

## KARTA KATALOGOWA

# R3G146-AD19-17

Wentylator promieniowy EC, łopatki zakrzywione do przodu, jednostronnie ssący

Producent: ebm-papst

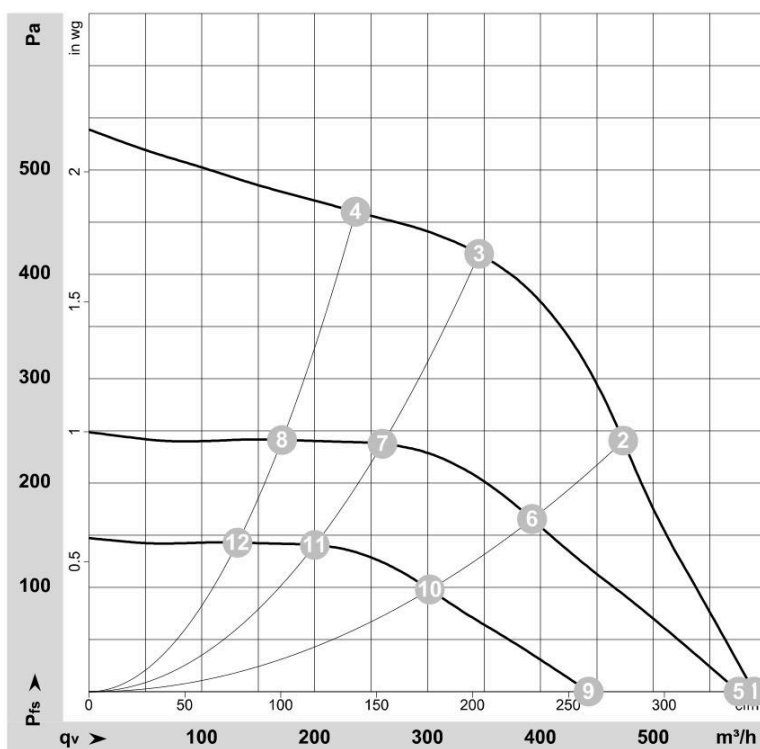


Zdjęcie poglądowe

| Dane znamionowe           |                        | Budowa           |                 |
|---------------------------|------------------------|------------------|-----------------|
| Napięcie znamionowe       | 1~ 230 V (200...240 V) | Średnica wirnika | 146 mm          |
| Częstotliwość             | 50/60 Hz               | Materiał wirnika | stal ocynkowana |
| Prędkość obrotowa         | 2425 obr/min           | Stopień ochrony  | IP54            |
| Pobór mocy                | 118 W                  | Klasa izolacji   | B               |
| Pobór prądu               | 1 A                    | Masa             | 1,32 kg         |
| Maks. wydajność           | 590 m³/h               |                  |                 |
| Maks. ciśnienie statyczne | 460 Pa                 |                  |                 |
| Temperatura otoczenia     | -25...+50 °C           |                  |                 |

## Charakterystyka przepływowa

### Curves: Air performance 50 Hz



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

Measurement: LU-155518-1

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.

Dane na podstawie karty producenta ebm-papst (oryginał na kolejnych stronach).

Wartości znamionowe dla punktu maksymalnego obciążenia; producent zastrzega możliwość zmian.

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**R3G146-AD19-17**

# EC centrifugal fan

forward-curved, single-intake

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Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | R3G146-AD19-17    |            |
| Motor                    | M3G055-CF         |            |
| Phase                    |                   | 1~         |
| Nominal voltage          | VAC               | 230        |
| Nominal voltage range    | VAC               | 200 .. 240 |
| Frequency                | Hz                | 50/60      |
| Method of obtaining data |                   | ml         |
| Speed (rpm)              | min <sup>-1</sup> | 2425       |
| Power consumption        | W                 | 118        |
| Current draw             | A                 | 1          |
| Min. back pressure       | Pa                | 0          |
| Min. back pressure       | in. wg            | 0          |
| Min. ambient temperature | °C                | -25        |
| Max. ambient temperature | °C                | 50         |

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


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## Technical description

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Weight</b>                                                                     | 1.32 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Size</b>                                                                       | 146 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Motor size</b>                                                                 | 55                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Rotor surface</b>                                                              | Thick-film passivated                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Impeller material</b>                                                          | Sheet steel, galvanized                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Direction of rotation</b>                                                      | Clockwise, viewed toward rotor                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Degree of protection</b>                                                       | IP54                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Insulation class</b>                                                           | "B"                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Moisture (F) / Environmental (H) protection class</b>                          | H1+                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Max. permitted ambient temp. for motor (transport/storage)</b>                 | + 80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Min. permitted ambient temp. for motor (transport/storage)</b>                 | - 40 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Installation position</b>                                                      | Any                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Condensation drainage holes</b>                                                | None, open rotor                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Mode</b>                                                                       | S1                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Motor bearing</b>                                                              | Hybrid bearing                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Technical features</b>                                                         | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Tach output</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Overvoltage detection</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage detection</li> </ul> |
| <b>EMC immunity to interference</b>                                               | According to EN 61000-6-2 (industrial environment)                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>EMC circuit feedback</b>                                                       | According to EN 61000-3-2/3                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>EMC interference emission</b>                                                  | According to EN 61000-6-3 (household environment)                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b> | <= 3.5 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Motor protection</b>                                                           | Electronic motor protection                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>With cable</b>                                                                 | Variable                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Protection class</b>                                                           | I (with customer connection of protective earth)                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Conformity with standards</b>                                                  | EN 60335-1; CE                                                                                                                                                                                                                                                                                                                                                                                                                                           |

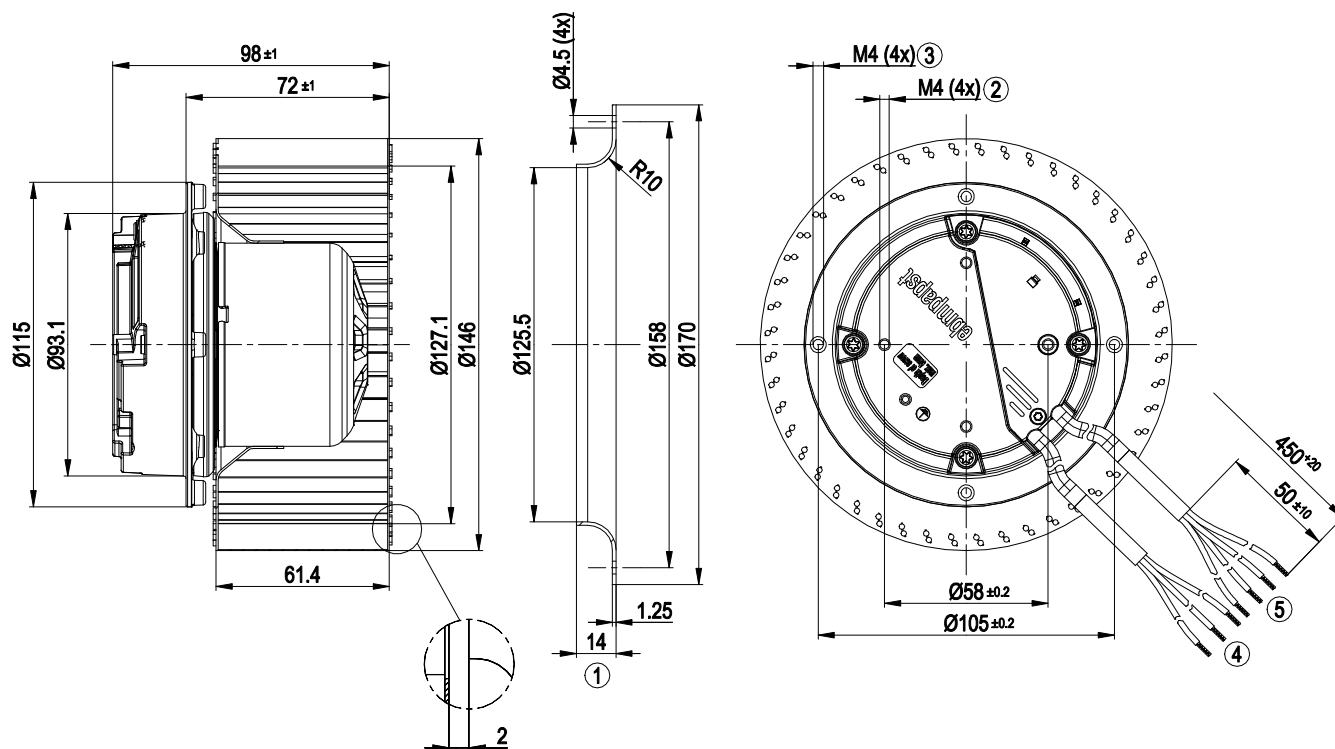


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## Product drawing



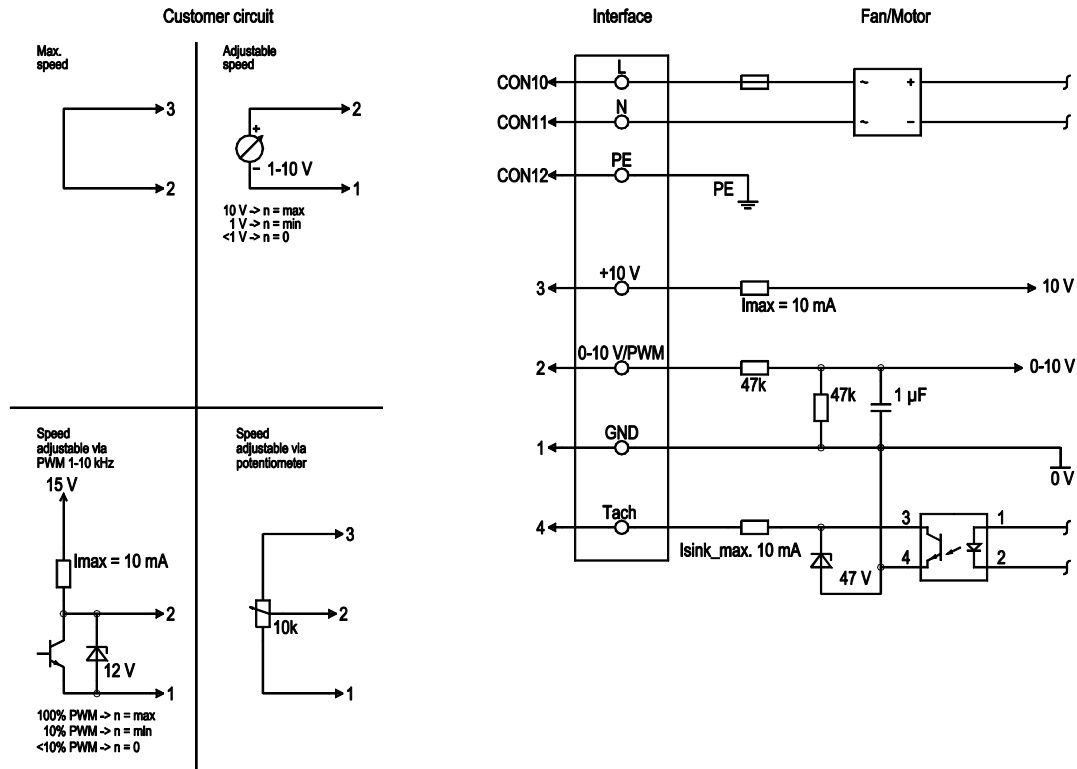
|   |                                                                            |
|---|----------------------------------------------------------------------------|
| 1 | Accessory part: inlet ring 09576-2-4013, not included in scope of delivery |
| 2 | Max. clearance for screw 6 mm                                              |
| 3 | Max. clearance for screw 6 mm                                              |
| 4 | Cable PVC 3G 0.5 mm <sup>2</sup> , 3x crimped splices                      |
| 5 | Cable PVC 4x 0.25 mm <sup>2</sup> , 4x crimped splices                     |

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## Connection diagram



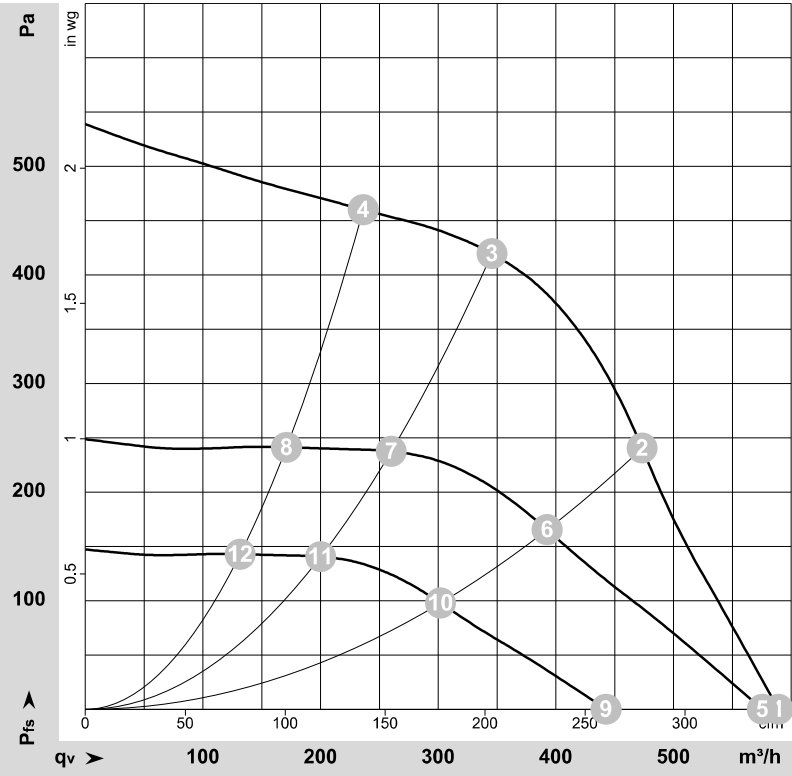
| No. | Conn. | Designation | Color        | Function/assignment                                                                                                               |
|-----|-------|-------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|
|     | CON10 | L           | brown        | Supply connection, power supply, phase, see nameplate for voltage range                                                           |
|     | CON11 | N           | blue         | Supply connection, power supply, neutral conductor, see nameplate for voltage range                                               |
|     | CON12 | PE          | green/yellow | Ground connection                                                                                                                 |
|     | 2     | 0- 10V PWM  | yellow       | 0-10 V / PWM control input, R <sub>i</sub> =100 kΩ, SELV                                                                          |
|     | 4     | Tach        | white        | Tach output, open collector, 1 pulse per revolution, I <sub>sink</sub> max = 10 mA, SELV                                          |
|     | 3     | +10 V       | red          | Fixed voltage output 10 VDC +/-3 %, I <sub>max</sub> . 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV |
|     | 1     | GND         | blue         | Reference ground for control interface, SELV                                                                                      |

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Measured values

|    | U   | f  | n                 | P <sub>ed</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    | m³/h           | Pa              | cfm            | in. wg          |
| 1  | 230 | 50 | 2000              | 118             | 1.00 | 590            | 0               | 345            | 0.00            |
| 2  | 230 | 50 | 2425              | 118             | 1.00 | 475            | 240             | 280            | 0.96            |
| 3  | 230 | 50 | 2590              | 99              | 0.93 | 345            | 420             | 205            | 1.69            |
| 4  | 230 | 50 | 2695              | 80              | 0.77 | 235            | 460             | 140            | 1.85            |
| 5  | 230 | 50 | 1950              | 110             | 1.01 | 575            | 0               | 340            | 0.00            |
| 6  | 230 | 50 | 1950              | 68              | 0.63 | 395            | 165             | 230            | 0.66            |
| 7  | 230 | 50 | 1950              | 42              | 0.40 | 260            | 238             | 155            | 0.96            |
| 8  | 230 | 50 | 1950              | 30              | 0.29 | 170            | 241             | 100            | 0.97            |
| 9  | 230 | 50 | 1500              | 50              | 0.46 | 445            | 0               | 260            | 0.00            |
| 10 | 230 | 50 | 1500              | 31              | 0.29 | 300            | 98              | 180            | 0.39            |
| 11 | 230 | 50 | 1500              | 19              | 0.18 | 200            | 141             | 120            | 0.57            |
| 12 | 230 | 50 | 1500              | 14              | 0.13 | 130            | 143             | 80             | 0.57            |

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

