

Beijing Hengrui Mechanical and Electrical Equipment Co.,Ltd

Phone +86 10-62547612

zhangyu@bjhengrui.cn

en.bjhengrui.com



## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | K3G400-RJ75-01    |            |
| Motor                    | M3G112-EA         |            |
| Phase                    |                   | 3~         |
| Nominal voltage          | VAC               | 400        |
| Nominal voltage range    | VAC               | 380 .. 480 |
| Frequency                | Hz                | 50/60      |
| Type of data definition  |                   | ml         |
| Speed                    | min <sup>-1</sup> | 2060       |
| Power input              | W                 | 1320       |
| Current draw             | A                 | 2.1        |
| Min. ambient temperature | °C                | -40        |
| Max. ambient temperature | °C                | 50         |

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*       | 1.01   |

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

|                                |                   | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------|--------------|--------------|
| Overall efficiency $\eta_{es}$ | %                 | 62.7   | 48.8         | 52.8         |
| Efficiency grade N             |                   | 71.9   | 58           | 62           |
| Power input $P_{ed}$           | kW                | 1.32   |              |              |
| Air flow $q_v$                 | m <sup>3</sup> /h | 4090   |              |              |
| Pressure increase $p_{fs}$     | Pa                | 676    |              |              |
| Speed n                        | min <sup>-1</sup> | 2065   |              |              |

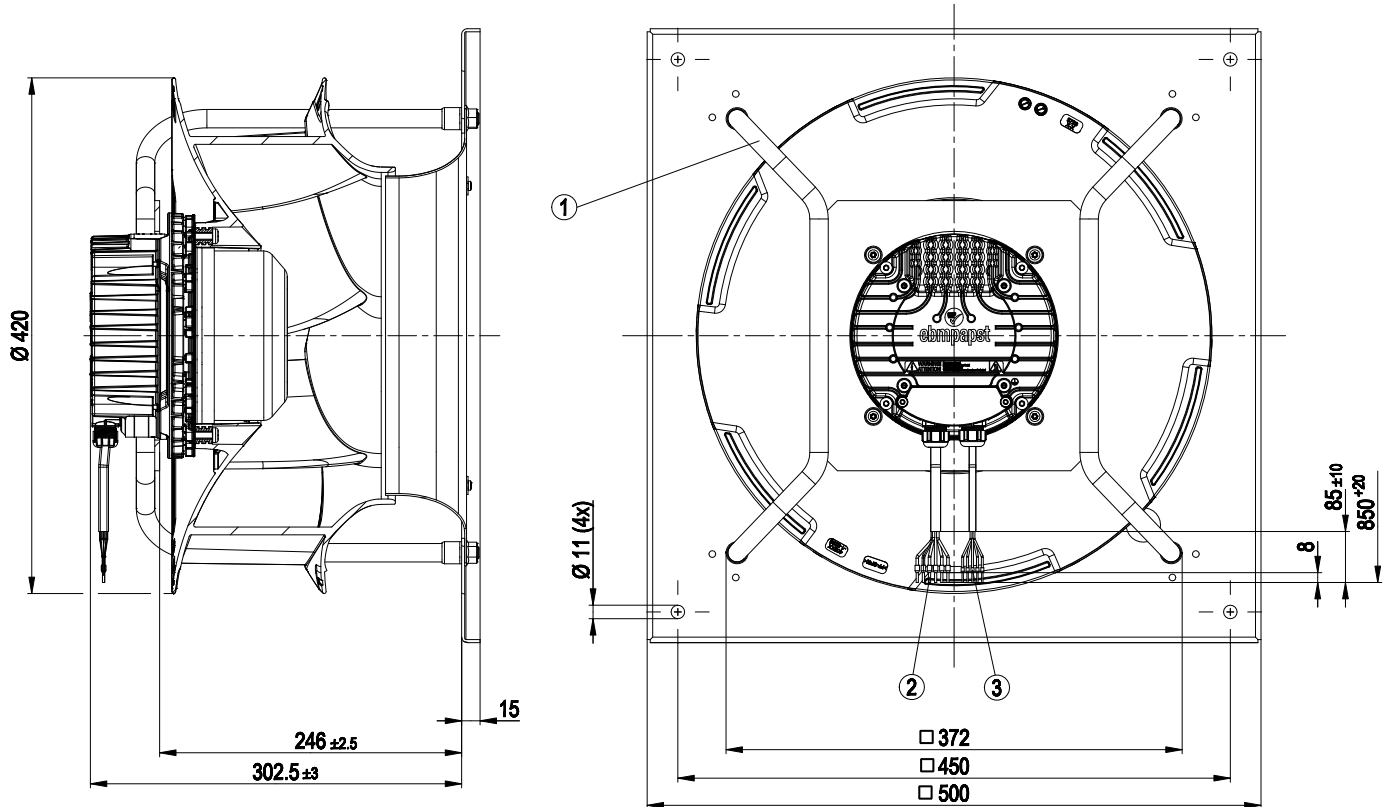
Data definition with optimum efficiency. LU-152014  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



## Technical features

|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mass                                                               | 16.5 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Size                                                               | 400 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Surface of rotor                                                   | Coated in black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Material of electronics housing                                    | Die-cast aluminium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Material of impeller                                               | PP plastic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Material of support bracket                                        | Steel, coated in black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Material of inlet nozzle                                           | Sheet steel, galvanised                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Number of blades                                                   | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 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                                                  | Refer to product drawing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Condensate discharge holes                                         | Rotor-side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Operation mode                                                     | S1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Motor bearing                                                      | Ball bearing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Technical features                                                 | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Motor current limit</li> <li>- PFC, passive</li> <li>- RS485 MODBUS RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage / phase failure detection</li> </ul> |
| 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                                                           | EAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

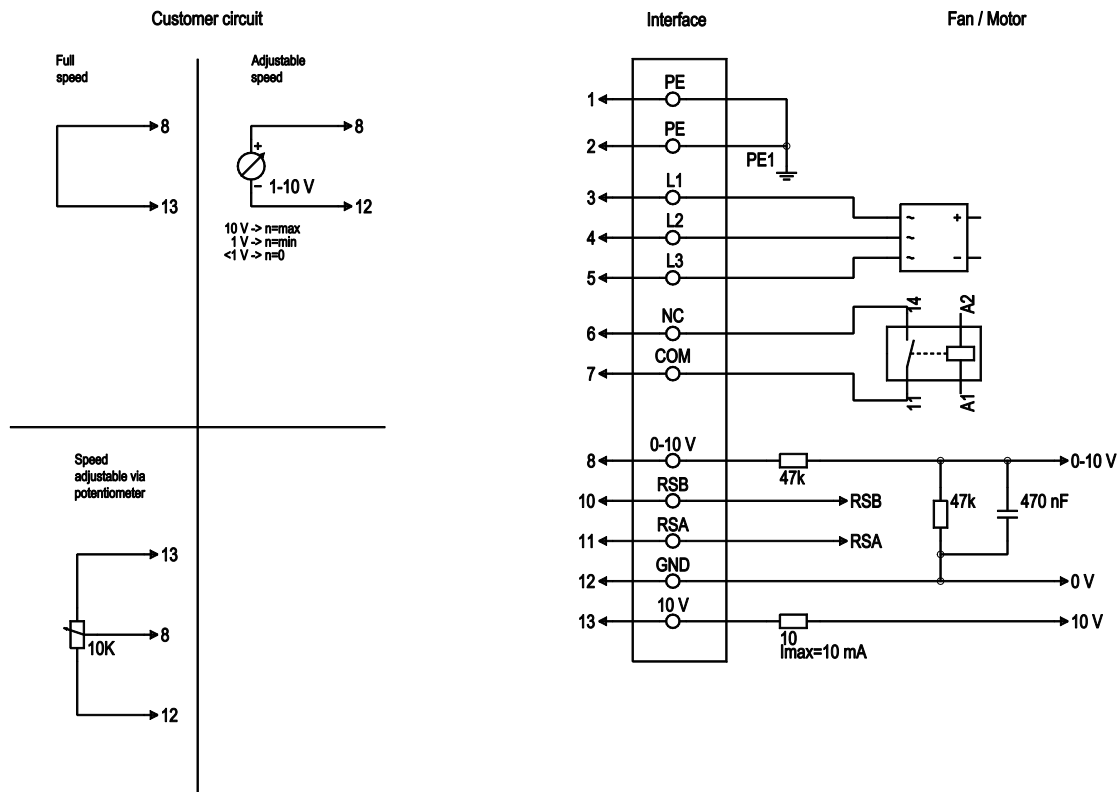
## Product drawing



- |   |                                                                                                                                                    |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Mounting position: shaft horizontal (install the support struts only vertically as shown in the view!) or rotor on bottom; rotor on top on request |
| 2 | Connection line PVC AWG18, 6x crimped core-end sleeves                                                                                             |
| 3 | Connection line PVC AWG22, 5x crimped core-end sleeves                                                                                             |

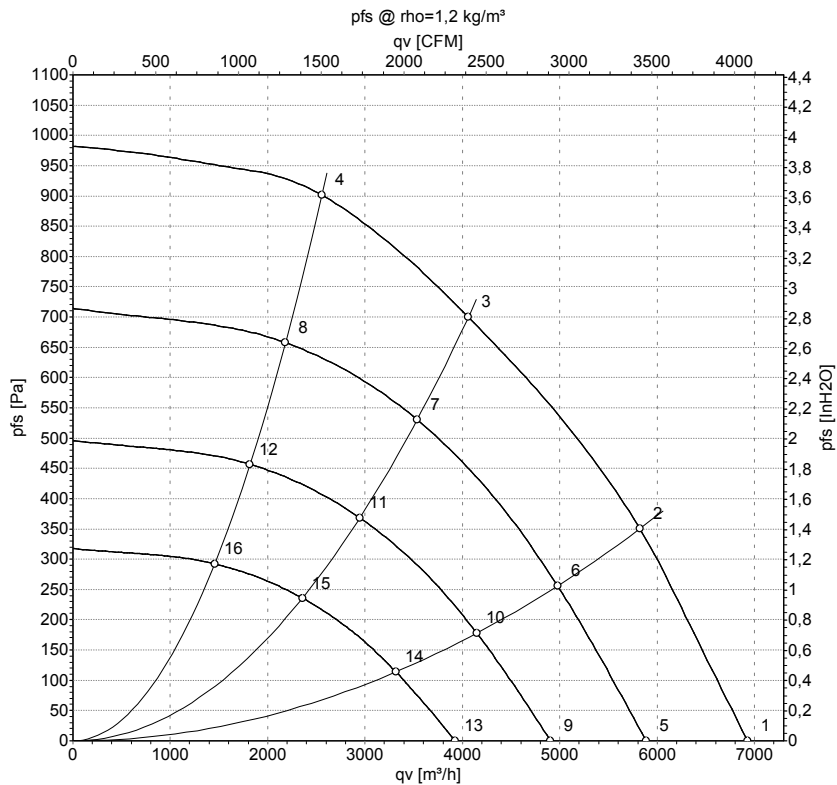
backward curved, single inlet  
with support bracket

## Connection screen



| No. | Conn.   | Designation | Colour       | Function / assignment                                                                                                                                                                      |
|-----|---------|-------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 1, 2    | PE          | green/yellow | Protective earth                                                                                                                                                                           |
| 1   | 3, 4, 5 | L1, L2, L3  | black        | Power supply, phase, 50/60 Hz                                                                                                                                                              |
| 1   | 6       | NC          | white 1      | Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side |
| 1   | 7       | COM         | white 2      | Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side |
| 2   | 8       | 0-10V       | yellow       | Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve                                                                                                                       |
| 2   | 10      | RSB         | brown        | RS485 interface for Modbus, RSB                                                                                                                                                            |
| 2   | 11      | RSA         | white        | RS485 interface for Modbus, RSA                                                                                                                                                            |
| 2   | 12      | GND         | blue         | Reference ground for control interface, SELV                                                                                                                                               |
| 2   | 13      | +10V        | red          | Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. potentiometer)                                                          |

## Charts: Air flow 50 Hz



Measurement: LU-152014

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 <sub>ed</sub> | I    | LpA <sub>in</sub> | LwA <sub>in</sub> | LwA <sub>out</sub> | qv   | p <sub>fs</sub> |
|----|-----|----|-------------------|-----------------|------|-------------------|-------------------|--------------------|------|-----------------|
|    | V   | Hz | min <sup>-1</sup> | W               | A    | dB(A)             | dB(A)             | dB(A)              | m³/h | Pa              |
| 1  | 400 | 50 | 2120              | 965             | 1.56 | 84                | 89                | 92                 | 6930 | 0               |
| 2  | 400 | 50 | 2110              | 1239            | 1.99 | 76                | 82                | 88                 | 5820 | 360             |
| 3  | 400 | 50 | 2060              | 1320            | 2.10 | 68                | 74                | 81                 | 4060 | 700             |
| 4  | 400 | 50 | 2110              | 1267            | 2.03 | 73                | 79                | 84                 | 2555 | 900             |
| 5  | 400 | 50 | 1800              | 592             | 0.96 | 80                | 85                | 88                 | 5885 | 0               |
| 6  | 400 | 50 | 1800              | 768             | 1.23 | 72                | 78                | 84                 | 4975 | 259             |
| 7  | 400 | 50 | 1800              | 877             | 1.41 | 64                | 71                | 78                 | 3535 | 534             |
| 8  | 400 | 50 | 1800              | 788             | 1.26 | 69                | 75                | 80                 | 2180 | 659             |
| 9  | 400 | 50 | 1500              | 342             | 0.55 | 75                | 80                | 83                 | 4905 | 0               |
| 10 | 400 | 50 | 1500              | 444             | 0.71 | 67                | 73                | 79                 | 4150 | 180             |
| 11 | 400 | 50 | 1500              | 507             | 0.81 | 60                | 66                | 73                 | 2945 | 371             |
| 12 | 400 | 50 | 1500              | 456             | 0.73 | 64                | 71                | 75                 | 1820 | 457             |
| 13 | 400 | 50 | 1200              | 175             | 0.28 | 70                | 75                | 77                 | 3925 | 0               |
| 14 | 400 | 50 | 1200              | 228             | 0.37 | 62                | 68                | 74                 | 3320 | 115             |
| 15 | 400 | 50 | 1200              | 260             | 0.42 | 54                | 61                | 68                 | 2355 | 238             |
| 16 | 400 | 50 | 1200              | 234             | 0.37 | 58                | 65                | 69                 | 1455 | 293             |

U = Supply voltage · f = Frequency · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · LwA<sub>out</sub> = Sound power level outlet side

qv = Air flow · p<sub>fs</sub> = Pressure increase