**K3G190-RC05-22**

# EC centrifugal module

backward curved, single inlet

with housing

**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** | **K3G190-RC05-22** |
| **Motor** | **M3G055-BI** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed (rpm) | $min^{-1}$ | 3200 |
| Power input | W | 83 |
| Current draw | A | 0.75 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 60 |

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

# EC centrifugal module

backward curved, single inlet

with housing

## Technical features

| | |
|---|---|
| **Mass** | 1.5 kg |
| **Size** | 190 mm |
| **Surface of rotor** | Thick layer passivated |
| **Material of impeller** | PA plastic |
| **Housing material** | PA plastic |
| **Number of blades** | 7 |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **Insulation class** | "B" |
| **Max. permissible ambient motor temp. (transp./ storage)** | + 80 °C |
| **Min. permissible ambient motor temp. (transp./storage)** | - 40 °C |
| **Mounting position** | Any |
| **Condensate discharge holes** | None, open rotor |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Output 10 VDC, max. 1.1 mA<br>- Tach output<br>- Output limit<br>- Motor current limit<br>- Soft start<br>- Control input 0-10 VDC / PWM<br>- Control interface with SELV potential safely disconnected from the mains<br>- Overvoltage detection<br>- Over-temperature protected electronics / motor<br>- Line undervoltage detection |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Motor protection** | Locked-rotor protection |
| **Cable exit** | Variable |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 60335-1; CE |



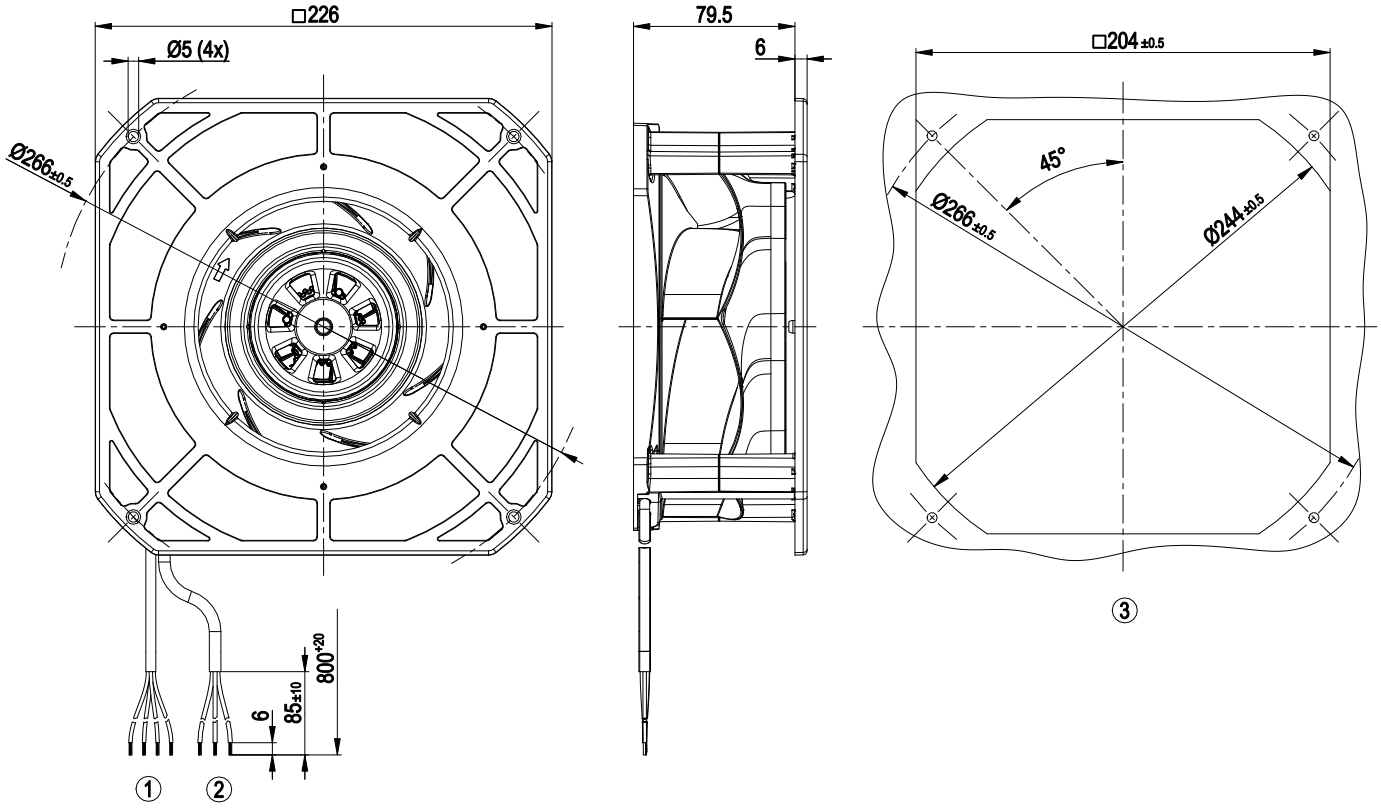
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal module

backward curved, single inlet

with housing

## Product drawing




| | |
|---|---|
| 1 | Connection line PVC AWG22, 4x lead tips crimped |
| 2 | Connection line PVC AWG20, 3x lead tips crimped |
| 3 | Mounting dimensions |



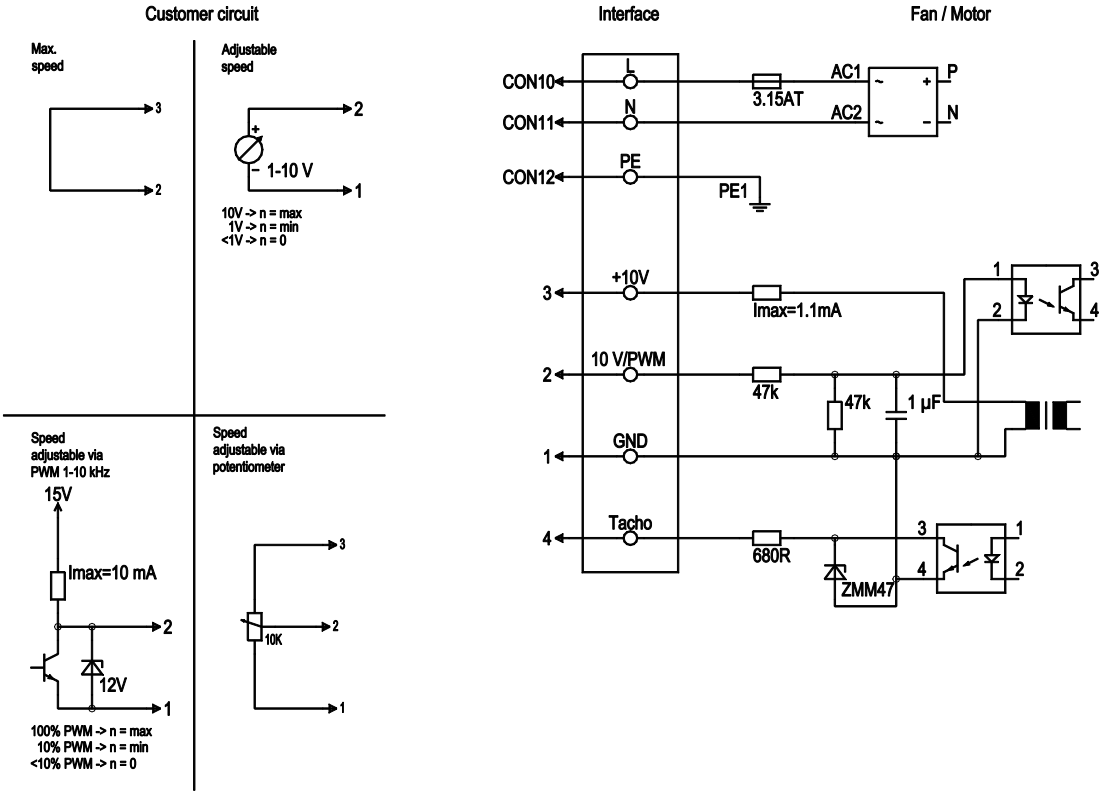
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal module

backward curved, single inlet

with housing

## Connection screen




| No. | Conn. | Designation | Colour | Function / assignment |
|---|---|---|---|---|
| | CON10 | L | black | Power supply 230 VAC, 50-60 Hz, see type plate for voltage range |
| | CON11 | N | blue | Neutral conductor |
| | CON12 | PE | green/yellow | Protective earth |
| | 1 | GND | blue | GND connection for control interface |
| | 2 | 0-10V PWM | yellow | Control input 0-10 V or PWM, electrically isolated |
| | 3 | 10 V / max. 1,1 mA | red | Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof |
| | 4 | Tacho | white | Tach output: Open collector, 1 pulse per revolution, electrically isolated |



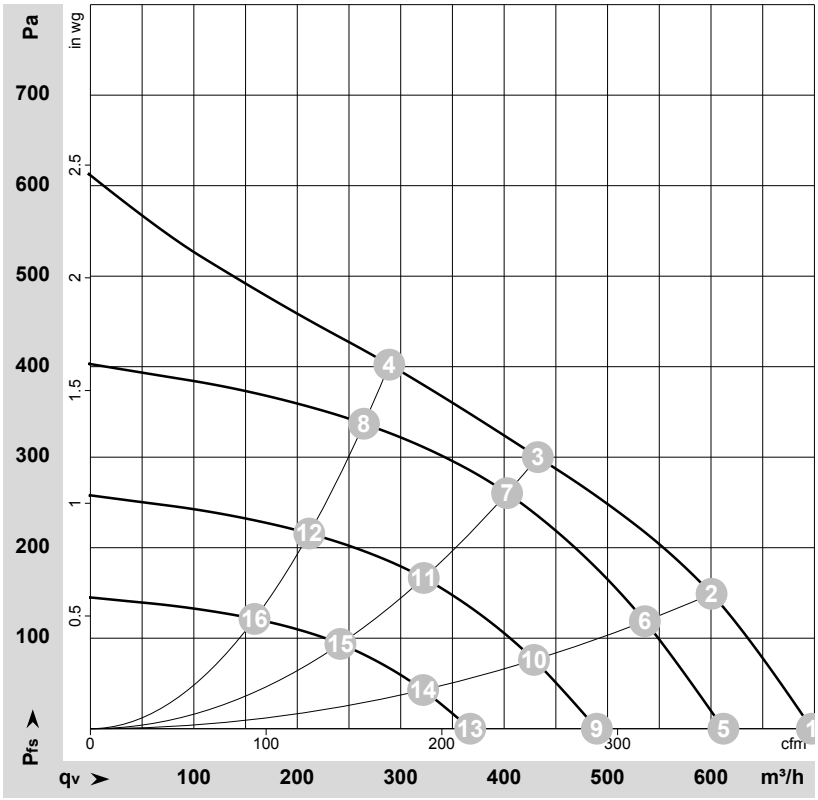
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

# EC centrifugal module

backward curved, single inlet

with housing

## Charts: Air flow 50 Hz




ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-171430-1

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 | $LpA_{in}$ | $LwA_{in}$ | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | $m^3/h$ | Pa | cfm | inH2O |
| 1 | 230 | 50 | 3420 | 75 | 0.67 | 66 | 73 | 695 | 0 | 410 | 0.00 |
| 2 | 230 | 50 | 3360 | 79 | 0.70 | 60 | 68 | 600 | 150 | 355 | 0.60 |
| 3 | 230 | 50 | 3200 | 83 | 0.75 | 58 | 66 | 435 | 300 | 255 | 1.20 |
| 4 | 230 | 50 | 3275 | 83 | 0.73 | 60 | 69 | 290 | 400 | 170 | 1.61 |
| 5 | 230 | 50 | 3000 | 51 | 0.45 | | | 610 | 0 | 360 | 0.00 |
| 6 | 230 | 50 | 3000 | 56 | 0.50 | | | 535 | 119 | 315 | 0.48 |
| 7 | 230 | 50 | 3000 | 69 | 0.60 | | | 405 | 261 | 235 | 1.05 |
| 8 | 230 | 50 | 3000 | 64 | 0.56 | | | 265 | 337 | 155 | 1.35 |
| 9 | 230 | 50 | 2400 | 26 | 0.23 | | | 490 | 0 | 290 | 0.00 |
| 10 | 230 | 50 | 2400 | 29 | 0.26 | | | 430 | 76 | 250 | 0.31 |
| 11 | 230 | 50 | 2400 | 35 | 0.31 | | | 320 | 167 | 190 | 0.67 |
| 12 | 230 | 50 | 2400 | 33 | 0.29 | | | 210 | 216 | 125 | 0.87 |
| 13 | 230 | 50 | 1800 | 11 | 0.10 | | | 365 | 0 | 215 | 0.00 |
| 14 | 230 | 50 | 1800 | 12 | 0.11 | | | 320 | 43 | 190 | 0.17 |
| 15 | 230 | 50 | 1800 | 15 | 0.13 | | | 240 | 94 | 140 | 0.38 |
| 16 | 230 | 50 | 1800 | 14 | 0.12 | | | 160 | 121 | 95 | 0.49 |

U = Supply voltage · f = Frequency · n = Speed (rpm) · $P_{ed}$ = Power input · I = Current draw · $LpA_{in}$ = Sound pressure level inlet side · $LwA_{in}$ = 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