



Fibre-optic lightpipe light fittings for sightglasses for use in hazardous areas Series fibroLUX®



Fibre-optic lightpipe light fitting for use in hazardous areas with built-in timer "V", type fibroLUX® X1 W2 V, EEx de IIC T4, Ex II 2 G + D, 50 W, 230 V, fixation of the light source by fixation legs "X1", fixation of the lightpipe by universal support "W2" onto sightglass to DIN 28120, DN 40, PN 10



Fibre-optic lightpipe light fitting with built-in timer "U", type fibroLUX® W W2 U sp, EEx de IIC T3, Ex II 2 G + D, 50 W, 24 V DC, fixation of the light source by bracket "W", fixation of the lightpipe by universal support "W2" onto sightglass to DIN 28120, DN 40, PN 10

The fibroLUX® series of light fittings for use in hazardous areas are technically advanced, innovative top products for the brilliant, powerful and continuous illumination of process equipment, typically in the pharmaceutical and chemical industries. Locating the light source away from the sightglass gives scope for the arrangement "light and sight through small sightglasses". With the well known MAX MÜLLER quality, no compromise technology, attention to detail and with proven components from our existing range of light fittings, the fibroLUX® series offers the following advantages:

For the purchasing department:

- **Highly competitive price**
- **Short lead times**

For the design or plant engineer:

- **The colours of the illuminated products remain "true"**, due to an absolutely white light output
- **Brilliant, targeted illumination**, even under difficult conditions, due to **focusable light output** and movable lightpipe
- The built-in **long life halogen bulb is industry standard**, available from local suppliers throughout the world
- **Available with a built-in electronic timer "V" or "U" or with a device for momentary operation "D"** (see options overleaf)
- **Easiest mounting** due to different mounting possibilities and an absence of orientation prescriptions
- The components of the system **do not require expensive servicing** due to long maintenance intervals
- There are **no complicated pre-installation checks to be carried out with respect to the conformance of the unit to its certification**: The unit is delivered ready for use
- The system is **designed for continuous operation**, thus allowing uninterrupted observation of the process reaction steps
- **Maximum length of the lightpipe: 5 m**
- Certified to ATEX in the groups G (zones 1 and 2) and D (zones 21 and 22)

For the electrician:

- The light fitting may be supplied for use with a **wide range of supply voltages** (see overleaf)
- Easy connection due to ample **junction box with large terminals**
- M20 standard tapping for gland permits easy change to a site standard or use with SWA cable
- **Quick bulb replacement**

Application:

For use in hazardous areas, mainly in situations where there is insufficient room to fit a "classic" type of sightglass light fitting, where there is only one very small sightglass available for both illumination and observation or in situations where it is desirable to highlight a specific area of a reaction or of the reaction vessel (e.g. for maintenance purposes).

Conditions of service:

The mounting is **independent** of the internal pressure or vacuum of the equipment to be fitted with. **There are no restrictions for the mounting position.**

Technical data:

| | |
|------------------------------|--|
| Mode of service: | Continuous service. If required for economic or environmental reasons, a version is available with a built-in timer or device for momentary use (see overleaf) |
| Enclosure protection degree: | IP 65, dust and water jet tight |
| Ignition protection type: | EEx de to DIN EN 50014 / 50018 / 50019 |
| Explosion group: | IIC |
| Temperature class: | T4 (T3 with supply voltage of 12 or 24 V DC) |
| ATEX: | Ex II 2, G + D, T 130 °C (T 195 °C) |



MAX MÜLLER AG

Europe's largest sightglass light fitting programme!
Perfect, thoroughly engineered solutions from one hand!
Always an interesting, technically advanced idea ahead!

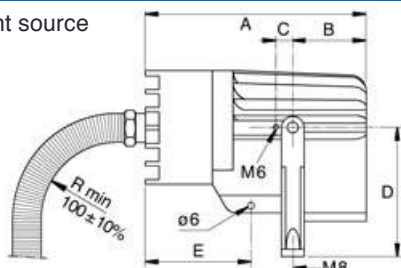
Dimensions

Electrical data

Construction and materials

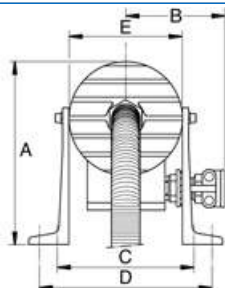
Additional equipment

Light source



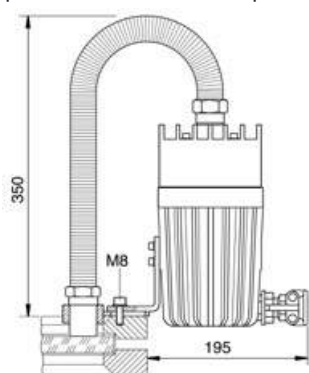
| A | B | C | D | E |
|-----|----|----|-----|-----|
| 230 | 76 | 18 | 135 | 110 |

Light source



| A | B | C | D | E |
|-----|-----|-----|-----|-----|
| 193 | 172 | 146 | 186 | 116 |

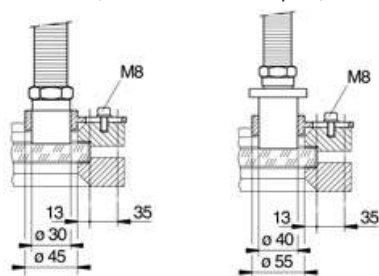
Lightpipe: Version "flood" or "spot"



Fixation of the light source by bracket "W" on sightglasses to or similar to DIN 28120 / 28121

Lightpipe:

Version "flood", "W2" Version "spot", "W3"



Fixation "W2" / "W3" on sightglasses to or similar to DIN 28120 / 28121

All dimensions in mm. Subject to changes without preliminary notice.

Electrical data:

Supply: Alternating current (AC) or direct current (DC), depending on light source

Supply voltages: With integrated transformer: 24 / 36 / 42 / 115 / 230 / 240 V AC

Without an integrated transformer: 12 / 24 V DC

Power: 50 W **effective**

Bulb socket: GY 6.35

Bulb: Halogen, 50 W / 12 V (with integrated transformer)
Halogen, 50 W / 24 or 12 V (without an integrated transformer)
Industry standard bulb with an effective operating life of ca. 1500 hours

Construction and materials:

Compact light source housing and its fixation elements of anti-corrosion cast aluminum alloy (Anticorodal). Marked earth terminal inside the Ex e junction box and another on the outside of the housing. Built-in separation transformer to VDE 0171 for all voltages supplied, except for 12 and 24 V DC. Built-in fine fuse, appropriate to the respective supply voltage (for versions with trafo). The light from the halogen bulb is optimally focused on to the lightpipe by an efficient reflector system. Light source mounting either via the "X1" fixation legs or bracket "W" (see dimensioned drawings) or by the customer making an adaptation using the M6 tappings on the housing. Lightpipe designed for optimum light transmission, directly fixed to the light source housing. Standard length of the lightpipe is 1 metre, other lengths on request. Light output as a wide beam, "flood" (standard delivery) or with narrow beam "spot" (see options). Light transmitting fibres protected by a galvanized steel flexible tube, enclosed in a chemical and temperature resistant silicon rubber tube. Lightpipe terminated with a stainless steel ferrule, ground flat and polished for close fit to the sightglass. Minimum bending radius of the lightpipe assembly 100 mm / $\pm 10\%$. Fixation of the lightpipe to the sightglass concerned with a stainless steel universal support "W2" or "W3" (for the spotlight adapter), with an M8 screw.

Additional equipment:

Timers: Standard set period of ca. 3 minutes, a period of 15 minutes is possible if specified on order

Type "V" for **action on the light source housing** or for remote operation

Type "U" for **remote operation** only via opening contact, to be built into the supply cable

Type "D", operated **on the light source housing**

Momentary push button:

Painting "K": (Alu parts)

2 components acrylic based colour, standard colour RAL 9001, other colours available on demand

Spotlight adapter "SA":

To produce a narrow focused output beam. Lens holder in stainless steel to be positively positioned on the emitting end of the lightpipe, adjusted in our works. May be removed / refitted, thus allowing either "flood" or alternatively "spot" operation.

Do you wish for more information about our wide range of light fittings for use in hazardous and safe areas, about our range of circular sightglasses to DIN 28120/28121, screwed sightglasses similar to DIN 11851, rectangular or D-ended sightglasses, pipeline flow indicators, centrally or sideways operated wipers, hinged sightglasses, spraying devices or our complete sight and lightglass units VETROLUX®? Are you interested in other types, special versions or different protection degrees? If yes, please contact us, our branch office or our local agents – it is our business! You will find the necessary indications about our sales network on the Internet.