

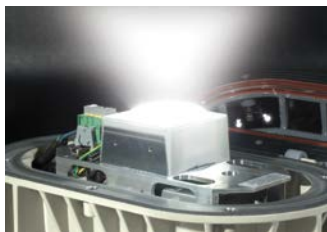
4.2

Ex-Ceiling light fittings AB 80 / AB 05 LED / AB 05 / AB 12 NAV 70

4 (Zone 1, 2, 21, 22)

The wall and ceiling light fixtures for particularly difficult operating conditions

The impact-resistant and flameproof luminaires of the series AB 80, AB 05 and AB 12 provide a safe and reliable light - even at extreme ambient temperatures and under extreme environmental conditions, such as those encountered in the oil and gas production industry, in- and outdoor areas of chemical plants or in heavy industry. This is due to the robust powder-coated light metal housing, stainless steel screws and a cover or tube made of scratch-resistant borosilicate glass.



The proper illuminant for your application

The AB 05 LED luminaire has an innovative 22 W LED module. The outstanding features are not only the high energy efficiency but also the resistance to shock and vibration. The luminaires of the series AB 05 and AB 80 can be fitted with incandescent or energy-saving lamps and they are used for lighting outdoor pathways or walkways and corridors. High-pressure discharge lamps are used in the luminaire series AB 05 and AB 12 NAV for lighting applications requiring a high illumination level at particularly low ambient temperatures.

AB 80 - the standard solution

This light fitting can be fitted with incandescent lamps with an E27 socket up to 100 W and is used as a wall or ceiling light



vibrations, has an extremely long lamp life and has also been approved for extremely low ambient temperatures as low as minus 55 ° C. Due to an optimised light distribution for low and medium suspension heights, the AB 05 LED is ideal for illuminating walkways, corridors, stairways and storage rooms and for use in all areas with limited space.

AB 05 - solid and reliable

The winning features of the robust housing with integral wire guard are its light weight and easy installation. The ballast for high pressure discharge lamps is mounted on a removable frame. This simplifies maintenance. An internal aluminium reflector provides a uniform light distribution.

in the chemical industry. Due to the robust enclosure and the ambient temperature range up to +55°C, this light fitting is suitable for a wide variety of applications.



AB 05 LED - robust against vibrations

This extremely robust luminaire with integral wire guard and its high-efficiency LED module is resistant against shocks and



Features

- Extremely rugged design for extremely harsh environments
- Various illuminants can be used
- Wide ambient temperature range depending on the version (-55 ° C to +55 ° C)
- High degree of protection up to IP 67

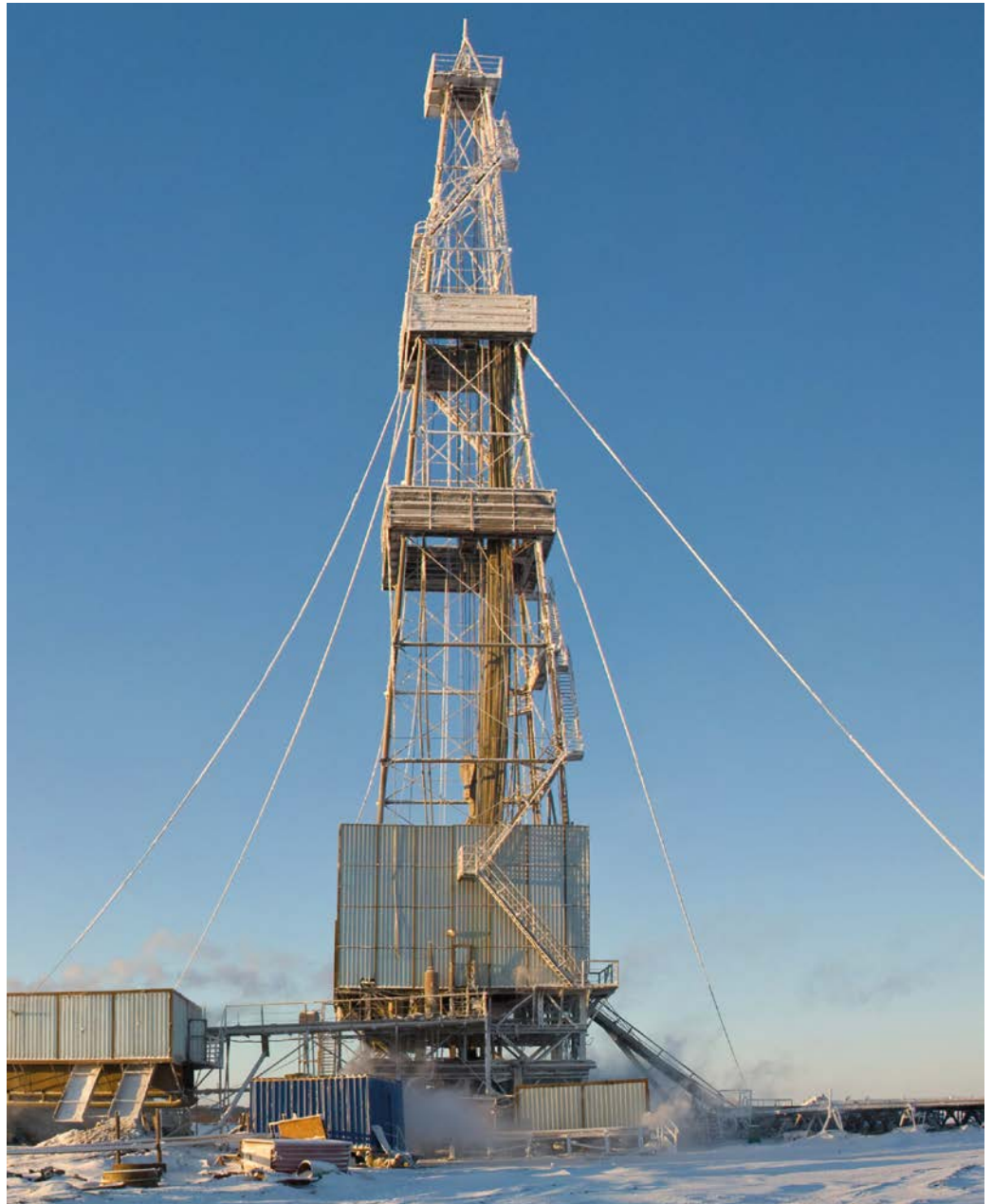


AB 12 NAV 70 - even for extreme cold environments






This compact Ex-d light fixture for high pressure sodium lamps is suitable for individual lighting solutions for areas with limited mounting space. Lamp, ballast and ignitor are incorporated on a compact module, which allows easy re-lamping and maintenance work. An optional external reflector allows individual illumination of working places. The **Arctic** version even allows the use of this versatile light fitting in extreme temperature ranges from minus 50 °C up to plus 50 °C within the highest explosion group IIC, e.g. for hydrogen atmospheres.



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Ordering details

| Type | Lamp/ Illuminant | Rated luminous flux 1) | Weight | Metal thread | Plug | Dust cap | Order No. |
|---|--|---------------------------------|--------|--------------|---------------------|-------------|----------------------------|
| AB 80 | | | | | | | |
|  AB 80 | IGA 60 W, 100 W / TC-DSE 11 W/ LED E27 lamp up to 13 W | 710 lm / 1360 lm / 660 lm | 6.6 kg | 2 x 3/4" NPT | 1 x 3/4" screw plug | | NOR 000 005 120 124 |
| AB 80 | IGA 60 W, 100 W / TC-DSE 11 W/ LED E27 lamp up to 13 W | 710 lm | 6.6 kg | 2 x M25 | 1 x M25 screw plug | x | NOR 000 005 120 123 |
| AB05 LED including LED-module | | | | | | | |
|  AB 05 LED | LED module 22 W | 2000 lm | 7.0 kg | 1 x M20 | - | x | AB05 251 011 0301 |
| AB 05 LED | LED module 22 W | 2000 lm | 7.0 kg | 1 x M25 | - | x | AB05 251 021 0301 |
| AB 05 LED | LED module 22 W | 2000 lm | 7.0 kg | 2 x M20 | 1 x M20 Ex-d | x | AB05 251 111 0301 |
| AB 05 LED | LED module 22 W | 2000 lm | 7.0 kg | 2 x M25 | 1 x M25 Ex-d | x | AB05 251 221 0301 |
| AB 05 Ex-e | | | | | | | |
|  AB 05 Ex-e | IGA 60 W | 710 lm | 5.9 kg | 1 x M20 | - | x | AB05 531 011 0001 |
| AB 05 Ex-e | IGA 60 W | 710 lm | 5.9 kg | 1 x M25 | - | x | AB05 531 021 0001 |
| AB 05 Ex-e | IGA 60 W | 710 lm | 5.9 kg | 2 x M25 | 1 x M25 Ex-d | x | AB05 531 111 0001 |
| AB 05 Ex-e | IGA 60 W | 710 lm | 5.9 kg | 1 x M25 | - | x | AB05 531 221 0001 |
| AB 05 Ex nR | | | | | | | |
|  AB 05 Ex nR | HSE 70 W | 5600 lm | 5.4 kg | 1 x M20 | - | x | AB05 611 011 0001 |
| AB 05 Ex nR | HSE 70 W | 5600 lm | 6.9 kg | 1 x M25 | - | x | AB05 611 021 0002 |
| AB 05 Ex nR | HSE 70 W | 5600 lm | 5.4 kg | 2 x M20 | 1 x M20 Ex-d | x | AB05 611 111 0001 |
| AB 05 Ex nR | HSE 70 W | 5600 lm | 5.4 kg | 2 x M25 | 1 x M25 Ex-d | x | AB05 611 221 0001 |
| AB 05 Ex nR | HME 80 W | 3800 lm | 6.9 kg | 2 x M25 | 1 x M25 Ex-d | x | AB05 621 221 0001 |
| AB 05 Ex nR | IGA 200 W | 3100 lm | 6.9 kg | 1 x M25 | - | x | AB05 631 021 0001 |
| AB 05 Ex-d IIB +H2 | | | | | | | |
|  AB 05 Ex-d IIB +H2 | HSE 70 W | 5600 lm | 6.9 kg | 1 x M20 | - | x | AB05 111 011 0001 |
| AB 05 Ex-d IIB +H2 | HSE 70 W | 5600 lm | 6.9 kg | 1 x NPT 1/2" | - | x | AB05 111 031 0001 |
| AB 05 Ex-d IIB | | | | | | | |
| AB 05 Ex-d IIB | HSE 70 W | 5600 lm | 6.9 kg | 1 x M20 | - | x | AB05 211 011 0001 |
| AB 05 Ex-d IIB | HSE 70 W | 5600 lm | 6.9 kg | 1 x M20 | 1 x M20 Ex-d | x | AB05 211 111 0001 |

¹⁾ depends on used lamps

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details

| Type | Lamp/ Illuminant | Rated luminous flux ¹⁾ | Weight | Metal thread | Plug | Dust cap | Order No. |
|---|---|---|---------|--------------|--------------|---------------|---------------------------------|
| AB 12 NAV 70 ... | | | | | | | |
|  | AB 12 NAV 70, IIC G2 -20 °C up to +40 °C | HSE 70 W | 5600 lm | 5.3 kg | 2 x 3/4" NPT | 1 x 3/4" Ex-d | x NOR 000 005 060 074 |
| | AB 12 NAV 70, IIB G2 -45 °C up to +55 °C | HSE 70 W | 5600 lm | 5.3 kg | 2 x 3/4" NPT | 1 x 3/4" Ex-d | x NOR 000 005 060 075 |
| AB 12 NAV 70 Arctic ... | | | | | | | |
|  | AB 12 NAV 70 Arctic IIC, -50 °C up to +40 °C | HST 70 W | 5600 lm | 5.6 kg | 2 x 3/4" NPT | 1 x 3/4" Ex-d | x 1 1750 000 353 |
| | AB 12 NAV 70 Arctic IIC, -50 °C up to +40 °C | HST 70 W | 5600 lm | 5.6 kg | 2 x M25 | 1 x M25 Ex-d | x 1 1750 000 354 |

¹⁾ depends on used lamps

Scope of delivery without lamp and fixing accessories, if not stated otherwise.
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories

| Type | Content | Application | OU | Order No. |
|-------------------|---|---------------------|----|----------------------------|
| GAB 80 | Wire guard, galvanized | AB 80 | 1 | NOR 000 005 120 439 |
| Lamp HSE 70 W | High pressure sodium lamp 70 W E27 | AB 05, AB 12 NAV 70 | 1 | 3 2475 900 012 |
| Lamp HST 70 W | High pressure sodium lamp 70 W E27 | AB 12 NAV 70 Arctic | 1 | 3 1750 301 070 |
| D92 | Ceiling mounting bracket incl. screws and polyamide washer - Stainless steel (2 pcs.) | AB 12 NAV 70 | 1 | 2 2480 092 000 |
| A5 | Ceiling bracket hot galvanized (1 pc.) | AB 12 NAV 70 | 1 | NOR 000 005 009 196 |
| BFP 45 | Wall bracket 45° hot galvanized (1 pc.) | AB 12 NAV 70 | 1 | NOR 003 045 060 471 |
| Reflector RAB 108 | Material: AISI 304 | AB 12 NAV 70 | 1 | NOR 003 045 060 471 |
| Reflector RAB 108 | Material: AISI 304 with wire guard white | AB 12 NAV 70 | 1 | NOR 003 045 060 819 |
| Reflector RAB 108 | Material: AISI 316 | AB 12 NAV 70 | 1 | NOR 003 165 060 471 |
| Reflector RAB 108 | Material: AISI 316 with wire guard white | AB 12 NAV 70 | 1 | NOR 003 165 060 819 |

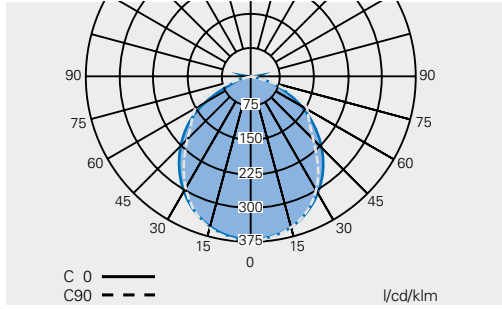
Metal cable glands see catalogue part 2, page 2.3.12 ff

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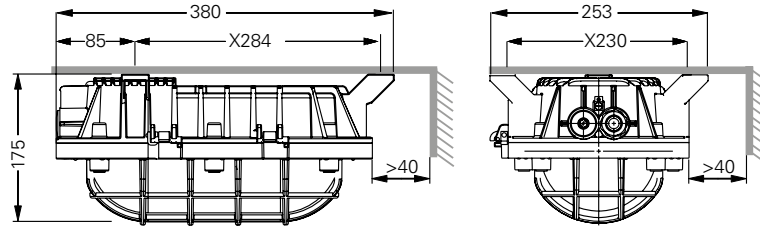
Dimension drawing / Polar curve

AB ...

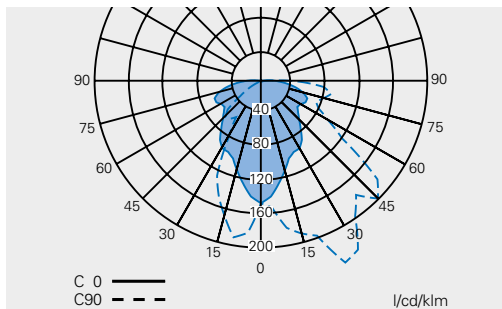
Polar curve AB 05 LED



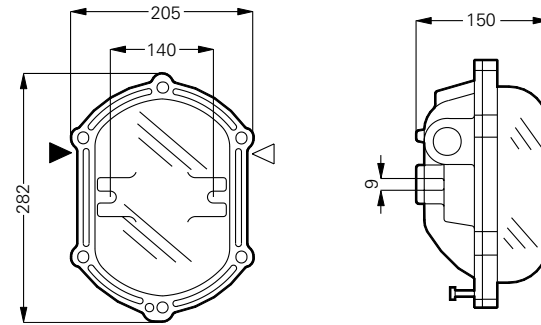
AB 05 LED



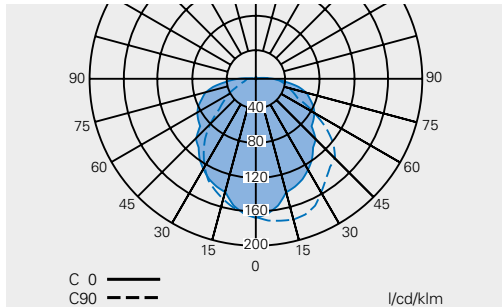
Polar curve AB 05 Ex de



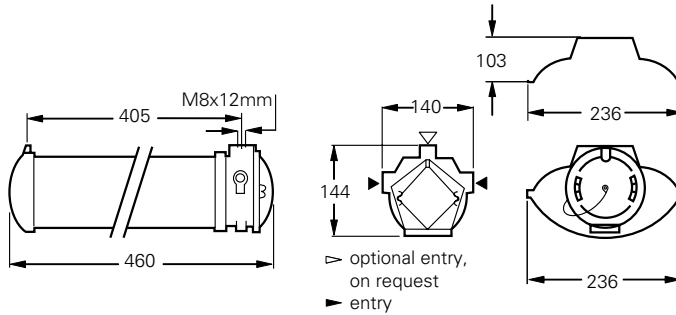
AB 80



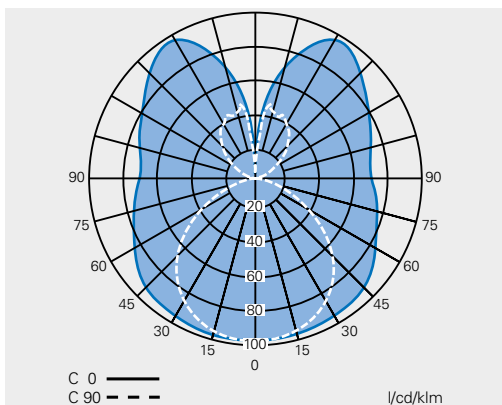
Polar curve AB 05 nR



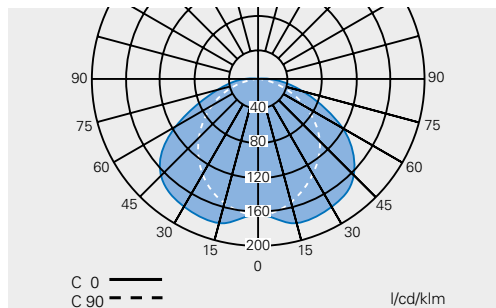
AB 12 NAV



Polar curve AB 12 NAV 70 without reflector



Polar curve AB 12 NAV 70 with reflector



Dimensions in mm



Technical data

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| | AB 80 | AB 05 LED |
|--|--|--|
| EC-Type Examination Certificate | LOM 01 ATEX 2041 X | BVS 09 ATEX E 014 X |
| IECEx Certificate of Conformity | | IECEx BVS 09.0032X |
| Marking accd. to 2014/34/EU | ⊕ II 2 G Ex d IIB T4.. T6 Gb | ⊕ II 2 G Ex d IIB T6 (Tu ≤ +40°C)/T5 Gb ⊕ II 2 D Ex tb IIIC T80 °C (Tu ≤ +40°C)/T100 °C Db IP66 |
| Marking accd. to IECEx | | Ex d IIB T6 (Tu ≤ +40°C)/T5 Gb Ex tb IIIC T80°C (Tu ≤ +40°C)/T100°C Db |
| Permissible ambient temperature | -20 °C up to +55 °C | -55 °C up to +55 °C |
| Rated voltage | max. 250 V | 230 V AC |
| Frequency | | 50 - 60 Hz |
| Power consumption | | approx. 23 W |
| Protection class | I | I |
| Lamp / Illuminant | Incandescent lamp | LED module 22 W (incl.) |
| Rated luminous flux | ¹⁾ | |
| Rated luminous flux of the luminaire (typical, ± 10 %) | | 1453 lm |
| Lamp cap | E27 | LED module |
| Light output ratio | 60 % | 100 % |
| Dimensions (L x W x H) | 282 x 205 x 150 mm | 360 x 230 x 175 mm |
| Connecting terminals | L1, N, PE: 2 x 2.5 mm ² | L1, N, PE: type MUT 4, 2 x 4 mm ² |
| Enclosure earth | 2 x 6 mm ² | 2 x 6 mm ² |
| Enclosure colour | Epoxy paint, body RAL 7032 | Epoxy paint, body RAL 7032 |
| Enclosure material | cast iron | light alloy |
| Weight | 6.6 kg | 7.0 kg |
| Cable glands / gland plates / enclosure drilling | 2 x M25 x 1.5 or 2 x 3/4" NPT (with adaptor) | 1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT on request |
| Type of mounting | ceiling/wall mounting | ceiling/wall mounting |
| Degree of protection accd. to EN EN 60598 | IP65 | IP66 |
| Protective cover / protective bowl | borosilicate glass | borosilicate glass |
| Screw plugs | 1 x M25 or 3/4" NPT Ex-d screw plug | 1 x M20/M25 or 3/4" NPT Ex-d screw plug |

¹⁾ depends on used lamps



4 Technical data

| | AB 05 Ex-e | AB 05 Ex nR |
|--|---|--|
| Type Examination Certificate | | BVS 07 ATEX E 151 |
| EC-Type Examination Certificate | BVS 07 ATEX E 152 X | |
| IECEX Certificate of Conformity | IECEX BVS 10.0070X | IECEX BVS 10.0071 |
| Marking accord. to 2014/34/EU | ⊕ II 2 G Ex de IIC T3 ²⁾ /T2 Gb ⊕ II 2 D Ex tb IIIC T125 °C Db IP66 | ⊕ II 3 G nR II T4/T3 Gc ⊕ II 3 D Ex tc IIIC T100°C/ T125°C/ T140°C Dc IP66 |
| Marking accord. to IECEx | Ex de IIC T3 ²⁾ /T2 Gb Ex tb IIIC T125 °C Db IP66 | Ex nR IIC T4/T3 Gc Ex tc IIIC T100°C/T125°C/T140°C Dc IP66 |
| Permissible ambient temperature | -20 °C up to +55 °C | -55 °C up to +55 °C |
| Rated voltage | max. 250 V | 230 V AC |
| Frequency | 50 - 60 Hz | 50 - 60 Hz |
| Power factor cos φ | | ≥ 0.9 |
| Protection class | I | I |
| Lamp / Illuminant | Incandescent lamp max. 60 W | incandescent lamp max. 200 W, high pressure sodium lamp HSE 70 W, compact fluorescent lamp max. 23 W |
| Rated luminous flux | 710 lm ¹⁾ | ¹⁾ |
| Lamp cap | E27 accord. IEC 60238 | E27 accord. IEC 60238 |
| Light output ratio | 70 % | 70 % |
| Dimensions (L x W x H) | 360 x 230 x 175 mm | 360 x 230 x 175 mm |
| Connecting terminals | L1, N, PE: 2 x 2.5 mm ² | L1, N, PE: 2 x 2.5 mm ² |
| Enclosure earth | 2 x 6 mm ² | 2 x 6 mm ² |
| Enclosure colour | Epoxy paint, body RAL 7032 | Epoxy paint, body RAL 7032 |
| Enclosure material | light alloy | light alloy |
| Weight | 5.9 kg | 6.9 kg |
| Cable glands / gland plates / enclosure drilling | 1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT | 1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT |
| Type of mounting | ceiling-/wall mounting | ceiling-/wall mounting |
| Degree of protection accord. to EN 60529 | IP66 | IP66 |
| Protective cover / protective bowl | borosilicate glass | borosilicate glass |
| Screw plugs | max. 1 x M20/M25 or 3/4" NPT Ex-d screw plug | max. 1 x M20/M25 or 3/4" NPT Ex-d screw plug |

¹⁾ depends on used lamps

²⁾ T3 when using a 60 W incandescent lamp accord. to EN 60064 and DIN 49810 with "T"-marking

Additional luminaire data AB 05 Ex nR

| Lamp | Power | Luminous flux ¹⁾ | Temperature class II 2/3 G | max. surface temp. II 2/3 D |
|--|-------|-----------------------------|----------------------------|-----------------------------|
| Compact fluorescent lamp ²⁾ | 23 W | 1450 lm | T4 | T 130 °C |
| High pressure sodium lamp | 70 W | 5600 lm | T4 | T 125 °C |
| Incandescent lamp IGA | 200 W | 3150 lm | T3 | T 140 °C |

¹⁾ depends on used lamps / ²⁾ T₀ ≤ 30 °C

Technical data

AB 05 Ex-d IIB +H2 / AB 05 Ex-d IIB
AB12 NAV70 / AB 12 NAV 70 Arctic

4.2



Technical data

| | AB 05 Ex-d IIB +H2 / AB 05 Ex-d IIB | AB12 NAV70 / AB 12 NAV 70 Arctic |
|--|---|--|
| EC-Type Examination Certificate | PTB 08 ATEX 1001 X | LOM 02 ATEX 2013X |
| IECEx Certificate of Conformity | | IECEx BK1 07.0008X |
| Marking accd. to 2014/34/EU | ⊕ II 2 G Ex d IIB (+H2) T4/T3 Gb / ⊕ II 2 G Ex d IIB T4/T3 Db | ⊕ II 2 G Ex d IIB/IIC T3 Gb ⊕ II 2 G Ex d IIC T3 Gb ⊕ II 2 D Ex t IIIC T155 °C Db ⊕ II 2 D Ex t IIIC T155 °C Db |
| Marking accd. to IECEx | | Ex d IIB T3 / Ex d IIC T3 Ex tD A21 IP66 T150°C |
| Permissible ambient temperature | -20 °C up to +55 °C | -20 °C up to +55 °C (gas-group IIC); -45 °C up to +55 °C (gas-group IIB) / -50 °C up to +40 °C (Arctic) |
| Rated voltage | 230 V AC | 230 V AC |
| Rated current | | 0.36 A |
| Frequency | 50 - 60 Hz / 50 Hz | 50 Hz |
| Power factor cos φ | ≥ 0.9 | ≥ 0.9 |
| Protection class | I | I |
| Lamp name | incandescent lamp up to 200 W, high pressure sodium lamp HSE 70 W | High pressure sodium lamp HST 70 W |
| Rated luminous flux | ¹⁾ | 5600 lm ¹⁾ |
| Lamp cap | E27 accord. IEC 60238 | E27 accord. IEC 60238 |
| Light output ratio | 70 % | 51 % |
| Dimensions (L x W x H) | 360 x 230 x 175 mm | 460 x 140 x 144 / 530 x 140 x 144 |
| Connecting terminals | L1, N, PE: 2 x 2.5 mm ² | L1, N, PE: 2 x 2.5 mm ² , PE: 2 x 6 mm ² |
| Enclosure earth | 2 x 6 mm ² | 2 x 6 mm ² |
| Enclosure colour | Epoxy paint, body RAL 7032 | Epoxy paint, body RAL 7032 |
| Enclosure material | light alloy | light alloy |
| Weight | 6.9 kg | 5.3 kg / 5.6 kg |
| Cable glands / gland plates / enclosure drilling | 1 x M20/M25 x 1.5, 2 x M20/M25 x 1.5, 1 x 3/4" NPT or 2 x 3/4" NPT | 2 x 3/4" thread (Ex-d) / 2 x 3/4" or 2 x M25 thread (Ex-d) |
| Type of mounting | ceiling-/wall mounting | ceiling-/wall mounting |
| Degree of protection accd. to EN 60529 | IP66 | IP67 |
| Protective cover / protective bowl | borosilicate glass | borosilicate glass |
| Screw plugs | max. 1 x M20/M25 or 3/4" NPT Ex-d screw plug | 1 x 3/4" Ex-d screw plug |

¹⁾ depends on used lamps

Additional luminaire data AB 05 Ex-d IIB +H2 / AB 05 Ex-d IIB

| Lamp | Power | Luminous flux ¹⁾ | Permissible ambient temperature | Temperature class II 2 G |
|---------------------------|-------|-----------------------------|---------------------------------|--------------------------|
| Incandescent lamp IGA | 40 W | 430 lm | -20 °C up to +55 °C | T4 |
| Incandescent lamp IGA | 60 W | 3100 lm | -20 °C up to +55 °C | T4 |
| Incandescent lamp IGA | 100 W | 1380 lm | -20 °C up to +55 °C | T4 |
| Incandescent lamp IGA | 200 W | 3150 lm | -20 °C up to +55 °C | T4 |
| High pressure sodium lamp | 70 W | 5600 lm | -20 °C up to +40 °C | T4 |

¹⁾ depends on used lamps