**K3G310-AJ38-58**

# EC centrifugal module

backward-curved, single-intake

with support plate

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## Nominal data

| | |
|---|---|
| **Type** | **K3G310-AJ38-58** |
| **Motor** | **M3G084-DF** |

| | | |
|---|---|---|
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | ml |
| Speed (rpm) | $min^{-1}$ | 2230 |
| Power consumption | W | 380 |
| Current draw | A | 1.7 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 40 |

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 $\eta_{es}$ | % | 59.4 | 47.1 |
| 02 Measurement category | | A | |
| 03 Efficiency category | | Static | |
| 04 Efficiency grade N | | 74.3 | 62 |
| 05 Variable speed drive | | Yes | |

| | | |
|---|---|---|
| 09 Power consumption $P_{ed}$ | kW | 0.38 |
| 09 Air flow $q_v$ | $m^3/h$ | 1600 |
| 09 Pressure increase $p_{fs}$ | Pa | 459 |
| 10 Speed (rpm) n | $min^{-1}$ | 2230 |
| 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 Pa

LU-107928

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## Technical description

| | |
|---|---|
| **Weight** | 7.4 kg |
| **Size** | 310 mm |
| **Motor size** | 84 |
| **Rotor surface** | Painted black |
| **Electronics housing material** | Die-cast aluminum |
| **Blade material** | Sheet aluminum |
| **Support plate material** | Sheet aluminum |
| **Spacer material** | Aluminum |
| **Inlet nozzle material** | Sheet aluminum |
| **Number of blades** | 6 |
| **Direction of rotation** | Clockwise, viewed toward rotor |
| **Degree of protection** | IP20 |
| **Insulation class** | "B" |
| **Moisture (F) / Environmental (H) protection class** | H0 - dry environment |
| **Max. permitted ambient temp. for motor (transport/storage)** | +80 °C |
| **Min. permitted ambient temp. for motor (transport/storage)** | -40 °C |
| **Installation position** | Shaft horizontal or rotor on top; rotor on bottom on request |
| **Condensation drainage holes** | None |
| **Mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - Operation and alarm display with LED<br>- Integrated PID controller<br>- Motor current limitation<br>- PFC, active<br>- RS-485 ebmBUS<br>- Soft start<br>- Control interface with SELV potential safely disconnected from the mains<br>- Thermal overload protection for electronics/motor<br>- Line undervoltage / phase failure detection |
| **Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical hookup** | Connector with cable |
| **Motor protection** | Thermal overload protector (TOP) internally connected |
| **With cable** | Variable |
| **Protection class** | I (with customer connection of protective earth) |
| **Conformity with standards** | EN 61800-5-1; CE |
| **Approval** | CSA C22.2 No. 77; UL 1004-3 |



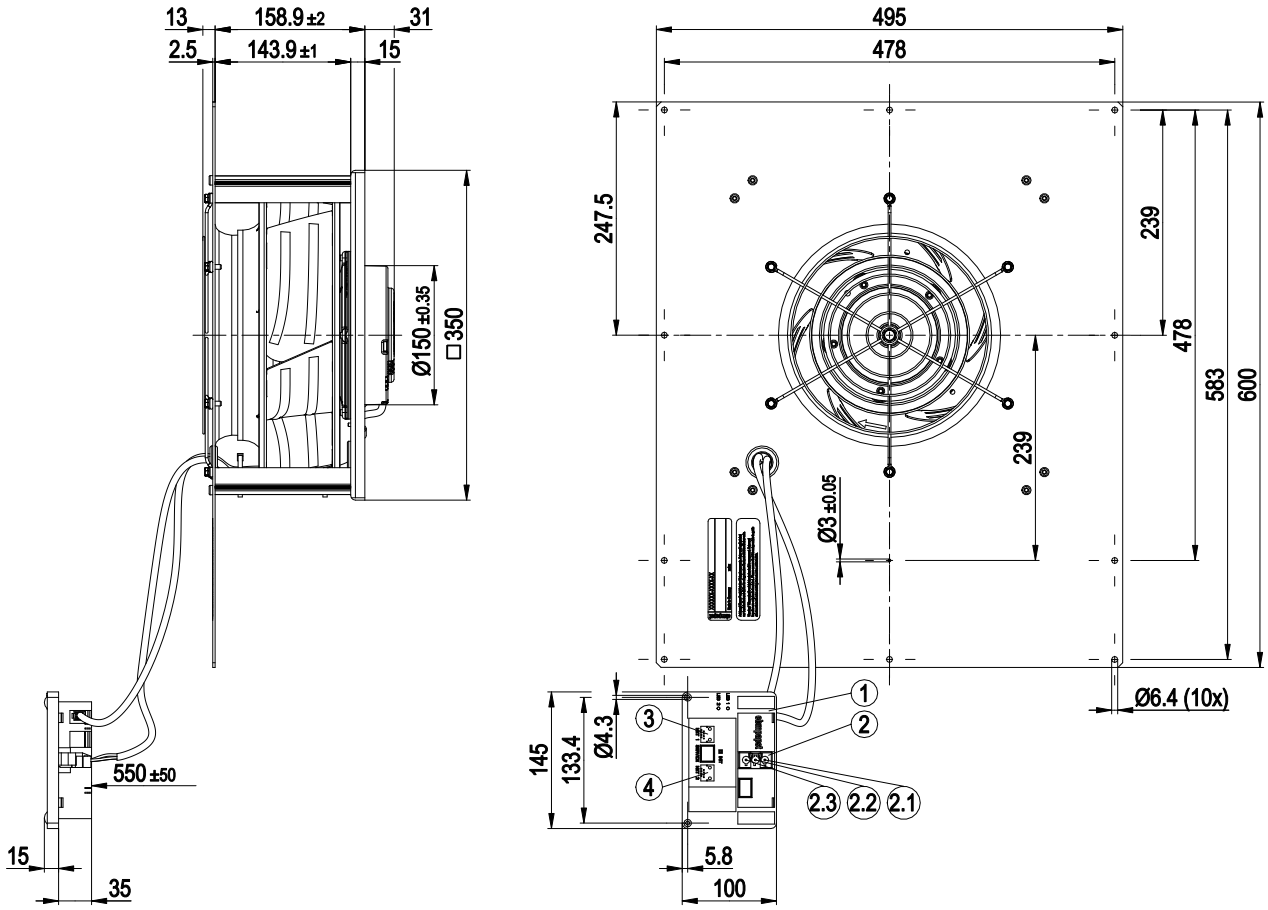
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## Product drawing




| | |
|---|---|
| 1 | Terminal box |
| 2 | Connector housing 3-pole GST18/3 Wieland 92.032.9058.1 |
| 2.1 | N |
| 2.2 | PE |
| 2.3 | L |
| 3 | 8-pole connector housing TE 100616-2 |
| 4 | 8-pole connector housing TE 100616-2 |



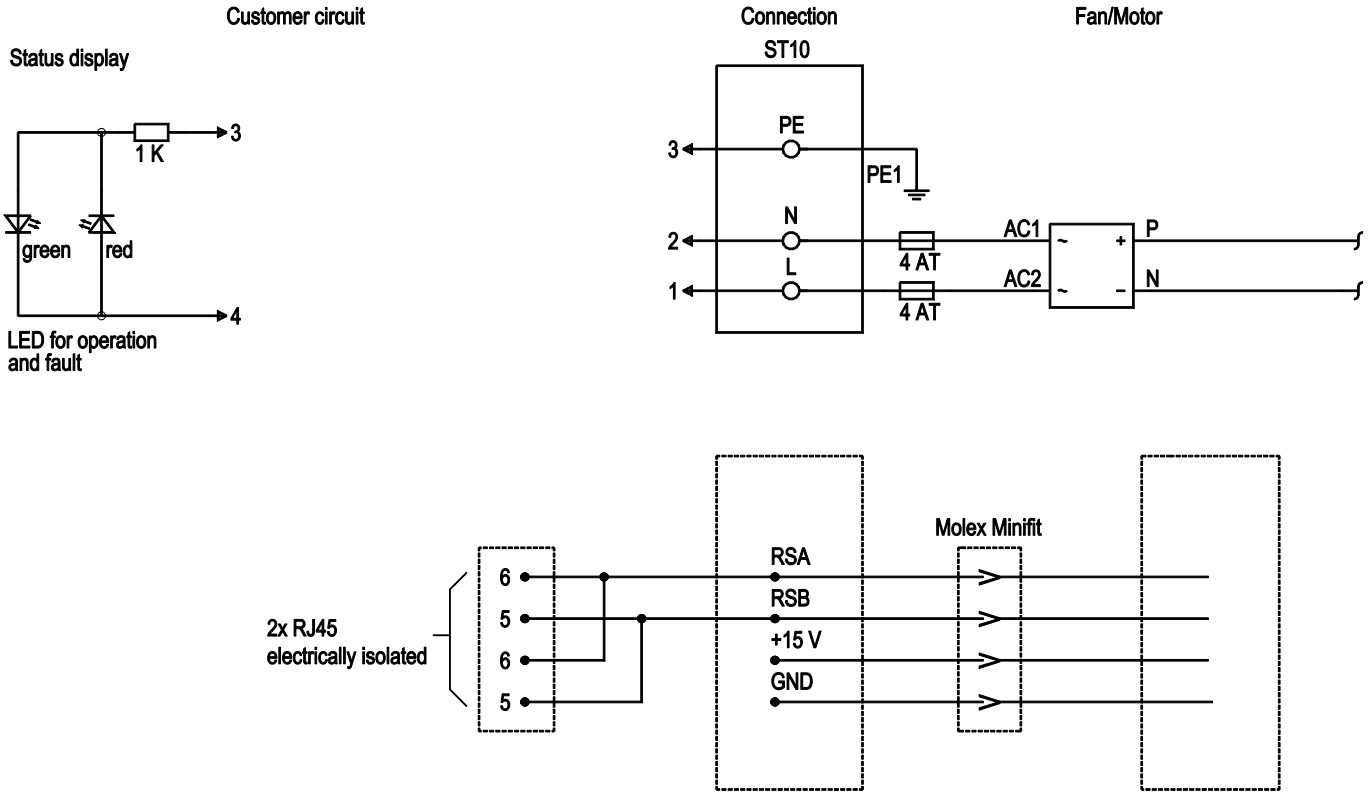
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## Connection diagram




| No. | Conn. | Designation | Function/assignment |
|---|---|---|---|
| 3 | PE | | Protective earth |
| 2 | N | | Supply connection, power supply, neutral conductor, voltage range see nameplate, 50/60 Hz |
| 1 | L | | Supply connection, power supply, phase, voltage range see nameplate, 50/60 Hz |
| 6 | RSA | | Bus connection RS485, RSA, ebmBUS; SELV |
| 5 | RSB | | Bus connection RS485, RSB, ebmBUS; SELV |



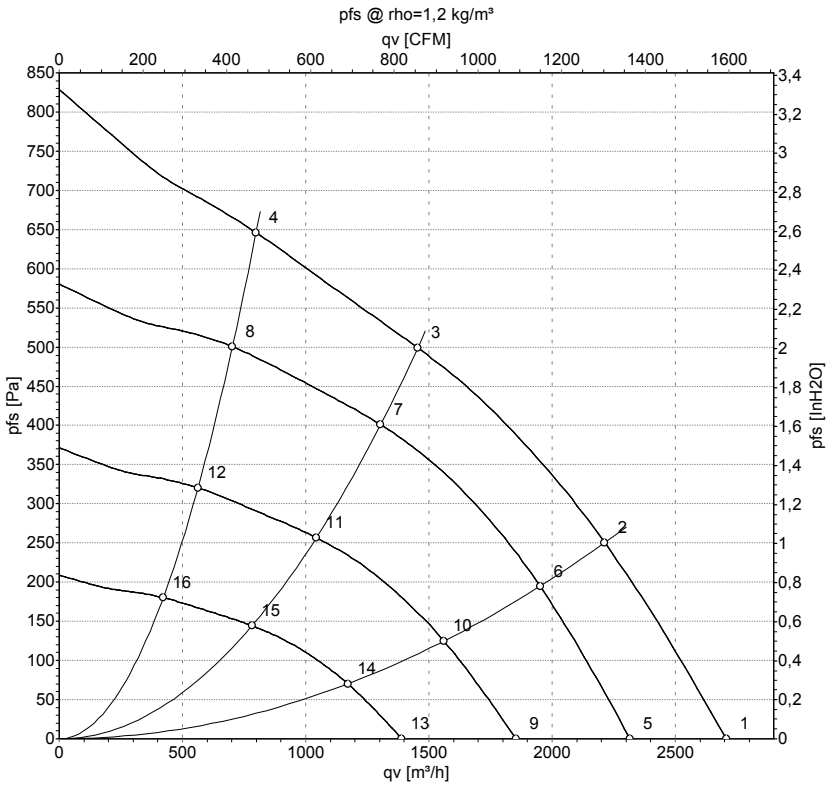
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## Curves: Air performance 50 Hz




Measurement: LU-107928-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. 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 | f | n | $P_{ed}$ | I | $q_V$ | $p_{fs}$ | $q_V$ | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | $m^3/h$ | Pa | cfm | in. wg |
| 1 | 230 | 50 | 2335 | 282 | 1.24 | 2710 | 0 | 1595 | 0.00 |
| 2 | 230 | 50 | 2270 | 351 | 1.54 | 2215 | 250 | 1305 | 1.00 |
| 3 | 230 | 50 | 2230 | 380 | 1.70 | 1455 | 500 | 855 | 2.01 |
| 4 | 230 | 50 | 2270 | 348 | 1.52 | 800 | 650 | 470 | 2.61 |
| 5 | 230 | 50 | 2000 | 177 | 0.77 | 2315 | 0 | 1365 | 0.00 |
| 6 | 230 | 50 | 2000 | 240 | 1.05 | 1950 | 195 | 1150 | 0.78 |
| 7 | 230 | 50 | 2000 | 275 | 1.20 | 1305 | 401 | 770 | 1.61 |
| 8 | 230 | 50 | 2000 | 238 | 1.04 | 705 | 502 | 415 | 2.02 |
| 9 | 230 | 50 | 1600 | 90 | 0.40 | 1855 | 0 | 1090 | 0.00 |
| 10 | 230 | 50 | 1600 | 123 | 0.54 | 1560 | 125 | 920 | 0.50 |
| 11 | 230 | 50 | 1600 | 141 | 0.62 | 1045 | 257 | 615 | 1.03 |
| 12 | 230 | 50 | 1600 | 122 | 0.53 | 565 | 321 | 330 | 1.29 |
| 13 | 230 | 50 | 1200 | 38 | 0.17 | 1390 | 0 | 820 | 0.00 |
| 14 | 230 | 50 | 1200 | 52 | 0.23 | 1170 | 70 | 690 | 0.28 |
| 15 | 230 | 50 | 1200 | 59 | 0.26 | 785 | 144 | 460 | 0.58 |
| 16 | 230 | 50 | 1200 | 51 | 0.22 | 420 | 181 | 250 | 0.73 |

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



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