



## Process Observation Lighting



## All Stainless Steel Construction



## Stainless steel luminaire type 1000 for sightglasses according to DIN11851

### Application:

Illumination of tanks, homogenisation mixers, cauldrons, mixers, reactors etc.

For usage in hygienic engineering (food processing, breweries, dairies, cosmetics and pharmaceutical industry).

### Advantages:

- compact design — large field of view--
- easy maintenance due to connector
- stainless steel housing without dead spaces - electropolished.

### Installation:

Installation in screw-in sightglasses according to DIN 11851 in nominal diameters DN65 to DN150.

### Operating conditions:

Independent of internal pressure in areas where there is no risk of explosion.  
Ambient temperature between  $-25^{\circ}\text{C}$   $+85^{\circ}\text{C}$ .

### Bulb:

Halogen- or xenon bulbs, average durability depending on type of bulb and power between 2.000 and 10.000 hours.

### Electrical performance data:

- Voltage: 12V or 24V AC or DC.
- Power: 10W, 20W, 35W, 50W or 100W, depending on operating voltage.

### Operating:

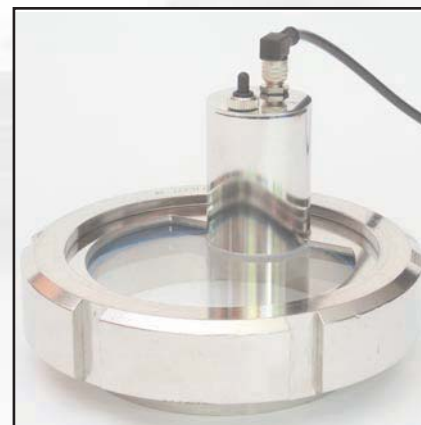
The luminaire has a momentary switch with an o-ring sealed rubber boot.

### Connecting cable:

Easy installation and maintenance due to plug and socket connection M5, M8 or DINEN175301-803 connector, depending on power, including 3 metre cable as standard, 5 and 10 metre cable available on demand.



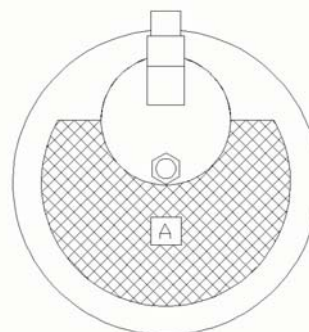
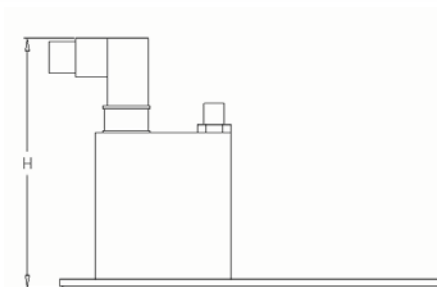
Stainless steel luminaire type 1000 DN125-DN150



Stainless steel luminaire type 1000 DN100 combined with a sightglass according to DIN11851



Stainless steel luminaire type 1000 DN65-DN80 combined with a sightglass according to DIN11851



| Type          |      | 1000-065 | 1000-080 | 1000-100 | 1000-125 | 1000-150 |
|---------------|------|----------|----------|----------|----------|----------|
| Height        | mm   | 63       | 63       | 76       | 95       | 95       |
| Field of view | cm²  | 26       | 42       | 61       | 94       | 146      |
| Power at 12V  | 5W   | x        | x        | x        | x        | x        |
|               | 10W  | x        | x        | x        | x        | x        |
|               | 20W  |          |          | x        | x        | x        |
|               | 35W  |          |          | x        | x        | x        |
|               | 50W  |          |          |          | x        | x        |
| Power at 24V  | 20W  | x        | x        | x        | x        | x        |
|               | 50W  |          |          | x        | x        | x        |
|               | 100W |          |          |          | x        | x        |

#### Technical data

|                    |    | 12V  |      |      |      |      | 24V  |      |      |
|--------------------|----|------|------|------|------|------|------|------|------|
|                    |    | 5W   | 10W  | 20W  | 35W  | 50W  | 20W  | 50W  | 100W |
| Average lifetime** | h  | 4000 | 4000 | 4000 | 4000 | 2000 | 3000 | 3000 | 3000 |
| luminous flux      | lm | 60   | 130  | 320  | 600  | 830  | 300  | 850  | 2200 |
| Switch*            |    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    |

\* 1=OFF—momentary, \*\*average lifetime XENON-bulb ca. 10.000h

|                              |                                                            |
|------------------------------|------------------------------------------------------------|
| Possibilities of combination | with a wiper<br>with a sightglass according to<br>DIN11851 |
| Material housing             | AISI 304                                                   |
| Surface housing              | e-polished                                                 |
| Sealing                      | silicon                                                    |

| Type      | Diameter   | Voltage | Power   | Bulb    | Cable |
|-----------|------------|---------|---------|---------|-------|
| 1 0 0 0 ? | DN 0 6 5 ? | 1 2 V   | 0 0 5 W | 0 ?     | 0 3m  |
|           | 0 8 0      | 2 4 V   | 0 1 0 W | 1 Xenon | 1 5m  |
|           | 1 0 0      |         | 0 2 0 W |         | 2 10m |
|           | 1 2 5      |         | 0 3 5 W |         |       |
|           | 1 5 0      |         | 0 5 0 W |         |       |
|           |            |         | 1 0 0 W |         |       |

## Stainless steel luminaire type 1100 for sightglasses according to DIN11851

### Application:

Illumination of tanks, homogenisation mixers, cauldrons, mixers, reactors etc. For usage in hygienic engineering (food processing, breweries, dairies, cosmetics and pharmaceutical industry).

### Advantages:

- compact design — large field of view
- easy maintenance due to connector
- stainless steel housing without dead spaces — electropolished.
- View with simultaneous illumination in DN40 and DN50 sightglasses.

### Installation:

Installation in screw-in sightglasses according to DIN 11851 in nominal diameters DN40 to DN50.

### Operating conditions:

Independent of internal pressure in areas where there is no risk of explosion. Ambient temperature between  $-25^{\circ}\text{C}$   $+85^{\circ}\text{C}$ .

### Bulb:

Halogen or xenon bulbs, average durability depending on type of bulb and power between 2.000 and 10.000 hours.

### Electrical performance data:

- Voltage: 12V or 24V AC or DC.
- Power: 5W, 10W or 20W, depending on operating voltage.

### Operating:

The luminaire has a momentary switch with an o-ring sealed rubber boot.

### Connecting cable:

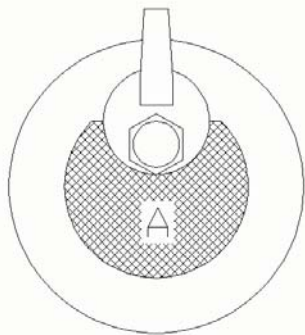
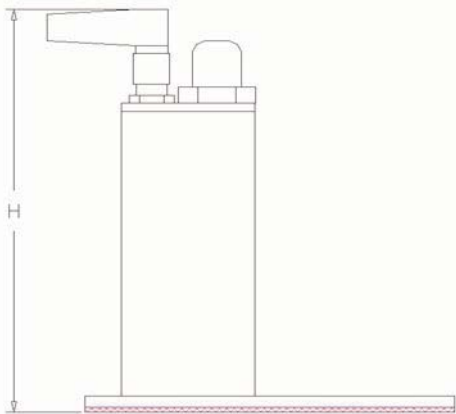
Easy installation and maintenance due to plug and socket connection M5, including 3 metre cable as standard, 5 and 10 metre cable available on demand.



Stainless steel luminaire type 1100



Stainless steel luminaire type 1100 combined with a sightglass according to DIN11851



| Type          |     | 1100-040 | 1100-050 |
|---------------|-----|----------|----------|
| Height        | mm  | 75       | 75       |
| Field of view | cm² | 8,4      | 14       |
| Power at 12V  | 5W  | x        | x        |
|               | 10W | x        | x        |
| Power at 24V  | 20W | x        | x        |

Technical data

|                    |    | 12V  |      | 24V  |
|--------------------|----|------|------|------|
|                    |    | 5W   | 10W  | 20W  |
| average lifetime** | h  | 4000 | 4000 | 3000 |
| luminous flux      | lm | 60   | 130  | 300  |
| Switch*            |    | 1    | 1    | 1    |

\* 1=OFF—momentary, \*\*average lifetime XENON-bulb ca. 10.000h

|                              |                                         |
|------------------------------|-----------------------------------------|
| Possibilities of combination | with a sightglass according to DIN11851 |
| Material housing             | AISI 304                                |
| Surface housing              | e-polished                              |
| Sealing                      | silicon                                 |

| Type    |    | Diameter |   | Voltage |   | Power   |   | Bulb |         | Cable |
|---------|----|----------|---|---------|---|---------|---|------|---------|-------|
| 1 1 0 0 | DN | 0 4 0    | - | 1 2 V   | - | 0 0 5 W | - | 0    | Halogen | 0 3m  |
|         |    | 0 5 0    | - | 2 4 V   | - | 0 1 0 W | - | 1    | Xenon   | 1 5m  |
|         |    |          | - |         | - | 0 2 0 W | - |      |         | 2 10m |

## Stainless steel luminaire type 1400 for sightglasses according to DIN11851

### Application:

Illumination of tanks, homogenisation mixers, cauldrons, mixers, reactors etc. For usage in hygienic engineering (food processing, breweries, dairies, cosmetics and pharmaceutical industry).

### Advantages:

- compact design
- easy maintenance due to connector
- stainless steel housing without dead spaces — electropolished.

### Installation:

Installation in screw-in sightglasses according to DIN 11851 in nominal diameters DN20 to DN25.

### Operating conditions:

Independent of internal pressure in areas where there is no risk of explosion. Ambient temperature between  $-25^{\circ}\text{C}$   $+85^{\circ}\text{C}$ .

### Bulb:

Halogen- or xenon bulbs, average durability depending on type of bulb and power between 2.000 and 10.000 hours.

### Electrical performance data:

- Voltage: 12V or 24V AC or DC.
- Power: 5W, 10W or 20W, depending on operating voltage.

### Operating:

The luminaire has a momentary switch with an o-ring sealed rubber boot.

### Connecting cable:

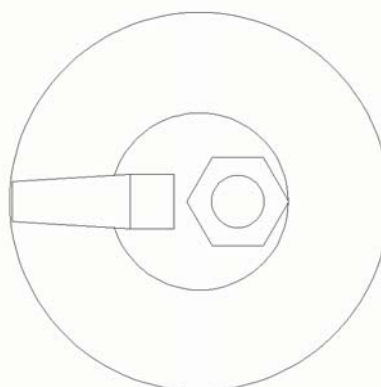
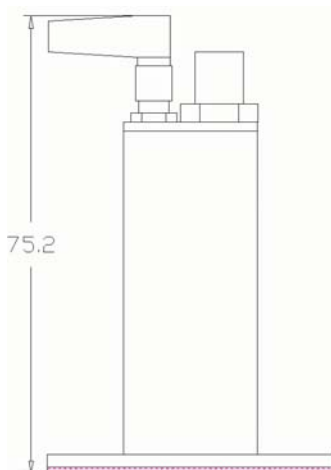
Easy installation and maintenance due to plug and socket connection M5, including 3 metre cable as standard, 5 and 10 metre cable available on demand.



Stainless steel luminaire type 1400



Stainless steel luminaire type 1400 combined with a sightglass according to DIN11851



| Type         |     | 1400-020 | 1400-025 |
|--------------|-----|----------|----------|
| Height       | mm  | 75       | 75       |
| Power at 12V | 5W  | x        | x        |
|              | 10W | x        | x        |
| Power at 24V | 20W | x        | x        |

#### Technical data

|                    |    | 12V  | 24V  |      |
|--------------------|----|------|------|------|
|                    |    | 5W   | 10W  | 20W  |
| average lifetime** | h  | 4000 | 4000 | 3000 |
| luminous flux      | lm | 60   | 130  | 300  |
| Switch*            |    | 1    | 1    | 1    |

\* 1=OFF—momentary, \*\*average lifetime XENON-bulb ca. 10.000h

|                              |                                         |
|------------------------------|-----------------------------------------|
| Possibilities of combination | with a sightglass according to DIN11851 |
| Material housing             | AISI 304                                |
| Surface housing              | e-polished                              |
| Sealing                      | silicon                                 |

| Type    | Diameter | Voltage | Power   | Bulb      | Cable |
|---------|----------|---------|---------|-----------|-------|
| 1 4 0 0 | DN 0 2 0 | 1 2 V   | 0 0 5 W | 0 Halogen | 0 3m  |
|         | 0 2 5    | 2 4 V   | 0 1 0 W | 1 Xenon   | 1 5m  |
|         |          |         | 0 2 0 W |           | 2 10m |

## Stainless steel luminaire type 1801 type "MikroLux"

### Application:

Illumination of homogenisation mixers, laboratory plants, cauldrons, reactors etc. For usage in hygienic engineering (food processing, breweries, dairies, cosmetics and pharmaceutical industry).

### Advantages:

- smallest currently available luminaire
- easy maintenance due to connector

### Installation:

Installation onto sightglasses according to DIN 11851 and other standards independent of nominal diameters.

### Operating conditions:

Independent of internal pressure in areas where there is no risk of explosion.  
Ambient temperature between  $-25^{\circ}\text{C}$   $+85^{\circ}\text{C}$ .

### Bulb:

Halogen- or xenon bulbs, average durability depending on type of bulb and power between 2.000 and 10.000 hours.

### Electrical performance data:

- Voltage: 12V or 24V AC or DC.
- Power: 5W, 10W or 20W, depending on operating voltage.

### Operating:

The luminaire has a momentary switch with an o-ring sealed rubber boot.

### Connecting cable:

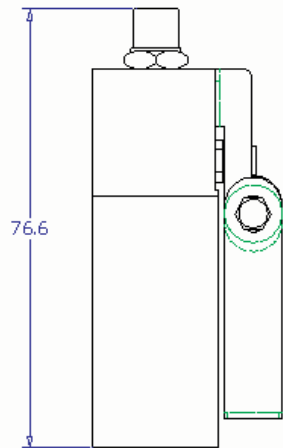
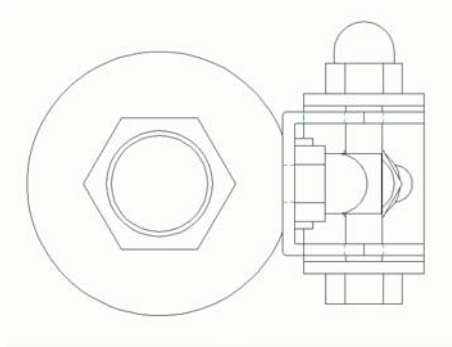
Easy installation and maintenance due to plug and socket connection M5 including 3 metre cable as standard, 5 and 10 metre cable available on demand



Stainless steel luminaire type 1801



Stainless steel luminaire type 1801 combined with a sightglass to DIN11851



|              |     |      |
|--------------|-----|------|
| Type         |     | 1801 |
| Height       | mm  | 77   |
| Power at 12V | 5W  | x    |
|              | 10W | x    |
| Power at 24V | 20W | x    |

|                              |                                      |
|------------------------------|--------------------------------------|
| Possibilities of combination | with different types of sightglasses |
| Material housing             | AISI 304                             |
| Surface housing              | Fine turned (e-polished)             |

Technical data

|                    |    | 12V  |      | 24V  |
|--------------------|----|------|------|------|
|                    |    | 5W   | 10W  | 20W  |
| average lifetime** | h  | 4000 | 4000 | 3000 |
| luminous flux      | lm | 60   | 130  | 300  |
| Switch*            |    | 1    | 1    | 1    |

\* 1=OFF—momentary, \*\*average lifetime XENON-bulb ca. 10.000h

| Type    | Voltage | Power   | Bulb      | Cable |
|---------|---------|---------|-----------|-------|
| 1 8 0 1 | 1 2 V   | 0 0 5 W | 0 Halogen | 0 3m  |
|         | 2 4 V   | 0 1 0 W | 1 Xenon   | 1 5m  |
|         |         | 0 2 0 W |           | 2 10m |

## Stainless steel luminaire type 1803 type “MikroLux” for sterile operations

### Application:

Illumination of tanks, homogenisation mixers, laboratory plants, cauldrons, reactors etc. For usage in hygienic engineering (food processing, breweries, dairies, cosmetics and pharmaceutical industry). Particularly hygienic housing design. Electropolished stainless steel housing. No screws in the lid.

### Advantages:

- particularly small design
- easy maintenance due to connector
- Hygienic housing—electropolished
- O-ring sealed connecting adaptor
- External diameter 22mm!

### Installation:

Installation onto the following sightglasses possible:

Metal glass sightglasses (with adaptor flange).

Sightglass according to DIN11851 (with adaptor, for hygienical applications).

### Operating conditions:

Independent of internal pressure in areas where there is no risk of explosion.

Ambient temperature between  $-25^{\circ}\text{C}$   $+85^{\circ}\text{C}$ .

### Bulb:

Halogen– or xenon bulbs, average durability depending on type of bulb and power between 2.000 and 10.000 hours.

### Electrical performance data:

- Voltage: 12V or 24V AC or DC.
- Power: 5W, 10W, 20W, or 100W, depending on operating voltage.

### Operating:

The luminaire has a momentary switch with an o-ring sealed rubber boot.



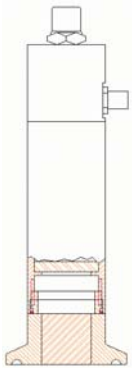
Stainless steel luminaire type 1803 combined with a sightglass to DIN32676



Stainless steel luminaire type 1803 combined with adaptor for sightglass

### Connecting cable:

Easy installation and maintenance due to plug and socket connection M5, including 3 meters cable as standard, 5 and 10 meters cable available on demand.

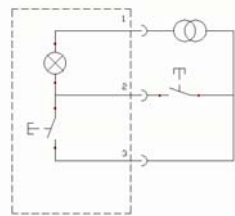
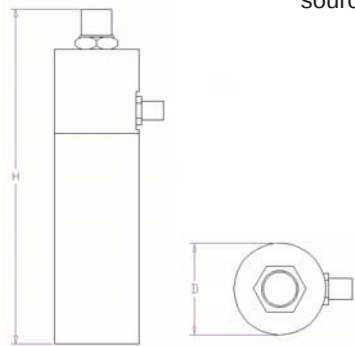


Aseptic technically optimized luminaire:

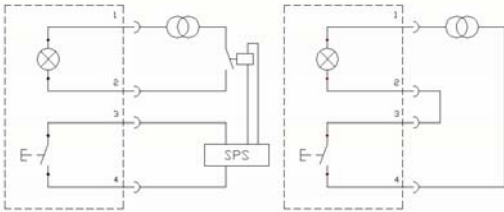
The lighting unit consists of an upper body that is screwed onto the base using internal thread; therefore, there are no outside bolts or screws holding a cover in place.

The two part body is sealed using an o-ring thereby conforming to aseptic design.

The electrical connector is available as a 3 pole or 4 pole units. The 4 pole model allows for the switch and the bulb to be controlled separately. The switch provided can transmit a signal to a time relay that controls the on/off cycle of the bulb. This allows for automated control of the lighting unit from external sources.



The 3-pole standard model with optional installation of an external switch.



The 4-pole specially designed model offers the possibility to control the bulb via a programmable logic control or with the switch of the luminaire. Here also it is possible to install an external switch.

|                     |    | 12V  |      | 24V  |
|---------------------|----|------|------|------|
|                     |    | 5W   | 10W  | 20W  |
| Average lamp life** | h  | 4000 | 4000 | 3000 |
| luminous flux       | lm | 60   | 130  | 300  |
| Switch*             |    | 1    | 1    | 1    |

\* 1=OFF—momentary, \*\*Brenndauer XENON-bulb ca. 10.000h

|                  |                                      |
|------------------|--------------------------------------|
| To combine       | with different types of sightglasses |
| Material housing | AISI 304                             |
| Surface housing  | Fine turned e-polished               |

|              |     |      |
|--------------|-----|------|
| Type         |     | 1803 |
| Height       | mm  | 88   |
| Power at 12V | 5W  | x    |
|              | 10W | x    |
| Power at 24V | 20W | x    |

| Type    | Voltage | Power   | Bulb      | Cable | Connector |
|---------|---------|---------|-----------|-------|-----------|
| 1 8 0 3 | 1 2 V   | 0 0 5 W | 0 Halogen | 0 3m  | 0 3-pins  |
|         | 2 4 V   | 0 1 0 W | 1 Xenon   | 1 5m  | 1 4-pins  |
|         |         | 0 2 0 W |           | 2 10m |           |