**W3G650-CK07-13**

# EC axial fan

sickled blades (S series)

with full square nozzle

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## Nominal data

| | |
|---|---|
| **Type** | **W3G650-CK07-13** |
| **Motor** | **M3G150-IF** |

| | | |
|---|---|---|
| Phase | | 3~ |
| Nominal voltage | VAC | 200 |
| Nominal voltage range | VAC | 200 .. 240 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed | $min^{-1}$ | 1500 |
| Power input | W | 2870 |
| Current draw | A | 8.8 |
| Max. back pressure | Pa | 350 |
| 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

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## Technical features

| | |
|---|---|
| **Mass** | 43 kg |
| **Size** | 650 mm |
| **Surface of rotor** | Coated in black |
| **Material of electronics housing** | Die-cast aluminium, coated in black |
| **Material of blades** | Die-cast aluminium |
| **Material of wall ring** | Sheet steel, pre-galvanised and coated in black plastic |
| **Material of guard grille** | Steel, phosphated and coated in black plastic |
| **Number of blades** | 5 |
| **Blade angle** | -5° |
| **Direction of air flow** | "V" |
| **Direction of rotation** | Clockwise, seen on rotor |
| **Type of protection** | IP 54 |
| **Insulation class** | "F" |
| **Humidity class** | F4-1 |
| **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 bottom; rotor on top on request |
| **Condensate discharge holes** | Rotor-side |
| **Operation mode** | S1 |
| **Motor bearing** | Ball bearing |
| **Technical features** | - PFC, passive<br>- Control input 0-10 VDC / PWM<br>- Over-temperature protected electronics / motor<br>- Alarm relay<br>- Integrated PID controller<br>- Input for sensor 0-10 V or 4-20 mA<br>- Output for slave 0-10 V<br>- RS485 ebmBUS<br>- Motor current limit<br>- Soft start<br>- Line undervoltage / phase failure detection<br>- Output 10 VDC, max. 10 mA<br>- Output 20 VDC, max. 50 mA |
| **Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)** | <= 3.5 mA |
| **Electrical leads** | Via terminal box |
| **Motor protection** | Reverse polarity and locked-rotor protection |
| **Protection class** | I (if protective earth is connected by customer) |
| **Product conforming to standard** | EN 61800-5-1; CE |
| **Approval** | GOST; UL 2111; CSA C22.2 Nr.77 |



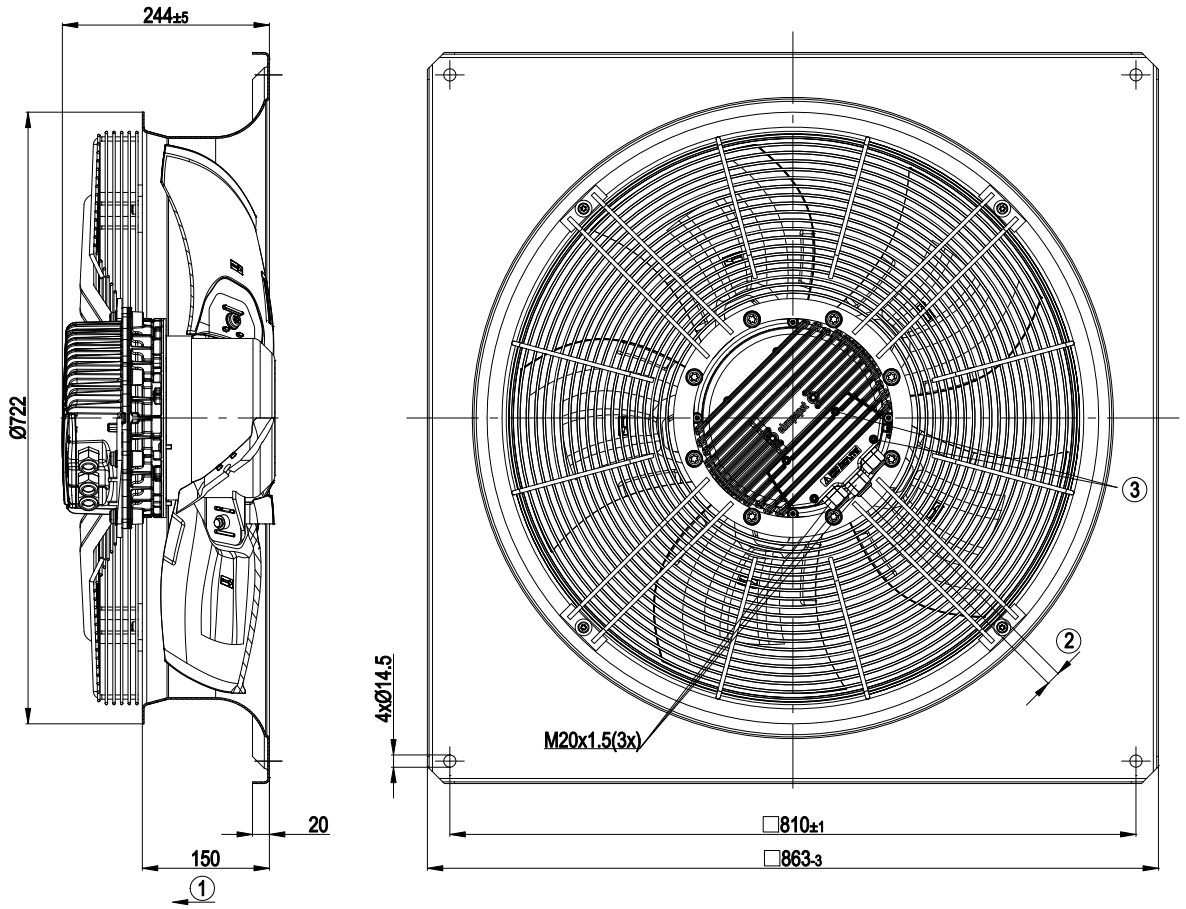
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## Product drawing




| | |
|---|---|
| 1 | Direction of air flow "V" |
| 2 | Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 4±0.6 Nm |
| 3 | Tightening torque 3.5±0.5 Nm |



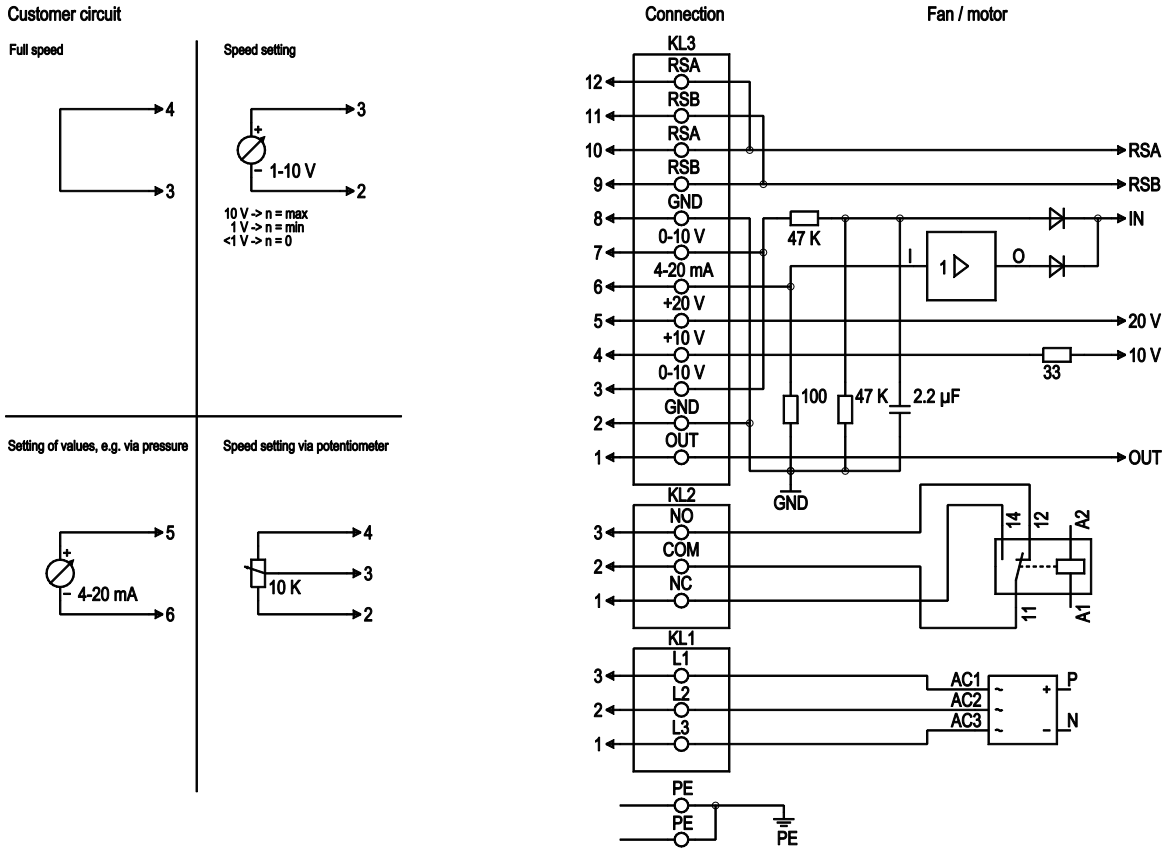
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## Connection screen




| No. | Pin | Signal | Function / assignment |
|---|---|---|---|
| PE | | PE | Protective earth connection |
| KL1 | 1, 2, 3 | L1, L2, L3 | Supply voltage, 50/60 Hz |
| KL2 | 1 | NC | Floating status message contact, normally closed connection |
| KL2 | 2 | COM | Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1) |
| KL2 | 3 | NO | Floating status message contact, normally open connection |
| KL3 | 1 | OUT | Analog output, 0-10 VDC, max. 3 mA, SELV, output of the current level control coefficient: 1 V equates to 10 % level control coefficient. 10 V equate to 100 % level control coefficient. |
| KL3 | 2, 8 | GND | Reference mass for control interface, SELV |
| KL3 | 3, 7 | 0-10 V | Use control / actual value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV |
| KL3 | 4 | +10 V | Voltage output 10 VDC (+/-3 %), max. 10 mA, supply voltage for ext. devices (e.g. potentiometers), SELV |
| KL3 | 5 | +20 V | Voltage output 20 VDC (+25 %/-10 %), max. 50 mA, supply voltage for ext. devices (e.g. sensors), SELV |
| KL3 | 6 | 4-20 mA | Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV |
| KL3 | 9, 11 | RSB | RS485 interface for ebmBus, RSB, SELV |
| KL3 | 10, 12 | RSA | RS485 interface for ebmBus, RSA, SELV |



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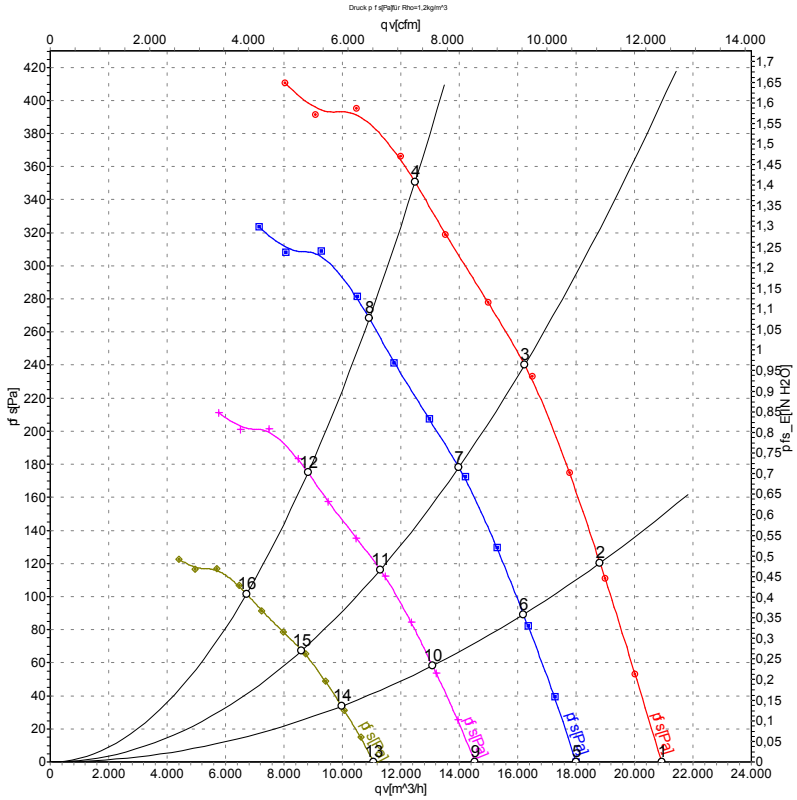
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## Charts: Air flow 50 Hz




Measurement: LU-105851

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 | $LpA_{in}$ | $LwA_{in}$ | $LwA_{out}$ | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| | V | Hz | $min^{-1}$ | W | A | dB(A) | dB(A) | dB(A) | $m^3/h$ | Pa |
| 1 | 200 | 50 | 1500 | 2021 | 6.20 | 76 | 82 | 83 | 20930 | 0 |
| 2 | 200 | 50 | 1500 | 2372 | 7.31 | 75 | 82 | 82 | 18820 | 120 |
| 3 | 200 | 50 | 1500 | 2739 | 8.47 | 77 | 83 | 83 | 16240 | 240 |
| 4 | 200 | 50 | 1500 | 2939 | 8.80 | 81 | 87 | 87 | 12490 | 350 |
| 5 | 200 | 50 | 1300 | 1284 | 3.94 | 73 | 79 | 80 | 18000 | 0 |
| 6 | 200 | 50 | 1300 | 1513 | 4.66 | 72 | 79 | 79 | 16200 | 89 |
| 7 | 200 | 50 | 1300 | 1749 | 5.41 | 73 | 80 | 80 | 13990 | 179 |
| 8 | 200 | 50 | 1300 | 1966 | 6.11 | 78 | 84 | 84 | 10920 | 268 |
| 9 | 200 | 50 | 1050 | 677 | 2.08 | 68 | 75 | 76 | 14530 | 0 |
| 10 | 200 | 50 | 1050 | 797 | 2.46 | 68 | 74 | 74 | 13090 | 58 |
| 11 | 200 | 50 | 1050 | 921 | 2.85 | 69 | 75 | 75 | 11300 | 117 |
| 12 | 200 | 50 | 1050 | 1036 | 3.22 | 73 | 79 | 79 | 8820 | 175 |
| 13 | 200 | 50 | 800 | 299 | 0.92 | 62 | 69 | 70 | 11070 | 0 |
| 14 | 200 | 50 | 800 | 353 | 1.09 | 62 | 68 | 69 | 9970 | 34 |
| 15 | 200 | 50 | 800 | 408 | 1.26 | 63 | 69 | 69 | 8605 | 68 |
| 16 | 200 | 50 | 800 | 458 | 1.42 | 67 | 73 | 73 | 6720 | 102 |

U = Supply voltage · f = Frequency · n = Speed · $P_{ed}$ = Power input · I = Current draw · $LpA_{in}$ = Sound pressure level inlet side · $LwA_{in}$ = Sound power level inlet side · $LwA_{out}$ = Sound power level outlet side
qv = Air flow · $p_{fs}$ = Pressure increase



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