

R2E160-AY50-29 ebmpapst Datasheet

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## Nominal data

|                             |                    |      |
|-----------------------------|--------------------|------|
| Type                        | R2E160-AY50-29     |      |
| Motor                       | M2E068-EC          |      |
| Phase                       |                    | 1~   |
| Nominal voltage             | VAC                | 230  |
| Frequency                   | Hz                 | 50   |
| Method of obtaining data    |                    | ml   |
| Valid for approval/standard |                    | CE   |
| Speed (rpm)                 | min <sup>-1</sup>  | 2400 |
| Power consumption           | W                  | 230  |
| Current draw                | A                  | 0.99 |
| Capacitor                   | μF                 | 5    |
| Capacitor voltage           | VDB                | 400  |
| Min. back pressure          | Pa                 | 250  |
| Min. back pressure          | inH <sub>2</sub> O | 1    |
| Min. ambient temperature    | °C                 | -25  |
| Max. ambient temperature    | °C                 | 60   |
| Starting current            | A                  | 1.7  |

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

## Data according to Commission Regulation (EU) 327/2011

|                                   |   | Actual | Req. 2015 |
|-----------------------------------|---|--------|-----------|
| 01 Overall efficiency $\eta_{es}$ | % | 32.2   | 32.1      |
| 02 Measurement category           |   | A      |           |
| 03 Efficiency category            |   | Static |           |
| 04 Efficiency grade N             |   | 44.1   | 44        |
| 05 Variable speed drive           |   | No     |           |

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

|                               |                   |      |
|-------------------------------|-------------------|------|
| 09 Power consumption $P_e$    | kW                | 0.13 |
| 09 Air flow $q_v$             | m <sup>3</sup> /h | 300  |
| 09 Pressure increase $p_{fs}$ | Pa                | 527  |
| 10 Speed (rpm) n              | min <sup>-1</sup> | 2745 |
| 11 Specific ratio*            |                   | 1.01 |

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

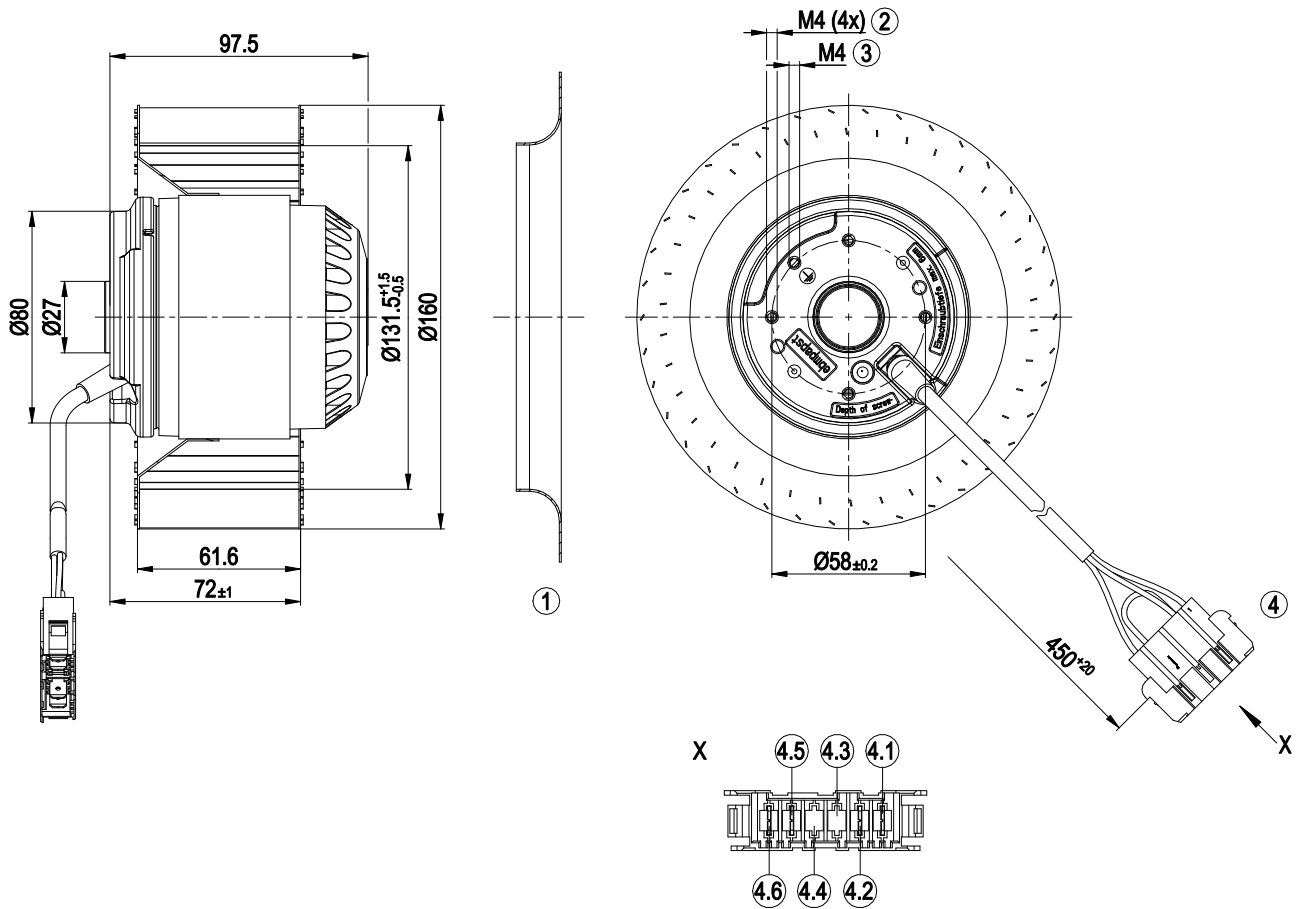
LU-140176



## Technical description

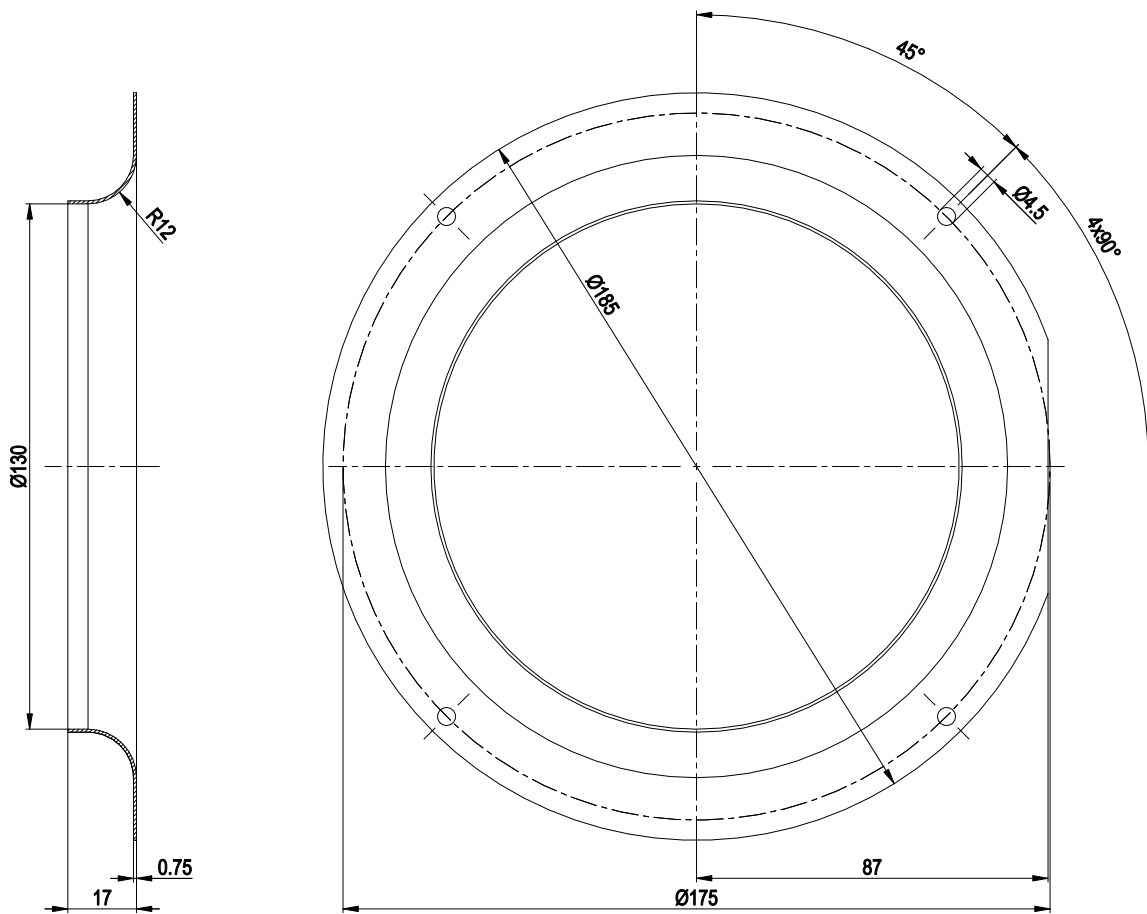
|                                                                            |                                                                                    |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Weight                                                                     | 2.7 kg                                                                             |
| Fan size                                                                   | 160 mm                                                                             |
| Rotor surface                                                              | Unpainted                                                                          |
| Impeller material                                                          | Sheet steel, galvanized                                                            |
| 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                          | F1-1                                                                               |
| 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                                                                 | Variable                                                                           |
| Protection class                                                           | I (if protective earth is connected by customer to the housing's connection point) |
| Conformity with standards                                                  | EN 60335-1; CE                                                                     |

## Product drawing



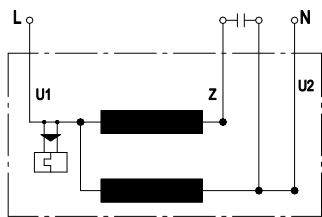
|     |                                                                                                         |
|-----|---------------------------------------------------------------------------------------------------------|
| 1   | Accessory part: inlet ring 09588-2-4013 not included in scope of delivery                               |
| 2   | Max. clearance for screw 6 mm                                                                           |
| 3   | Max. clearance for screw 6 mm                                                                           |
| 4   | Cable silicone 3x 0.5 mm <sup>2</sup> , tyco 6-pole connector housing 5-1241967-6, 4x flat plug 6.3x0.8 |
| 4.1 | L (blue)                                                                                                |
| 4.2 | N (black + gray)                                                                                        |
| 4.3 | not used                                                                                                |
| 4.4 | not used                                                                                                |
| 4.5 | Capacitor (gray)                                                                                        |
| 4.6 | Capacitor (brown)                                                                                       |

Accessory part



Accessory part: inlet ring 09588-2-4013 not included in scope of delivery

Connection diagram



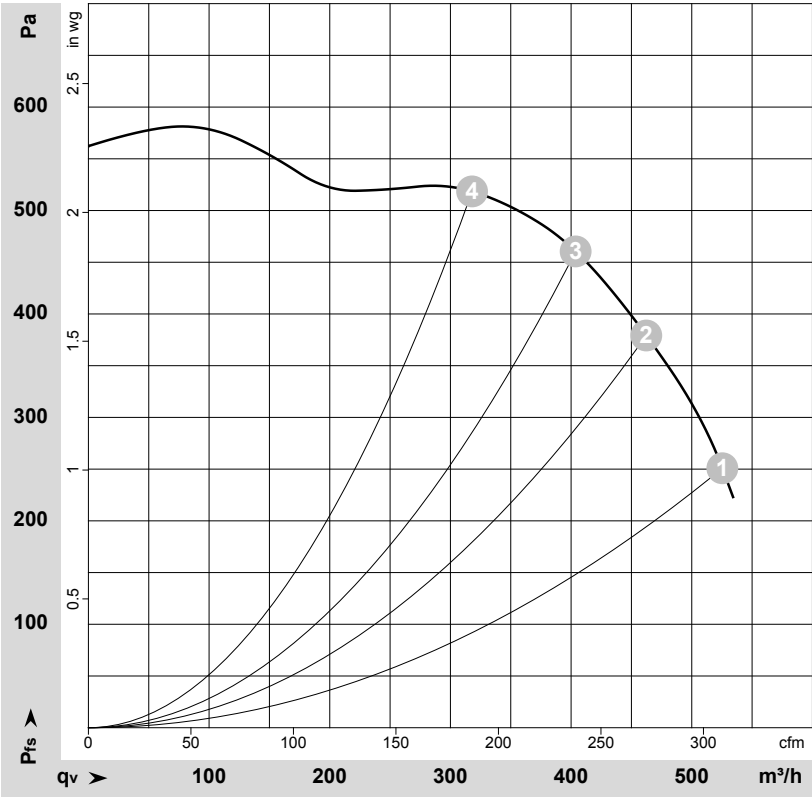
|    |      |   |       |    |       |
|----|------|---|-------|----|-------|
| U1 | blue | Z | brown | U2 | black |
|----|------|---|-------|----|-------|



# AC centrifugal fan

forward-curved

## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-140176-1

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    | q <sub>v</sub>    | p <sub>fs</sub> | q <sub>v</sub> | 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 | 230 | 50 | 2400              | 230            | 0.99 | 525               | 250             | 310            | 1.00               |
| 2 | 230 | 50 | 2545              | 199            | 0.87 | 460               | 380             | 270            | 1.53               |
| 3 | 230 | 50 | 2630              | 173            | 0.76 | 405               | 460             | 240            | 1.85               |
| 4 | 230 | 50 | 2720              | 148            | 0.65 | 320               | 520             | 185            | 2.09               |

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

