

EC axial fan

sickle-shaped blades (S series)
with guard grille for short nozzle

S3G800-CM65-29 ebmpapst Datasheet
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Limited partnership · Headquarters Muldingen
Amtsgericht (court of registration) Stuttgart · HRA 590344
General partner Elektrobau Muldingen GmbH · Headquarters Muldingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

| | | |
|--------------------------|--------------------|------------|
| Type | S3G800-CM65-29 | |
| Motor | M3G112-EA | |
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Method of obtaining data | | ml/ce |
| Speed (rpm) | min ⁻¹ | 435 |
| Power consumption | W | 167 |
| Current draw | A | 0.8 |
| Max. back pressure | Pa | 29 |
| Max. back pressure | inH ₂ O | 0.12 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 65 |

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

| | | Actual | Req. 2015 | | |
|-----------------------------------|---|--------|-----------|-------------------------------|-------------------|
| 01 Overall efficiency η_{es} | % | 36.5 | 28.6 | 09 Power consumption P_{ed} | kW |
| 02 Measurement category | | A | | 09 Air flow q_v | m ³ /h |
| 03 Efficiency category | | Static | | 09 Pressure increase p_{fs} | Pa |
| 04 Efficiency grade N | | 47.9 | 40 | 10 Speed (rpm) n | min ⁻¹ |
| 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 = $1 + p_s / 100\,000\text{ Pa}$

LU-115942



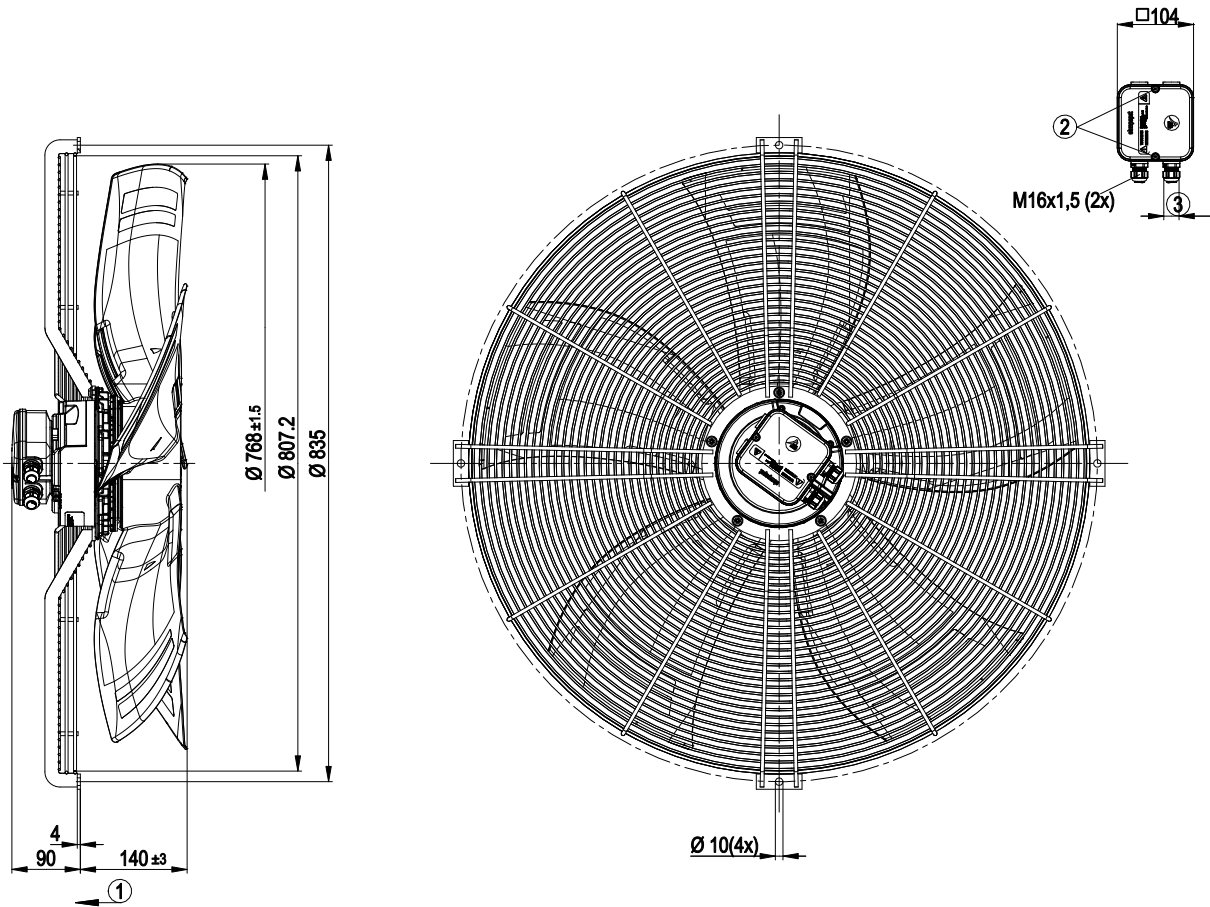
Technical description

| | |
|--|--|
| Weight | 15 kg |
| Fan size | 800 mm |
| Rotor surface | Painted black |
| Electronics housing material | Die-cast aluminum, painted black |
| Blade material | Press-fitted sheet steel blank, sprayed with PP plastic |
| Guard grille material | Steel, coated with black plastic (RAL 9005) |
| Number of blades | 5 |
| Airflow direction | "V" |
| Direction of rotation | Clockwise, viewed toward rotor |
| Degree of protection | IP54 |
| Insulation class | "F" |
| Moisture (F) / Environmental (H) protection class | F4-1 |
| 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 bottom; rotor on top on request |
| Condensation drainage holes | On rotor side |
| Mode | S1 |
| Motor bearing | Ball bearing |
| Technical features | <ul style="list-style-type: none"> - Bus terminating resistor 120 Ohm - Selection of direction of rotation left/right - External 24 V input (parameter setting) - Shake-loose function - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection |
| EMC immunity to interference | According to EN 61000-6-2 (industrial environment) |
| EMC circuit feedback | According to EN 61000-3-2/3 |
| EMC interference emission | According to EN 61000-6-3 (household environment) |
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA |
| Electrical hookup | Via terminal box |
| Motor protection | Thermal overload protector (TOP) internally connected |
| Protection class | I (with customer connection of protective earth) |
| Conformity with standards | EN 61800-5-1; CE |
| Approval | EAC |

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Product drawing



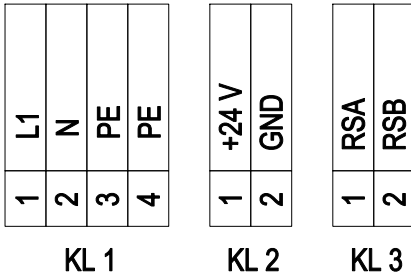
| | |
|---|--|
| 1 | Direction of air flow "V" |
| 2 | Tightening torque 1.5 ± 0.2 Nm |
| 3 | Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm |



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Connection diagram



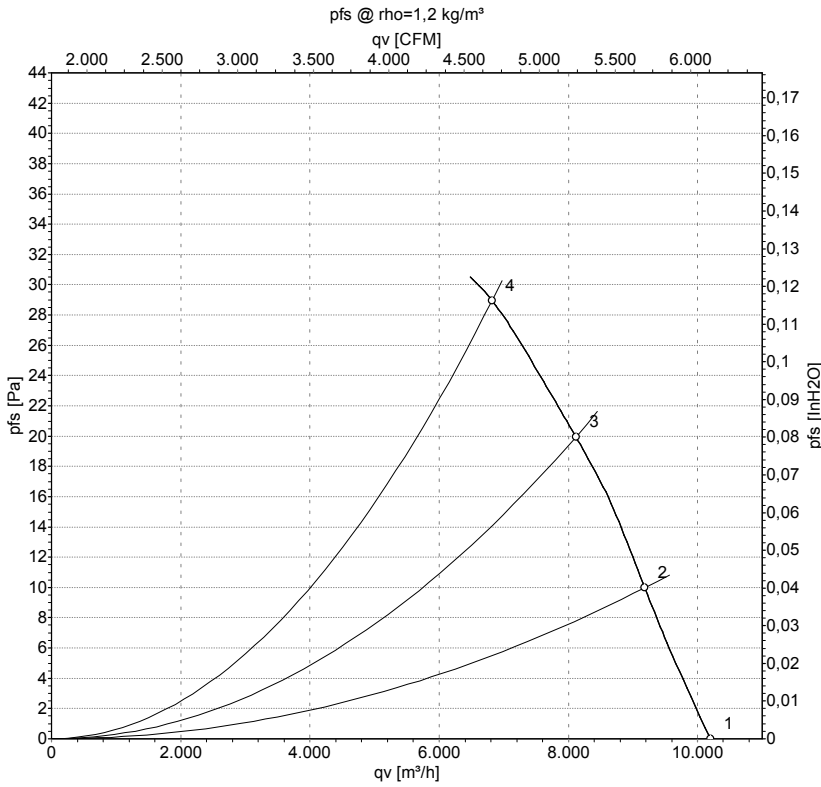
| No. | Conn. | Designation | Function/assignment |
|------|-------|-------------|---|
| KL 1 | 1, 2 | L1, N | Power supply 50/60 Hz |
| KL 1 | 3, 4 | PE | Protective earth terminal |
| KL 2 | 1 | +24 V | Parameter-setting input 24 VDC \pm 15%, Isink max. 40 mA, external feed |
| KL 2 | 2 | GND | Reference ground for interface SELV |
| KL 3 | 1 | RSA | RS485 interface for MODBUS, RSA |
| KL 3 | 2 | RSB | RS485 interface for MODBUS, RSB |



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Curves: Air performance 50 Hz



Measurement: LU-115942-1

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 | LpA _{in} | LwA _{in} | LwA _{out} | q _v | p _{fs} | q _v | p _{fs} |
|---|-----|----|-------------------|-----------------|------|-------------------|-------------------|--------------------|-------------------|-----------------|----------------|--------------------|
| | V | Hz | min ⁻¹ | W | A | dB(A) | dB(A) | dB(A) | m ³ /h | Pa | cfm | inH ₂ O |
| 1 | 230 | 50 | 435 | 124 | 0.58 | 51 | 58 | 58 | 10195 | 0 | 6000 | 0.00 |
| 2 | 230 | 50 | 435 | 138 | 0.64 | 50 | 56 | 56 | 9185 | 10 | 5405 | 0.04 |
| 3 | 230 | 50 | 435 | 152 | 0.69 | 47 | 54 | 55 | 8115 | 20 | 4775 | 0.08 |
| 4 | 230 | 50 | 435 | 167 | 0.80 | 47 | 55 | 56 | 6820 | 29 | 4015 | 0.12 |

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_v = Air flow · p_{fs} = Pressure increase

