

## Lumiglas Luminaire Type USL 07-Ex

**II 2G Ex de IIC T3/T4/T6/120°C**  
**II 2D Ex tD A21 IP67 T195/T130/T80/T120°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 design; powerful light output:

Glare-free illumination; suitable 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. Nominal widths from DN 50, depending on fitting.

### • Optimum screw-in lens design ensures maximum light efficiency and convenient light bulb replacement.

• **Application:** For illuminating the interior of tanks, hoppers, silos, agitators and other - usually closed - vessels 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 60 529

• **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.

• **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 by complying with the regulations for

#### a) Gas

EN 60079-0: 2006 General Requirements  
 EN 60079-1: 2007 Flame-proof Enclosure  
 EN 60079-7: 2007 Increased Safety (relates to terminal box)  
 Explosion group: II C (covers II A and II B)  
 Temperature class: T3/T4/T6/120°C (depending on wattage)

#### b) Dust

EN 61241-0: 2006 General Requirements  
 EN 61241-1: 2004 Protection by Enclosures  
 Temperature class: T195/T130/T80/T120°C (depending on wattage)

### • EC type-examination certificate: BVS 08 ATEX E 136

**II 2G Ex de IIC T3/T4/T6/120°C**  
**II 2D Ex tD A21 IP67 T195/T130/T80/T120°C**

• **Electrical data and equipment:** see 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	50 W
24 V...	Halogen lamp	20 W or 50 W
230 V...	Halogen lamp	50 W or 75 W

**With integrated transformer; PTC-protected**

120 V...	Halogen lamp	12 V/50 W
230 V...	Halogen lamp	12 V/20 W, 35 W or 50 W
240 V...	Halogen lamp	12 V/35 W or 50 W

CE 0158

Data Sheet 07.07



Lumiglas luminaire type USL 07-Ex with connecting cable



Lumiglas luminaire type USL 07-Ex with terminal box

### • Straightforward electrical connection via

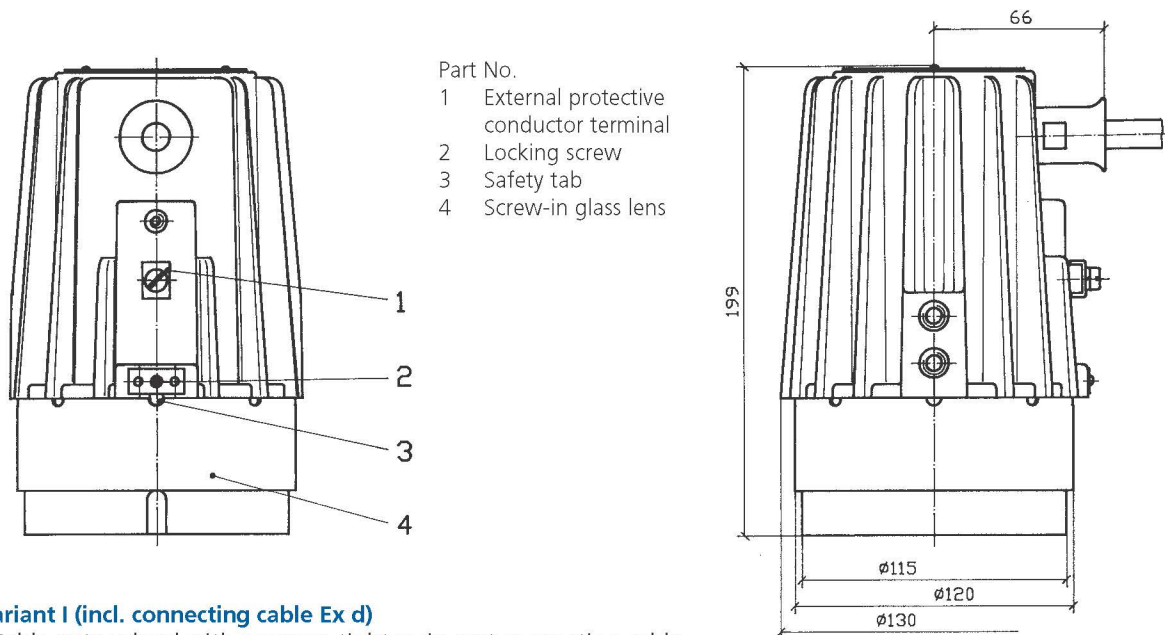
#### - Connecting cable (variant I only):

Pressure-tight, resin-cast flared cable entry gland with connecting cable installed by manufacturer.  
 Length: 2 m (standard), 5 m or 20 m.

Replacement possible at any time by operating company

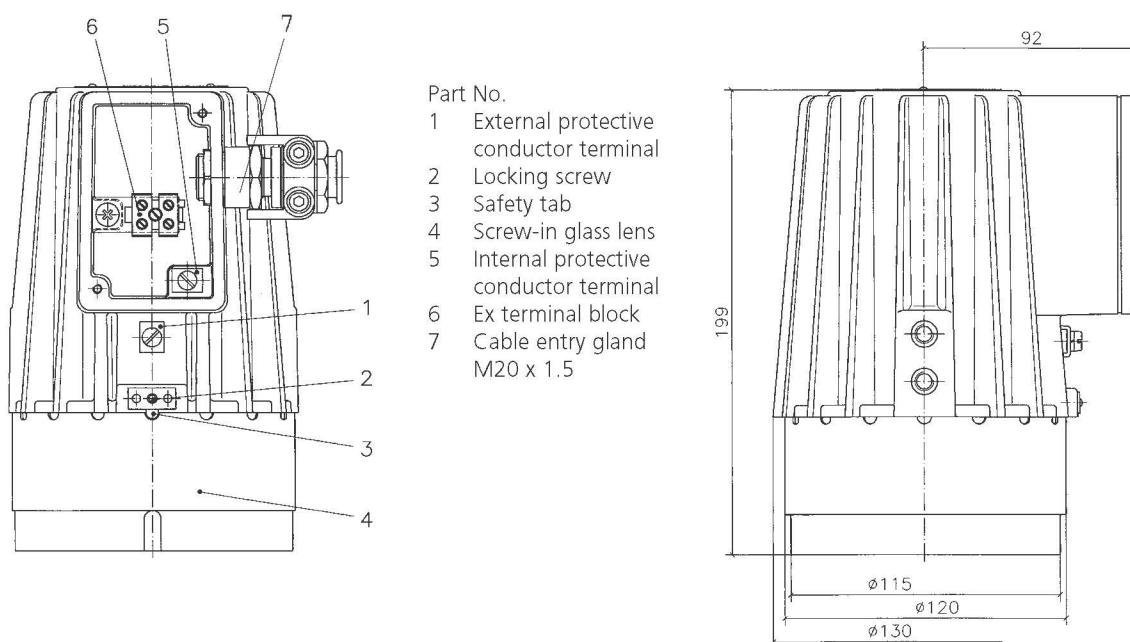
#### - Terminal box (variant II only): Any cable length possible.

• **Dimensions and electrical data for Lumiglas luminaires, type USL 07-Ex:**



• **Variant I (incl. connecting cable Ex d)**

- Cable entry gland with pressure-tight resin-cast connecting cable, Sinothem 110 H05GG-F 3G, 1.5 mm<sup>2</sup> (standard length: 2 m)
- Protective conductor terminal: Internal terminal already connected, additional external protective conductor terminal on enclosure
- Weight (incl. connecting cable): 2.7 kg; with built-in transformer: 3.7 kg



• **Variant II (incl. terminal box Ex de)**

- Weight: without built-in transformer: 2.5 kg; with built-in transformer: 3.5 kg



• **Connecting data: Temperature classification and electrical parameters**  
for Variant I (incl. connecting cable)

No.	Type USL 07 -Ex	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	(230 V/12 V) 20 W	3541.101.00	230 ~	with	12 V/20 W	GY6.35	2G T6	2D T80°C	–	–
2	(24 V) 20 W	3541.103.00	24 ~	without	24 V/20 W	G4	2G T6	2D T80°C	–	–
3	(230 V/12 V) 35 W	3541.106.00	230 ~	with	12 V/35 W	GY6.35	2G T4	2D T130°C	–	–
4	(240 V/12 V) 35 W	3541.111.00	240 ~	with	12 V/35 W	GY6.35	2G T4	2D T130°C	–	–
5	(12 V) 50 W	3541.116.00	12 ~	without	12 V/50 W	GY6.35	2G T4	2D T130°C	2G T3	2D T195°C
6	(24 V) 50 W	3541.121.00	24 ~	without	24 V/50 W	GY6.35	2G T4	2D T130°C	2G T3	2D T195°C
7	(120 V/12 V) 50 W	3541.126.00	120 ~	with	12 V/50 W	GY6.35	2G T3	2D T195°C	–	–
8	(230 V) 50 W	3541.131.00	230 ~	without	230 V/50 W	GZ10	2G T4	2D T130°C	2G T3	2D T195°C
9	(230 V/12 V) 50 W	3541.133.00	230 ~	with	12 V/50 W	GY6.35	2G T4	2D T130°C	–	–
10	(240 V/12 V) 50 W	3541.136.00	240 ~	with	12 V/50 W	GY6.35	2G T3	2D T195°C	–	–
11	(230 V) 75 W	3541.141.00	230 ~	without	230 V/75 W	GZ10	2G T3	2D T195°C	–	–

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

e. g. Lumiglas Luminaire USL 07-Ex, Variant I, 230 V/50 W, Part No. 3541.131.00

for Variant II (incl. terminal box)

No.	Type USL 07-Ex	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	(230 V/12 V) 20 W-AK	3541.151.00	230 ~	with	12 V/20 W	GY6.35	2G T6	2D T80°C	–	–
2	(24 V) 20 W-AK	3541.153.00	24 ~	without	24 V/20 W	G4	2G T6	2D T80°C	–	–
3	(230 V/12 V) 35 W-AK	3541.156.00	230 ~	with	12 V/35 W	GY6.35	2G T4	2D T130°C	–	–
4	(240 V/12 V) 35 W-AK	3541.161.00	240 ~	with	12 V/35 W	GY6.35	2G T4	2D T130°C	–	–
5	(12 V) 50 W-AK	3541.166.00	12 ~	without	12 V/50 W	GY6.35	2G T4	2D T130°C	–	–
6	(24 V) 50 W-AK	3541.171.00	24 ~	without	24 V/50 W	GY6.35	2G T4	2D T130°C	–	–
7	(24 V) 50 W-AK	3541.172.00	24 ~	without	24 V/50 W	GY6.35	2G T120°C	2D T120°C	–	–
8	(120 V/12 V) 50 W-AK	3541.176.00	120 ~	with	12 V/50 W	GY6.35	2G T3	2D T195°C	–	–
9	(230 V) 50 W-AK	3541.181.00	230 ~	without	230 V/50 W	GZ10	2G T4	2D T130°C	–	–
10	(230 V/12 V) 50 W-AK	3541.183.00	230 ~	with	12 V/50 W	GY6.35	2G T4	2D T130°C	–	–
11	(240 V/12 V) 50 W-AK	3541.186.00	240 ~	with	12 V/50 W	GY6.35	2G T3	2D T195°C	–	–
12	(230 V) 75 W-AK	3541.191.00	230 ~	without	230 V/75 W	GZ10	2G T3	2D T195°C	–	–

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

e.g. Lumiglas Luminaire USL 07-Ex, Variant II, 230 V/50 W-AK, Part No. 3541.181.00

• **Accessories:**

No.	Component	Part No.
1	Fixture for luminaire, straight, DN 50 to 100	0354.005.00
2	Fixture for luminaire, angled, DIN 125 to 200	0354.006.00
3	Lumiglas timer module, integrated, for time-dependent illumination, 5 min.	Please request data sheet 09.01
4	Lumiglas timer module, external, for time-dependent illumination, Ex-timer switch	Please request data sheet 09.02
5	Claw spanner for screw-in lens, for opening the lamp	6805.002.00
6	Cable entry gland complete with 5 m connecting cable (for Variant I)	1084.015.00
7	Cable entry gland complete with 20 m connecting cable (for Variant I)	1084.017.00

- **Simple installation using special mounting for practical application:**

The luminaire is normally secured to the slotted nut on the screw-type sight glass fittings using the attachment parts on the cover flange of the round sight glass fitting or the visual flow indicator.

**Lumiglas luminaire model USL 07-Ex fits to the following nominal widths:**

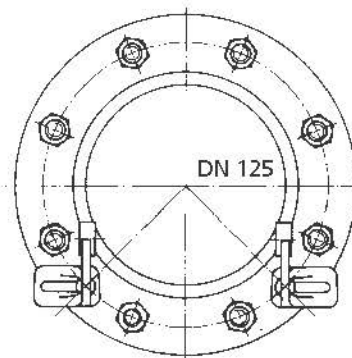
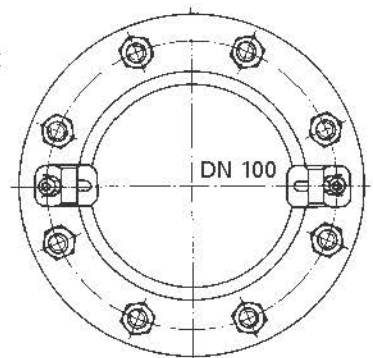
- a) Round sight glass fitting to DIN 28120: from DN 50
- b) Round sight glass fitting to DIN 28121: from DN 50
- c) Visual flow indicators: from DN 50
- d) Screw-type sight glass fittings similar to DIN 11851: from DN 65

- **Convenient replacement of lamp bulb thanks to optimised screw-off lens**



Application as a combined sight and light glass mounted on a sight glass fitting to DIN 28120

As a light glass:  
Straight lamp attachment  
Part No.: 1.0354.005.91  
for DN 50 – DN 100



As a light and sight glass:  
Angular lamp attachment  
Part No.: 1.0354.006.91  
for DN 125 – DN 200

Combination options

All dimensions in mm unless stated otherwise. Subject to change without prior notice.  
WW 09.09 3755.180

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