

W3G630-DQ37-22 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

Nominal data

| | | |
|--------------------------|-------------------|------------|
| Type | W3G630-DQ37-22 | |
| Motor | M3G112-GA | |
| Phase | | 1~ |
| Nominal voltage | VAC | 230 |
| Nominal voltage range | VAC | 200 .. 277 |
| Frequency | Hz | 50/60 |
| Type of data definition | | ml |
| Speed | min ⁻¹ | 1000 |
| Power input | W | 720 |
| Current draw | A | 3.2 |
| Max. back pressure | Pa | 140 |
| 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

Data according to ErP directive

| | |
|-----------------------|--------|
| Installation category | A |
| Efficiency category | Static |
| Variable speed drive | Yes |
| Specific ratio* | 1.00 |

* Specific ratio = $1 + p_b / 100\,000\text{ Pa}$

| | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------------|--------------|
| Overall efficiency η_{es} | 44.1 | 28.7 | 32.7 |
| Efficiency grade N | 51.4 | 36 | 40 |
| Power input P_{ed} | kW | 0.69 | |
| Air flow q_v | m ³ /h | 8080 | |
| Pressure increase p_{fs} | Pa | 124 | |
| Speed n | min ⁻¹ | 1005 | |

Data established at point of optimum efficiency



Technical features

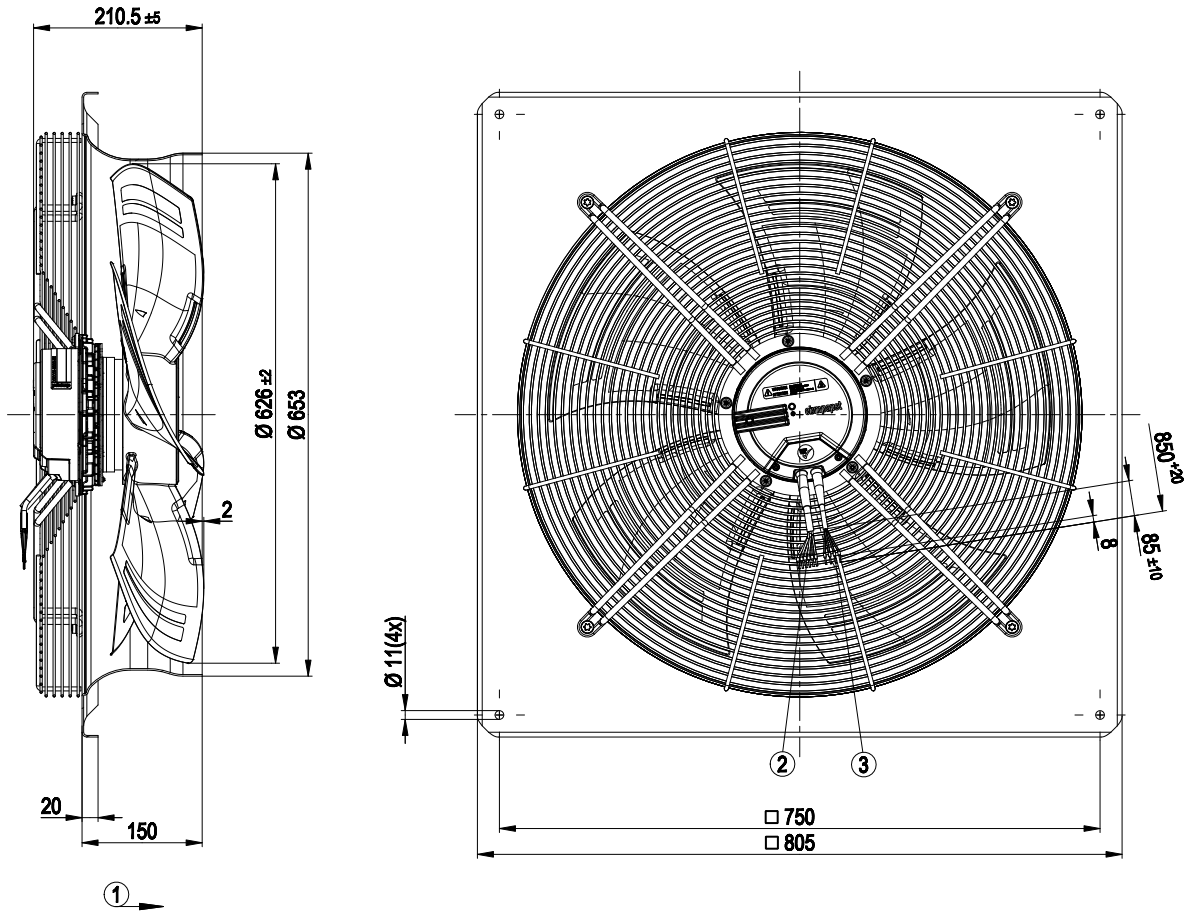
| | |
|---|---|
| Mass | 23.8 kg |
| Size | 630 mm |
| Surface of rotor | Coated in black |
| Material of electronics housing | Die-cast aluminium, coated in black |
| Material of blades | Press-fitted sheet steel blank, sprayed with PP plastic |
| Material of wall ring | Sheet steel, pre-galvanised and coated in black plastic (RAL 9005) |
| Material of guard grille | Steel, coated in black plastic (RAL9005) |
| Number of blades | 5 |
| Blade angle | -5° |
| Direction of air flow | "A" |
| Direction of rotation | Clockwise, seen on rotor |
| Type of protection | IP 54; Depending on installation and position as per EN 60034-5 |
| Insulation class | "B" |
| 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 | <ul style="list-style-type: none"> - Output 10 VDC, max. 10 mA - Fault output (open collector) - Motor current limit - PFC, active - Soft start - Control input 0-10 VDC - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - 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 61000-6-4 (industrial 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) |
| Product conforming to standard | EN 61800-5-1; CE |
| Approval | GOST |

EC axial fan - HyBlade®

sickled blades (S series)

with full square nozzle

Product drawing

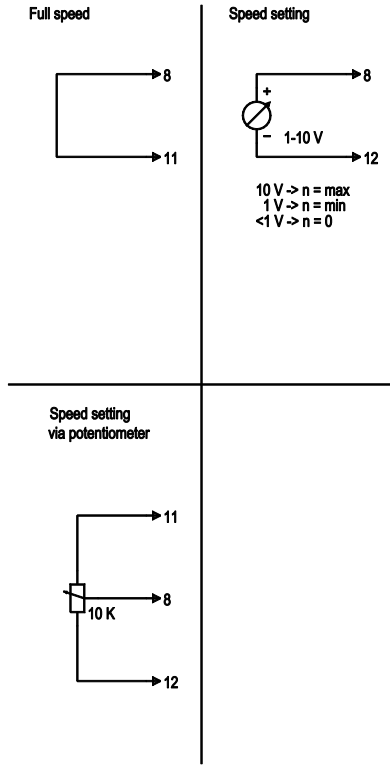


| | |
|---|---|
| 1 | Direction of air flow "A" |
| 2 | Connection line PVC AWG18, 5x crimped core-end sleeves |
| 3 | Connection line PVC, AWG22, 4x crimped core-end sleeves |



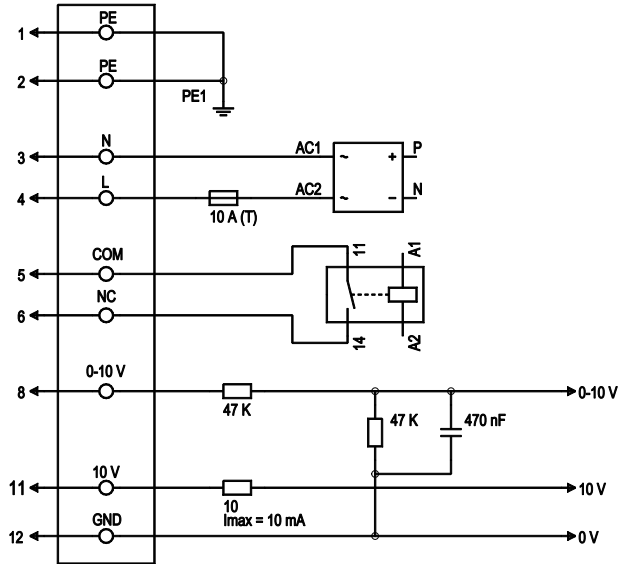
Connection screen

Customer circuit



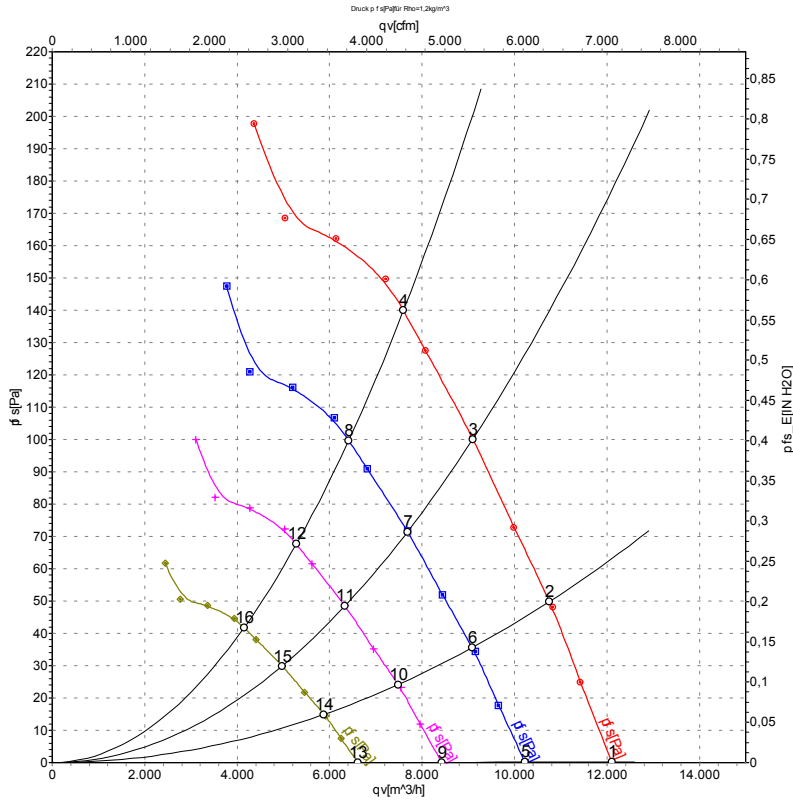
Connection

Fan / motor



| Line | No. | Signal | Colour | Function / assignment |
|------|-----|--------|--------------|---|
| 1 | 1,2 | PE | green/yellow | Protective earth |
| 1 | 3 | N | blue | Supply voltage, neutral conductor, 50/60 Hz |
| 1 | 4 | L | black | Supply voltage, phase, 50/60 Hz |
| 1 | 5 | COM | white 1 | Floating status message contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1) |
| 1 | 6 | NC | white 2 | Floating status message contact, break for failure |
| 2 | 8 | 0-10 V | yellow | Control input, set value 0-10 VDC, impedance 100 kΩ, SELV |
| 2 | 11 | 10 VDC | red | Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for external devices (e.g. potentiometer), SELV |
| 2 | 12 | GND | blue | Reference mass for control interface, SELV |

Charts: Air flow 50 Hz



Measurement: LU-116825

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 | 230 | 50 | 1000 | 462 | 2.11 | 65 | 71 | 71 | 12100 | 0 |
| 2 | 230 | 50 | 1000 | 559 | 2.54 | 61 | 68 | 67 | 10750 | 50 |
| 3 | 230 | 50 | 1000 | 653 | 2.94 | 62 | 69 | 68 | 9100 | 100 |
| 4 | 230 | 50 | 1000 | 720 | 3.20 | 64 | 71 | 70 | 7595 | 140 |
| 5 | 230 | 50 | 850 | 279 | 1.27 | 61 | 67 | 67 | 10230 | 0 |
| 6 | 230 | 50 | 850 | 337 | 1.53 | 58 | 64 | 64 | 9085 | 36 |
| 7 | 230 | 50 | 850 | 394 | 1.77 | 59 | 65 | 64 | 7685 | 72 |
| 8 | 230 | 50 | 850 | 429 | 1.93 | 61 | 67 | 67 | 6415 | 100 |
| 9 | 230 | 50 | 700 | 156 | 0.71 | 57 | 63 | 63 | 8420 | 0 |
| 10 | 230 | 50 | 700 | 188 | 0.86 | 53 | 60 | 60 | 7480 | 24 |
| 11 | 230 | 50 | 700 | 220 | 0.99 | 55 | 61 | 60 | 6330 | 49 |
| 12 | 230 | 50 | 700 | 240 | 1.08 | 57 | 63 | 63 | 5280 | 68 |
| 13 | 230 | 50 | 550 | 76 | 0.35 | 52 | 58 | 58 | 6615 | 0 |
| 14 | 230 | 50 | 550 | 91 | 0.42 | 48 | 55 | 54 | 5880 | 15 |
| 15 | 230 | 50 | 550 | 107 | 0.48 | 49 | 56 | 55 | 4975 | 30 |
| 16 | 230 | 50 | 550 | 116 | 0.52 | 51 | 58 | 57 | 4150 | 42 |

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

