

Installation and Operating Instructions for Lumiglas luminaires

Lumiglas luminaire model USL06-Ex

• Important note:

Sightglass luminaires are specifically designed and exclusively intended for mounting onto flanged sightglass fittings.

Under no circumstances may luminaires be substituted for cover flange or complete sightglass units or in any other way be used as lids or covers for vessel openings.

Luminaires for Ex hazardous areas may only be installed and serviced by suitably qualified personnel duly authorized for those tasks.

EC type test certificate contents to be noted.

• General operating conditions:

- independent of vessel pressure/vacuum
- approved for use in Ex Zones 1 & 2 and 21 and 22
- approved for use at temperatures up to 60° C or 40° C depending on lamp power (see identity plate)

• Electrical data – general:

- Voltage, power, temperature class and protection rating are shown on identity label
- Ex approval in accordance with type test certificate PTB 99 ATEX 1157
 - ⊕ II 2G EEx d (e) IIC T3, T4, T6, or 120° C; EXAM BVS 06 ATEX E009
 - ⊕ II 2D IP 67 T 195° C or T 130° C
- Version fitted with integral transformer is protected by PTC; fuse exchange not needed
- Observance of data given in EC type test certificate imperative!
- Power supply: depending on components fitted – AC or DC (**Warning:** only AC may be used with luminaires fitted with integral transformers or high voltage timer)
- **Warning:** excessive voltage will shorten lamp life!
- 10% tolerance in voltage is approved

• Electrical connection:

a) Version I (with cable tail)

- the electric cable is fitted ready for use at manufacturers works.
- the external safety conductor terminal (item 1) must be connected to a separate grounding point on the plant

- the cable must be supported within 1 m of entry gland.
- **Warning:** when changing cable (e.g. for another length) the internal wiring must be disconnected before unscrewing the cable entry gland

b) Version II (with terminal box)

- select a cable corresponding to cable entry gland M20 x 1.5 and temperature rating according to type plate
- remove terminal box lid. Loosen screws (and anti twist tabs) on cable pull-out preventer clamp on cable gland assembly. Feed in cable and retighten screws
- connect cable cores to Ex terminal block (6); safety core to terminal – internal (5). External ground terminal (1) must be connected to separate ground point on plant
- fit terminal box cover gasket and refit cover

• Lamp Exchange:

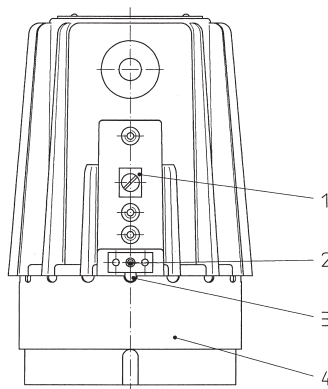
- switch off power
- allow sufficient time to cool as indicated on identity plate
- loosen socket screw (2) which releases locking tab (3) to screwed lens ring (4)
- unscrew lens ring (4) but only with special claw spanner
- withdraw defective lamp; 2 pin is pulled out; GZ 10 bayonet type twisted and pulled out
- holding new lamp (use only genuine replacement part) by its protective material (never with bare fingers) insert into socket, pushing in carefully in case of 2 pin; twist and push in case of bayonet type (ensure correct seating)
- refit lens ring (4) and screw in until tight (compression of O ring seal)
- safety locking tab (3) must engage in appropriate notch so that lens ring (4) is locked in position
- retighten locking screw (2)
- reconnect power

• Warning:

When changing lamps ensure that the light beam remains evenly distributed over the lamp glass, as designed. On no account should a "hot spot" be allowed to develop externally to the luminaire (e.g. caused by lamp mis-positioning or as a result of lamp condition)

• Version I (with cable tail EEx d)

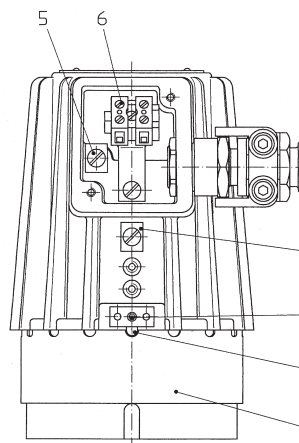
- cable entry gland; with pressure tight resin cast connecting cable (Sinotherm 110 H05GG-F 3G 1.5 mm²)
- safety/ground conductor terminal fitted to luminaire body internally; additional terminal fitted to outside of body



- 1 Safety/ground terminal – external
- 2 Locking screw
- 3 Safety locking tab
- 4 Screwed lens ring

• Version II (with terminal box EEx de)

- cable entry gland: M20 x 1.5



- 1 Safety/ground terminal – external
- 2 Locking screw
- 3 Safety locking tab
- 4 Screwed lens ring
- 5 Safety/ground terminal – internal
- 6 Ex terminal block

• **Mechanical installation:**

Using the hinged mounting bracket the luminaire is mounted on the cover flange of the circular sightglass fitting or flow indicator or on the slotted cover nut of the screwed sightglass. Alternatively: on a screwed sightglass mounting with flanged adapter collar is possible.

• **The Lumiglas luminaire model USL06-Ex, using the appropriate mounting bracket or adapter collar, suits the following nominal sizes of sightglass:**

Type of fitting	from DN	Hinged bracket	Flanged adapter collar
Circular sightglass fitting			
	DIN 28120	50 ... +	-
	DIN 28121	50 ... +	-
Flow indicator	50 ...	+ -	-
Screwed sightglass fitting	65	-	+
	80	+	+
	100	+	+
	125	+	-

• **Mounting with hinged bracket**

The hinged bracket serves to secure the luminaire to the cover flange of a circular sightglass unit (also of a flow indicator) or the slotted cover nut of screwed sightglass similar to DIN 11851.

The bracket is fixed using the M8 screw supplied, and a blind hole drills and tapped on the bolt pitch circle of the cover flange face. Alternatively the bracket can be welded on.

• **Mounting with flanged adapter collar:**

The adapter is mounted onto (screw – or weld connection) the slotted cover nut (DIN 11851).

• **Replacement parts:**

a) for both versions

Part	Cat. No.
- screwed lens ring (light exit)	1774.033.00
- reflector, Spot	5904.047.00
- reflector, Flood	5904.048.00
- O ring seal (Viton)	0862.039.00
- lamp socket G4 (2 pin)	1202.011.00
- lamp socket GY6.35 (2 pin)	1202.012.00
- lamp socket, GZ 10	1202.024.00

b) for Version I (with cable tail)

Part	Cat. No.
- Cable entry gland complete with	
- 2 m connecting cable	1084.013.00
- 5 m connecting cable	1084.015.00
- 10 m connecting cable	1084.016.00
- 20 m connecting cable	1084.017.00

c) for Version II (with terminal box):

Part	Cat. No.
- flat gasket for cover	0.854.058.00
- trumpet cable entry gland assy	9108.008.00

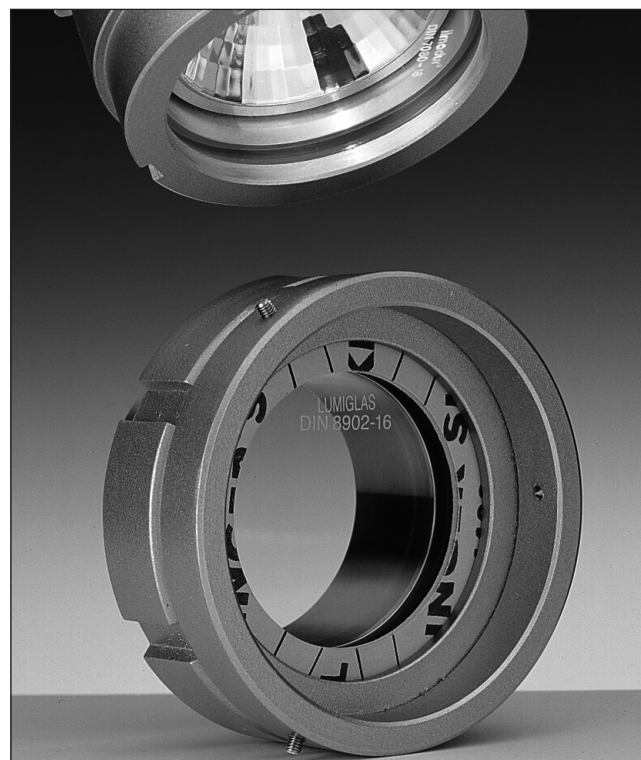
• **Filament lamps (Halogen):**

Part	Cat. No.
- 12 V/20 W – GY6.35	3232.240.00
- 24 V/20 W – G4	3232.206.00
- 24 V/20 W – G4 (reflector, spot)	3232.222.00
- 12 V/35 W – GY6.35	3232.232.00
- 12 V/50 W – GY6.35	3232.238.00
- 24 V/50 W – GY6.35	3232.242.00
- 230 V/50 W – GZ10	3232.261.00

• **Mounting example:**



Unit fitted as combined light and sight port. Fitting DIN 28120 using hinged bracket.



Unit fitted to screwed sightglass used as light port only; mounted by means of flanged adapter collar.

• **Accessories:** claw spanner (for lens ring) Cat. No. 6805.001.00

• **Servicing:**

- keep luminaire clean
- after opening of luminaire, lightly lubricate thread of lens ring (4) (e.g. with AEMA-SOL 6B, manufactured by A. E. Matthes).
- note mean figure for lamp life!
- use only genuine replacement parts!

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