

R3G280-AC66-30

EC centrifugal fan

backward-curved, single-intake



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Nominal data

| | | |
|--------------------------|-------------------|----------|
| Type | R3G280-AC66-30 | |
| Motor | M3G084-CA | |
| Nominal voltage | VDC | 48 |
| Nominal voltage range | VDC | 36 .. 57 |
| Method of obtaining data | | fa |
| Speed (rpm) | min ⁻¹ | 2000 |
| Power consumption | W | 135 |
| Current draw | A | 2.85 |
| 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 η_{es} | % | 53.1 | 43.9 | 09 Power consumption P_e | kW | 0.18 |
| 02 Measurement category | | A | | 09 Air flow q_v | m ³ /h | 1270 |
| 03 Efficiency category | | Static | | 09 Pressure increase p_{fs} | Pa | 250 |
| 04 Efficiency grade N | | 71.2 | 62 | 10 Speed (rpm) n | min ⁻¹ | 1925 |
| 05 Variable speed drive | | Yes | | 11 Specific ratio* | | 1.00 |

Data obtained at optimum efficiency level.

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

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

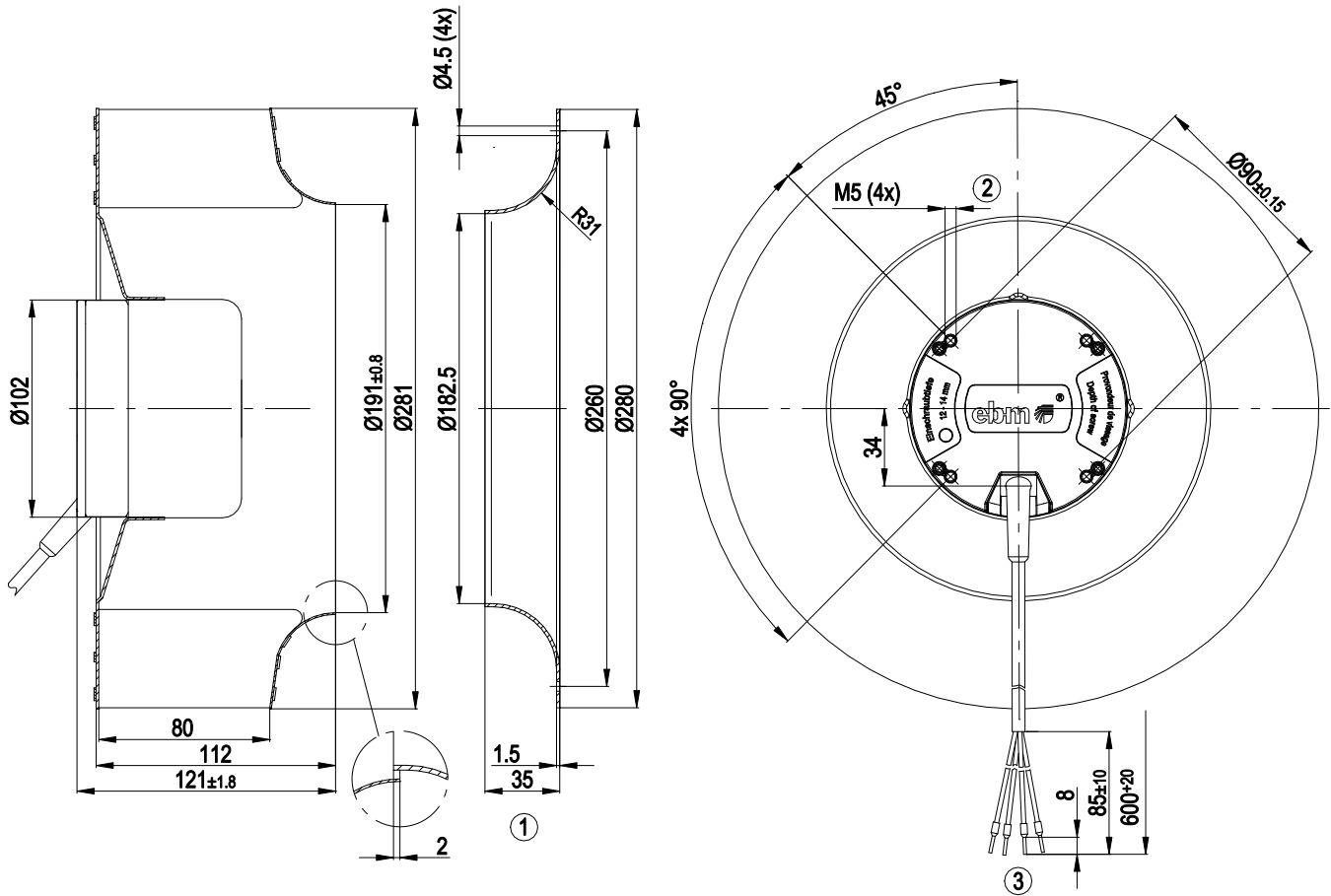
LU-61034



Technical description

| | |
|---|---|
| Weight | 3.3 kg |
| Size | 280 mm |
| Motor size | 84 |
| Rotor surface | Painted black |
| Electronics housing material | Die-cast aluminum |
| Impeller material | Sheet steel, galvanized |
| Number of blades | 11 |
| Direction of rotation | Clockwise, viewed toward rotor |
| Degree of protection | IP42 |
| 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 | None |
| Mode | S1 |
| Motor bearing | Ball bearing |
| Technical features | <ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection |
| Motor protection | Thermal overload protector (TOP) internally connected |
| With cable | Variable |
| Protection class assignment | <p>Built-in component, protection class is based on the intended installation.</p> <p>This component for installation may have several local protection classes. This information relates to this component's basic design.</p> <p>The final protection class is based on the component's intended installation and connection.</p> |
| Conformity with standards | EN 61800-5-1; CE |
| Approval | UL 1004-1; EAC; CCC; CSA C22.2 No. 100 |

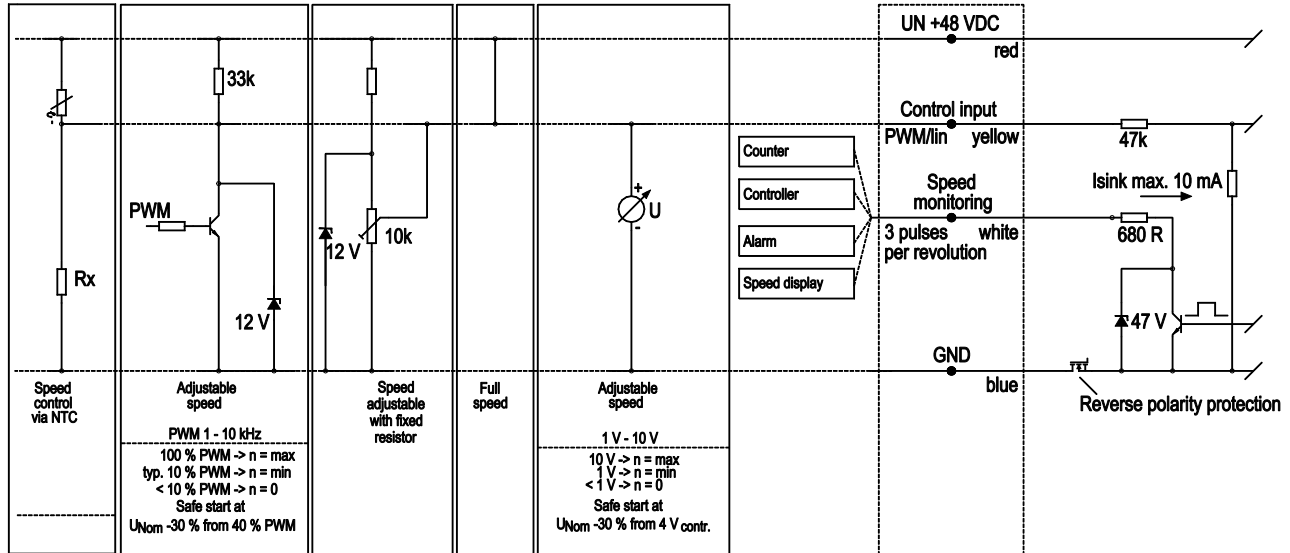
Product drawing



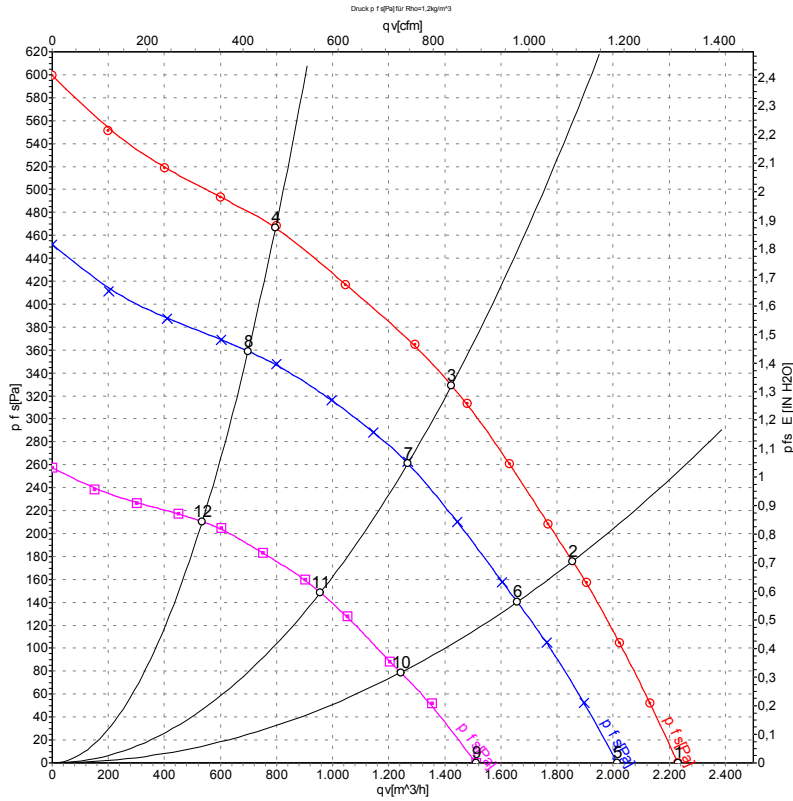
- | | |
|---|---|
| 1 | Accessory part: inlet ring 96360-2-4013 not included in scope of delivery |
| 2 | Clearance for screw 12-14 mm |
| 3 | Cable PVC AWG16, 4x crimped ferrules |

Connection diagram

Customer circuit
Application notes for various control options



Curves: Air performance



Measurement: LU-72884-1
 Measurement: LU-61034-1
 Measurement: LU-72885-1

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 _{ed} | I | q _v | p _{fs} | q _v | p _{fs} |
|----|----|-------------------|-----------------|------|-------------------|-----------------|----------------|-----------------|
| | V | min ⁻¹ | W | A | m ³ /h | Pa | cfm | in. wg |
| 1 | 57 | 2305 | 212 | 3.74 | 2230 | 0 | 1315 | 0.00 |
| 2 | 57 | 2245 | 257 | 4.55 | 1855 | 176 | 1090 | 0.71 |
| 3 | 57 | 2210 | 281 | 4.97 | 1425 | 329 | 840 | 1.32 |
| 4 | 57 | 2270 | 242 | 4.27 | 795 | 469 | 470 | 1.88 |
| 5 | 48 | 2000 | 135 | 2.85 | 2015 | 0 | 1185 | 0.00 |
| 6 | 48 | 1955 | 173 | 3.64 | 1660 | 140 | 975 | 0.56 |
| 7 | 48 | 1920 | 185 | 3.80 | 1270 | 260 | 745 | 1.04 |
| 8 | 48 | 1980 | 160 | 3.35 | 700 | 360 | 410 | 1.45 |
| 9 | 36 | 1550 | 65 | 1.81 | 1510 | 0 | 890 | 0.00 |
| 10 | 36 | 1520 | 80 | 2.23 | 1245 | 79 | 730 | 0.32 |
| 11 | 36 | 1505 | 87 | 2.45 | 955 | 149 | 565 | 0.60 |
| 12 | 36 | 1530 | 75 | 2.09 | 535 | 210 | 315 | 0.84 |

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

