V...	Halogen lamp	12 V/20 W
240 V...	Halogen lamp	12 V/20 W



Lumiglas Luminaire, model USL 06-Ex with connecting cable



Lumiglas Luminaire USL 06-Ex with terminal box.

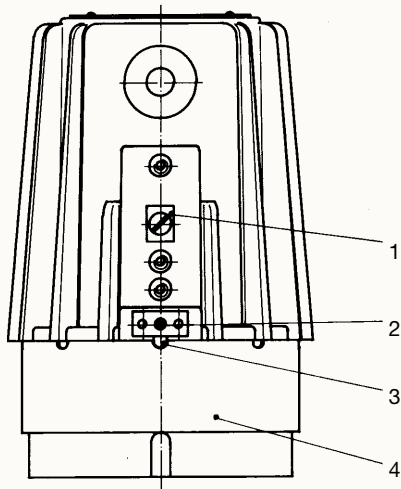
**Simple electrical connection via integrated terminal box.**

**Straightforward installation thanks to simple fixture:**

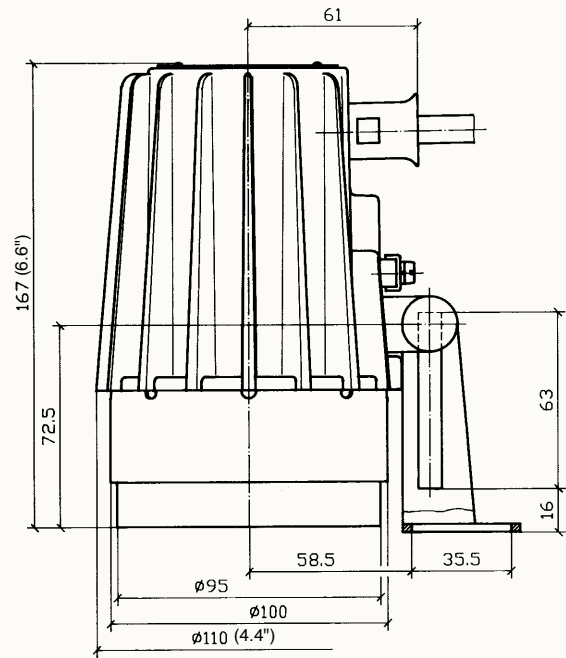
With circular sight glass fittings and visual flow indicators, the luminaire is attached to the cover flange by means of the hinged bracket.

With screw-type sight glass fittings, the luminaire is either attached to the nut or, alternatively mounted on a flanged adapter collar or hinged bracket.

## Dimensions and electrical data for stainless steel Lumiglas luminaire, type USL 06-Ex:

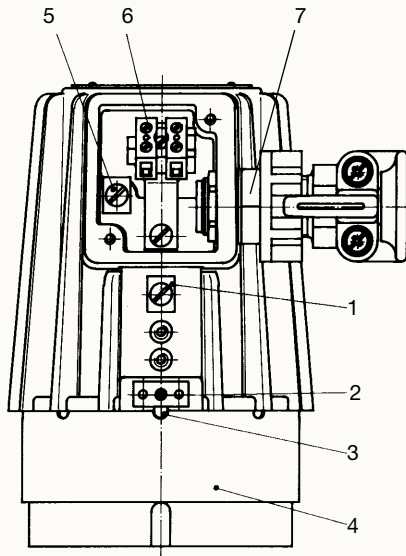


- Part No.
- 1 External protective conductor terminal
  - 2 Locking screw
  - 3 Safety tab
  - 4 Screw-in glass lens

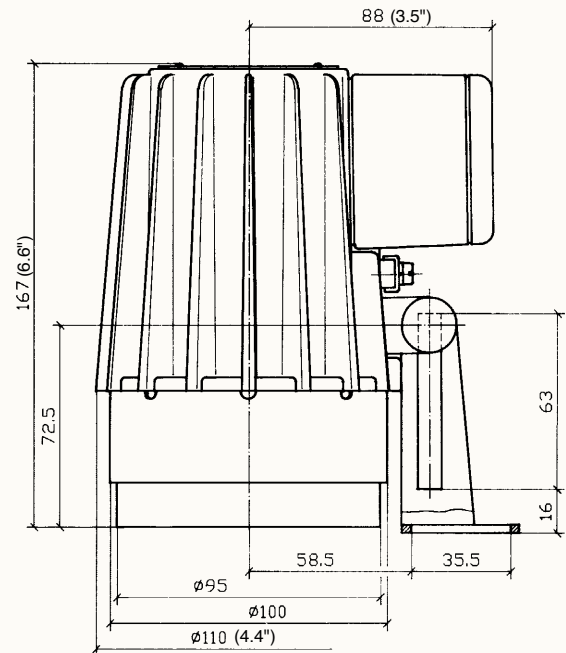


### Version 1 (incl. connecting cable Ex d)

- Cable gland with pressure-tight resin-cast connecting cable, Sinotherm 110 H05GG-F 3G, 1.5 mm<sup>2</sup> (supplied cable length: 2m)
- Protective conductor terminal: Internal terminal already connected, additional external protective conductor terminal on enclosure
- Weight: (without connecting cable): without built-in transformer: 1.7 kg; with built-in transformer: 2.3kg



- Part No.
- 1 External protective conductor terminal
  - 2 Locking screw
  - 3 Safety tab
  - 4 Screw-in glass lens
  - 5 Internal protective conductor terminal
  - 6 Ex-terminal block
  - 7 Cable gland M20 x 1.5



### Version 2 (incl. terminal box Ex de)

- Weight: without built-in transformer: 1.8 kg; with built-in transformer: 2.4kg

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**Connecting Data:**

**Version 1 (including connecting cable)**

Pos.	Type USL 06-EX Version 1	Part No.	Voltage	Built-in Transf.	Halogen Lamp			Ambient Temperature Range			
					Voltage/W	Socket	Cat. No.	-20°C ≤ T <sub>a</sub> ≤ +40°C		-20°C ≤ T <sub>a</sub> ≤ +60°C	
1	(12 V) 20 W	USL06-Ex V1 L20	12 ≈	without	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
2	(12 V) 20 W	Call Factory	12 ≈	without	12 V/20 W	GU5.3	Call Factory	2G T4	2D T130°C	2G T4	2D T130°C
3	(24 V) 20 W	USL06-Ex V1 H20	24 ≈	without	24 V / 20 W	G4	BLB H20 G4N	2G T4	2D T130°C	2G T4	2D T130°C
4	(120/12 V) 20 W	USL06-Ex V1 NT20	120 ~	with	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
5	(230/12 V) 20 W	USL06-Ex V1 ET20	230 ~	with	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
6	(240/12 V) 20 W	USL06-Ex V1 FT20	240 ~	with	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
7	(12 V) 35 W	USL06-Ex V1 L35	12 ≈	without	12 V / 35 W	GY6.35	BLB L35 GYN	2G T4	2D T130°C	2G T3	2D T195°C
8	(12 V) 50 W	USL06-Ex V1 L50	12 ≈	without	12 V / 50 W	GY6.35	BLB L50 GYN	2G T3	2D T195°C	Call	Factory
9	(24 V) 50 W	USL06-Ex V1 H50	24 ≈	without	24 V / 50 W	GY6.35	BLB H50 GYN	2G T3	2D T195°C	Call	Factory
10	(230 V) 50 W	USL06-Ex V1 E50	230 ≈	without	230 V / 50 W	GZ10	BLB E50 E27	2G T3	2D T195°C	Call	Factory

**order data** (please specify if flood reflector is preferred):

e. g. Lumiglas luminaire USL 06-Ex with connecting cable, 24 V/20 W, Part No. 3541.006.00; with accessory: 5m connecting cable, Part No. 1084.015.00

**Version 2 (including terminal box):**

Pos.	Type USL 06-EX Version 2	Part No.	Voltage	Built-in Transf.	Halogen Lamp			Ambient Temperature Range			
					Voltage/W	Socket	Cat. No.	-20°C ≤ T <sub>a</sub> ≤ +40°C		-20°C ≤ T <sub>a</sub> ≤ +60°C	
1	(12 V) 20 W-AK	USL06-Ex V2 L20	12 ≈	without	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
2	(12 V) 20 W-AK	Call Factory	12 ≈	without	12 V/20 W	GU5.3	Call Factory	2G T4	2D T130°C	2G T4	2D T130°C
3	(24 V) 20 W-AK	USL06-Ex V2 H20	24 ≈	without	24 V / 20 W	G4	BLB H20 G4N	2G T4	2D T130°C	2G T4	2D T130°C
4	(120/12 V) 20 W-AK	USL06-Ex V2 NT20	120 ~	with	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
5	(230/12 V) 20 W-AK	USL06-Ex V2 ET20	230 ~	with	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
6	(240/12 V) 20 W-AK	USL06-Ex V2 FT20	240 ~	with	12 V / 20 W	GY6.35	BLB L20 GYN	2G T4	2D T130°C	2G T4	2D T130°C
7	(12 V) 35 W-AK	USL06-Ex V2 L35	12 ≈	without	12 V / 35 W	GY6.35	BLB L35 GYN	2G T4	2D T130°C	Call	Factory
8	(12 V) 50 W-AK	USL06-Ex V2 L50	12 ≈	without	12 V / 50 W	GY6.35	BLB L50 GYN	2G T3	2D T195°C	Call	Factory
9	(24 V) 50 W-AK	USL06-Ex V2 H50	24 ≈	without	24 V / 50 W	GY6.35	BLB H50 GYN	2G T3	2D T195°C	Call	Factory
10	(230 V) 50 W-AK	USL06-Ex V2 E50	230 ≈	without	230 V / 50 W	GZ10	BLB E50 E27	2G T3	2D T130°C	Call	Factory

**order data** (please specify if flood reflector is preferred):

e. g. Lumiglas luminaire USL 06-Ex with terminal box, 24 V/20 W-AK, Part No. 3541.056.00

**Accessories:**

Item	Component	Part No.
1	Stainless steel mounting (hinged bracket) for luminaire	0354.016.00
2	Stainless steel mounting (flanged adapter collar) for luminaire	1356.015.00
3	Lumiglas timer module, integrated, for timed switching, 5 min.	On request
4	Lumiglas timer module, Ex timer switch, external, for timed switching	On request
5	Claw spanner for screw-in lens for opening the luminaire	6805.001.00
6	Cable gland complete with 5 m connecting cable (for Variant I)	1084.015.00
7	Cable gland complete with 20 m connecting cable (for Variant II)	1084.017.00

**Type USL06-Ex fits the following nominal sizes:**

- a) circular sight glass fittings to DIN 28120, DIN 28121 and visual flow indicators; mounting on cover flange: from DN 50 up
- b) screw-type sight glass fittings similar to DIN 11851; mounting on or below the nut:
  - sizes DN 65, 80, 100: on flanged adapter collar
  - sizes DN 80, 100, 125: on hinged bracket
  - sizes DN 80 and 100: either on flanged adapter collar or hinged bracket

**Components and materials:**

- Body of luminaire: Corrosion-resistant die-cast aluminium alloy
- Lens assembly: Bonded unit made of Al ring and glass, O-ring seal
- Fastening components: Stainless steel (see also accessories)



USL 06-Ex as a combined sight/light port on a glass assembly to DIN 29120, using hinged mounting bracket



USL 06-Ex as a light port, showing adapter collar fitted to a screw-type lens assembly

ISO 9001 QA CERTIFICATE

GERMAN MANUFACTURER:

F.H. PAPANMEIER AWARDED QA APPROVAL CERTIFICATE



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