

R3G225-RN28-05 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

Limited partnership · Headquarters Muldingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Muldingen GmbH · Headquarters Muldingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

## Nominal data

|                          |                   |          |
|--------------------------|-------------------|----------|
| Type                     | R3G225-RN28-05    |          |
| Motor                    | M3G074-CF         |          |
| Nominal voltage          | VDC               | 24       |
| Nominal voltage range    | VDC               | 16 .. 28 |
| Method of obtaining data |                   | fa       |
| Speed (rpm)              | min <sup>-1</sup> | 3270     |
| Power consumption        | W                 | 205      |
| Current draw             | A                 | 8.5      |
| Min. ambient temperature | °C                | -25      |
| Max. ambient temperature | °C                | 60       |

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 (EN 17166)

|                                   |   | Actual | Req. 2015 |                               |                   |      |
|-----------------------------------|---|--------|-----------|-------------------------------|-------------------|------|
| 01 Overall efficiency $\eta_{es}$ | % | 57.2   | 44.5      | 09 Power consumption $P_e$    | kW                | 0.21 |
| 02 Measurement category           |   | A      |           | 09 Air flow $q_v$             | m <sup>3</sup> /h | 800  |
| 03 Efficiency category            |   | Static |           | 09 Pressure increase $p_{fs}$ | Pa                | 483  |
| 04 Efficiency grade N             |   | 74.7   | 62        | 10 Speed (rpm) n              | min <sup>-1</sup> | 3185 |
| 05 Variable speed drive           |   | Yes    |           | 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-156112



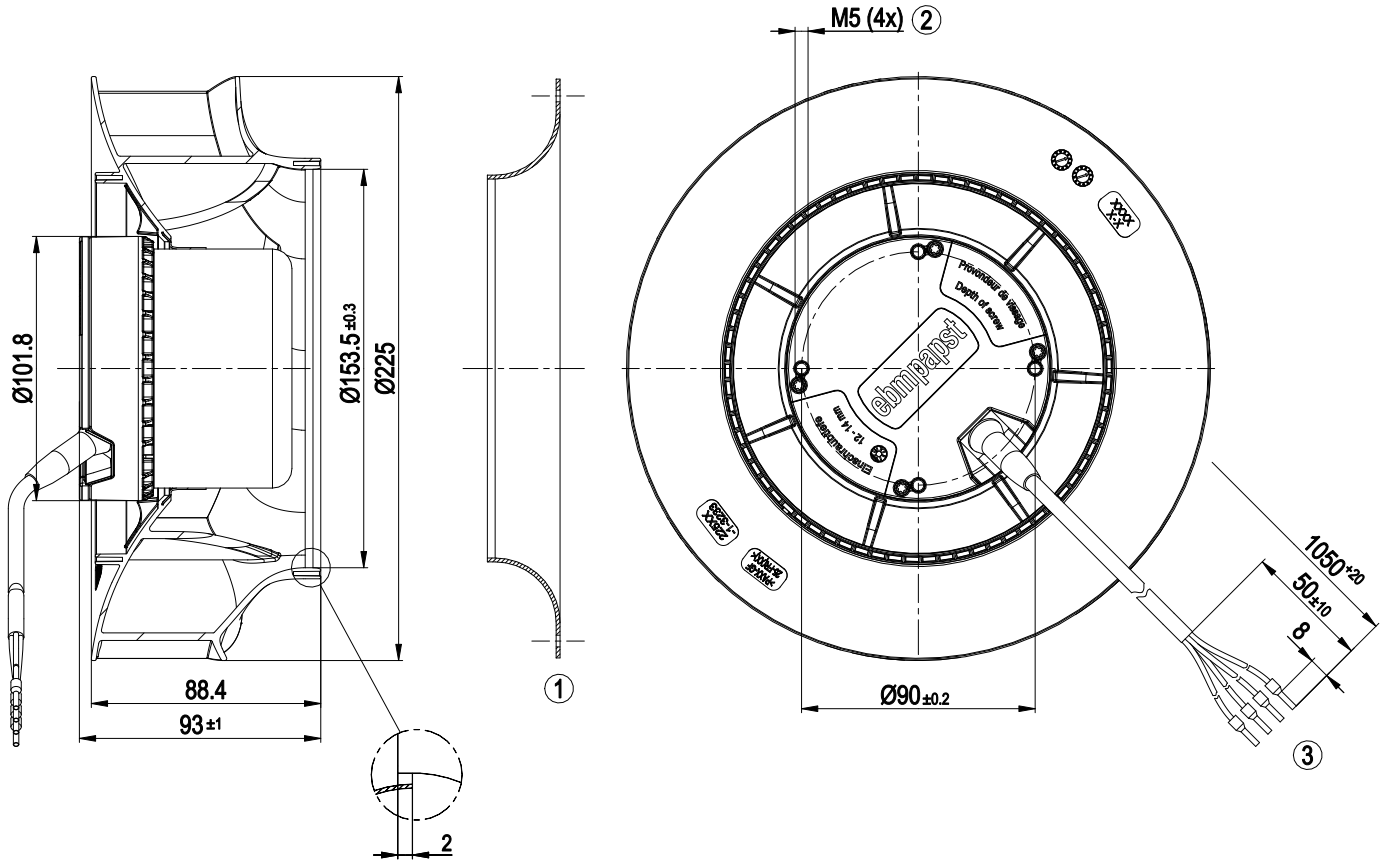
## Technical description

|  |  |
|--|--|
| Weight   | 2 kg   |
| Size   | 225 mm   |
| Motor size   | 74   |
| Rotor surface  | Painted black  |
| Impeller material  | PA plastic   |
| Number of blades   | 7  |
| Direction of rotation                                      | Clockwise, viewed toward rotor   |
| Degree of protection                                       | IP44; installation- and position-dependent as per EN 60034-5   |
| Insulation class   | "B"  |
| Moisture (F) / Environmental (H) protection class          | H1   |
| 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   |
| Technical features   | <ul style="list-style-type: none"> <li>- Tach output</li> <li>- Motor current limitation</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Overvoltage detection</li> </ul> |
| Motor protection   | Reverse polarity and locked-rotor protection   |
| With cable   | Variable   |
| Conformity with standards                                  | EN 60950-1   |
| Approval   | EAC  |

# EC centrifugal fan

backward-curved, single-intake

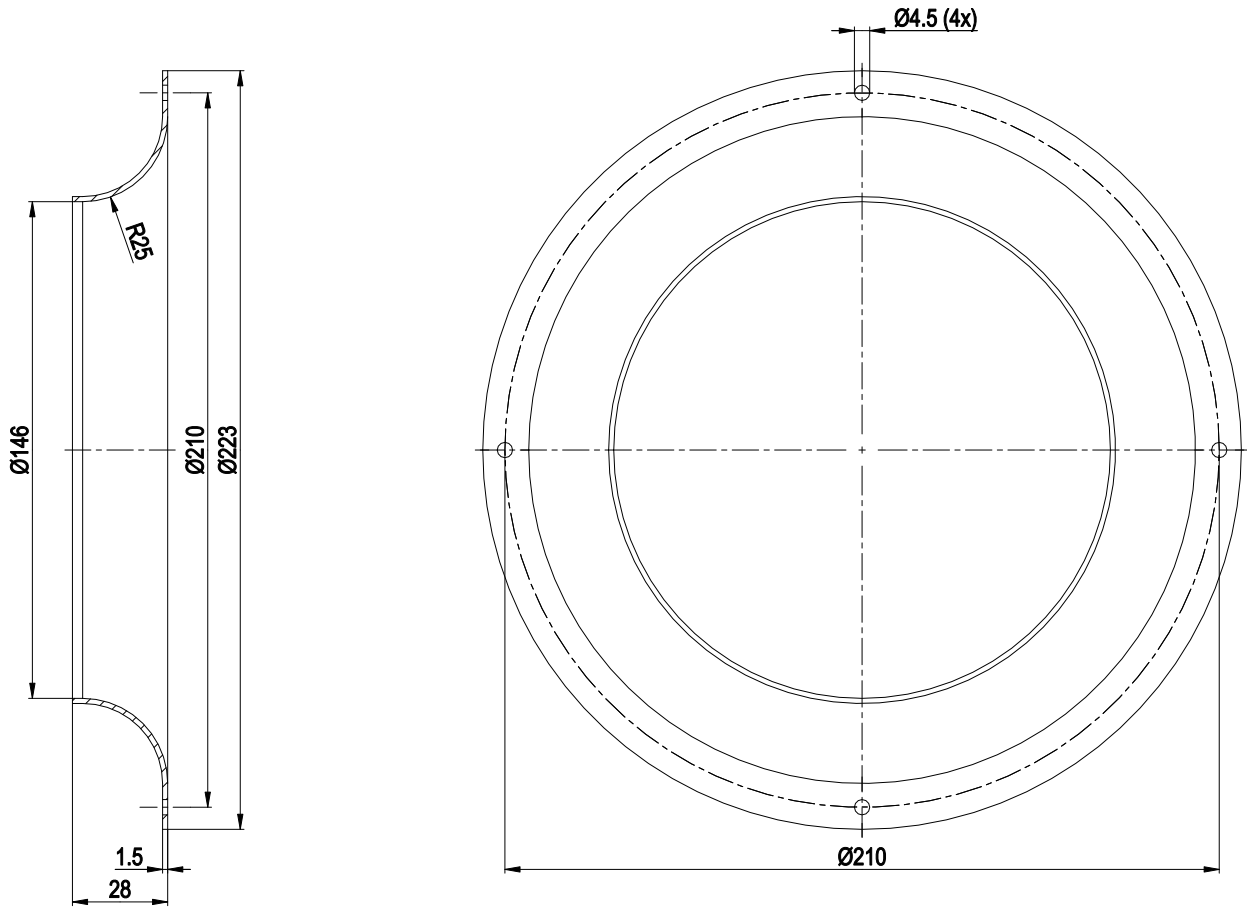
## Product drawing



|   |   |
|---|---|
| 1 | Accessory part: inlet ring 96358-2-4013 not included in scope of delivery |
| 2 | Clearance for screw 12-14 mm  |
| 3 | Cable PVC AWG16, 4x crimped ferrules                                      |

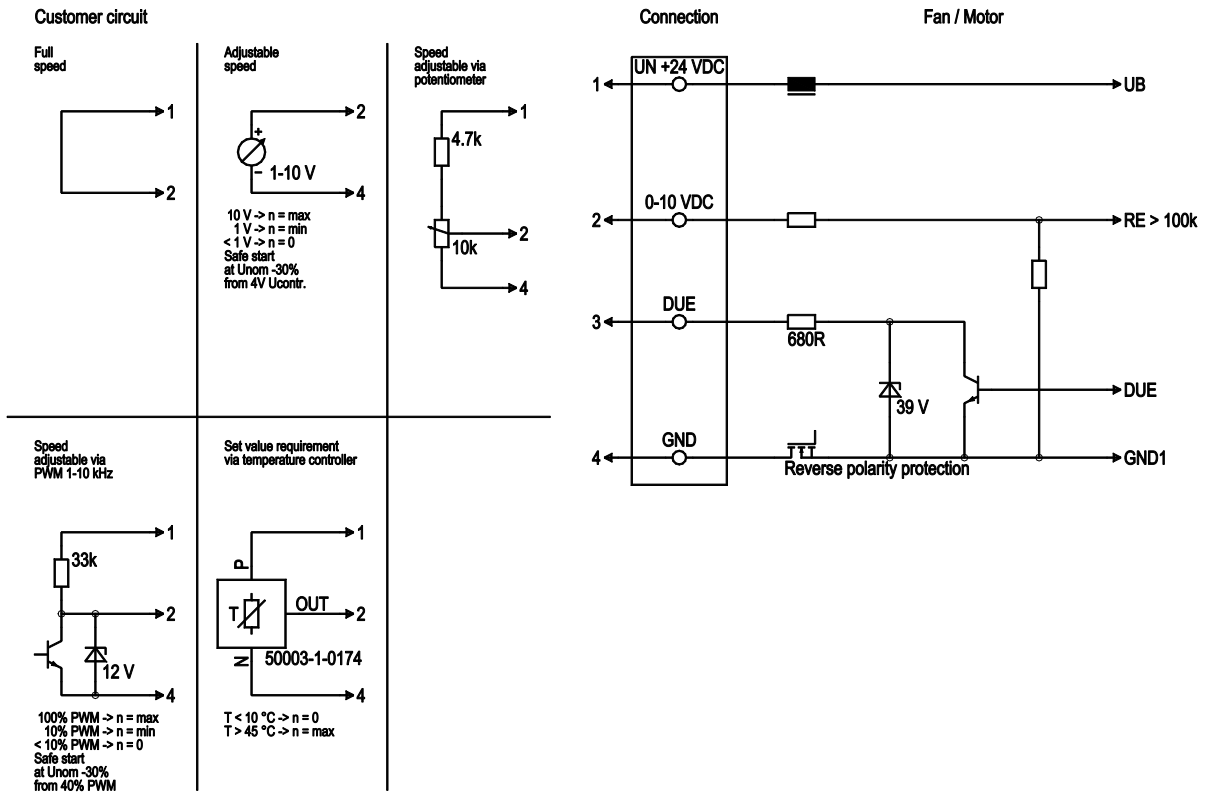


## Accessory part



Inlet ring 96358-2-4013 not included in scope of delivery

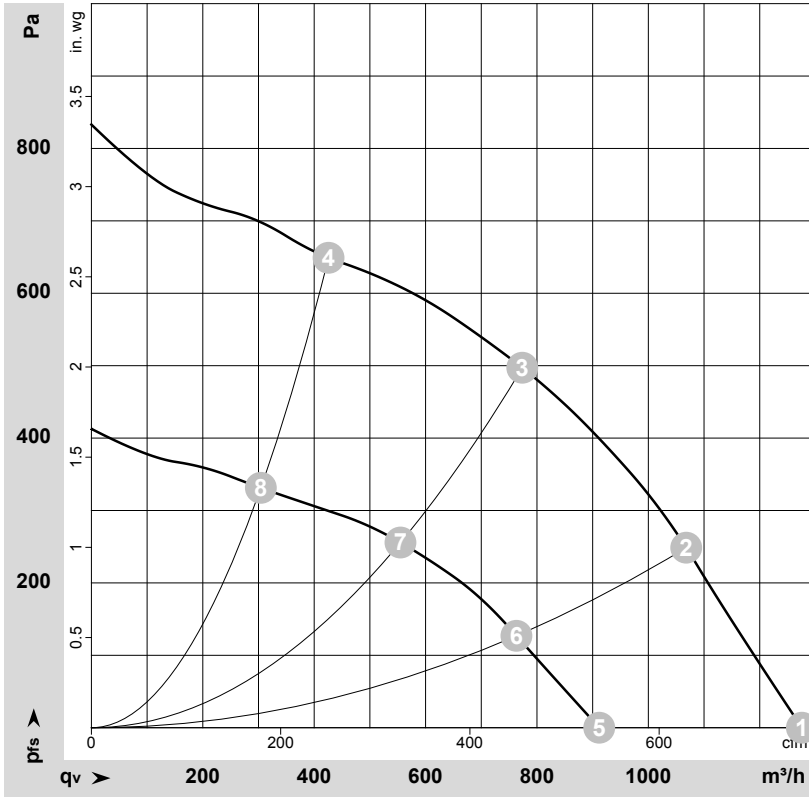
## Connection diagram



| No. | Conn. | Designation | Color  | Function/assignment                                     |
|-----|-------|-------------|--------|---|
|     | 1     | Un +24 VDC  | red    | Power supply 24 VDC, maximum ripple 3.5%                |
|     | 2     | 0-10 VDC    | yellow | Control input Re > 100k                                 |
|     | 3     | Tach        | white  | Tach output, 3 pulses per revolution, Isink max = 10 mA |
|     | 4     | GND         | blue   | Reference ground  |



## Curves: Air performance



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

Measurement: LU-156112-1  
Measurement: LU-156119-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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     | n                 | P <sub>ed</sub> | I     | LwA <sub>in</sub> | q <sub>v</sub>    | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|---|-------|-------------------|-----------------|-------|-------------------|-------------------|-----------------|----------------|-----------------|
|   | V     | min <sup>-1</sup> | W               | A     | dB(A)             | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1 | 24-28 | 3270              | 205             | 8.50* | 81                | 1275              | 0               | 750            | 0.00            |
| 2 | 24-28 | 3200              | 208             | 8.66* | 78                | 1070              | 250             | 630            | 1.00            |
| 3 | 24-28 | 3185              | 213             | 8.88* | 74                | 775               | 500             | 455            | 2.01            |
| 4 | 24-28 | 3275              | 182             | 7.76* | 77                | 425               | 650             | 250            | 2.61            |
| 5 | 16    | 2335              | 77              | 4.79  |                   | 910               | 0               | 535            | 0.00            |
| 6 | 16    | 2305              | 82              | 5.12  |                   | 765               | 127             | 450            | 0.51            |
| 7 | 16    | 2305              | 82              | 5.12  |                   | 555               | 256             | 325            | 1.03            |
| 8 | 16    | 2355              | 73              | 4.52  |                   | 305               | 331             | 180            | 1.33            |

U = Voltage · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · \* = Current measured at nominal voltage · LwA<sub>in</sub> = Sound power level intake side · q<sub>v</sub> = Air flow  
p<sub>fs</sub> = Pressure increase

