**D4E146-LV55-01**

# AC centrifugal fan

forward curved, dual inlet

with housing (flange)



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## Nominal data

| | |
|---|---|
| **Type** | **D4E146-LV55-01** |
| **Motor** | **M4E068-CF** |

| | | | |
|---|---|---|---|
| Phase | | 1~ | 1~ |
| Nominal voltage | VAC | 230 | 230 |
| Frequency | Hz | 50 | 60 |
| Type of data definition | | fa | fa |
| Valid for approval / standard | | CE | CE |
| Speed | $min^{-1}$ | 780 | 710 |
| Power input | W | 65 | 68 |
| Current draw | A | 0.29 | 0.30 |
| Motor capacitor | µF | 2 | 2 |
| Capacitor voltage | VDB | 400 | 400 |
| Capacitor standard | | P2 (CE) | P2 (CE) |
| Min. back pressure | Pa | 0 | 0 |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 50 | 40 |
| Starting current | A | 0.33 | 0.33 |

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** | 146 mm |
| **Surface of rotor** | Uncoated |
| **Material of terminal box** | PP plastic |
| **Material of impeller** | PA plastic |
| **Housing material** | PP plastic |
| **Motor suspension** | Motor anti-vibration mounted on both sides |
| **Direction of rotation** | Counter-clockwise, seen on rotor |
| **Type of protection** | IP 44 |
| **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** | Any |
| **Condensate discharge holes** | None |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Speed steps** | 5 |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | < 0.75 mA |
| **Electrical leads** | Via terminal box, integrated capacitor connected via terminal box; With plug |
| **Motor protection** | Thermal overload protector (TOP) wired internally |
| **Cable exit** | Axial |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |



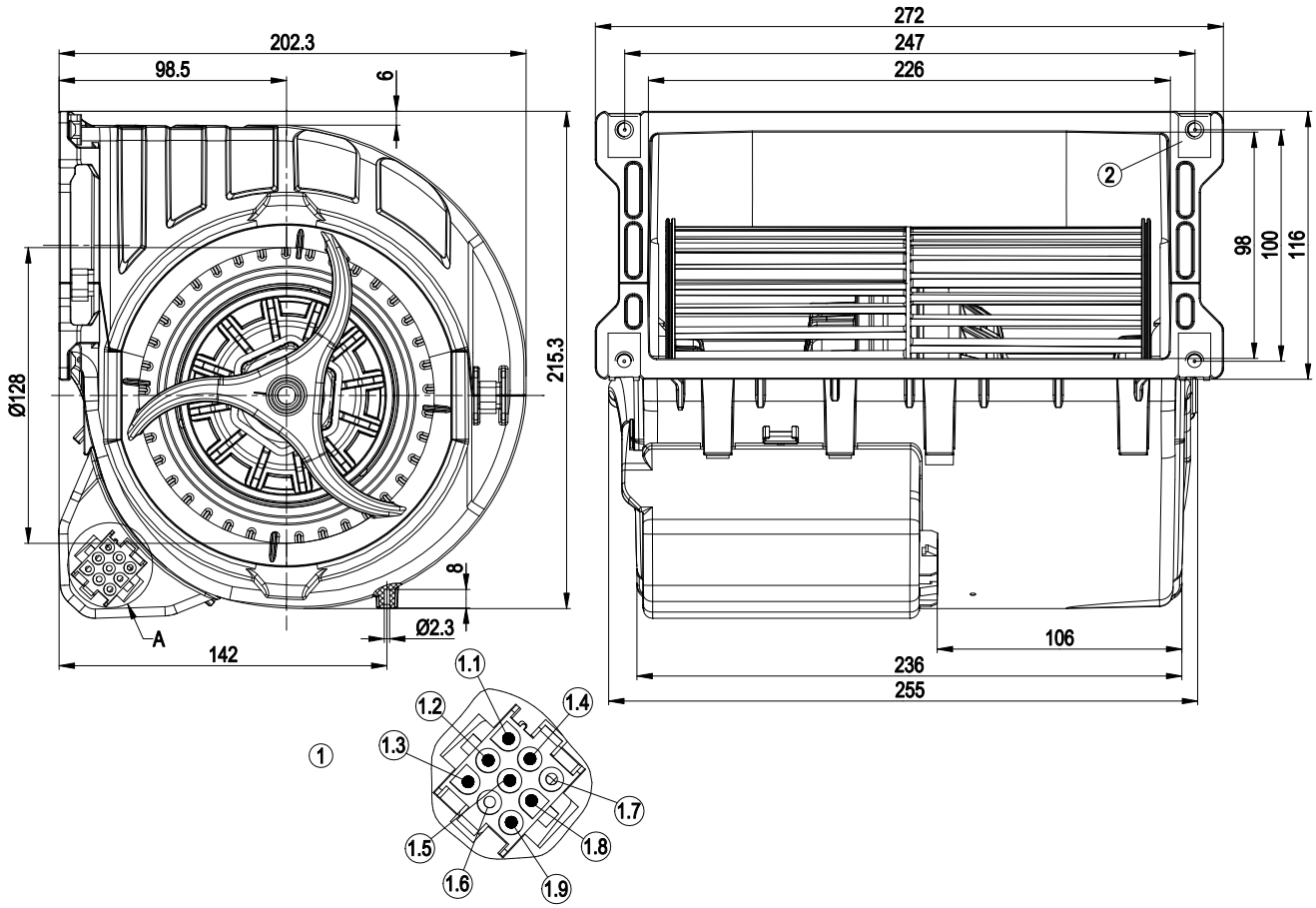
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## Product drawing




| | |
|---|---|
| 1 | Connector housing AMP Universal Mate-N-Lok |
| 1.1 | Step 1 (min.) |
| 1.2 | Step 2 |
| 1.3 | Step 3 |
| 1.4 | Step 4 |
| 1.5 | Step 5 (max.) |
| 1.6 | - |
| 1.7 | - |
| 1.8 | N |
| 1.9 | Protective earth |
| 2 | 4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material) |



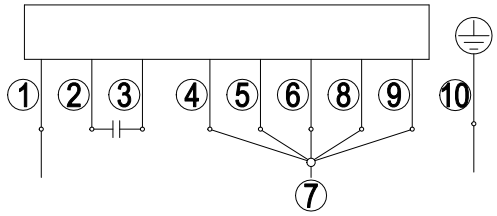
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## Connection screen




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

| | | | | | |
|---|---|---|---|---|---|
| 1 | = N = blue | 2 | brown | 3 | yellow |
| 4 | Step I white | 5 | Step II red | 6 | Step III grey |
| 7 | L1 | 8 | Step IV orange | 9 | Step V black |
| 10 | PE | | | | |



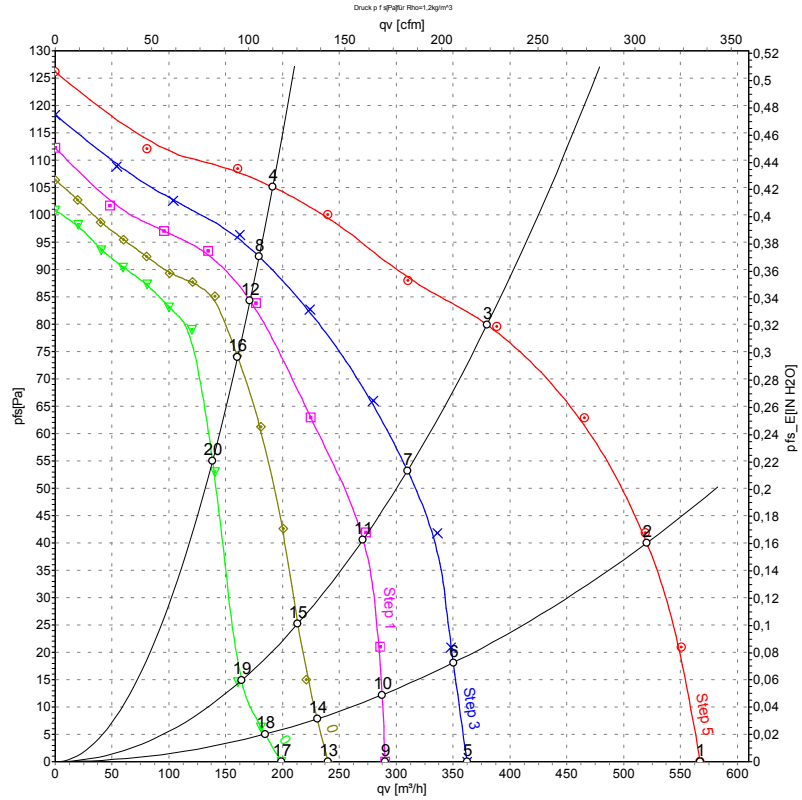
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## Charts: Air flow 50 Hz




Measurement: LU-58986
Measurement: LU-58988
Measurement: LU-58990
Measurement: LU-58992
Measurement: LU-58994

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 | 5 | 230 | 50 | 780 | 65 | 0.29 | 565 | 0 |
| 2 | 5 | 230 | 50 | 1055 | 57 | 0.25 | 520 | 40 |
| 3 | 5 | 230 | 50 | 1270 | 47 | 0.20 | 380 | 80 |
| 4 | 5 | 230 | 50 | 1380 | 39 | 0.17 | 190 | 105 |
| 5 | 4 | 230 | 50 | 530 | 53 | 0.23 | 360 | 0 |
| 6 | 4 | 230 | 50 | 740 | 50 | 0.23 | 350 | 18 |
| 7 | 4 | 230 | 50 | 1055 | 43 | 0.20 | 310 | 53 |
| 8 | 4 | 230 | 50 | 1310 | 33 | 0.15 | 180 | 93 |
| 9 | 3 | 230 | 50 | 430 | 48 | 0.22 | 290 | 0 |
| 10 | 3 | 230 | 50 | 595 | 47 | 0.21 | 285 | 14 |
| 11 | 3 | 230 | 50 | 930 | 43 | 0.20 | 270 | 43 |
| 12 | 3 | 230 | 50 | 1240 | 32 | 0.15 | 170 | 85 |
| 13 | 2 | 230 | 50 | 365 | 45 | 0.21 | 240 | 0 |
| 14 | 2 | 230 | 50 | 480 | 45 | 0.20 | 230 | 7 |
| 15 | 2 | 230 | 50 | 720 | 42 | 0.19 | 215 | 25 |
| 16 | 2 | 230 | 50 | 1185 | 32 | 0.15 | 160 | 74 |
| 17 | 1 | 230 | 50 | 300 | 43 | 0.20 | 200 | 0 |
| 18 | 1 | 230 | 50 | 405 | 43 | 0.19 | 185 | 5 |
| 19 | 1 | 230 | 50 | 570 | 42 | 0.19 | 165 | 13 |
| 20 | 1 | 230 | 50 | 1105 | 32 | 0.16 | 140 | 56 |

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



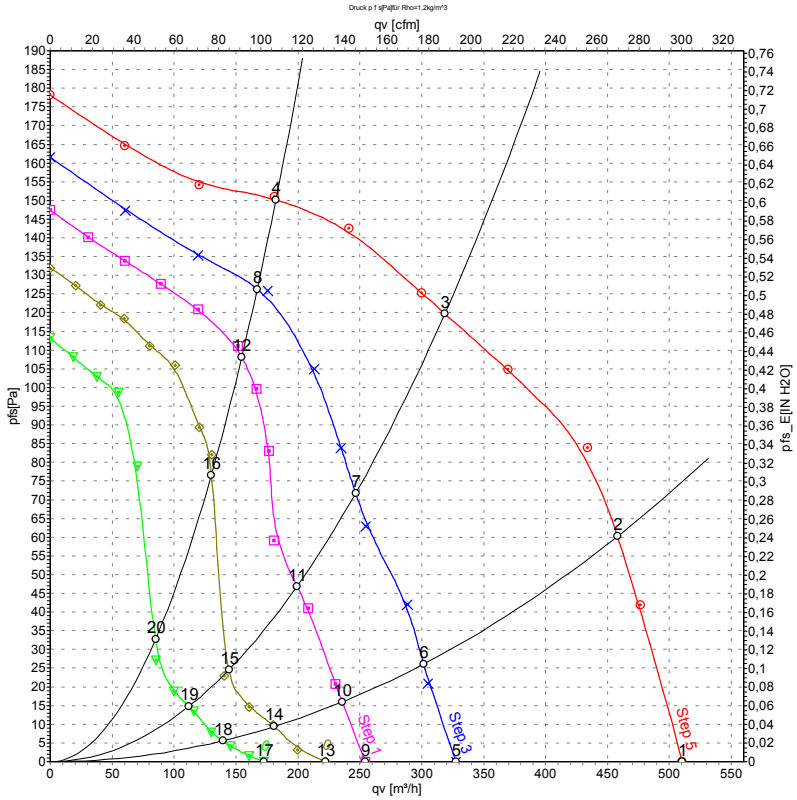
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## Charts: Air flow 60 Hz




Measurement: LU-58987
Measurement: LU-58989
Measurement: LU-58991
Measurement: LU-58993
Measurement: LU-58995

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 | 5 | 230 | 60 | 710 | 68 | 0.30 | 510 | 0 |
| 2 | 5 | 230 | 60 | 1160 | 63 | 0.28 | 460 | 60 |
| 3 | 5 | 230 | 60 | 1505 | 53 | 0.24 | 320 | 120 |
| 4 | 5 | 230 | 60 | 1655 | 44 | 0.21 | 180 | 150 |
| 5 | 4 | 230 | 60 | 480 | 52 | 0.24 | 330 | 0 |
| 6 | 4 | 230 | 60 | 740 | 51 | 0.24 | 300 | 26 |
| 7 | 4 | 230 | 60 | 1180 | 46 | 0.22 | 245 | 72 |
| 8 | 4 | 230 | 60 | 1525 | 35 | 0.19 | 165 | 127 |
| 9 | 3 | 230 | 60 | 385 | 47 | 0.22 | 255 | 0 |
| 10 | 3 | 230 | 60 | 580 | 46 | 0.22 | 235 | 16 |
| 11 | 3 | 230 | 60 | 940 | 44 | 0.21 | 200 | 47 |
| 12 | 3 | 230 | 60 | 1430 | 34 | 0.18 | 155 | 109 |
| 13 | 2 | 230 | 60 | 310 | 43 | 0.20 | 220 | 0 |
| 14 | 2 | 230 | 60 | 480 | 42 | 0.20 | 180 | 10 |
| 15 | 2 | 230 | 60 | 675 | 42 | 0.20 | 145 | 21 |
| 16 | 2 | 230 | 60 | 1290 | 34 | 0.18 | 130 | 82 |
| 17 | 1 | 230 | 60 | 260 | 40 | 0.19 | 170 | 0 |
| 18 | 1 | 230 | 60 | 400 | 40 | 0.19 | 140 | 6 |
| 19 | 1 | 230 | 60 | 555 | 39 | 0.19 | 110 | 15 |
| 20 | 1 | 230 | 60 | 805 | 38 | 0.19 | 85 | 28 |

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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