

R3G133-AE07-02

# EC centrifugal fan

backward curved, single inlet



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## Nominal data

|                          |                      |            |
|--------------------------|----------------------|------------|
| Type                     | R3G133-AE07-02       |            |
| Motor                    | M3G055-BD            |            |
| Phase                    |                      | 1~         |
| Nominal voltage          | [VAC]                | 230        |
| Nominal voltage range    | [VAC]                | 195 .. 253 |
| Frequency                | [Hz]                 | 50/60      |
| Type of data definition  |                      | rfa        |
| Speed                    | [min <sup>-1</sup> ] | 4480       |
| Power input              | [W]                  | 43         |
| Current draw             | [A]                  | 0.32       |
| Min. ambient temperature | [°C]                 | -25        |
| Max. ambient temperature | [°C]                 | 60         |

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations

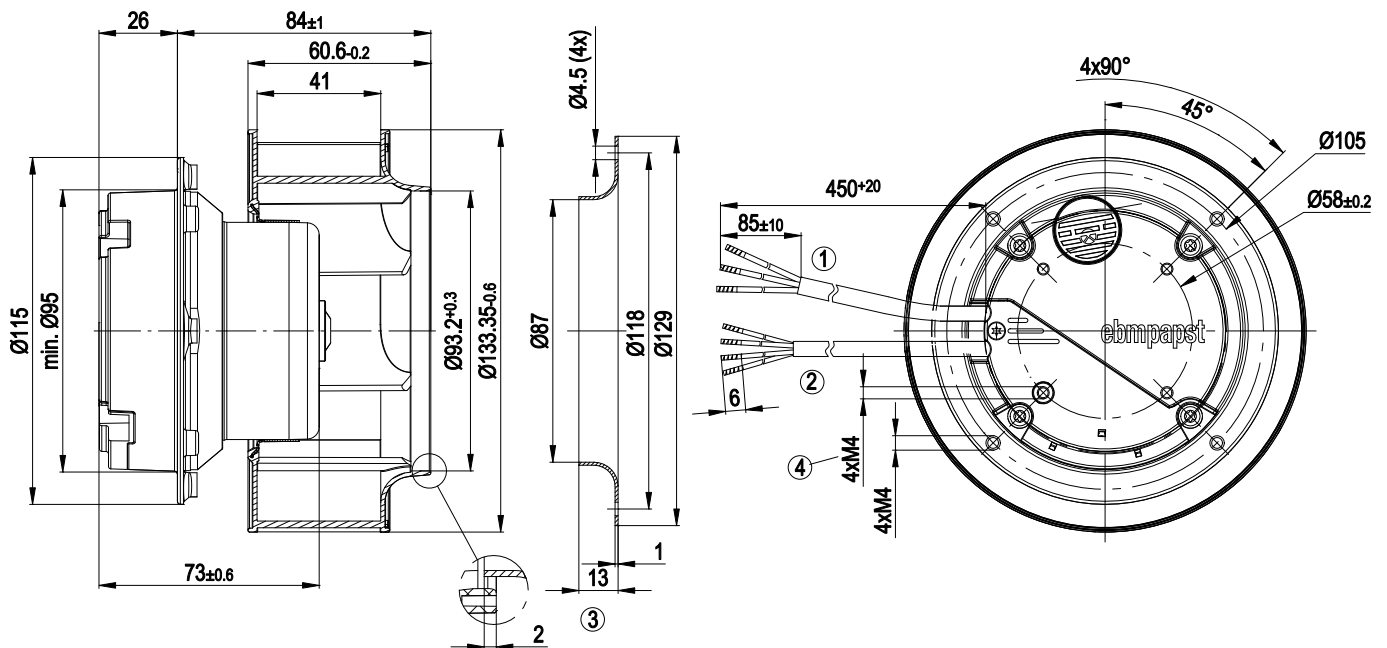
## Technical features

|                                                         |                                                                                                                                                                                  |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Leakage current                                         | <= 3.5 mA                                                                                                                                                                        |
| General description                                     | Integrated electronics                                                                                                                                                           |
| Size                                                    | 133 mm                                                                                                                                                                           |
| Operation mode                                          | S1                                                                                                                                                                               |
| Direction of rotation                                   | Clockwise, seen on rotor                                                                                                                                                         |
| Mounting position                                       | Shaft horizontal or rotor on bottom; rotor on top on request                                                                                                                     |
| EMC harmonics                                           | Acc. to EN 61000-3-2/3                                                                                                                                                           |
| EMC interference emission                               | Acc. to EN 61000-6-3 (household environment)                                                                                                                                     |
| EMC interference immunity                               | Acc. to EN 61000-6-1                                                                                                                                                             |
| Insulation class                                        | "B"                                                                                                                                                                              |
| Cable exit                                              | Variable                                                                                                                                                                         |
| Condensate discharge holes                              | Rotor-side                                                                                                                                                                       |
| Bearing motor                                           | Ball bearing                                                                                                                                                                     |
| Mass                                                    | 1.0 kg                                                                                                                                                                           |
| Material of electronics housing                         | Die-cast aluminium                                                                                                                                                               |
| Material of impeller                                    | Plastic PA66, fibreglass-reinforced, red-brown                                                                                                                                   |
| Motor protection                                        | Thermal overload protector (TOP) wired internally                                                                                                                                |
| Product conforming to standard                          | EN 60335-1                                                                                                                                                                       |
| Surface of rotor                                        | Thick layer passivated                                                                                                                                                           |
| Number of blades                                        | 7                                                                                                                                                                                |
| Type of protection                                      | IP 44; Depending on installation and position as per EN 60034-5                                                                                                                  |
| Protection class                                        | I                                                                                                                                                                                |
| Technical features                                      | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Locked-rotor protection</li> <li>- Tach output</li> <li>- Control input 0-10 VDC / PWM</li> </ul> |
| Max. permissible ambient motor temp. (transp./ storage) | + 80 °C                                                                                                                                                                          |
| Min. permissible ambient motor temp. (transp./storage)  | - 40 °C                                                                                                                                                                          |
| Approval                                                | GOST                                                                                                                                                                             |

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## Product drawing

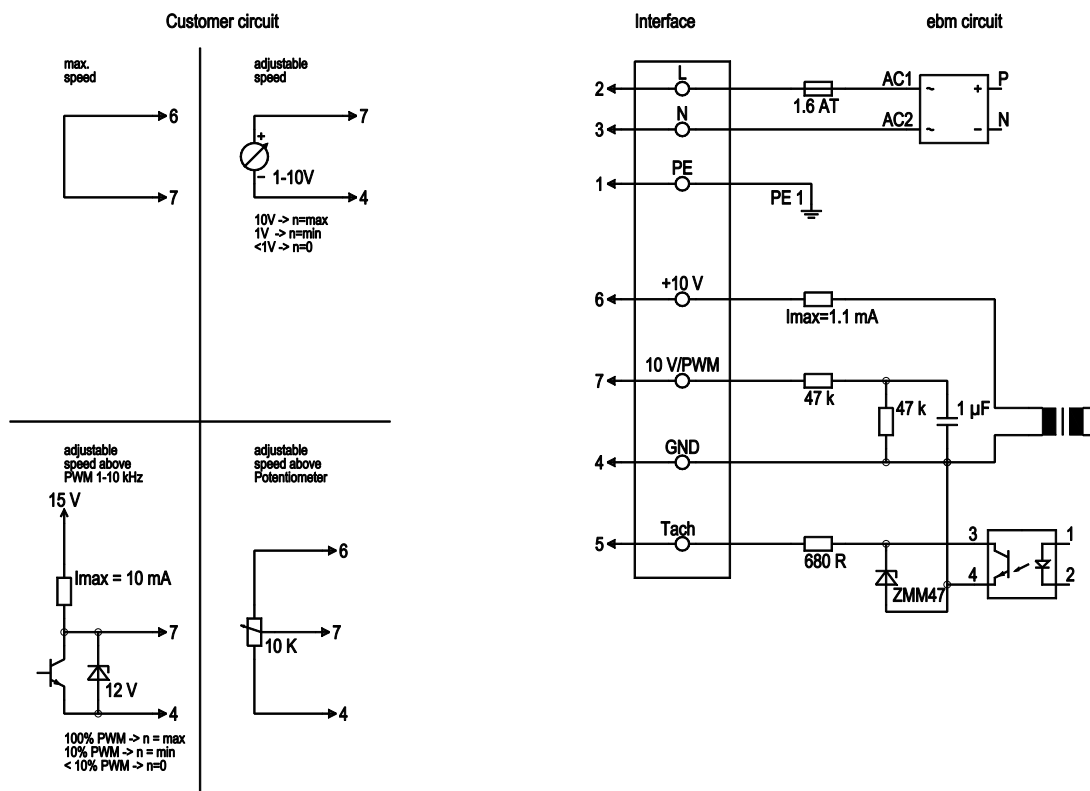


|   |                                                                                           |
|---|-------------------------------------------------------------------------------------------|
| 1 | Connection line PVC 3 x 0.5 mm <sup>2</sup> ; 3 x brass lead tips crimped                 |
| 2 | Control line PVC 4 x 0.25 mm <sup>2</sup> , 4x brass lead tips crimped                    |
| 3 | Accessory part: Inlet nozzle 09566-2-4013, not included in the standard scope of delivery |
| 4 | Depth of screw max. 6 mm                                                                  |

# EC centrifugal fan

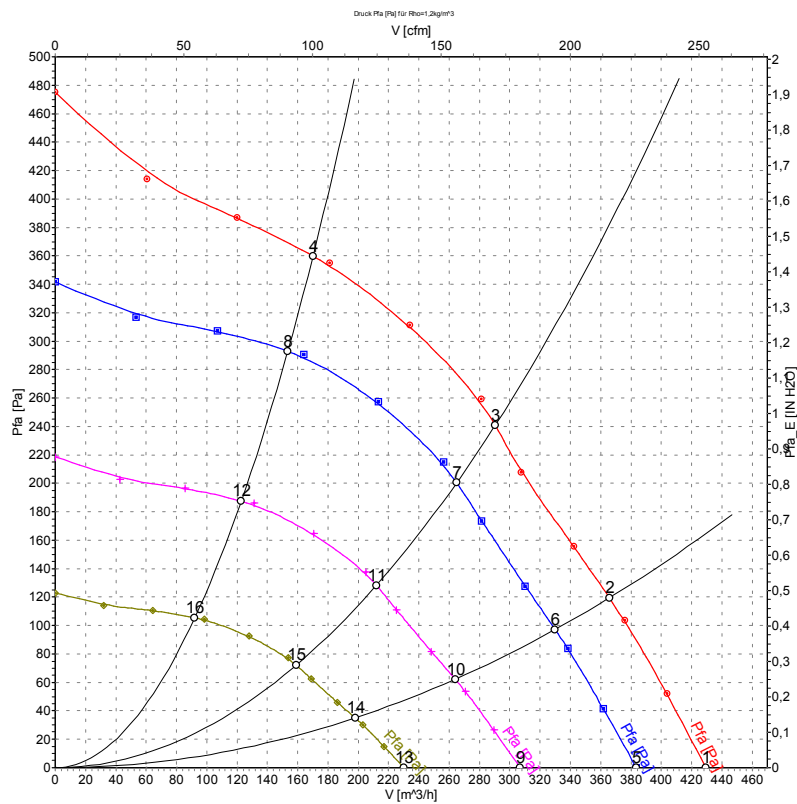
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## Connection screen



| Line | No. | Signal     | Colour       | Function / assignment                                                                   |
|------|-----|------------|--------------|-----------------------------------------------------------------------------------------|
| 1    | 1   | PE         | green/yellow | Protective earth                                                                        |
| 1    | 2   | L          | brown        | Power supply 230 VAC, 50-60 Hz, see type plate for voltage range                        |
| 1    | 3   | N          | blue         | Neutral conductor                                                                       |
| 2    | 4   | GND        | blue         | GND - Connection for control interface                                                  |
| 2    | 5   | Tacho      | white        | Tach output: Open Collector, 1 pulse per revolution, electrically isolated              |
| 2    | 6   | 10V        | red          | max. 1.1 mA, voltage output 10 V/1.1 mA, electrically isolated, not short-circuit-proof |
| 2    | 7   | 0-10 V PWM | yellow       | Control input 0 - 10 V or PWM, electrically isolated                                    |

## Charts: Air flow 50 Hz



Measurement: LU-68538

## Measured values

|    | U   | f    | n                    | P <sub>1</sub> | I    | $\hat{V}$ | P <sub>fa</sub> |
|----|-----|------|----------------------|----------------|------|-----------|-----------------|
|    | [V] | [Hz] | [min <sup>-1</sup> ] | [W]            | [A]  | [m³/h]    | [Pa]            |
| 1  | 230 | 50   | 4480                 | 43             | 0.32 | 430       | 0               |
| 2  | 230 | 50   | 4435                 | 47             | 0.35 | 365       | 120             |
| 3  | 230 | 50   | 4385                 | 49             | 0.38 | 290       | 240             |
| 4  | 230 | 50   | 4430                 | 47             | 0.36 | 170       | 360             |
| 5  | 230 | 50   | 4000                 | 31             | 0.23 | 385       | 0               |
| 6  | 230 | 50   | 4000                 | 35             | 0.26 | 330       | 97              |
| 7  | 230 | 50   | 4000                 | 38             | 0.29 | 265       | 201             |
| 8  | 230 | 50   | 4000                 | 34             | 0.26 | 155       | 294             |
| 9  | 230 | 50   | 3200                 | 16             | 0.12 | 305       | 0               |
| 10 | 230 | 50   | 3200                 | 18             | 0.13 | 265       | 62              |
| 11 | 230 | 50   | 3200                 | 19             | 0.15 | 210       | 128             |
| 12 | 230 | 50   | 3200                 | 18             | 0.14 | 125       | 188             |
| 13 | 230 | 50   | 2400                 | 6.61           | 0.05 | 230       | 0               |
| 14 | 230 | 50   | 2400                 | 7.48           | 0.06 | 200       | 35              |
| 15 | 230 | 50   | 2400                 | 8.11           | 0.06 | 160       | 72              |
| 16 | 230 | 50   | 2400                 | 7.42           | 0.06 | 90        | 106             |