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## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | R3G560-RA25-71    |            |
| Motor                    | M3G150-FF         |            |
| Phase                    |                   | 3~         |
| Nominal voltage          | V                 | 400        |
| Nominal voltage range    | V                 | 380 .. 480 |
| Frequency                | Hz                | 50/60      |
| Type of data definition  |                   | ml         |
| State                    |                   | prelim.    |
| Speed                    | min <sup>-1</sup> | 1540       |
| Power input              | W                 | 2360       |
| Current draw             | A                 | 3.65       |
| 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*       | 1.01   |

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

|                                |                   | Actual | Request 2013 | Request 2015 |
|--------------------------------|-------------------|--------|--------------|--------------|
| Overall efficiency $\eta_{es}$ | %                 | 65.8   | 51.4         | 55.4         |
| Efficiency grade N             |                   | 72.4   | 58           | 62           |
| Power input $P_{ed}$           | kW                | 2.35   |              |              |
| Air flow $q_v$                 | m <sup>3</sup> /h | 8565   |              |              |
| Pressure increase $p_{fs}$     | Pa                | 612    |              |              |
| Speed n                        | min <sup>-1</sup> | 1550   |              |              |

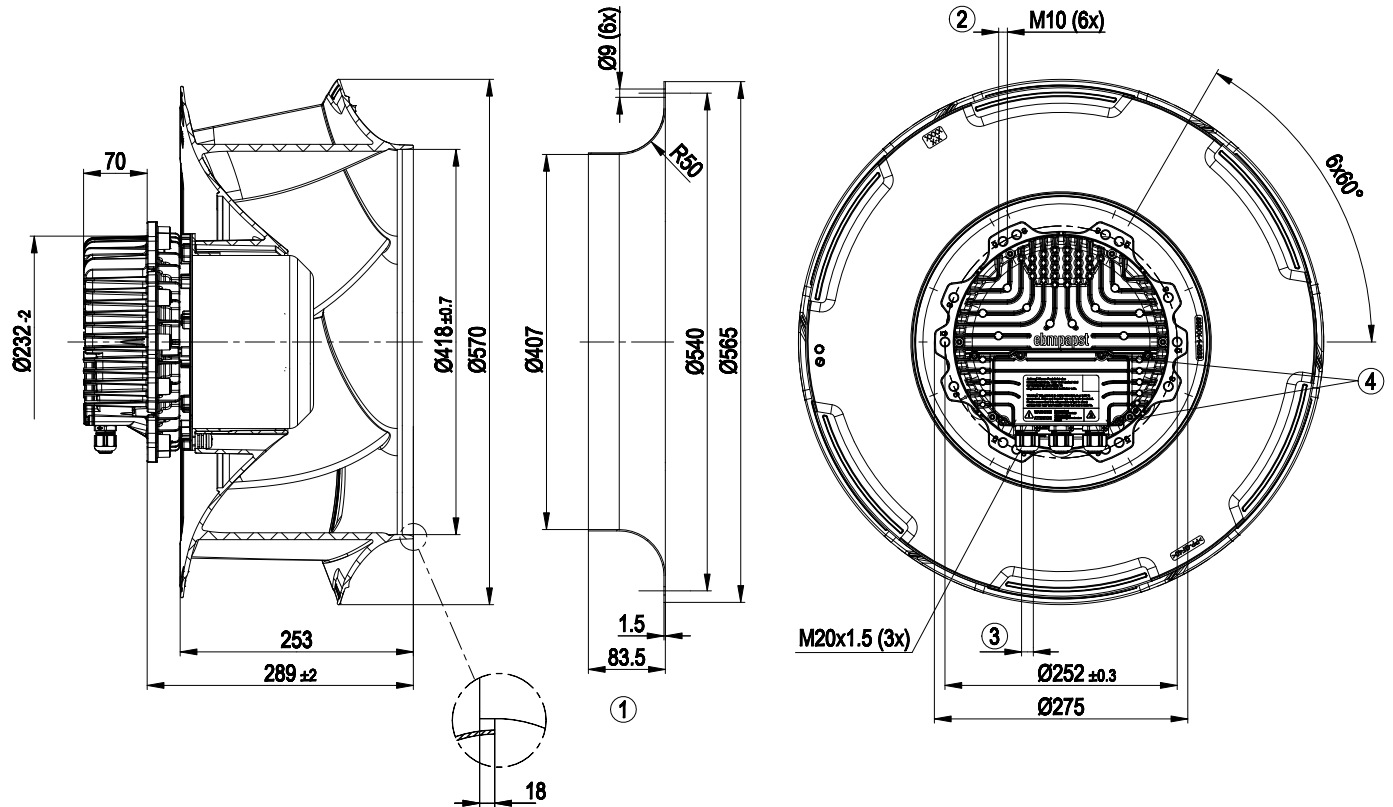
Data definition with optimum efficiency. LU-148925  
 The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.



## Technical features

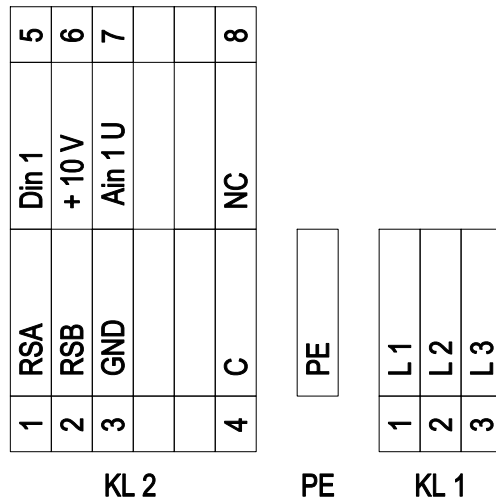
|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mass                                                               | 26 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Size                                                               | 560 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Surface of rotor                                                   | Coated in black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Material of electronics housing                                    | Die-cast aluminium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Material of impeller                                               | PP plastic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 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                                                  | 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"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- External 24 V input (programming)</li> <li>- External release input</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> |
| EMC interference immunity                                          | Acc. to EN 61000-6-2 (industrial environment)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| EMC interference emission                                          | Acc. to EN 55022 (Class A, industrial environment)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 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                                                           | EAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Product drawing



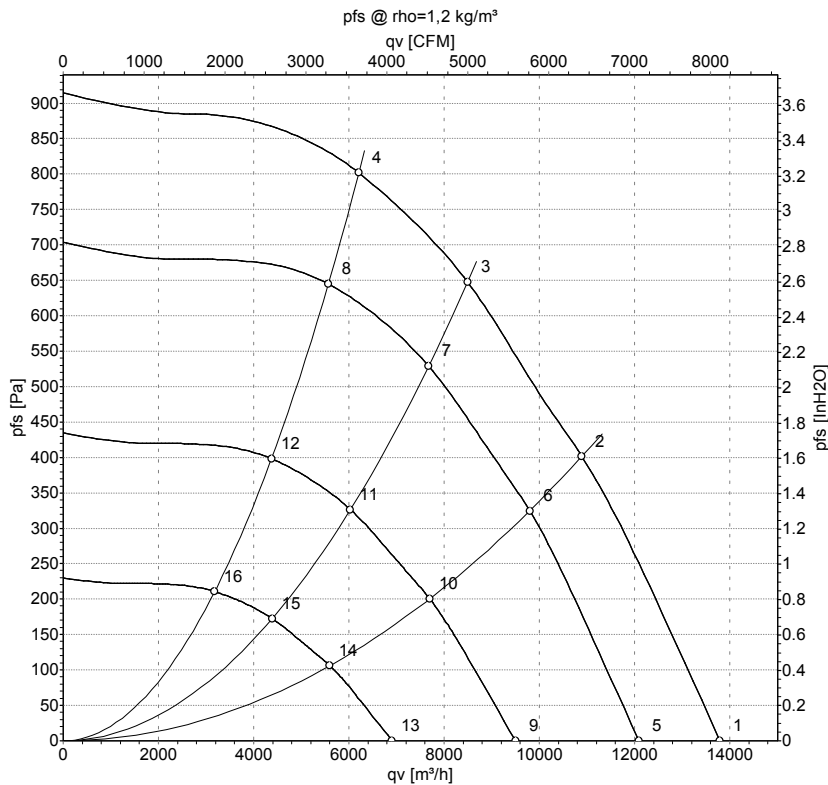
|   |                                                                                           |
|---|-------------------------------------------------------------------------------------------|
| 1 | Accessory part: Inlet nozzle 54482-2-4013, not included in the standard scope of delivery |
| 2 | Depth of screw max. 25 mm                                                                 |
| 3 | Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 4±0.6 Nm                        |
| 4 | Tightening torque 3.5±0.5 Nm                                                              |

## Connection screen



| No.  | Conn. | Designation | Function / assignment                                                                                                                                                                                                          |
|------|-------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KL 1 | 1     | L1          | Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz                                                                                                                                                                |
| KL 1 | 2     | L2          | Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz                                                                                                                                                                |
| KL 1 | 3     | L3          | Mains supply connection, supply voltage 3~380-480 VAC; 50/60 Hz                                                                                                                                                                |
| PE   |       | PE          | Earth connection, PE connection                                                                                                                                                                                                |
| KL 2 | 1     | RSA         | Bus connection RS-485, RSA, MODBUS RTU; SELV                                                                                                                                                                                   |
| KL 2 | 2     | RSB         | Bus connection RS-485, RSB, MODBUS RTU; SELV                                                                                                                                                                                   |
| KL 2 | 3     | GND         | Signal ground for control interface; SELV                                                                                                                                                                                      |
| KL2  | 4     | C           | Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)                                                                                                               |
| KL 2 | 5     | Din1        | Digital input 1 enabling of electronics,<br>enabling: open pin or applied voltage 5-50 VDC<br>disabling: bridge to GND or applied voltage <1 VDC<br>reset function: triggers software reset after a level change to <1 V; SELV |
| KL 2 | 6     | + 10 V      | Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometer), SELV                                                                                          |
| KL 2 | 7     | Ain1 U      | Analogue input 1 (set value) 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain1 I SELV                                                                                                        |
| KL2  | 8     | NC          | Status relay, floating status contact; break for failure                                                                                                                                                                       |

## Charts: Air flow 50 Hz



Measurement: LU-148925

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 | 1540              | 1840            | 2.89 | 79                | 86                | 90                 | 13785 | 0               |
| 2  | 400 | 50 | 1540              | 2296            | 3.56 | 74                | 81                | 85                 | 10890 | 400             |
| 3  | 400 | 50 | 1540              | 2360            | 3.65 | 71                | 78                | 82                 | 8490  | 650             |
| 4  | 400 | 50 | 1540              | 2313            | 3.58 | 72                | 80                | 83                 | 6205  | 800             |
| 5  | 400 | 50 | 1400              | 1240            | 1.95 | 75                | 83                | 87                 | 12085 | 0               |
| 6  | 400 | 50 | 1400              | 1672            | 2.59 | 71                | 78                | 82                 | 9795  | 327             |
| 7  | 400 | 50 | 1400              | 1736            | 2.69 | 69                | 76                | 80                 | 7675  | 533             |
| 8  | 400 | 50 | 1400              | 1669            | 2.58 | 69                | 77                | 81                 | 5565  | 645             |
| 9  | 400 | 50 | 1100              | 601             | 0.94 | 69                | 77                | 81                 | 9495  | 0               |
| 10 | 400 | 50 | 1100              | 811             | 1.26 | 65                | 72                | 76                 | 7695  | 202             |
| 11 | 400 | 50 | 1100              | 842             | 1.30 | 63                | 70                | 74                 | 6030  | 329             |
| 12 | 400 | 50 | 1100              | 810             | 1.25 | 63                | 71                | 75                 | 4375  | 398             |
| 13 | 400 | 50 | 800               | 231             | 0.36 | 61                | 69                | 73                 | 6905  | 0               |
| 14 | 400 | 50 | 800               | 312             | 0.48 | 57                | 64                | 68                 | 5595  | 107             |
| 15 | 400 | 50 | 800               | 324             | 0.50 | 55                | 62                | 66                 | 4385  | 174             |
| 16 | 400 | 50 | 800               | 311             | 0.48 | 55                | 63                | 67                 | 3180  | 211             |

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

