**K3G400-RP45-A2**

# EC centrifugal module - RadiCal

backward curved, single inlet

with support bracket

**ebm-papst Mulfingen GmbH & Co. KG**
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

## Nominal data

| | |
|---|---|
| **Type** | **K3G400-RP45-A2** |
| **Motor** | **M3G084-FA** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed (rpm) | $min^{-1}$ | 1270 |
| Power input | W | 330 |
| Current draw | A | 1.46 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 40 |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

## Data according to ErP directive

| | | Actual | Request 2015 |
|---|---|---|---|
| 01 Overall efficiency $\eta_{es}$ | % | 64.3 | 46.3 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 80 | 62 |
| 05 Variable speed drive | | Yes | |

| | | |
|---|---|---|
| 09 Power input $P_{ed}$ | kW | 0.32 |
| 09 Air flow $q_v$ | $m^3/h$ | 2805 |
| 09 Pressure increase $p_{fs}$ | Pa | 242 |
| 10 Speed (rpm) n | $min^{-1}$ | 1270 |
| 11 Specific ratio* | | 1.00 |

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-140434

# EC centrifugal module - RadiCal

backward curved, single inlet

with support bracket

## Technical features

| | |
|---|---|
| **Mass** | 11 kg |
| **Size** | 400 mm |
| **Surface of rotor** | Coated in black |
| **Material of electronics housing** | Die-cast aluminium |
| **Material of impeller** | PP plastic |
| **Material of mounting plate** | Sheet steel, galvanised |
| **Material of support bracket** | Steel, coated in black |
| **Material of inlet nozzle** | Sheet steel, galvanised |
| **Number of blades** | 6 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **Insulation class** | "B" |
| **Humidity (F)/environmental protection class (H)** | F3-1 |
| **Max. permissible ambient motor temp. (transp./ storage)** | +80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | -40 °C |
| **Mounting position** | Shaft horizontal or rotor on top; rotor on bottom on request |
| **Condensate discharge holes** | None |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 10 mA<br>- Alarm relay<br>- Motor current limit<br>- PFC, active<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Control interface with SELV potential safely disconnected from the mains<br>- Over-temperature protected electronics / motor<br>- Line undervoltage / phase failure detection |
| **EMC interference immunity** | Acc. to EN 61000-6-2 (industrial environment) |
| **EMC harmonics** | Acc. to EN 61000-3-2/3 |
| **EMC interference emission** | Acc. to EN 61000-6-3 (household environment) |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Thermal overload protector (TOP) wired internally |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer at the connection point of the housing) |
| **Product conforming to standard** | EN 61800-5-1; CE |
| **Approval** | CCC; UL 2111; EAC; CSA C22.2 No.77 |



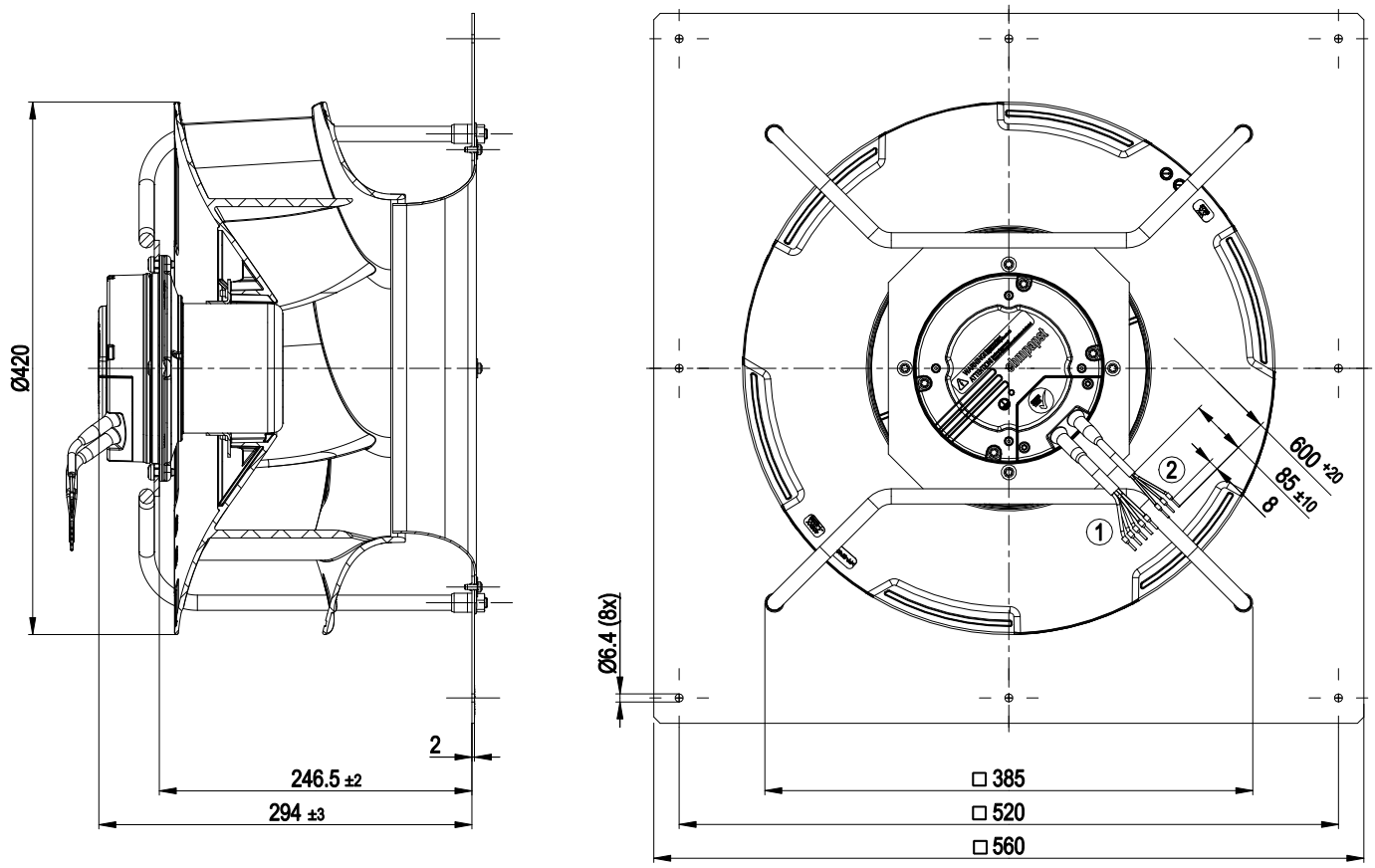
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal module - RadiCal

backward curved, single inlet

with support bracket

## Product drawing




| | |
|---|---|
| 1 | Connection line PVC AWG18, 5x crimped core-end sleeves |
| 2 | Connection line PVC AWG22, 3x crimped core-end sleeves |



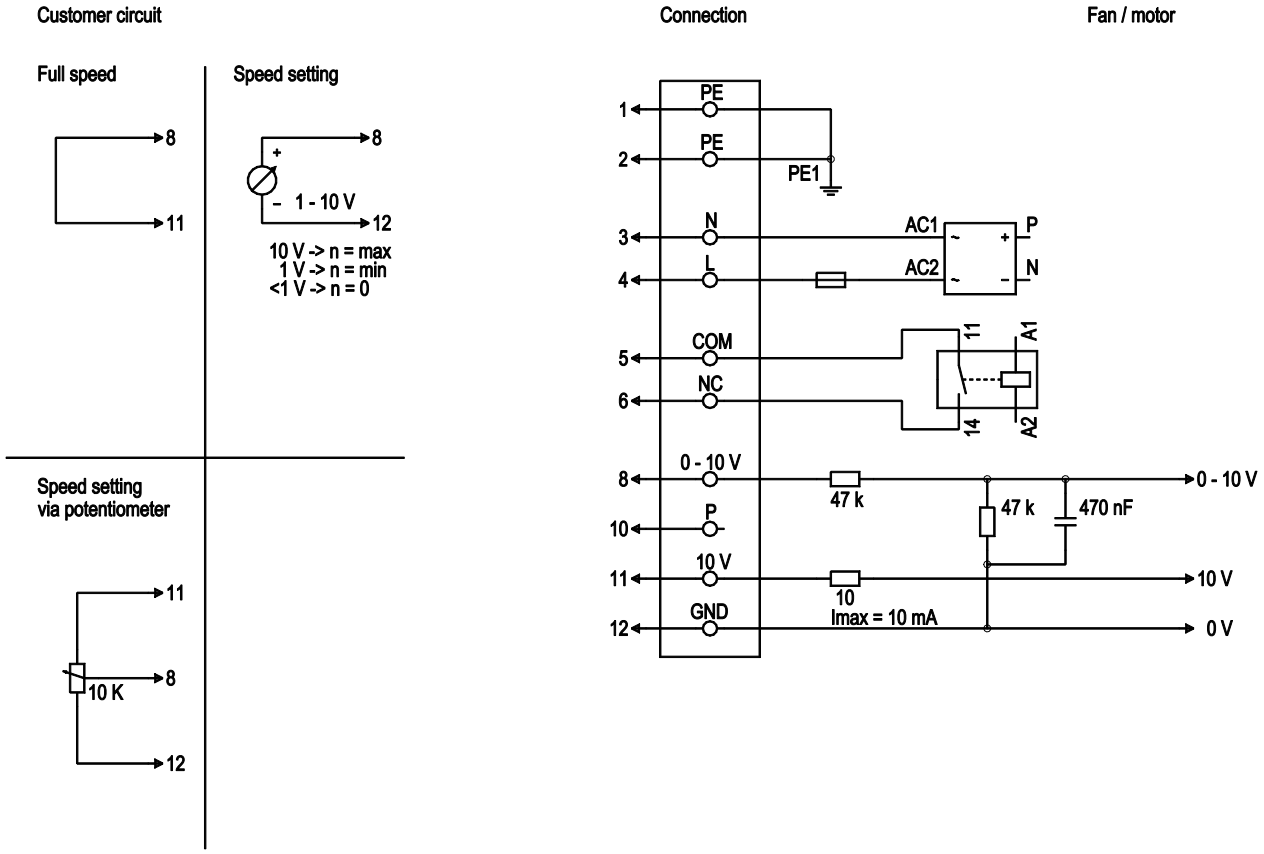
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal module - RadiCal

backward curved, single inlet

with support bracket

## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| 1 | 1, 2 | PE | green/yellow | Protective earth |
| 1 | 3 | N | blue | Supply voltage, neutral conductor, voltage range see rating plate, 50 / 60 Hz |
| 1 | 4 | L | black | Supply voltage, phase, voltage range see rating plate, 50 / 60 Hz |
| 1 | 5 | COM | white 1 | Floating status message contact, normally closed connection (2 A, max. 250 VAC, min. 10 mA) |
| 1 | 6 | NC | white 2 | Floating status message contact, normally closed connection |
| 2 | 8 | 0 -10 V | yellow | Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV |
| 2 | 10 | P | orange | Not assigned |
| 2 | 11 | 10 VDC | red | Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV |
| 2 | 12 | GND | blue | Reference mass for control interface, SELV |



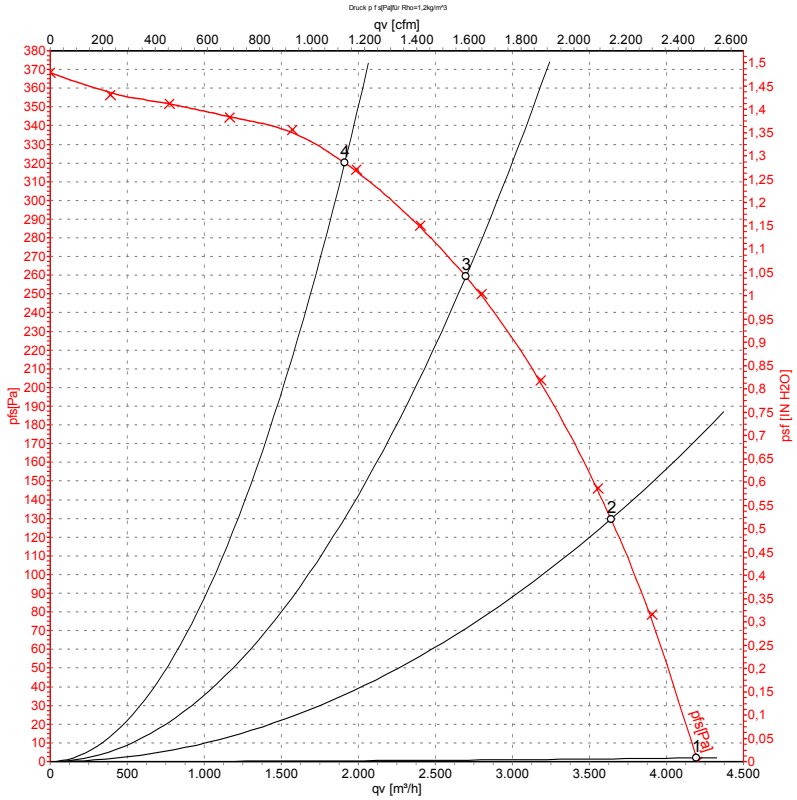
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal module - RadiCal

backward curved, single inlet

with support bracket

## Charts: Air flow 50 Hz




Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

## Measured values

| | U | f | n | $P_{ed}$ | I | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | $m^3/h$ | Pa | cfm | inH2O |
| 1 | 230 | 50 | 1270 | 220 | 1.00 | 75 | 4200 | 0 | 2470 | 0.00 |
| 2 | 230 | 50 | 1270 | 290 | 1.28 | 70 | 3640 | 130 | 2140 | 0.52 |
| 3 | 230 | 50 | 1270 | 330 | 1.46 | 64 | 2700 | 260 | 1590 | 1.04 |
| 4 | 230 | 50 | 1270 | 310 | 1.37 | 64 | 1910 | 320 | 1125 | 1.28 |

U = Supply voltage · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power input · I = Current draw · $LwA_{in}$ = Sound power level inlet side · $q_V$ = Air flow · $p_{fs}$ = Pressure increase



ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com