

## LEDSecure SOL

### Design

The LEDSecure SOL consists of 5 components, a mains unit, the connection cable secondary side, the lighting module(s), the interconnecting cables and the dazzling boxes.

### Versions

The mains unit:

- The standard mains unit (LEDSecure SOL mains unit) is provided on the primary side with a 3 metre long connection lead. Other lengths are available upon request. These are calculated in gradations of one metre each.

The secondary-side connection is made using an M12 A-coded socket on the housing.

The connection cable secondary side (LEDSecure SOL connection cable secondary side) is available in a standard length of 3 metres. Other lengths up to a maximum of 15 metres are available upon request. These are calculated in gradations of one metre each.

The LEDSecure SOL g-r lighting modules are available in 2 versions:

- 3 LED lines (LEDSecure SOL g-r 6 luminaire)
- 4 LED lines (LEDSecure SOL g-r 8 luminaire)

The interconnecting cable (LEDSecure SOL interconnecting cable) is available in a standard length of 45 cm.

The dazzling boxes are available in several versions:

- for the LEDSecure SOL 6 (3 sight openings one-part)
- for the LEDSecure SOL 8 (4 sight openings one-part)
- Special variants (stainless steel, two-part, only bracket + dazzling box front)

### Area of application

Device groups A1T and A2T

- Bicolour level gauge type CD green-red
- Bicolour level gauge type BU green-red

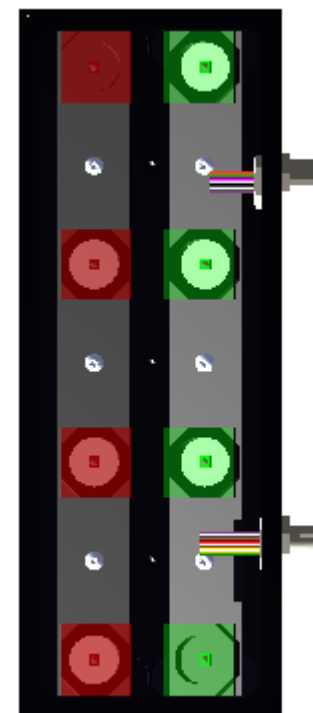
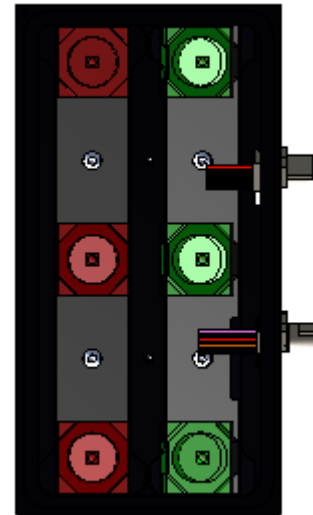
### Application and function

The LEDSecure SOL lighting equipment serves for generating the green and red light phases that are necessary to enable the colour differentiation between liquid and gas on the red-green type bicolour level gauge

Specially developed for this purpose, it is well suited to the thermal and physical requirements.

The strong directional light of the IGEA LED lighting is optimally focused on the display area of the fill level indicator. This achieves the maximum illumination of the steam and water space, which leads to a clear and unambiguous separation of the two phases on the visible side of the gauge.

IGEMA has continuously developed its light technology over the years – from conventional illuminants such as light bulbs and halogen lamps to extremely economically working LED lighting modules that only require a fraction of the power of traditional illuminants and have at the same time a considerably longer life.



The luminaire consists of 6 or 8 LED elements. The aluminium housing is protected from corrosion by an oxidic protective layer. A glass cover of temperature and media-resistant, thermally tempered borosilicate glass protects the LEDs.

With large sight lengths several LED luminaires are arranged vertically.

Each luminaire has a four-core supply line with separate actuation for red and green LEDs.

Up to five luminaires can be connected with each other via the interconnecting cables to loop through the supply voltage of the first luminaire. In this the various luminaire modules can be mixed in any way. The first luminaire is connected with the connection cable as secondary with the mains unit.

It is supplied with power using a switched-mode mains unit with a voltage input range of 100-240VDC. The power supply must be protected with a 6A fuse in the customer's system. If this is not possible, instead of the standard mains unit (LEDSecure SOL mains unit) there are options such as the LEDSecure Sol switch box. This then contains the corresponding fuse. The intensity of the two colours is set separately. It has already been factory preset based on experience and tests. This ensures high efficiency and service life with optimum results. In particular cases subsequent adjustment of the intensity is possible on site by the IGEMA Customer Service.

### Technical data

#### Technical data LEDSecure SOL g-r 6 luminaire

Type designation	LEDSecure SOL g-r 6
Electromagnetic compatibility	EN 61326-1
LED module output	6 W
Operating voltage (red / green)	12 VDC / 18 VDC
Protection type as per DIN EN 60529	IP67
Protection class	3
Housing material	Aluminium
Connection supply line	M12 plug A-coded
Ambient temperature	-10° C < Tamb. < 70° C
Weight	0.6kg
Order number	40-11126

#### Technical data LEDSecure SOL g-r 8 luminaire

Type designation	LEDSecure SOL g-r 8
Electromagnetic compatibility	EN 61326-1
LED module output	6 W
Operating voltage (red / green)	12 VDC / 18 VDC
Protection type as per DIN EN 60529	IP67
Protection class	3
Housing material	Aluminium
Connection supply line	M12 plug A-coded
Ambient temperature	-10° C < Tamb. < 70° C
Weight	0.8kg
Order number	40-11125

**Technical data LEDSecure SOL mains unit**

Type designation	LEDSecure SOL mains unit
Electromagnetic compatibility	EN 61326-1
Low voltage	EN 60730-1
Rated input voltage	100 - 240 VAC
max. input voltage range	90 - 265 VAC
Mains frequency	47 - 63 Hz
Input current @ 115 VAC	0.75 A
Input current @ 230 VAC	0.45 A

Rated output voltage	10-13 VDC / 15-18 VDC
Maximum number of LED luminaires	5
Rated output current per luminaire per colour	200 mA
Rated output per luminaire	6 W
Max. total output of all LEDs (@ 5 luminaires)	30 W

Insulation voltage I/O-O/P	4000 VAC
Insulation voltage I/O-FG	1500 VAC
Insulation voltage O/O-FG	500 VAC
Insulation resistance (@500 VDC, 25° C, 70% RH)	108 Ω

Ambient temperature	0° C < Tamb. < 40° C
Output overcurrent protection	1.6 (foldback to 0.8 A, self-resetting)
Output overvoltage protection	red 16 VDC, green 20 VDC (self-limiting)
Overload protection	150% (Foldback to 80%, self-resetting)
Overtemperature protection	@ 75° C housing (locking, mains reset necessary)
Ambient humidity	20 - 90% RH non-condensing
Dimensions	130 x 170 x 90mm
Connection cable primary	- Cable, 3-core with cable end sleeves - Standard length 3m
Connection secondary	M12 A-coded built-in socket
Order number	25-13000

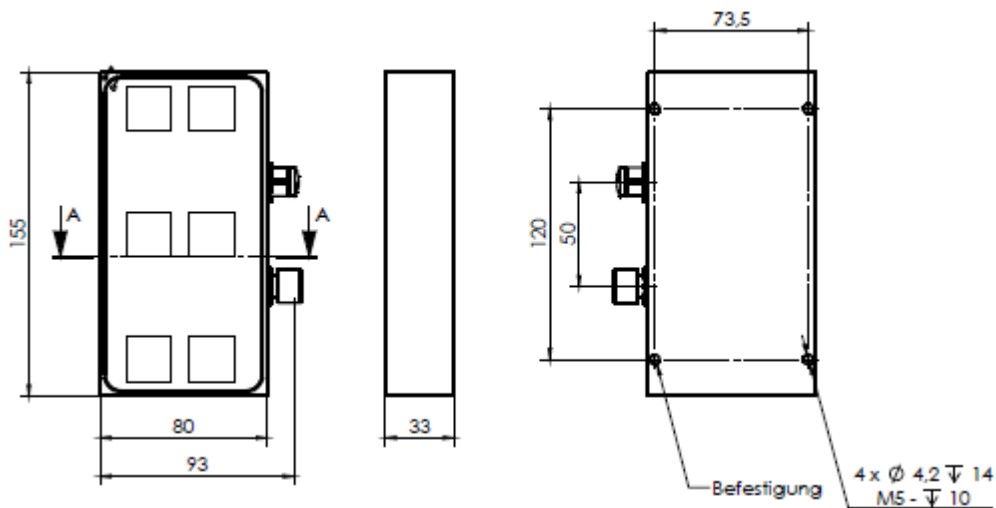


Input voltage must be protected with a 6A fuse in the customer's system.

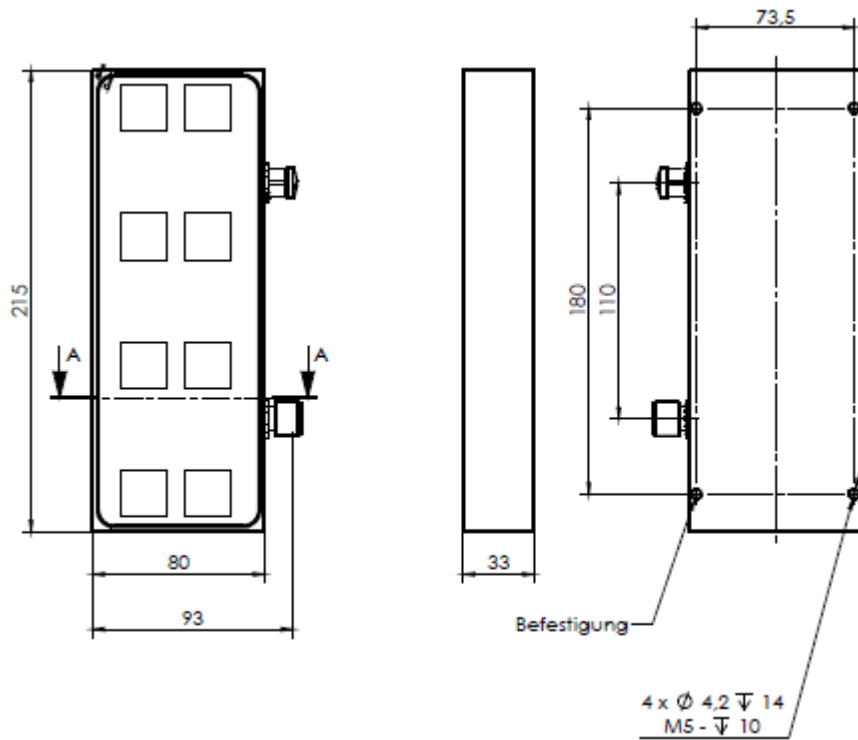
**Technical data LEDSecure SOL switch box**

Type designation	LEDSecure SOL switch box
Protection class according to DIN EN 60529	IP 65
Dimensions	300 x 200 x 150mm
Housing material	Stainless steel 1.4301, electropolished
Operating voltage	230V 50Hz or 110-120V 60Hz
Electric fuse	1-pole + N 6A tripping characteristic B
Main switch	2-pole switchable, padlockable in 0 position
Connection primary	via input terminals
Connection secondary	via M12 A-coded built-in socket
Fixing	carried out via 4 openings in housing rear wall
Order number	25-13016

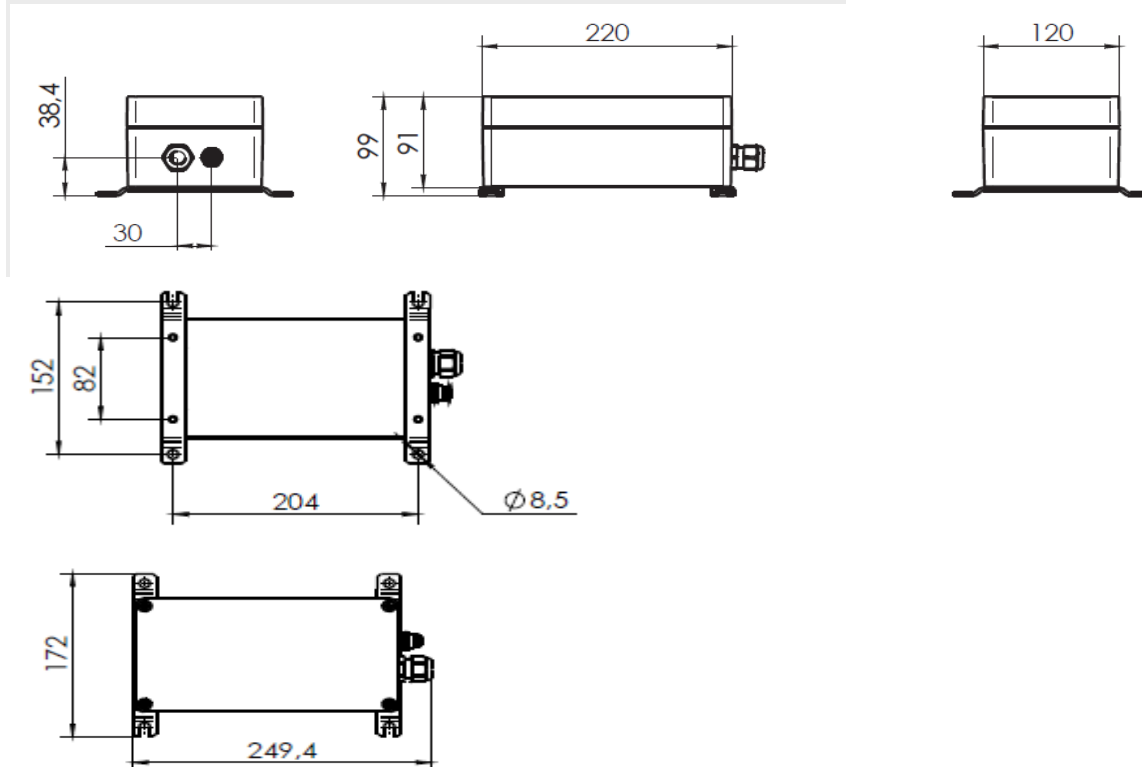
Optionally wall holders for mounting the housing can be included in the order.

**Dimensions LEDSecure SOL g-r 6 luminaire**


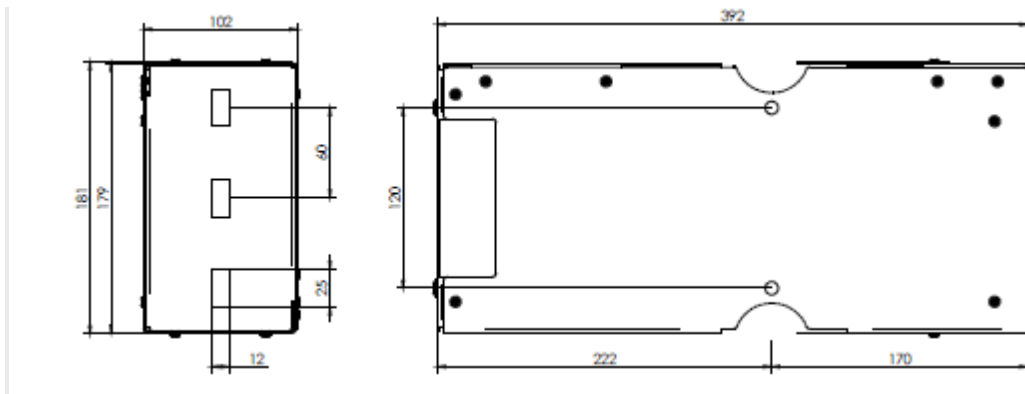
Dimensions LEDSecure SOL g-r 8 luminaire



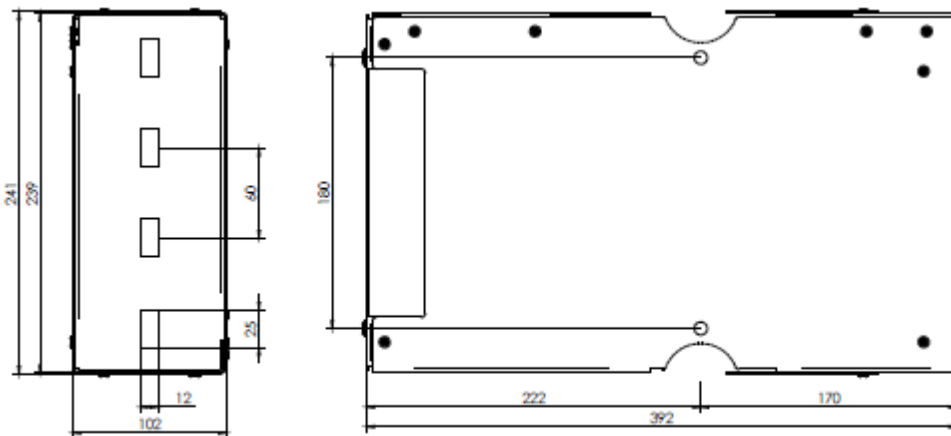
Dimensions LEDSecure SOL mains unit



**Dimensions LEDSecure SOL 6 dazzling box**



**Dimensions LEDSecure SOL 8 dazzling box**



**Dimensions Connection cable secondary LEDSecure SOL**

The LEDSecure SOL connection cable secondary side (25-13015) is available in a standard length of 3 metres. Other lengths up to a maximum of 15 metres are available upon request. These are calculated in gradations of one metre each.

**Dimensions LEDSecure SOL interconnecting cable**

The LEDSecure SOL interconnecting cable (25-13013) between the lighting modules are 45 cm long.