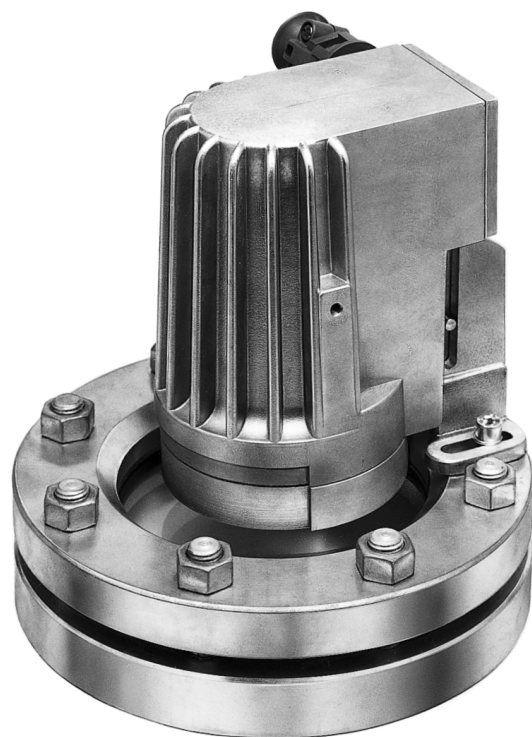


SIGHTGLASS LIGHT FITTINGS

Series PEL / PL, the ideal solution for your lighting problems in hazardous as well as safe areas.

- Brilliant illumination due to high luminous power
- Fully developed package
- Various mounting options
- Highly competitive prices
- For combination of sight / light unit as well as for separate fitting (2 port version)
- Also supplied complete with VETROLUX® sightglasses



Type PEL 50 deHSch, Ex d e IIC T4 Gb, Ex t IIIC T130°C Db IP67, Ex II 2 G + D, 230 V, 50 W, mounted on circular sightglass to DIN 28120, DN 125, PN 10, in 2 port version.

Branch office / exclusive agent:

The sightglass light fittings of the series PEL/PL represent, due to our long experience of more than 40 years in this field, technically advanced top products, being thoroughly designed and manufactured according to the latest technical knowledge. They offer, besides the well-known quality and reliability of our products, the following principal advantages:

For the purchasing department:

- **Highly competitive prices** due to extremely compact value-engineered design and highly efficient manufacturing techniques
- **Short** lead times

For the design engineer or the plant engineer:

- Versatile design enabling the light fittings to be used as a combination “view **and** light through **one** assembly” already from DN 100 on depending on the type of the sightglass, as well as for use as a separate light fitting in a two port system
- ATEX equipment protection level (EPL): Gb (zones 1 and 2) and Db (zones 21 and 22)
- Temperature classes until: **T6 (version 20 W)**, **T4 (version 50 W)**
- **Easy installation** due to the availability of 3 different fixing systems (tilting hinge “Sch”, flange collar “R”, mounting feet “X1” / “X2”), meeting all applications on:
 - Circular sightglasses to DIN 28120 / 28121 or similar
 - Screwed sightglasses similar to DIN 11851
 - Pipeline flow indicators
- **Very compact** design
- **Brilliant illumination** due to high wattage capability up to max. 100 Watt
- **Different** terminal voltages possible (see page 3)
- **Dazzle free illumination** through anti-dazzle shield “B”
- Light units may be **installed in any position without restriction**
- **Admitted** for food processing applications
- **Particularly designed for extremely brilliant lighting** of vessels, reactors, tanks or silos
- Optionally to be equipped with an electronic timer “V” / “U”. The “V”-version permits action **on site** (on the light fitting) **and** on distance, the “U” version **on distance** only
- **All models** may be equipped with a built-in device for momentary operation (“D”), the safe area types alternatively with built-in “ON - OFF” switch (“E”)
- Available on request equipped **with transport handle** (“T”), thus serving as hand lamp

For the maintenance electrician:

- **Easy replacement** of bulbs
- **Halogen bulbs** are **industry standards** available from local suppliers
- **Comfortable connection** due to largely dimensioned junction box
- Only built-in **low voltage** halogen bulbs **with long lifetime**

Operating conditions:

Completely **independent** of vessel internal pressure or vacuum

Electrical data:

Supply: AC (DC **only** possible with 12 / 24 V terminal voltage)
Terminal voltages: Refer to table on page 3 for details

Enclosure protection degree:

IP67, dust tight and protected against the effects of temporary immersion to EN 60529 / DIN VDE 0470 part 1

Construction and materials:

Housing and fixations “Sch”, “X1” / “X2” of corrosion resistant cast aluminium alloy (Anticorodal). Upon request painted with a two component acryl based colour (“K”). Cable gland M 20 x 1.5 (explosion proof types), Pg 11 (safe area types). Connection to terminals up to 2.5 mm². Additional earth terminal 4 mm² external to the housing for hazardous area types. When timer “V” / “U” is included, an operating time of 3 minutes is preprogrammed at our factory. Various other operating times may be specified on ordering. With built-in transformers, the hazardous area models contain an integrated fuse. Reflector-bulb-units or bulbs according to your needs to produce a wide (“flood” version) or concentrated (“spot” version) beam of light. Standard version: “Spot”. Sockets BA 15 d / GY 6.35/G4, depending on type.

Survey on types General / electrical data Additional equipment (available for all types) Mounting possibilities

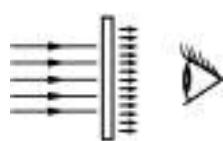


| Type designation for | safe area light fitting | PL 20 H | PL 50 H | PL 100 H |
|--|------------------------------|-------------------------------|-------------------------------|----------|
| | hazardous area light fitting | PEL 20 deH | PEL 50 deH | |
| Nominal rating | (W) | 20 | 50 | 100 |
| Terminal voltages with built-in transformer | (V) | 24, 36 42, 115 230, 240 | 24, 36 42, 115 230, 240 | |
| Secondary voltage of built-in transformer | (V) | 12 | 12 | |
| Terminal voltages without built-in transformer | (V) | 12, 24 | 12, 24 | 12, 24 |
| Weight of light fitting* (kg) | with transfo | 3,60 | 3,60 | |
| | without transfo | 2,65 | 2,65 | 2,65 |

The lower indications are **only valid for the hazardous area models**

| | | | | |
|---|---|------------------------------------|------------------------------------|--|
| Ignition protection type to EN | 60079-0/60079-1/ 60079-7 / 60079-31 | Ex d e Gb Ex t IIIC Db IP 67 | Ex d e Gb Ex t IIIC Db IP 67 | |
| Explosion groups | | IIC / IIIC | IIC / IIIC | |
| Temperature class G / D $T_a = -20^{\circ}\text{C} / +40^{\circ}\text{C}$ (T_a up to $+60^{\circ}\text{C}$ on request) | with transfo | T4 / T130°C T6 / T80°C | T3 / T195°C T4 / T130°C | |
| | without transfo | T5 / T95°C T6 / T80°C | | |
| ATEX | | Ex II 2 G + D | Ex II 2 G + D | |

* Weight of fixations: "Sch" 0.3 kg, "X1" / "X2": 0.2 kg



Opal glass screen

... M

In the case of pipeline flow indicator application, a strong blinding effect occurs when the unit is mounted as usual. This blinding effect is avoided by an opal glass screen creating a much higher light dispersion as compared to that of the standard "spot" or "flood" types.



Device for momentary illumination

... D

In order to avoid unnecessary continuous operation and thus prolong the lifetime of the bulb, the light fitting may be equipped with a built-in device for momentary operation. The latter **cannot** be combined with the timer ... V or ... U. (Refer to separate leaflet "Switches, push-buttons and timers").



Electronic timer

... V / U

The timers for command **on** the unit (... V) or **at distance** (... U) considerably save energy and increase the lifetime of the bulb, limiting the function of the unit to approximately 3 minutes. They are especially recommended for short or even sporadic observation of the vessel contents. Expensive primary time relays are no more necessary. The timers **cannot** be combined with the device ... D. (Refer to separate leaflet "Switches, push-buttons and timers").



Transport handle

... T

An ergonomic and insulated handle facilitates the transport within the factory. This handle also renders the light fitting portable, e.g. for use for inspections inside vessels.



Paint finish

... K

The special two component acrylic paint finish protects against corrosion in excessively aggressive environments, and may satisfy customers special aesthetic requirements. RAL 9001 is standard, other colours on demand.

The following tables show the mounting possibilities on circular sightglasses to or similar to DIN 28120 / 28121 and similar to DIN 11851:

On circular sightglasses to DIN 28120 in 2 port version (light and sightglass separated):

| DN | 50 | 80 | 100 | 125 | 150 | 200 |
|----------|----|----|-----|-----|-----|-----|
| Fixation | | | | | | |
| Sch | | | | ⊙ | ● | ● |
| X1 | ● | ● | ● | ● | | |
| X2 | | | | | | |

On circular sightglasses to DIN 28120 in 1 port version (light and sightglass):

| DN | 50 | 80 | 100 | 125 | 150 | 200 |
|----------|----|----|-----|-----|-----|-----|
| Fixation | | | | | | |
| Sch | | | | | | ⊙ |
| X1 | | | ● | ● | ● | |
| X2 | | | | ⊙ | ⊙ | ● |

On circular sightglasses to DIN 28121 in 2 port version (light and sightglass separated):

| DN | 50 | 80 | 100 | 125 | 150 | 200 |
|----------|----|----|-----|-----|-----|-----|
| Fixation | | | | | | |
| Sch | | | | | ⊙ | ⊙ |
| X1 | ● | ● | ● | ● | ● | ● |
| X2 | | | | | | |

On circular sightglasses to DIN 28121 in 1 port version (light and sightglass):

| DN | 50 | 80 | 100 | 125 | 150 | 200 |
|----------|----|----|-----|-----|-----|-----|
| Fixation | | | | | | |
| Sch | | | | | | |
| X1 | | | | ● | ● | ● |
| X2 | | | | | | |

On circular sightglasses similar to DIN 11851 in 2 port version (light and sightglass separated):

| DN | 80 | 100 | 125 | 150 |
|----------|----|-----|-----|-----|
| Fixation | | | | |
| R | ● | ● | ● | |
| X1 | | | | ● |

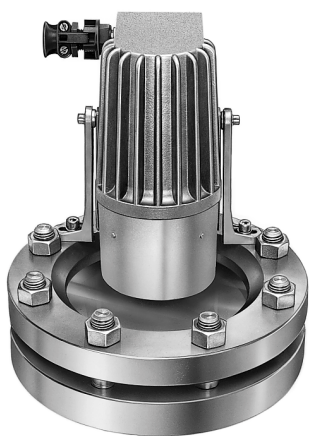
⊙ **Prefer** these mounting possibilities

For the mounting on flow indicators as well as on non-standardized sightglasses please contact us so we may submit you our proposals.

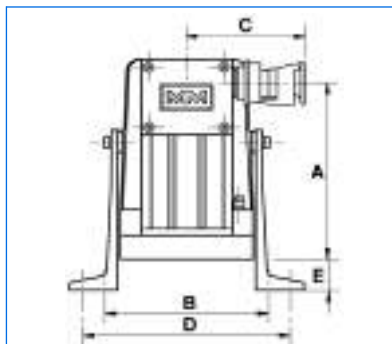
In case of order please specify the desired fixation.

Attention: The anti-dazzle shield "B" has always to be ordered **separately** together with the fixations "X1" or "X2" if the light fitting is foreseen to be mounted in the 1 port version.

Dimensions Application examples

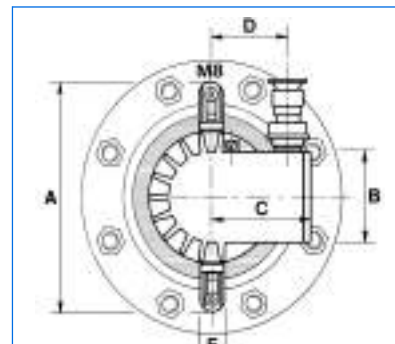


Type PEL 50 deH X2 B, 230 V, 50 W, Ex d e IIC T4 Gb, Ex t IIIC T130°C Db IP67, Ex II 2 G + D, with anti-dazzle shield "B", on circular sightglass to DIN 28120, DN 150, in version "view and light trough one assembly"



Fixation "X1"

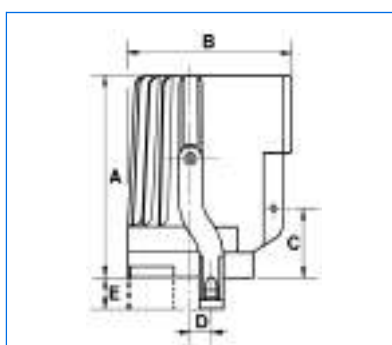
| A | B | C | D | E |
|-----|-----|-----|-----|----|
| 161 | 146 | 108 | 186 | 28 |



| A | B | C | D | E |
|-----|----|----|----|----|
| 209 | 82 | 96 | 74 | 23 |

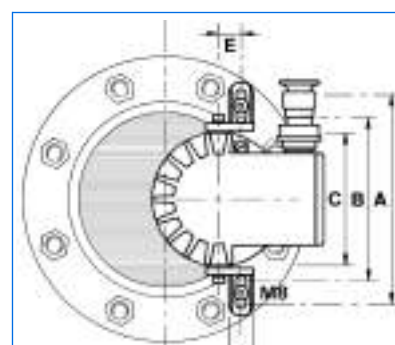


Type PL 100 HR80, 24 V, 100 W, on screwed sightglass similar to DIN 11851, DN80, PN6. Fixation with intermediate flange collar "R"



Fixation "X2"

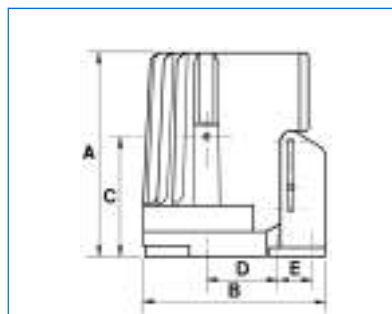
| A | B | C | D | E |
|-----|-----|----|----|----|
| 183 | 156 | 63 | 20 | 28 |



| A | B | C | D | E |
|-----|-----|-----|----|----|
| 186 | 146 | 116 | 23 | 20 |

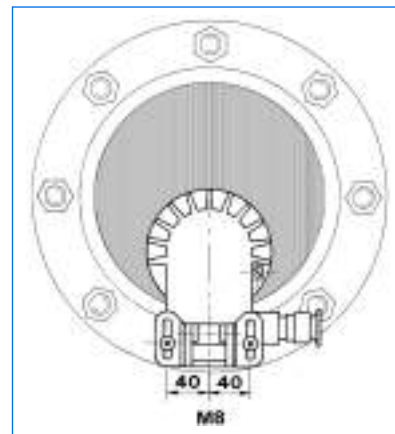


Type PEL 20 deH Sch, 230 V, 20 W, Ex d e IIC T6 Gb, Ex t IIIC T80°C Db IP67, Ex II 2 G + D, mounted on circular sightglass to DIN 28120, DN 125, PN 10, in 1 port version



Fixation "Sch"

| A | B | C | D | E |
|-----|-----|-----|----|----|
| 183 | 172 | 107 | 70 | 30 |



All dimensions in mm.

Subject to changes without preliminary notice.

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