**D4E146-LX64-30**

# AC centrifugal fan

forward-curved, dual-intake

with housing (flange)



## Nominal data

| | |
|---|---|
| **Type** | **D4E146-LX64-30** |
| **Motor** | **M4E068-DF** |

| | | | |
|---|---|---|---|
| Phase | | 1~ | 1~ |
| Nominal voltage | VAC | 230 | 230 |
| Frequency | Hz | 50 | 60 |
| Method of obtaining data | | fa | fa |
| Valid for approval/standard | | CE | CE |
| Speed (rpm) | $min^{-1}$ | 1250 | 1150 |
| Power consumption | W | 105 | 130 |
| Current draw | A | 0.47 | 0.58 |
| Capacitor | µF | 2.5 | 2.5 |
| Capacitor voltage | VDB | 450 | 450 |
| Capacitor standard | | S2 (CE) | S2 (CE) |
| Min. back pressure | Pa | 0 | 0 |
| Min. back pressure | in. wg | 0 | 0 |
| Min. ambient temperature | °C | -25 | -25 |
| Max. ambient temperature | °C | 60 | 50 |
| Starting current | A | 0.68 | 0.64 |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



D4E146-LX64-30 ebmpapst Datasheet FansCo sales@fansco.com www.fansco.com

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## Technical description

| | |
|---|---|
| **Weight** | 2.9 kg |
| **Size** | 146 mm |
| **Motor size** | 68 |
| **Rotor surface** | Unpainted |
| **Impeller material** | PP plastic |
| **Housing material** | PP plastic |
| **Motor suspension** | Motor vibration-damped on both sides |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | IP20 |
| **Insulation class** | "F" |
| **Moisture (F) / Environmental (H) protection class** | H0 - dry environment |
| **Max. permitted ambient temp. for motor (transport/storage)** | + 80 °C |
| **Min. permitted ambient temp. for motor (transport/storage)** | - 40 °C |
| **Installation position** | Any |
| **Condensation drainage holes** | None, open rotor |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Speed levels** | 3 |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | < 0.75 mA |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **With cable** | Axial |
| **Protection class** | I (with customer connection of protective earth) |
| **Motor capacitor according to EN 60252-1 in safety protection class** | S2 |
| **Conformity with standards** | EN 60335-1; CE |
| **Approval** | CSA C22.2 No. 100; UL 1004-1 |

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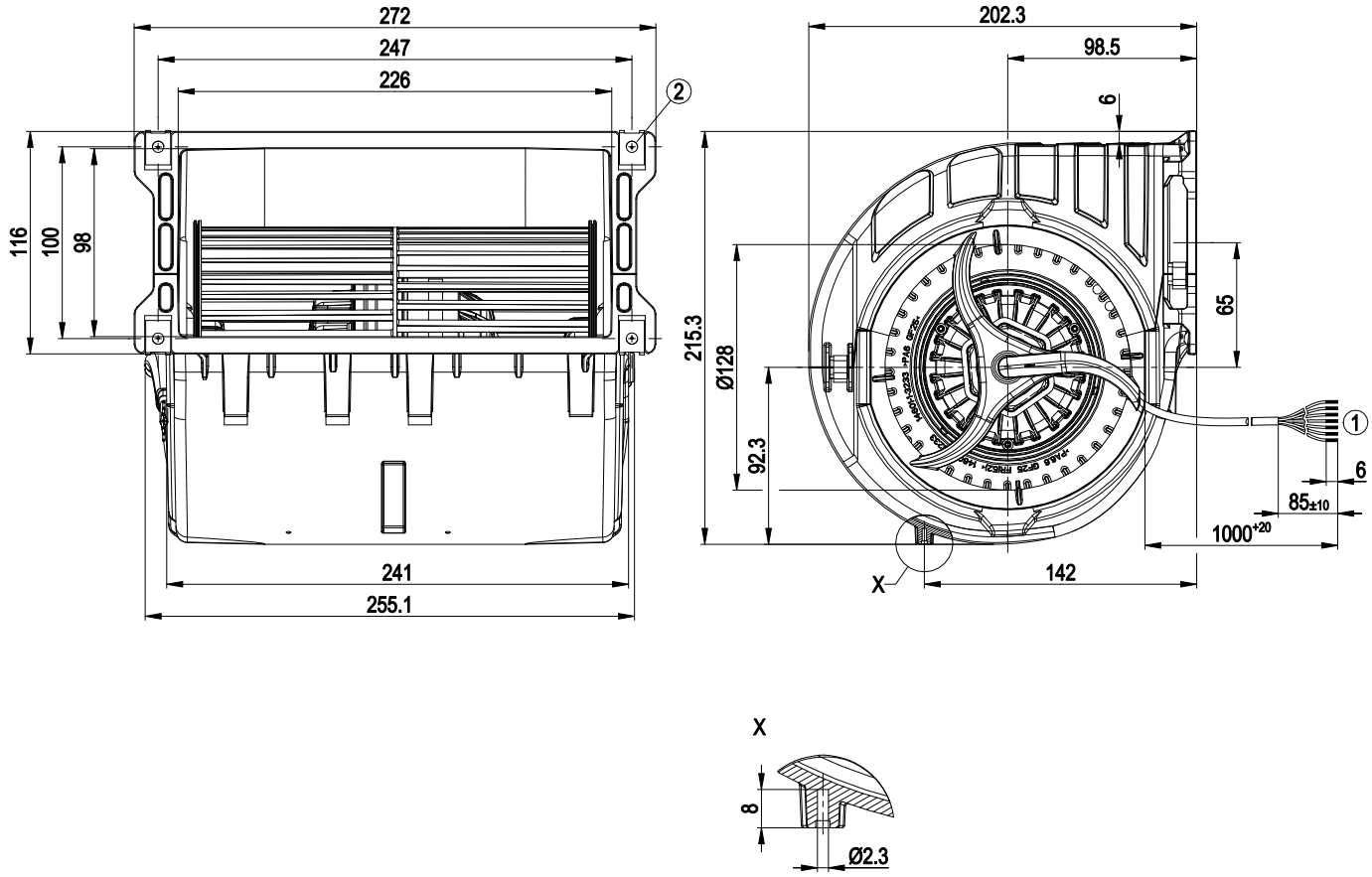
## Product drawing




| | |
|---|---|
| 1 | Cable ETFE AWG22, 6x crimped splices<br>Cable ETFE AWG20, 1x crimped splice |
| 2 | 4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus material thickness of attachment) |

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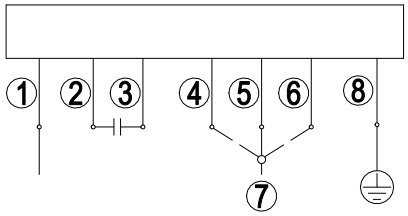
## Connection diagram




Note: High speed (step III); low speed (step I); the switch must interrupt the circuit on switching.

| | | | | | |
|---|---|---|---|---|---|
| 1 | blue (N) | 2 | Capacitor (yellow) | 3 | Capacitor (brown) |
| 4 | Step I (black) | 5 | Step II (gray) | 6 | Step III (white) |
| 7 | L1 | 8 | PE (green/yellow) | | |

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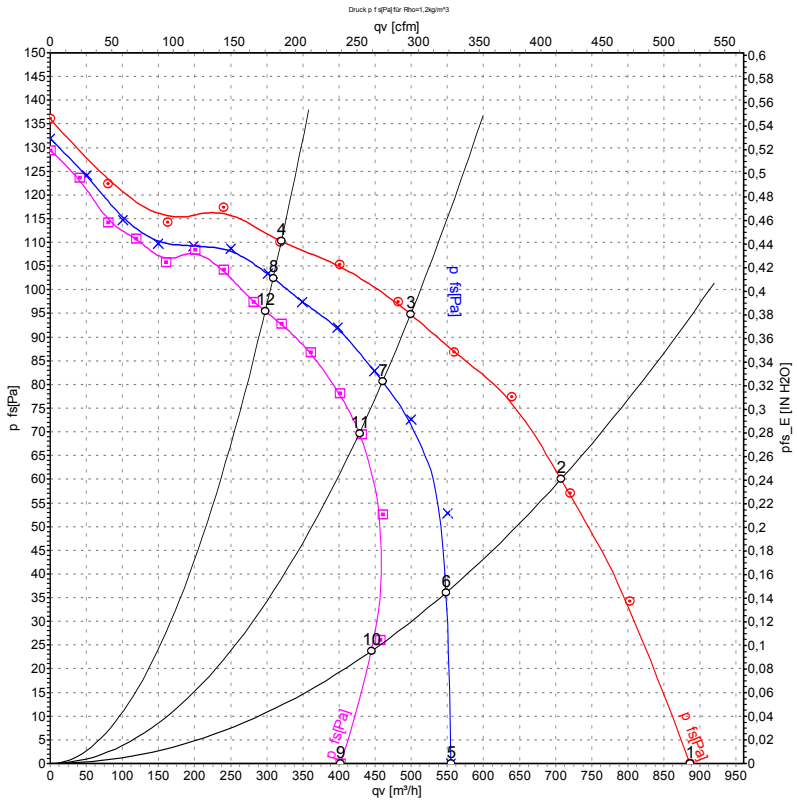
## Curves: Air performance 50 Hz




Measurement: LU-128188-1
Measurement: LU-128191-1
Measurement: LU-128194-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

| | U | f | n | $P_e$ | I | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 230 | 50 | 1250 | 105 | 0.47 | 885 | 0 | 520 | 0.00 |
| 2 | 230 | 50 | 1350 | 85 | 0.38 | 710 | 60 | 415 | 0.24 |
| 3 | 230 | 50 | 1405 | 72 | 0.32 | 500 | 95 | 295 | 0.38 |
| 4 | 230 | 50 | 1440 | 63 | 0.29 | 320 | 110 | 190 | 0.44 |
| 5 | 230 | 50 | 785 | 90 | 0.39 | 555 | 0 | 325 | 0.00 |
| 6 | 230 | 50 | 1180 | 73 | 0.32 | 550 | 54 | 325 | 0.22 |
| 7 | 230 | 50 | 1300 | 61 | 0.27 | 460 | 81 | 270 | 0.33 |
| 8 | 230 | 50 | 1385 | 49 | 0.22 | 310 | 102 | 180 | 0.41 |
| 9 | 230 | 50 | 615 | 83 | 0.36 | 400 | 0 | 235 | 0.00 |
| 10 | 230 | 50 | 845 | 79 | 0.34 | 445 | 20 | 260 | 0.08 |
| 11 | 230 | 50 | 755 | 80 | 0.35 | 430 | 12 | 250 | 0.05 |
| 12 | 230 | 50 | 1345 | 47 | 0.21 | 300 | 95 | 175 | 0.38 |

U = Voltage · f = Frequency · n = Speed (rpm) · $P_e$ = Power consumption · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase

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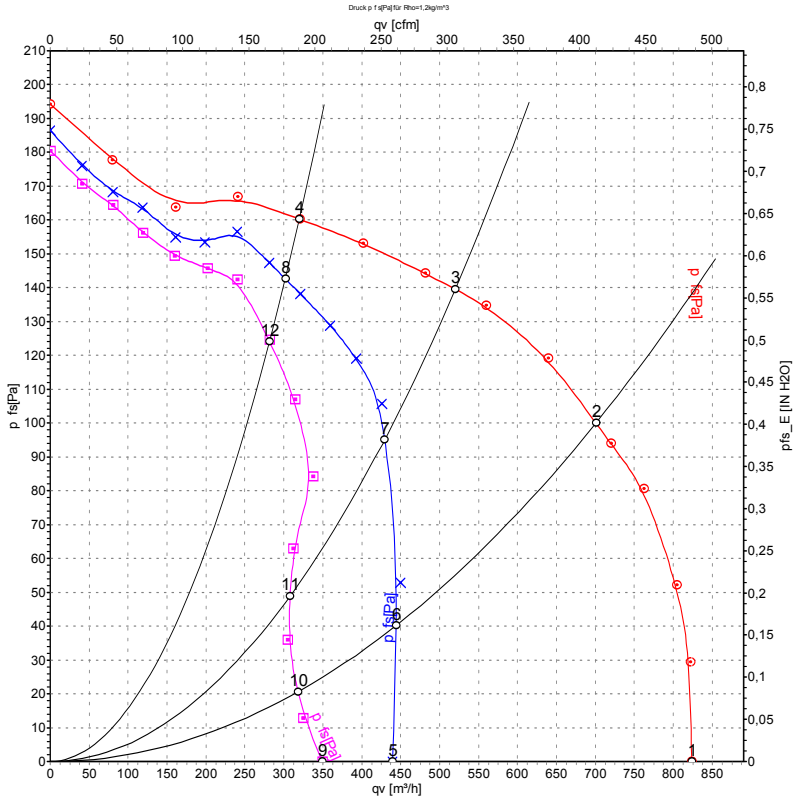
## Curves: Air performance 60 Hz




Measurement: LU-128189-1
Measurement: LU-128193-1
Measurement: LU-128195-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

## Measured values

| | U | f | n | $P_e$ | I | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 230 | 60 | 1150 | 130 | 0.58 | 825 | 0 | 485 | 0.00 |
| 2 | 230 | 60 | 1550 | 109 | 0.48 | 700 | 100 | 415 | 0.40 |
| 3 | 230 | 60 | 1655 | 94 | 0.41 | 520 | 140 | 305 | 0.56 |
| 4 | 230 | 60 | 1705 | 82 | 0.37 | 320 | 160 | 190 | 0.64 |
| 5 | 230 | 60 | 650 | 90 | 0.39 | 440 | 0 | 260 | 0.00 |
| 6 | 230 | 60 | 860 | 87 | 0.38 | 445 | 25 | 260 | 0.10 |
| 7 | 230 | 60 | 1395 | 73 | 0.34 | 430 | 99 | 250 | 0.40 |
| 8 | 230 | 60 | 1615 | 56 | 0.28 | 300 | 143 | 180 | 0.57 |
| 9 | 230 | 60 | 515 | 76 | 0.34 | 350 | 0 | 205 | 0.00 |
| 10 | 230 | 60 | 745 | 75 | 0.33 | 320 | 20 | 185 | 0.08 |
| 11 | 230 | 60 | 880 | 74 | 0.33 | 310 | 32 | 180 | 0.13 |
| 12 | 230 | 60 | 1505 | 55 | 0.27 | 280 | 125 | 165 | 0.50 |

U = Voltage · f = Frequency · n = Speed (rpm) · $P_e$ = Power consumption · I = Current draw · $q_V$ = Air flow · $p_{fs}$ = Pressure increase