

D2E097-BI56-A4

# AC centrifugal fan

forward-curved, dual-intake  
with housing (without flange)



**ebm-papst Mulfingen GmbH & Co. KG**

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.ebmpapst.com

www.ebmpapst.com

Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

|                             |                    |      |      |
|-----------------------------|--------------------|------|------|
| Type                        | D2E097-BI56-A4     |      |      |
| Motor                       | M2E052-CA          |      |      |
| 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 <sup>-1</sup>  | 1950 | 1850 |
| Power consumption           | W                  | 87   | 100  |
| Current draw                | A                  | 0.39 | 0.45 |
| Capacitor                   | µF                 | 2    | 2    |
| Capacitor voltage           | VDB                | 400  | 400  |
| Min. back pressure          | Pa                 | 0    | 0    |
| Min. back pressure          | inH <sub>2</sub> O | 0    | 0    |
| Min. ambient temperature    | °C                 | -25  | -25  |
| Max. ambient temperature    | °C                 | 60   | 55   |

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

D2E097-BI56-A4

## AC centrifugal fan

forward-curved, dual-intake  
with housing (without flange)

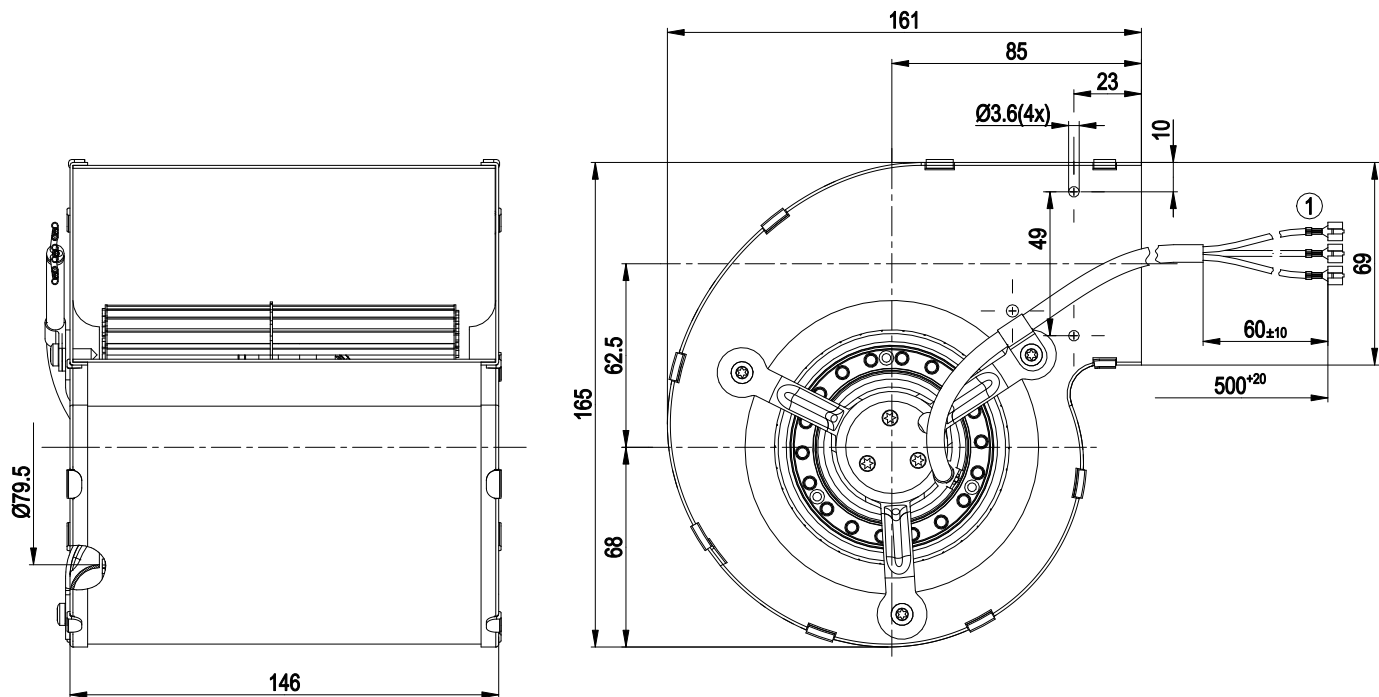
### Technical description

|                                                                            |                                                              |
|----------------------------------------------------------------------------|--------------------------------------------------------------|
| Weight                                                                     | 1.5 kg                                                       |
| Fan size                                                                   | 97 mm                                                        |
| Rotor surface                                                              | Painted black                                                |
| Impeller material                                                          | Sheet steel, painted black                                   |
| Housing material                                                           | Sheet steel, galvanized                                      |
| Direction of rotation                                                      | Counterclockwise, viewed toward rotor                        |
| Degree of protection                                                       | IP20                                                         |
| Insulation class                                                           | "F"                                                          |
| Max. permitted ambient temp. for motor (transport/storage)                 | + 80 °C                                                      |
| Min. permitted ambient temp. for motor (transport/storage)                 | - 40 °C                                                      |
| Installation position                                                      | Shaft horizontal or rotor on bottom; rotor on top on request |
| Condensation drainage holes                                                | On rotor side                                                |
| Mode                                                                       | S1                                                           |
| Motor bearing                                                              | Ball bearing                                                 |
| 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)             |
| Conformity with standards                                                  | EN 60335-1; CE                                               |

# AC centrifugal fan

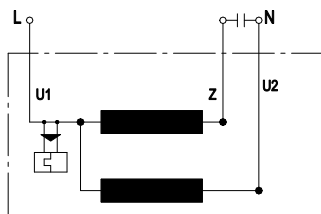
forward-curved, dual-intake  
with housing (without flange)

## Product drawing



1 Cable ETFE AWG 20, 3x flat push-on receptacle 2.8 x 1

## Connection diagram

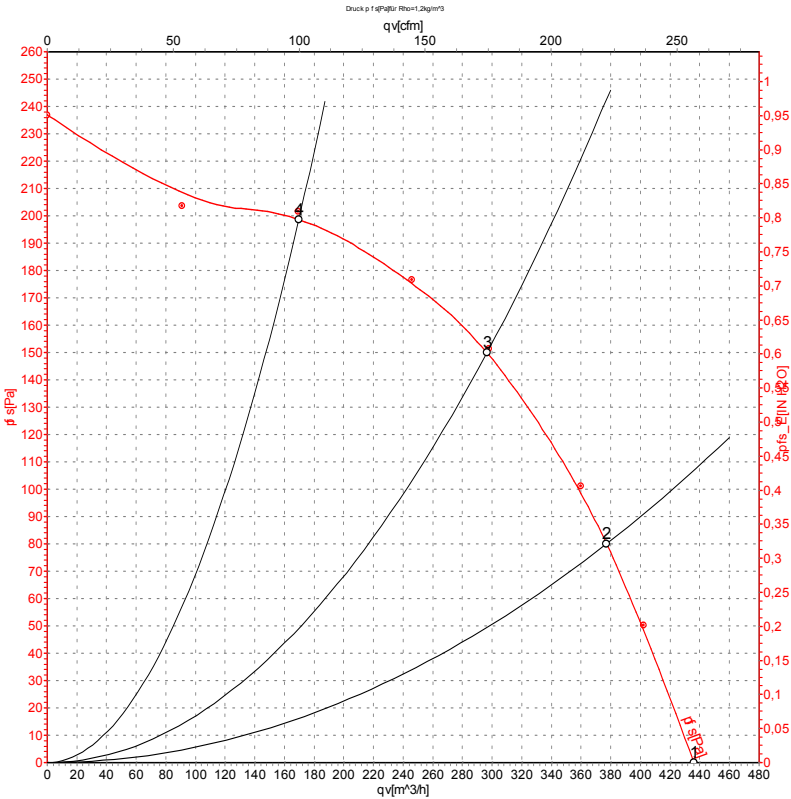


| U1 | blue | Z | brown | U2 | black |
|----|------|---|-------|----|-------|
|    |      |   |       |    |       |

# AC centrifugal fan

forward-curved, dual-intake  
with housing (without flange)

## Curves: Air performance 50 Hz



Measurement: LU-34651-1

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

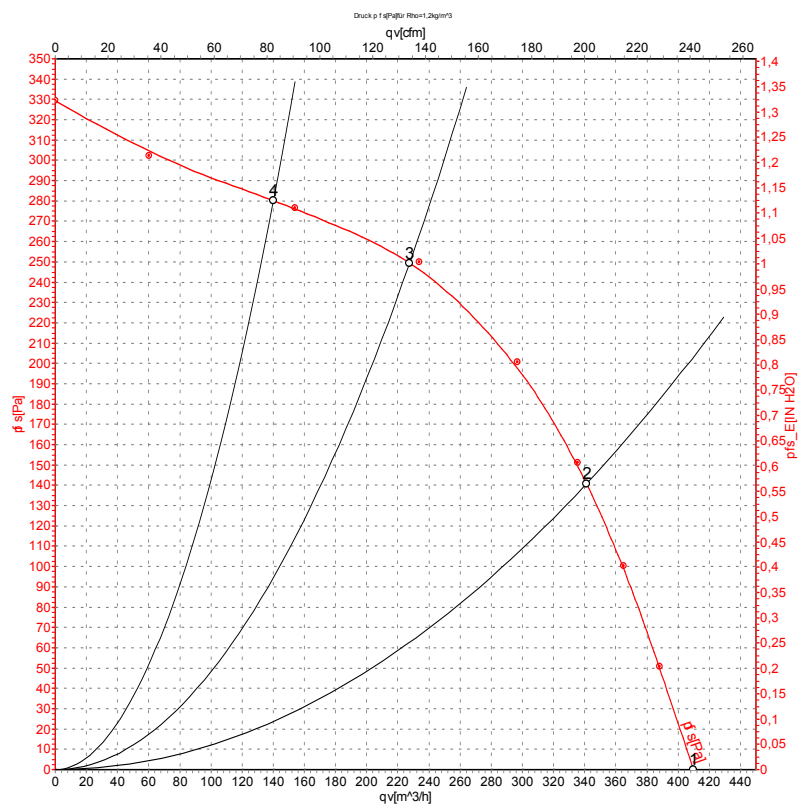
|   | U   | f  | n                 | P <sub>e</sub> | I    | qv   | p <sub>fs</sub> | qv  | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|------|-----------------|-----|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h | Pa              | CFM | inH2O           |
| 1 | 230 | 50 | 1950              | 87             | 0.39 | 435  | 0               | 255 | 0.00            |
| 2 | 230 | 50 | 2235              | 81             | 0.35 | 375  | 80              | 220 | 0.32            |
| 3 | 230 | 50 | 2470              | 73             | 0.32 | 295  | 150             | 175 | 0.60            |
| 4 | 230 | 50 | 2710              | 67             | 0.31 | 170  | 200             | 100 | 0.80            |

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

# AC centrifugal fan

forward-curved, dual-intake  
with housing (without flange)

## Curves: Air performance 60 Hz



Measurement: LU-34652-1

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 <sub>e</sub> | I    | qv   | p <sub>fs</sub> | qv  | p <sub>fs</sub> |
|---|-----|----|-------------------|----------------|------|------|-----------------|-----|-----------------|
|   | V   | Hz | min <sup>-1</sup> | W              | A    | m³/h | Pa              | CFM | inH2O           |
| 1 | 230 | 60 | 1850              | 100            | 0.45 | 410  | 0               | 240 | 0.00            |
| 2 | 230 | 60 | 2500              | 93             | 0.40 | 340  | 140             | 200 | 0.56            |
| 3 | 230 | 60 | 2995              | 81             | 0.35 | 230  | 250             | 135 | 1.00            |
| 4 | 230 | 60 | 3210              | 74             | 0.32 | 140  | 280             | 80  | 1.12            |

U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ebm-papst:](#)

[D2E097-BI56-A4](#)