**R3G310-AN46-12**

# EC centrifugal fan

backward curved, single inlet

R3G310-AN46-12 ebmpapst Datasheet
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## Nominal data

| | | |
|---|---|---|
| **Type** | **R3G310-AN46-12** | |
| **Motor** | **M3G084-FA** | |
| Nominal voltage | VDC | 110 |
| Nominal voltage range | VDC | 77 .. 138 |
| Type of data definition | | fa |
| State | | prelim. |
| Speed | $min^{-1}$ | 2950 |
| Power input | W | 570 |
| Current draw | A | 5.2 |
| Min. ambient temperature | °C | -40 |
| Max. ambient temperature | °C | +55 |

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

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## Technical features

| | |
|---|---|
| **Mass** | 4.9 kg |
| **Size** | 310 mm |
| **Surface of rotor** | Coated in black |
| **Material of impeller** | Aluminium sheet |
| **Number of blades** | 6 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 42 |
| **Insulation class** | "B" |
| **Max. permissible ambient motor temp. (transp./ storage)** | +80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | -40 °C |
| **Mounting position** | Shaft horizontal or rotor on top; rotor on bottom on request |
| **Condensate discharge holes** | None |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Motor protection** | PTC resistor |
| **Cable exit** | Lateral |
| **Protection class** | I (if protective earth is connected by customer) |

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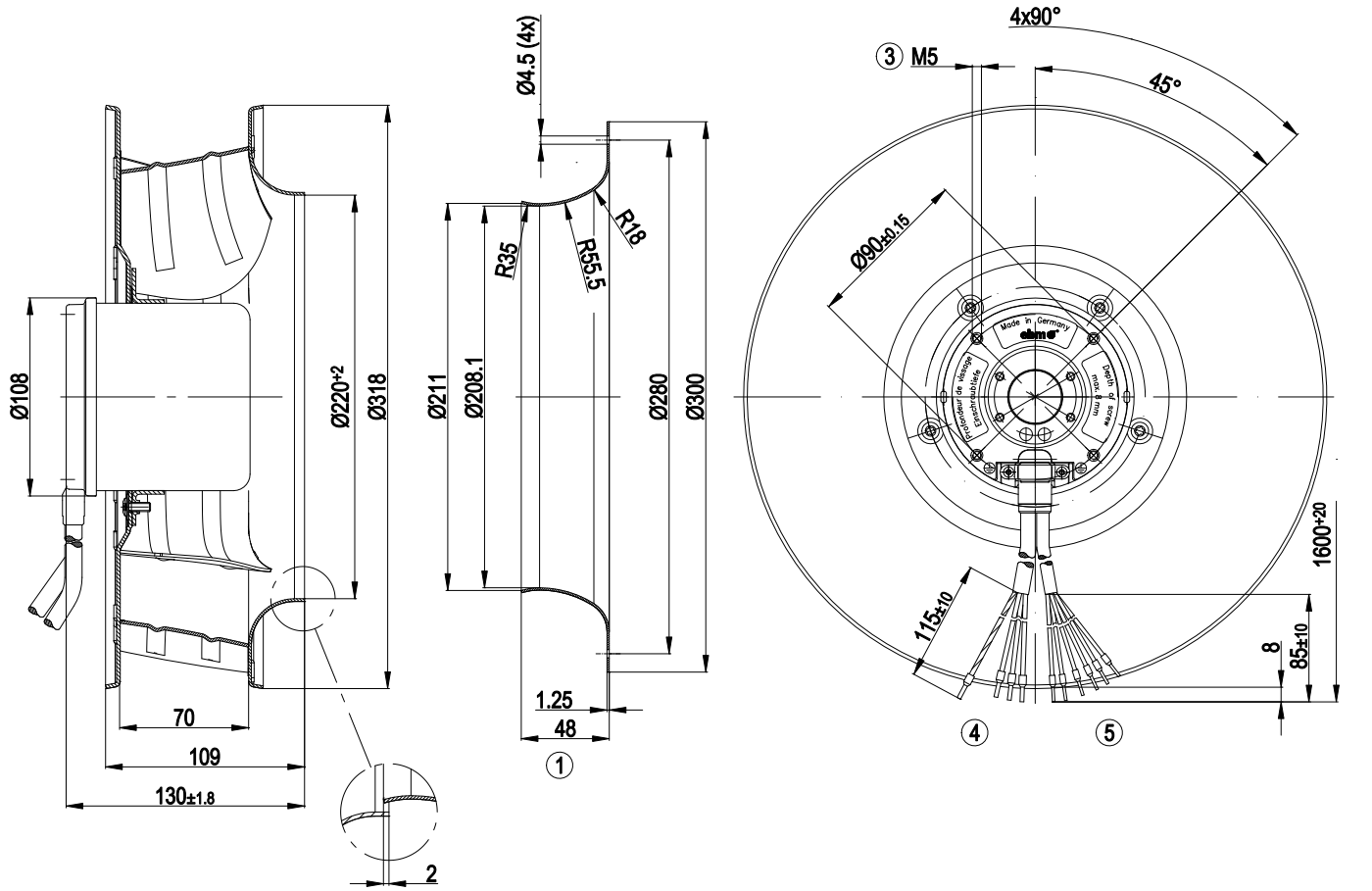
## Product drawing




| | |
|---|---|
| 1 | Accessory part: Inlet nozzle 31050-2-4013, not included in the standard scope of delivery |
| 2 | Accessory part: External electronics CHG090-AA07-12 not included in the standard scope of delivery (not shown) |
| 3 | Depth of screw max. 8 mm |
| 4 | Connection line XLPE/XLPO 4G 1.5 mm², 5x crimped core-end sleeves |
| 5 | Connection line XLPE/XLPO 6x 0.5 mm², 6x crimped core-end sleeves |

## Connection screen

Pin configuration for external electronics CHG090-AA07-12

| Wire colour | Cross-section [mm²] | Device connection terminal on the external electronics CHG090-AA07-12 | Function |
|---|---|---|---|
| First wire | | | |
| red | 0.5 | KL5B, pin 1 or 2 (+15 V) | Power supply for Hall sensors (+) |
| blue | 0.5 | KL5B, pin 4 or 5 (GND) | Power supply for Hall sensors (-) |
| black | 0.5 | KL5B, pin 3 (TOP/PTC) | Temperature monitor (PTC) |
| orange | 0.5 | KL5A, pin 1 (H1) | Hall sensor 1 |
| brown | 0.5 | KL5A, pin 2 (H2) | Hall sensor 2 |
| yellow | 0.5 | KL5A, pin 3 (H3) | Hall sensor 3 |
| Second wire | | | |
| black | 1.5 | KL6, Pin 1 (U) | Motor winding UY |
| blue | 1.5 | KL6, Pin 2 (V) | Motor winding VZ |
| brown | 1.5 | KL6, Pin 3 (W) | Motor winding WX |
| green / yellow | 1.5 | PE | Protective earth |

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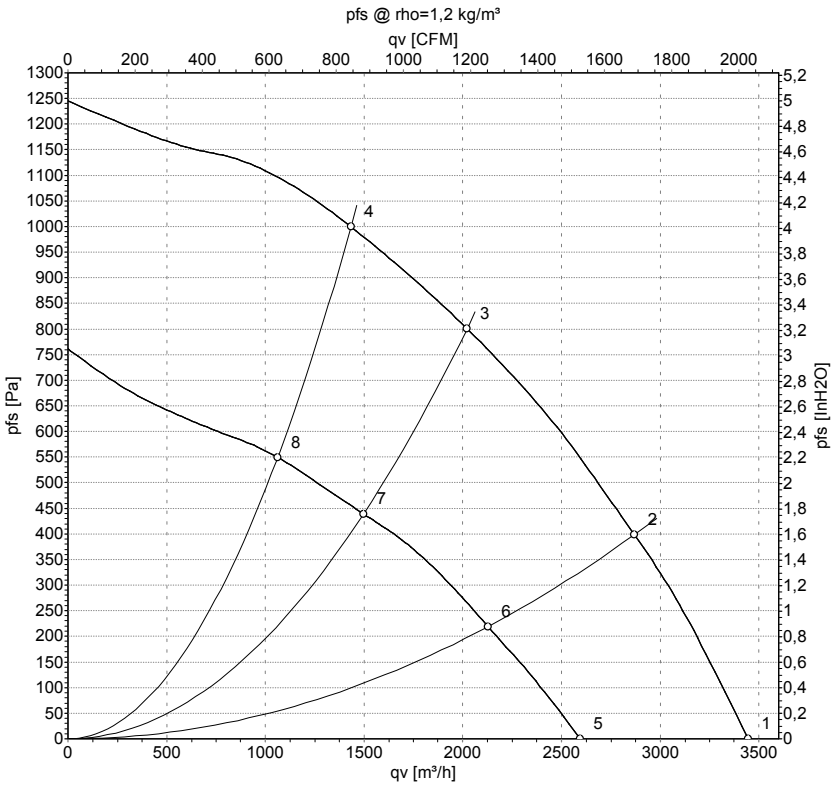
## Charts: Air flow




Measurement: LU-131844
Measurement: LU-131846

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

| | U | n | $P_{ed}$ | I | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|
| | V | $min^{-1}$ | W | A | $m^3/h$ | Pa |
| 1 | 110 | 2950 | 570 | 5.20 | 3445 | 0 |
| 2 | 110 | 2925 | 743 | 6.73 | 2870 | 400 |
| 3 | 110 | 2880 | 792 | 7.19 | 2020 | 800 |
| 4 | 110 | 2900 | 769 | 6.97 | 1435 | 1000 |
| 5 | 77 | 2240 | 255 | 3.32 | 2595 | 0 |
| 6 | 77 | 2180 | 310 | 4.03 | 2130 | 219 |
| 7 | 77 | 2150 | 332 | 4.32 | 1495 | 439 |
| 8 | 77 | 2165 | 320 | 4.17 | 1065 | 550 |

U = Supply voltage · n = Speed · $P_{ed}$ = Power input · I = Current draw · qv = Air flow · $p_{fs}$ = Pressure increase