

Lumistar Luminaire USL 06-Ex


II 2G Ex de IIC T3/T4 Gb
II 2D Ex tb IIIC 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.

- **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 to replace the cover flange or the sight glass/luminaire assembly.

- **Ambient temperatures:** up to 60°C, depending on the lamp bulb

- **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	General Requirements
EN 60079-1: 2007	Flame-proof Enclosures 'd'
EN 60079-7: 2007	Increased Safety (relates to terminal box)
Explosion group:	II C (includes II A and II B)
Temperature class:	T3 to T4 (depending on wattage)

b) Dust

EN 60079-0: 2012	General Requirements
EN 60079-31: 2009	Protection by Enclosures 't'
Explosion group:	III C (includes III A and III B)
Temperature class:	T130/T195°C (depending on wattage)

- **EC type-examination certificate:**

BVS 08 ATEX E 135



II 2G Ex de IIC T3/T4 Gb
II 2D Ex tb IIIC T130/T195°C Db

- **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...	Halogen lamp	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

CE 0158

3755.178 c



Lumistar luminaire USL 06-Ex with connecting cable



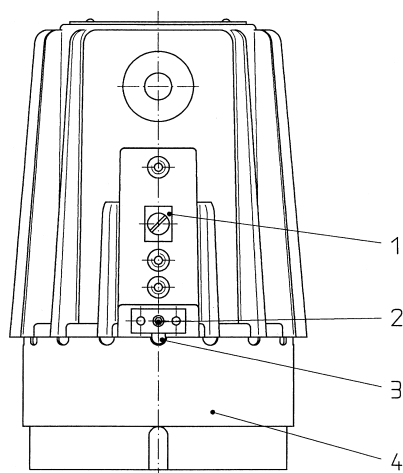
Lumistar luminaire USL 06-Ex with terminal box

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

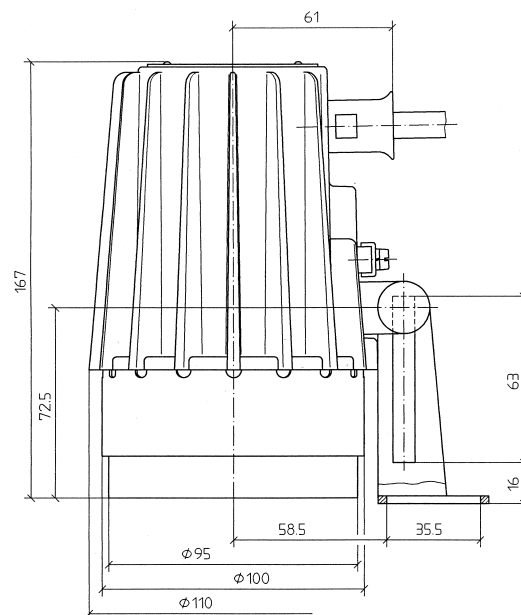
- **Straightforward installation thanks to special fixture:**

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 bracketed.

• Dimensions and electrical data for stainless steel Lumistar luminaire USL 06-Ex:

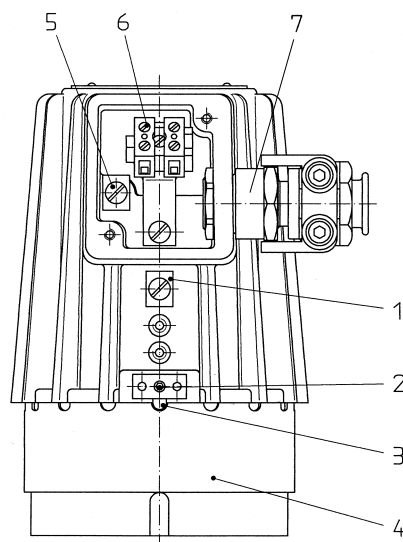


- Part no.
- 1 External protective conductor terminal
 - 2 Locking screw
 - 3 Safety tab
 - 4 Screw-in glass lens

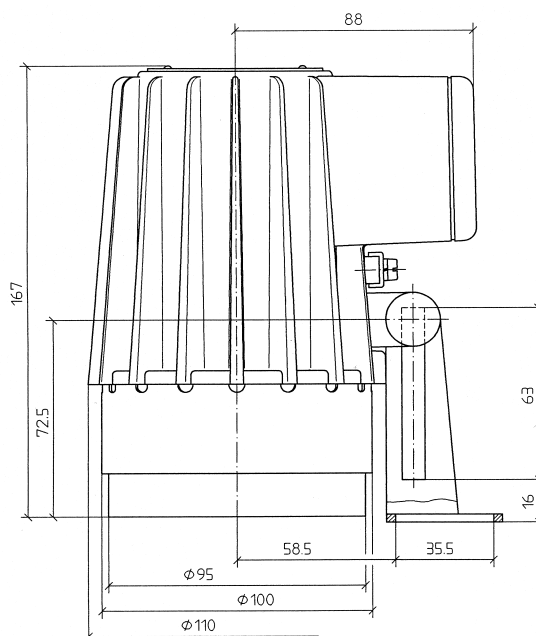


• Variant I (incl. connecting cable Ex d)

- Cable gland with pressure-tight resin-cast connecting cable, Sinotherm 110 H05GG-F 3G, 1.5 mm² (supplied cable length: 2 m)
- 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: 2.3 kg



- 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



• Variant II (incl. terminal box Ex de)

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

• **Connecting data: Temperature classification and electrical parameters:**

Variante I (including connecting cable)

No.	USL 06-Ex Variant	Part No.	Voltage	Built-in transf.	Halogen lamp*		Ambient temperature range			
					Voltage	Socket	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$		$-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$	
1	(12 V) 20 W	3541.001.00	12 ≈	without	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
2	(12 V) 20 W	3541.003.00	12 ≈	without	12 V/20 W	GU5.3	2G T4	2D T130°C	2G T4	2D T130°C
3	(24 V) 20 W	3541.006.00	24 ≈	without	24 V/20 W	G4	2G T4	2D T130°C	2G T4	2D T130°C
4	(120 V/12 V) 20 W	3541.011.00	120 ~	with	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
5	(230 V/12 V) 20 W	3541.016.00	230 ~	with	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
6	(240 V/12 V) 20 W	3541.021.00	240 ~	with	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
7	(12 V) 35 W	3541.026.00	12 ≈	without	12 V/35 W	GY6.35	2G T4	2D T130°C	2G T3	2D T195°C
8	(12 V) 50 W	3541.031.00	12 ≈	without	12 V/50 W	GY6.35	2G T3	2D T195°C	–	–
9	(24 V) 50 W	3541.036.00	24 ≈	without	24 V/50 W	GY6.35	2G T3	2D T195°C	–	–
10	(230 V) 50 W	3541.041.00	230 ≈	without	230 V/50 W Hi-Spot	GZ10	2G T3	2D T195°C	–	–

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

e. g. Lumistar luminaire USL 06-Ex with connecting cable, 24 V / 20 W, part no. 3541.006.00;

with accessory: 5 m connecting cable, part no. 1084.015.00

Variante II (including terminal box)

No.	USL 06-Ex Variant	Part No.	Voltage	Built-in transf.	Halogen lamp*		Ambient temperature range			
					Voltage	Socket	$-20^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$		$-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$	
1	(12 V) 20 W-AK	3541.051.00	12 ≈	without	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
2	(12 V) 20 W-AK	3541.053.00	12 ≈	without	12 V/20 W	GU5.3	2G T4	2D T130°C	2G T4	2D T130°C
3	(24 V) 20 W-AK	3541.056.00	24 ≈	without	24 V/20 W	G4	2G T4	2D T130°C	2G T4	2D T130°C
4	(120 V/12 V) 20 W-AK	3541.061.00	120 ~	with	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
5	(230 V/12 V) 20 W-AK	3541.066.00	230 ~	with	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
6	(240 V/12 V) 20 W-AK	3541.071.00	240 ~	with	12 V/20 W	GY6.35	2G T4	2D T130°C	2G T4	2D T130°C
7	(12 V) 35 W-AK	3541.076.00	12 ≈	without	12 V/35 W	GY6.35	2G T4	2D T130°C	–	–
8	(12 V) 50 W-AK	3541.081.00	12 ≈	without	12 V/50 W	GY6.35	2G T3	2D T195°C	–	–
9	(24 V) 50 W-AK	3541.086.00	24 ≈	without	24 V/50 W	GY6.35	2G T3	2D T195°C	–	–
10	(230 V) 50 W-AK	3541.091.00	230 ≈	without	230 V/50 W Hi-Spot	GZ10	2G T4	2D T130°C	–	–

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

e. g. Lumistar luminaire USL 06-Ex with terminal box, 24 V / 20 W-AK, part no. 3541.056.00

• **Accessories:**

No.	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.	Please request
4	Lumiglas timer module, Ex-timer switch, external, for timed switching	Please request
5	Claw spanner for screw-in lens, for opening the lamp	6805.001.00
6	Cable gland complete with 5 m connecting cable (for Variante I)	1084.015.00
7	Cable gland complete with 20 m connecting cable (for Variante II)	1084.017.00

- **Lumistar luminaire USL 06-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 sight 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