

# AC centrifugal fan

forward-curved, single-intake

with housing (flange)

G2D160-AF28-38 ebmpapst Datasheet

sales@fansco.com

www.fansco.com



## Nominal data

|                             |                    |      |      |
|-----------------------------|--------------------|------|------|
| Type                        | G2D160-AF28-38     |      |      |
| Motor                       | M2D068-EC          |      |      |
| Phase                       |                    | 3~   | 3~   |
| Nominal voltage             | VAC                | 400  | 480  |
| Wiring                      |                    | Y    | Y    |
| Frequency                   | Hz                 | 50   | 60   |
| Method of obtaining data    |                    | ml   | ml   |
| Valid for approval/standard |                    | CE   | CE   |
| Speed (rpm)                 | min <sup>-1</sup>  | 2480 | 2820 |
| Power consumption           | W                  | 225  | 365  |
| Current draw                | A                  | 0.37 | 0.48 |
| Min. back pressure          | Pa                 | 300  | 400  |
| Min. back pressure          | inH <sub>2</sub> O | 1.2  | 1.61 |
| Min. ambient temperature    | °C                 | -25  | -25  |
| Max. ambient temperature    | °C                 | 85   | 40   |

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

## Data according to ErP Directive

|                                   |   | Actual | Req. 2015 |                               |                   |      |
|-----------------------------------|---|--------|-----------|-------------------------------|-------------------|------|
| 01 Overall efficiency $\eta_{es}$ | % | 32.5   | 32.5      | 09 Power consumption $P_e$    | kW                | 0.15 |
| 02 Measurement category           |   | A      |           | 09 Air flow $q_v$             | m <sup>3</sup> /h | 355  |
| 03 Efficiency category            |   | Static |           | 09 Pressure increase $p_{fs}$ | Pa                | 500  |
| 04 Efficiency grade N             |   | 44     | 44        | 10 Speed (rpm) n              | min <sup>-1</sup> | 2685 |
| 05 Variable speed drive           |   | No     |           | 11 Specific ratio*            |                   | 1.01 |

Data obtained at optimum efficiency level.  
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

LU-48058



# AC centrifugal fan

forward-curved, single-intake  
with housing (flange)

## Technical description

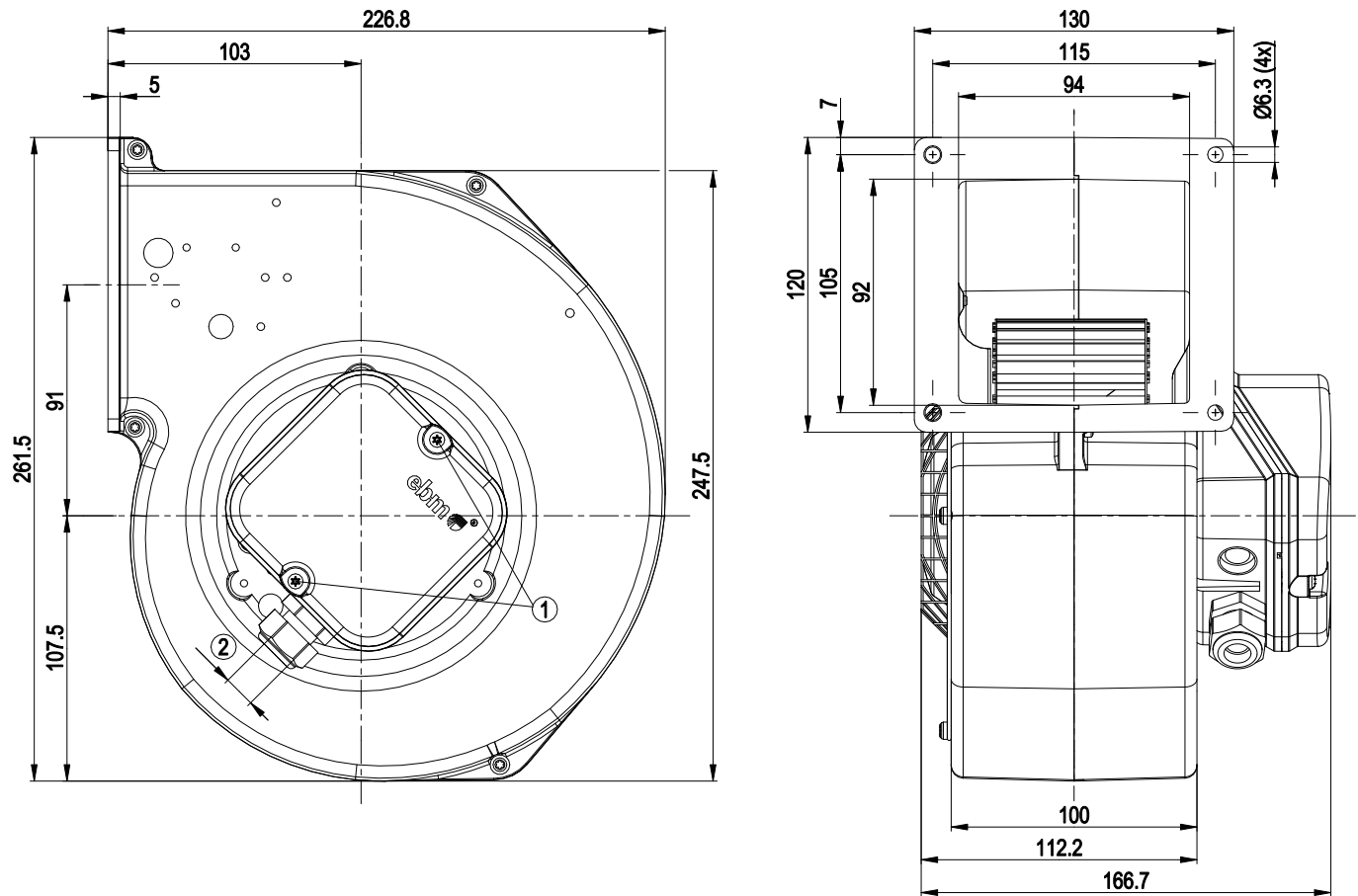
|                                                                            |                                                              |
|----------------------------------------------------------------------------|--------------------------------------------------------------|
| Weight                                                                     | 4.3 kg                                                       |
| Fan size                                                                   | 160 mm                                                       |
| Rotor surface                                                              | Painted black                                                |
| Terminal box material                                                      | ABS plastic                                                  |
| Impeller material                                                          | Sheet steel, galvanized                                      |
| Housing material                                                           | Die-cast aluminum                                            |
| Guard grille material                                                      | Hot-dip galvanized and spot-welded net                       |
| Direction of rotation                                                      | Clockwise, viewed toward rotor                               |
| Degree of protection                                                       | IP44; installation- and position-dependent as per EN 60034-5 |
| Insulation class                                                           | "F"                                                          |
| Moisture (F) / Environmental (H) protection class                          | F2-2                                                         |
| 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                                                | On rotor side                                                |
| Mode                                                                       | S1                                                           |
| Motor bearing                                                              | Ball bearing                                                 |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | < 0.75 mA                                                    |
| Electrical hookup                                                          | Via terminal box                                             |
| Protection class                                                           | I (with customer connection of protective earth)             |
| Conformity with standards                                                  | CE                                                           |
| Approval                                                                   | CSA C22.2 No. 100; UL 1004-1                                 |



## AC centrifugal fan

forward-curved, single-intake  
with housing (flange)

## Product drawing

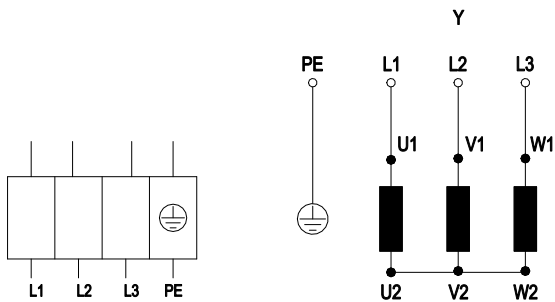


- |   |                                                                       |
|---|-----------------------------------------------------------------------|
| 1 | Tightening torque $0.8 \pm 0.1$ Nm                                    |
| 2 | Cable diameter min. 4 mm, max. 8 mm, tightening torque $2 \pm 0.2$ Nm |

# AC centrifugal fan

forward-curved, single-intake  
with housing (flange)

Connection diagram



|    |                 |    |              |    |      |
|----|-----------------|----|--------------|----|------|
| Y  | Star connection | L1 | black        | L2 | blue |
| L3 | brown           | PE | green/yellow |    |      |

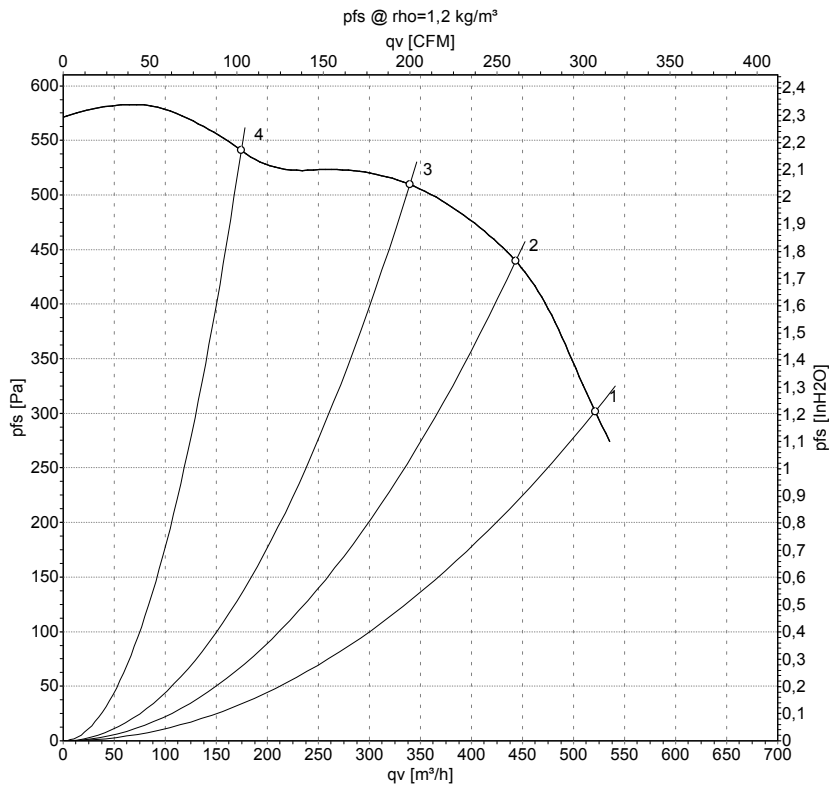


## AC centrifugal fan

forward-curved, single-intake

with housing (flange)

## Curves: Air performance 50 Hz



Measurement: LU-48058-1

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    | m <sup>3</sup> /h | Pa              | CFM | inH <sub>2</sub> O |
| 1 | 400 | 50 | 2480              | 225            | 0.37 | 520               | 300             | 305 | 1.20               |
| 2 | 400 | 50 | 2590              | 187            | 0.31 | 445               | 440             | 260 | 1.77               |
| 3 | 400 | 50 | 2695              | 148            | 0.26 | 340               | 510             | 200 | 2.05               |
| 4 | 400 | 50 | 2820              | 97             | 0.21 | 175               | 540             | 100 | 2.17               |

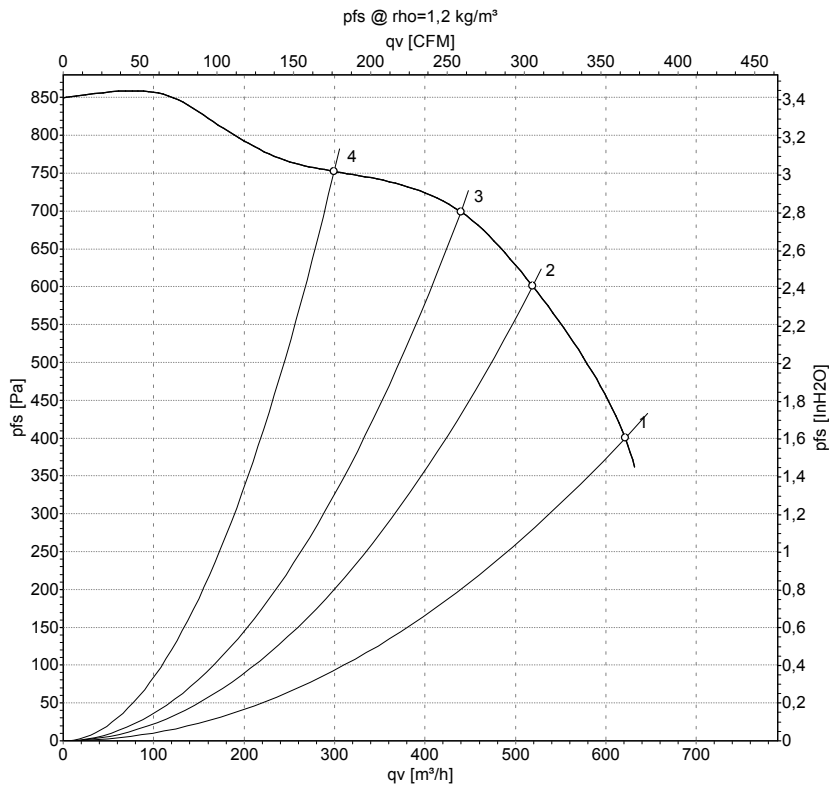
U = Power supply · f = Frequency · n = Speed (rpm) · P<sub>e</sub> = Power consumption · I = Current draw · qv = Air flow · p<sub>fs</sub> = Pressure increase



# AC centrifugal fan

forward-curved, single-intake  
with housing (flange)

## Curves: Air performance 60 Hz



Measurement: LU-107557-1

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 | 480 | 60 | 2820              | 365            | 0.48 | 620  | 400             | 365 | 1.61            |
| 2 | 480 | 60 | 3000              | 300            | 0.40 | 520  | 600             | 305 | 2.41            |
| 3 | 480 | 60 | 3115              | 256            | 0.38 | 440  | 700             | 260 | 2.81            |
| 4 | 480 | 60 | 3305              | 194            | 0.27 | 300  | 750             | 175 | 3.01            |

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

