**D4E160-HN48-10**

# AC centrifugal fan

forward curved, dual inlet

with housing (without flange)

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## Nominal data

| | |
|---|---|
| **Type** | **D4E160-HN48-10** |
| **Motor** | **M4E068-CF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Frequency | Hz | 50 |
| Type of data definition | | ml |
| Valid for approval / standard | | CE |
| Speed | $min^{-1}$ | 1280 |
| Power input | W | 93 |
| Current draw | A | 0.42 |
| Motor capacitor | µF | 2 |
| Capacitor voltage | VDB | 450 |
| Capacitor standard | | P2 (CE) |
| Min. back pressure | Pa | 100 |
| Max. ambient temperature | °C | 40 |

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** | 2.55 kg |
| **Size** | 160 mm |
| **Surface of rotor** | Uncoated |
| **Material of impeller** | PP plastic, fibreglass-reinforced |
| **Housing material** | Plastic PA6, fibreglass-reinforced; sheet steel, hot-galvanised |
| **Motor suspension** | Motor anti-vibration mounted on both sides |
| **Direction of rotation** | Counter-clockwise, seen on rotor |
| **Type of protection** | IP 44; Depending on installation and position |
| **Insulation class** | "F" |
| **Humidity class** | F0 |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Shaft horizontal |
| **Condensate discharge holes** | None |
| **Operation mode** | S1 |
| **Motor bearing** | Calotte bearing |
| **Speed steps** | 2 |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | < 0.75 mA |
| **Electrical leads** | With plug |
| **Motor protection** | Thermal overload protector (TOP) wired internally |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |



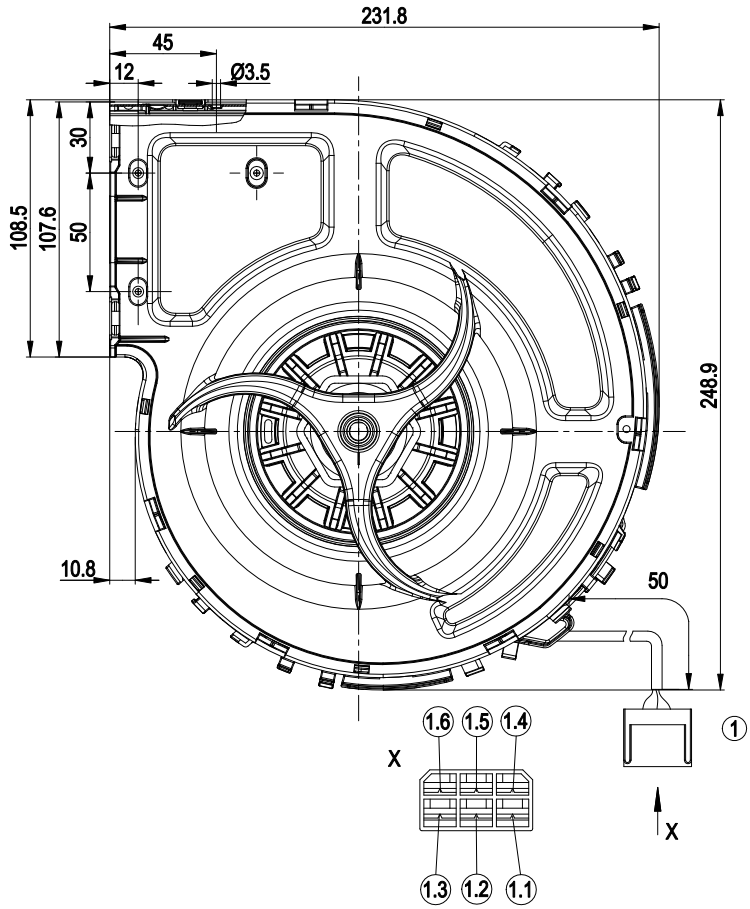
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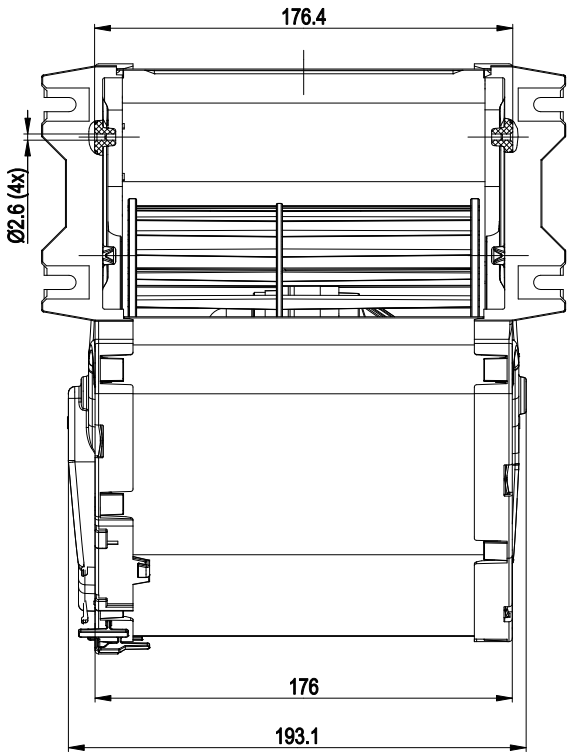
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## Product drawing




| Line | No. | Signal | Colour | Function / assignment |
|---|---|---|---|---|
| | | 1 | | Connector shell INARCA 0854081700 |
| | | 1.1 | yellow | Capacitor |
| | | 1.2 | black | Step 2 (max.) |
| | | 1.3 | blue | N |
| | | 1.4 | brown | Capacitor |
| | | 1.5 | white | Step 1 (min.) |
| | | 1.6 | green/yellow | Protective earth |



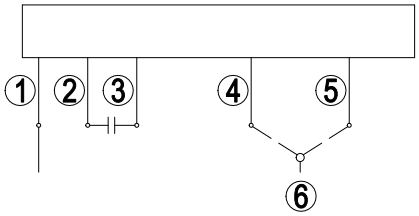
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## Connection screen




Note: Fast speed (step II); slow speed (step I)

| | | | | | |
|---|---|---|---|---|---|
| 1 | = N = blue | 2 | brown | 3 | yellow |
| 4 | Step I white | 5 | Step II black | 6 | L1 |



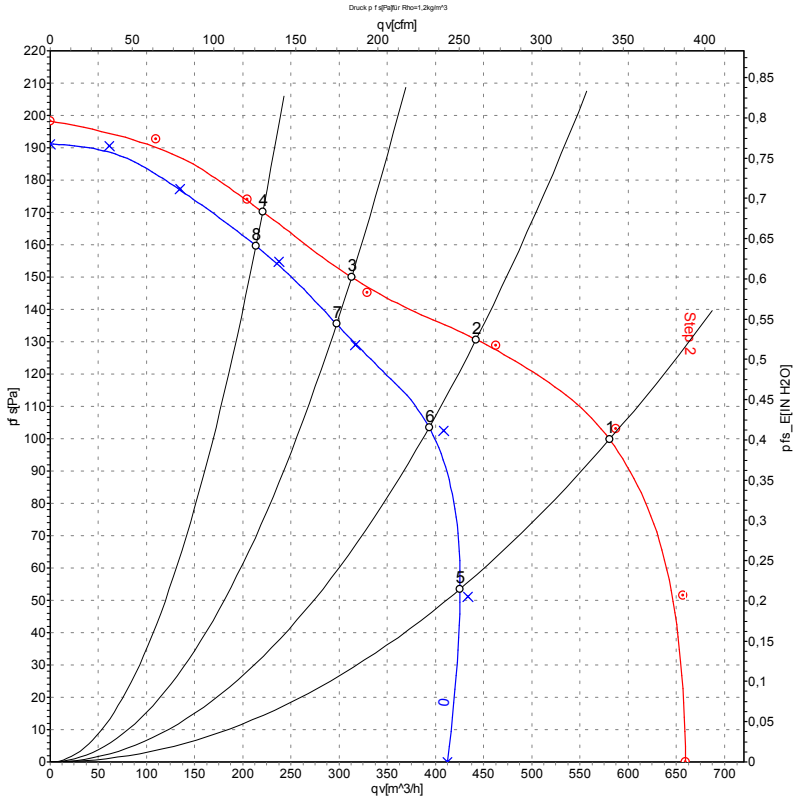
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## Charts: Air flow 50 Hz




Measurement: LU-38542
Measurement: LU-38543

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

| | Stage | U | f | n | $P_e$ | I | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|
| | | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa |
| 1 | 2 | 230 | 50 | 1280 | 93 | 0.42 | 580 | 100 |
| 2 | 2 | 230 | 50 | 1365 | 80 | 0.35 | 440 | 130 |
| 3 | 2 | 230 | 50 | 1405 | 73 | 0.33 | 315 | 150 |
| 4 | 2 | 230 | 50 | 1425 | 69 | 0.31 | 220 | 170 |
| 5 | 1 | 230 | 50 | 800 | 88 | 0.38 | 425 | 32 |
| 6 | 1 | 230 | 50 | 1235 | 70 | 0.31 | 395 | 107 |
| 7 | 1 | 230 | 50 | 1335 | 61 | 0.27 | 295 | 135 |
| 8 | 1 | 230 | 50 | 1380 | 56 | 0.25 | 215 | 160 |

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



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