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## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | K3G800-PW07-01    |            |
| Motor                    | M3G200-QA         |            |
| Phase                    |                   | 3~         |
| Nominal voltage          | VAC               | 400        |
| Nominal voltage range    | VAC               | 380 .. 480 |
| Frequency                | Hz                | 50/60      |
| Method of obtaining data |                   | ml         |
| Speed (rpm)              | min <sup>-1</sup> | 1370       |
| Power consumption        | W                 | 11300      |
| Current draw             | A                 | 17.5       |
| Min. ambient temperature | °C                | -40        |
| Max. ambient temperature | °C                | 40         |

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

Subject to change

## Data according to Commission Regulation (EU) 327/2011 (EN 17166)

|                                   |   | Actual | Req. 2015 |                               |                   |       |
|-----------------------------------|---|--------|-----------|-------------------------------|-------------------|-------|
| 01 Overall efficiency $\eta_{es}$ | % | 70.1   | 62.1      | 09 Power consumption $P_{ed}$ | kW                | 11.37 |
| 02 Measurement category           |   | A      |           | 09 Air flow $q_v$             | m <sup>3</sup> /h | 25985 |
| 03 Efficiency category            |   | Static |           | 09 Pressure increase $p_{fs}$ | Pa                | 1069  |
| 04 Efficiency grade N             |   | 70     | 62        | 10 Speed (rpm) n              | min <sup>-1</sup> | 1365  |
| 05 Variable speed drive           |   | Yes    |           | 11 Specific ratio*            |                   | 1.01  |

Data obtained at optimum efficiency level.

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

LU-184297

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).  
 The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.  
 The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).



## Technical description

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                     | 157.3 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Size                                                       | 800 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Motor size                                                 | 200                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Rotor surface                                              | Painted black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electronics housing material                               | Die-cast aluminum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Impeller material                                          | Sheet aluminum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Support plate material                                     | Sheet steel, galvanized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Spacer material                                            | Aluminum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Inlet nozzle material                                      | Sheet steel, galvanized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Number of blades                                           | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Direction of rotation                                      | Clockwise, viewed toward rotor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Degree of protection                                       | IP55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Insulation class                                           | "F"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Moisture (F) / Environmental (H) protection class          | H1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ambient temperature note                                   | Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Max. permitted ambient temp. for motor (transport/storage) | +80 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Min. permitted ambient temp. for motor (transport/storage) | -40 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Installation position                                      | See legend on product drawing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Condensation drainage holes                                | On rotor side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Mode                                                       | S1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Motor bearing                                              | Ball bearing; (sealed)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Technical features                                         | <ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Output 20 VDC, max. 50 mA</li> <li>- Output for slave 0-10 V</li> <li>- Operation and alarm display</li> <li>- Input for sensor 0-10 V or 4-20 mA</li> <li>- External 24 V input (parameter setting)</li> <li>- External release input</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- PFC, passive</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- EEPROM write cycles: 100,000 maximum</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Temperature derating</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul> |
| EMC immunity to interference                               | According to EN 61000-6-2 (industrial environment)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| EMC interference emission                                  | According to EN 61000-6-4 (industrial environment)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

# EC centrifugal module - RadiPac

backward-curved, single-intake

with cube design

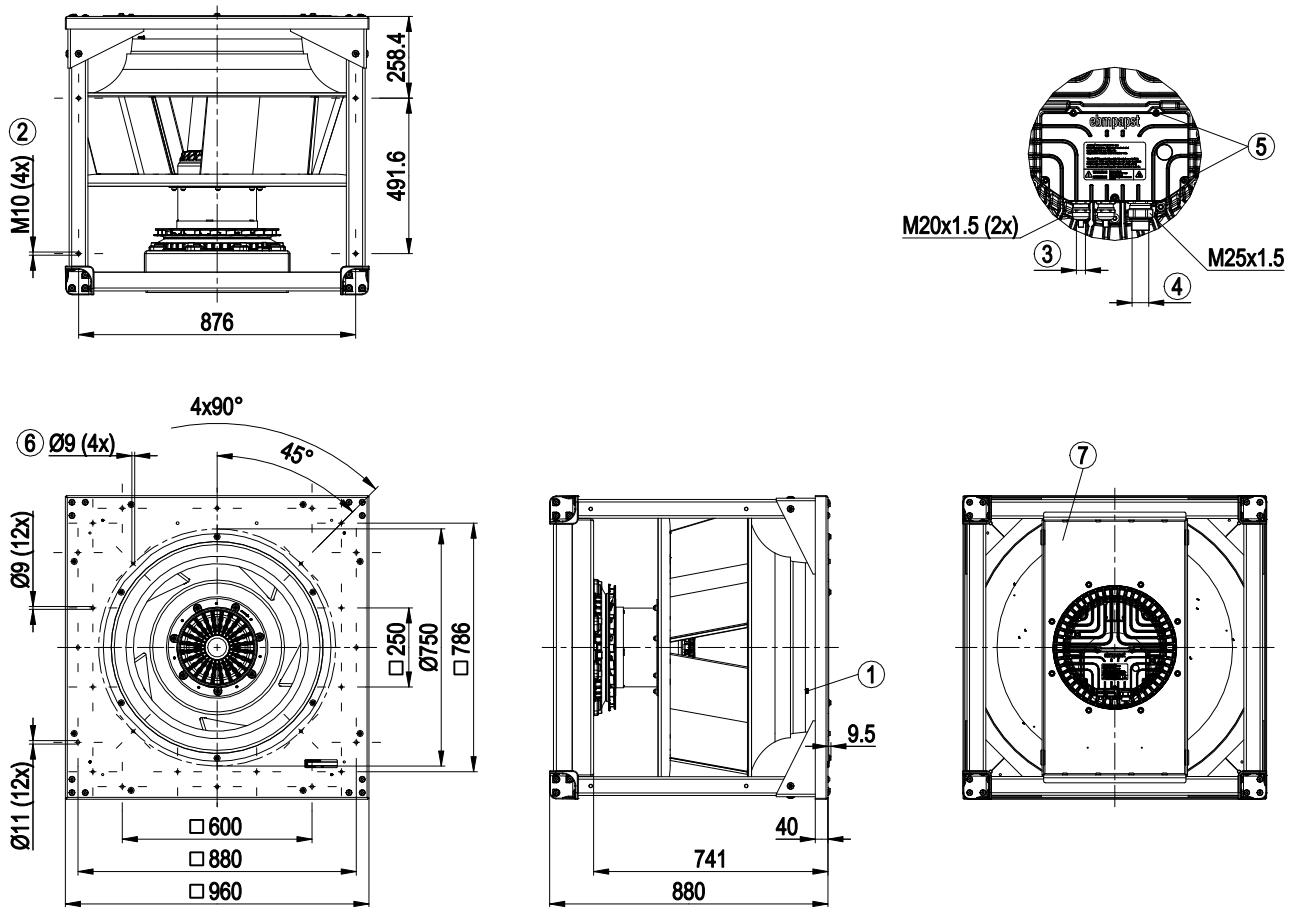
|                                                                            |                                                               |
|----------------------------------------------------------------------------|---------------------------------------------------------------|
| Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system) | <= 3.5 mA                                                     |
| Electrical hookup                                                          | Terminal box                                                  |
| Motor protection                                                           | Reverse polarity and locked-rotor protection                  |
| Protection class                                                           | I (with customer connection of protective earth)              |
| Conformity with standards                                                  | EN 61800-5-1; CE; UKCA                                        |
| Approval                                                                   | UL 1004-7 + 60730-1; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1 |



# EC centrifugal module - RadiPac

backward-curved, single-intake  
with cube design

## Product drawing



|   |                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------|
| 1 | Inlet ring with pressure tap (k-factor: 695)                                                                                 |
| 2 | Mounting position for vibration-absorbing elements, tightening torque max. 40 Nm                                             |
| 3 | Cable diameter min. 5 mm, max. 13 mm; tightening torque $6 \pm 0.9$ Nm                                                       |
| 4 | Cable diameter min. 16 mm, max. 20.5 mm, tightening torque $6 \pm 0.9$ Nm                                                    |
| 5 | Tightening torque $3.5 \pm 0.5$ Nm                                                                                           |
| 6 | Attachment holes for FlowGrid (63000-2-2957 not included in scope of delivery)                                               |
| 7 | Motor support plate                                                                                                          |
|   | Installation position: shaft horizontal (motor support plate must stand upright) or rotor on bottom; rotor on top on request |
|   | The drawing shows the dimensions only and does not represent the installation position                                       |

## Connection diagram

|   |         |         |    |
|---|---------|---------|----|
| 1 | RSA     | Din 2   | 8  |
| 2 | RSB     | Din 3   | 9  |
| 3 | GND     | GND     | 10 |
| 4 | Ain 1 U | Ain 2 U | 11 |
| 5 | + 10 V  | + 20 V  | 12 |
| 6 | Ain 1 I | Ain 2 I | 13 |
| 7 | Din 1   | Aout    | 14 |

KL 3

|   |     |
|---|-----|
| 1 | NO  |
| 2 | COM |
| 3 | NC  |

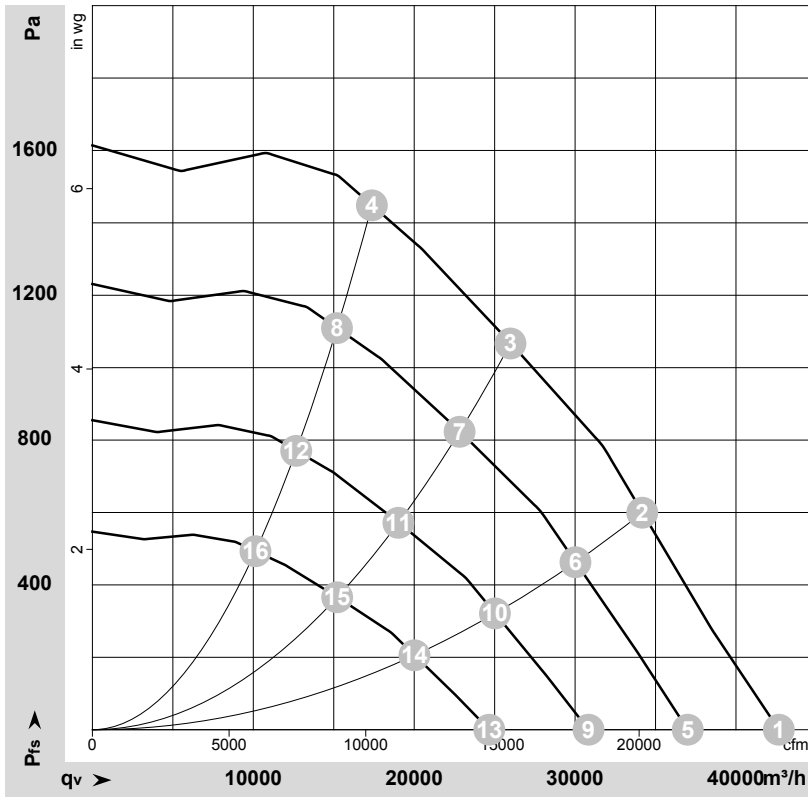
KL 2

|   |     |
|---|-----|
| 1 | L 1 |
| 2 | L 2 |
| 3 | L 3 |
|   | PE  |

KL 1 PE

| No.  | Conn.  | Designation | Function/assignment                                                                                                                                                                                                                                                             |
|------|--------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KL 1 | 1      | L1          | Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz                                                                                                                                                                                                                   |
| KL 1 | 2      | L2          | Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz                                                                                                                                                                                                                   |
| KL 1 | 3      | L3          | Supply connection, power supply 3-phase 380-480 VAC, 50/60 Hz                                                                                                                                                                                                                   |
| PE   |        | PE          | Ground connection, PE connection                                                                                                                                                                                                                                                |
| KL 2 | 1      | NO          | Status relay, floating status contact, make for failure                                                                                                                                                                                                                         |
| KL2  | 2      | COM         | Status relay, floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA                                                                                                                                              |
| KL2  | 3      | NC          | Status relay, floating status contact, break for failure                                                                                                                                                                                                                        |
| KL 3 | 1      | RSA         | Bus connection RS485, RSA, MODBUS RTU                                                                                                                                                                                                                                           |
| KL 3 | 2      | RSB         | Bus connection RS485, RSB, MODBUS RTU                                                                                                                                                                                                                                           |
| KL 3 | 3 / 10 | GND         | Reference ground for control interface                                                                                                                                                                                                                                          |
| KL 3 | 4      | Ain1 U      | Analog input 1 (set value), 0-10 V, Ri = 100 kΩ, adjustable curves, only usable as alternative to input Ain1I                                                                                                                                                                   |
| KL 3 | 5      | + 10 V      | Fixed voltage output 10 VDC, +10 V ±3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)                                                                                                                                                           |
| KL 3 | 6      | Ain1 I      | Analog input 1 (set value), 4-20 mA, Ri = 100 Ω, adjustable curves, only usable as alternative to input Ain1U                                                                                                                                                                   |
| KL 3 | 7      | Din1        | Digital input 1: enable electronics, enable: pin open or applied voltage 5...50 VDC; disable: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to < 1 V                                                                   |
| KL 3 | 8      | Din2        | Digital input 2: Switching parameter sets 1/2; according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: pin open or applied voltage 5-50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC |
| KL 3 | 9      | Din3        | Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected as normal/inverse via bus or digital input; normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage < 1 VDC                        |
| KL 3 | 11     | Ain2 U      | Analog input 2, measured value 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2I                                                                                                                                                                 |
| KL 3 | 12     | + 20 V      | Fixed voltage output 20 VDC, 20 V +25/-10%, max. 50 mA, short-circuit-proof power supply for external devices (e.g. sensors)                                                                                                                                                    |
| KL 3 | 13     | Ain2 I      | Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2U                                                                                                                                                                |
| KL 3 | 14     | Aout        | Analog output 0-10 V, max. 5 mA, output of current motor modulation level / of the current motor speed. Adjustable curve.                                                                                                                                                       |

## Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2\%$$

Measurement: LU-184297-1

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 <sub>ed</sub> | I     | LpA <sub>in</sub> | LwA <sub>in</sub> | LwA <sub>out</sub> | q <sub>v</sub>    | p <sub>fs</sub> | q <sub>v</sub> | p <sub>fs</sub> |
|----|-----|----|-------------------|-----------------|-------|-------------------|-------------------|--------------------|-------------------|-----------------|----------------|-----------------|
|    | V   | Hz | min <sup>-1</sup> | W               | A     | dB(A)             | dB(A)             | dB(A)              | m <sup>3</sup> /h | Pa              | cfm            | in. wg          |
| 1  | 400 | 50 | 1370              | 6370            | 10.26 | 83                | 91                | 95                 | 42670             | 0               | 25115          | 0.00            |
| 2  | 400 | 50 | 1370              | 9600            | 14.99 | 80                | 88                | 92                 | 34170             | 600             | 20110          | 2.41            |
| 3  | 400 | 50 | 1370              | 11300           | 17.50 | 78                | 85                | 90                 | 25980             | 1070            | 15290          | 4.30            |
| 4  | 400 | 50 | 1370              | 10990           | 17.04 | 80                | 88                | 93                 | 17370             | 1450            | 10225          | 5.82            |
| 5  | 400 | 50 | 1200              | 4155            | 6.70  | 80                | 87                | 91                 | 37000             | 0               | 21780          | 0.00            |
| 6  | 400 | 50 | 1200              | 6512            | 10.16 | 77                | 84                | 88                 | 30020             | 464             | 17670          | 1.86            |
| 7  | 400 | 50 | 1200              | 7708            | 11.95 | 75                | 82                | 87                 | 22820             | 825             | 13435          | 3.31            |
| 8  | 400 | 50 | 1200              | 7367            | 11.42 | 77                | 85                | 90                 | 15200             | 1110            | 8945           | 4.46            |
| 9  | 400 | 50 | 1000              | 2405            | 3.87  | 75                | 83                | 87                 | 30835             | 0               | 18150          | 0.00            |
| 10 | 400 | 50 | 1000              | 3768            | 5.88  | 72                | 80                | 84                 | 25020             | 322             | 14725          | 1.29            |
| 11 | 400 | 50 | 1000              | 4461            | 6.91  | 70                | 77                | 82                 | 19020             | 573             | 11195          | 2.30            |
| 12 | 400 | 50 | 1000              | 4263            | 6.61  | 72                | 80                | 85                 | 12665             | 771             | 7455           | 3.10            |
| 13 | 400 | 50 | 800               | 1231            | 1.98  | 69                | 77                | 81                 | 24670             | 0               | 14520          | 0.00            |
| 14 | 400 | 50 | 800               | 1929            | 3.01  | 66                | 74                | 78                 | 20015             | 206             | 11780          | 0.83            |
| 15 | 400 | 50 | 800               | 2284            | 3.54  | 64                | 72                | 77                 | 15215             | 367             | 8955           | 1.47            |
| 16 | 400 | 50 | 800               | 2183            | 3.38  | 67                | 75                | 79                 | 10135             | 493             | 5965           | 1.98            |

U = Voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
 LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

