

## KARTA KATALOGOWA

# A3G800-AU25-01

Wentylator osiowy EC HyBlade, łopatki sierpowe (seria S)

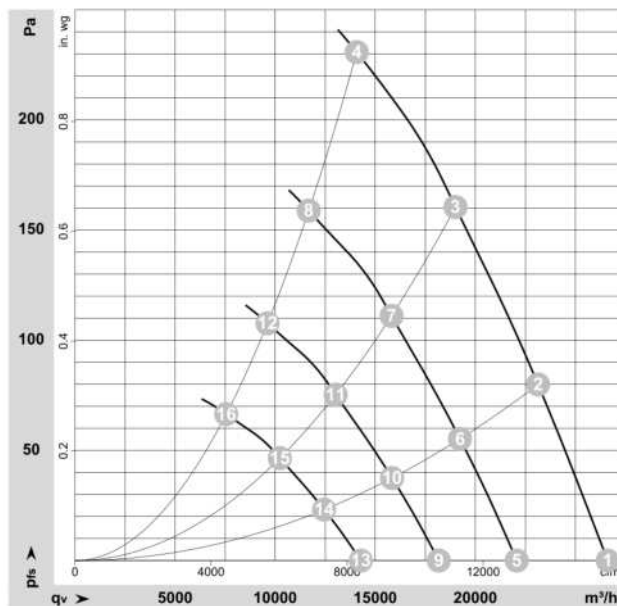
Producent: ebm-papst



| Dane znamionowe        |                          | Budowa                 |                                                            |
|------------------------|--------------------------|------------------------|------------------------------------------------------------|
| Napięcie znamionowe    | 3~ 400 V (380...480 V)   | Wielkość               | 800 mm                                                     |
| Częstotliwość          | 50/60 Hz                 | Silnik                 | M3G150-IF                                                  |
| Prędkość obrotowa      | 1020 obr/min             | Materiał wirnika       | wkładka z blachy aluminiowej natryskiwana tworzywem PP     |
| Pobór mocy             | 2560 W                   | Obudowa elektroniki    | odlew aluminiowy malowany na czarno                        |
| Pobór prądu            | 3,9 A                    | Liczba łopatek         | 5                                                          |
| Maks. przeciwciśnienie | 230 Pa                   | Kierunek obrotów       | w prawo, patrząc na wirnik                                 |
| Temperatura otoczenia  | -25...+70 °C             | Stopień ochrony        | IP55                                                       |
| Regulacja obrotów      | 0-10 V / PWM, MODBUS RTU | Klasa izolacji         | F                                                          |
|                        |                          | Zabezpieczenie silnika | ochrona przed odwrotną polaryzacją i zablokowaniem wirnika |
|                        |                          | Łożyskowanie           | kulkowe                                                    |
|                        |                          | Podłączenie            | skrzynka zaciskowa                                         |
|                        |                          | Masa                   | 26 kg                                                      |

## Charakterystyka przepływowa (50 Hz)

Charts: Air flow 50 Hz



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

Measurement: LU-136917-1

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.

Dane na okładce wg karty katalogowej producenta ebm-papst (oryginał na kolejnych stronach).

Wartości przy maksymalnym obciążeniu; producent zastrzega możliwość zmian.

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A3G800-AU25-01

# EC axial fan - HyBlade

sickled blades (S series)



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## Nominal data

|       |                |  |
|-------|----------------|--|
| Type  | A3G800-AU25-01 |  |
| Motor | M3G150-IF      |  |

|                          |                   |            |
|--------------------------|-------------------|------------|
| Phase                    |                   | 3~         |
| Nominal voltage          | VAC               | 400        |
| Nominal voltage range    | VAC               | 380 .. 480 |
| Frequency                | Hz                | 50/60      |
| Type of data definition  |                   | ml         |
| Speed (rpm)              | min <sup>-1</sup> | 1020       |
| Power input              | W                 | 2560       |
| Current draw             | A                 | 3.9        |
| Max. back pressure       | Pa                | 230        |
| Min. ambient temperature | °C                | -25        |
| Max. ambient temperature | °C                | 70         |

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations

## Data in accordance with ecodesign regulation EU 327/2011 (EN 17166)

|                                   |   | Actual |    | Request 2015 |  |                               |                   |       |  |
|-----------------------------------|---|--------|----|--------------|--|-------------------------------|-------------------|-------|--|
| 01 Overall efficiency $\eta_{es}$ | % | 47.6   |    | 35.8         |  | 09 Power input $P_{ed}$       | kW                | 2.18  |  |
| 02 Measurement category           |   | A      |    |              |  | 09 Air flow $q_v$             | m³/h              | 17625 |  |
| 03 Efficiency category            |   | Static |    |              |  | 09 Pressure increase $p_{fs}$ | Pa                | 200   |  |
| 04 Efficiency grade N             |   | 51.8   | 40 |              |  | 10 Speed (rpm) n              | min <sup>-1</sup> | 1025  |  |
| 05 Variable speed drive           |   | Yes    |    |              |  | 11 Specific ratio*            |                   | 1.00  |  |

Data definition with optimum efficiency.

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

LU-170392

The indicated efficiency values for obtaining conformity with the Ecodesign Directive EU 327/2011 were achieved with defined air conduction components (e.g. inlet nozzles).  
The dimensions are to be requested from ebm-papst. If other air guide geometries are used on the installation side, the ebm-papst evaluation loses its validity/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).



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## Technical features

|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mass                                                               | 26 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Size                                                               | 800 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Motor size                                                         | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Surface of rotor                                                   | Coated in black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Material of electronics housing                                    | Die-cast aluminium, coated in black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Material of blades                                                 | Aluminium sheet insert, sprayed with PP plastic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Number of blades                                                   | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Blade angle                                                        | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Direction of air flow                                              | V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Direction of rotation                                              | Clockwise, seen on rotor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Type of protection                                                 | IP55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Insulation class                                                   | "F"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Humidity (F) / environmental protection class (H)                  | H2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Condensation drainage 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>- Output 20 VDC, max. 50 mA</li> <li>- Output for slave 0-10 V</li> <li>- Input for sensor 0-10 V or 4-20 mA</li> <li>- External 24 V input (programming)</li> <li>- External release input</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Output limit</li> <li>- Motor current limit</li> <li>- PFC, passive</li> <li>- RS485 MODBUS RTU</li> <li>- Soft start</li> <li>- Maximum EEPROM write cycles 100,000</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 61000-6-3 (household environment), except EN 61000-3-2 for professionally used devices with a total rated power greater than 1 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Touch current acc. IEC 60990 (measuring network Fig. 4, TN system) | <= 3.5 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Electrical connection                                              | Terminal box                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Motor protection                                                   | Reverse polarity and locked-rotor protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Protection class                                                   | I (if protective earth is connected by customer)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |



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|                                |                                                                                                                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product conforming to standard | EN 61800-5-1; CE                                                                                                                                                                                |
| Standard conformity            | UKCA                                                                                                                                                                                            |
| Approval                       | CSA C22.2 no. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1                                                                                                                                   |
| Remark                         | Perm. operating altitude up to max. 4000 m above sea level as per DIN 61800-5-1_2008_Sect. 4.3.6.4.1 Overvoltage category II.<br>Up to 2000 m above sea level Overvoltage category III applies. |

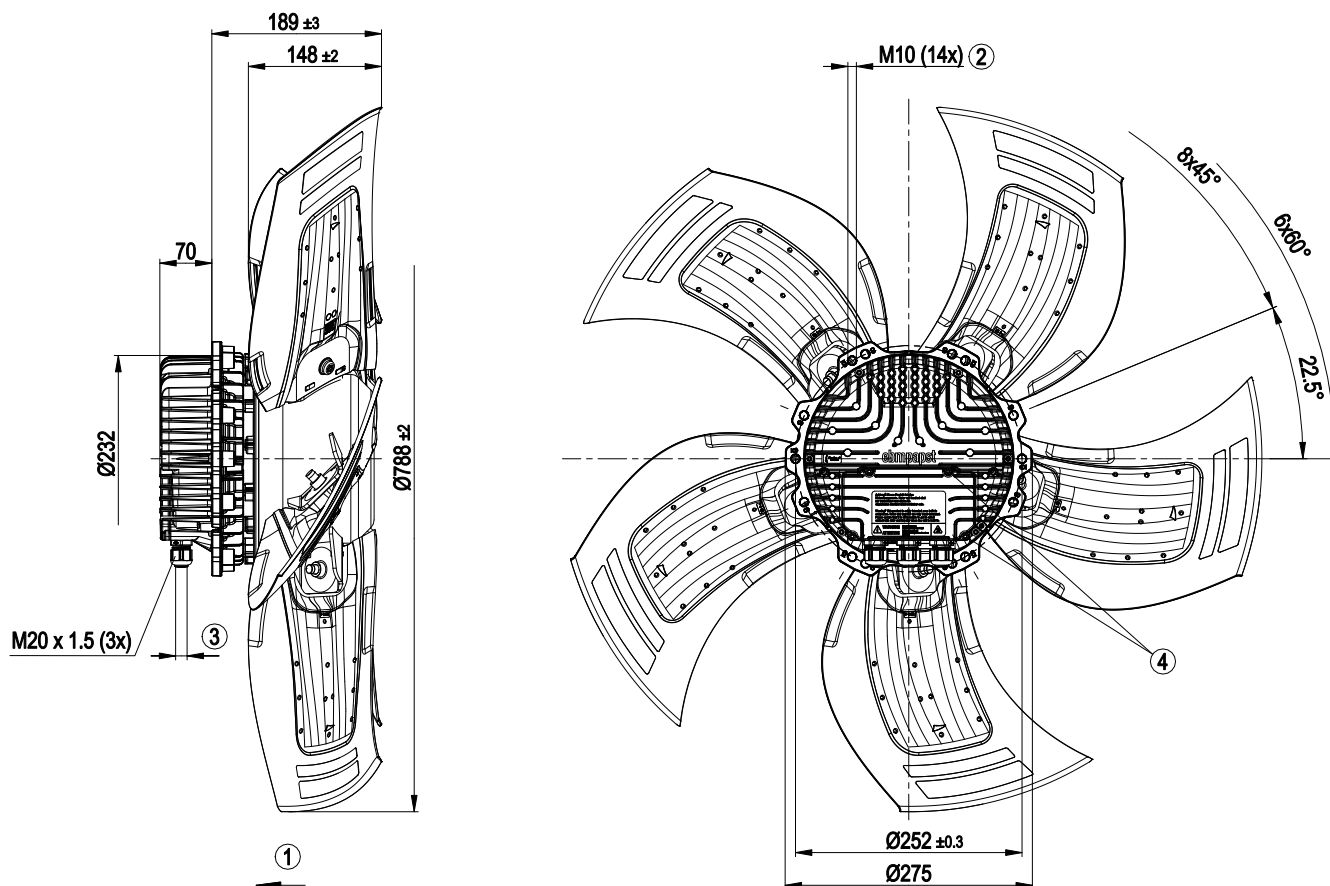


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sickled blades (S series)

## Product drawing



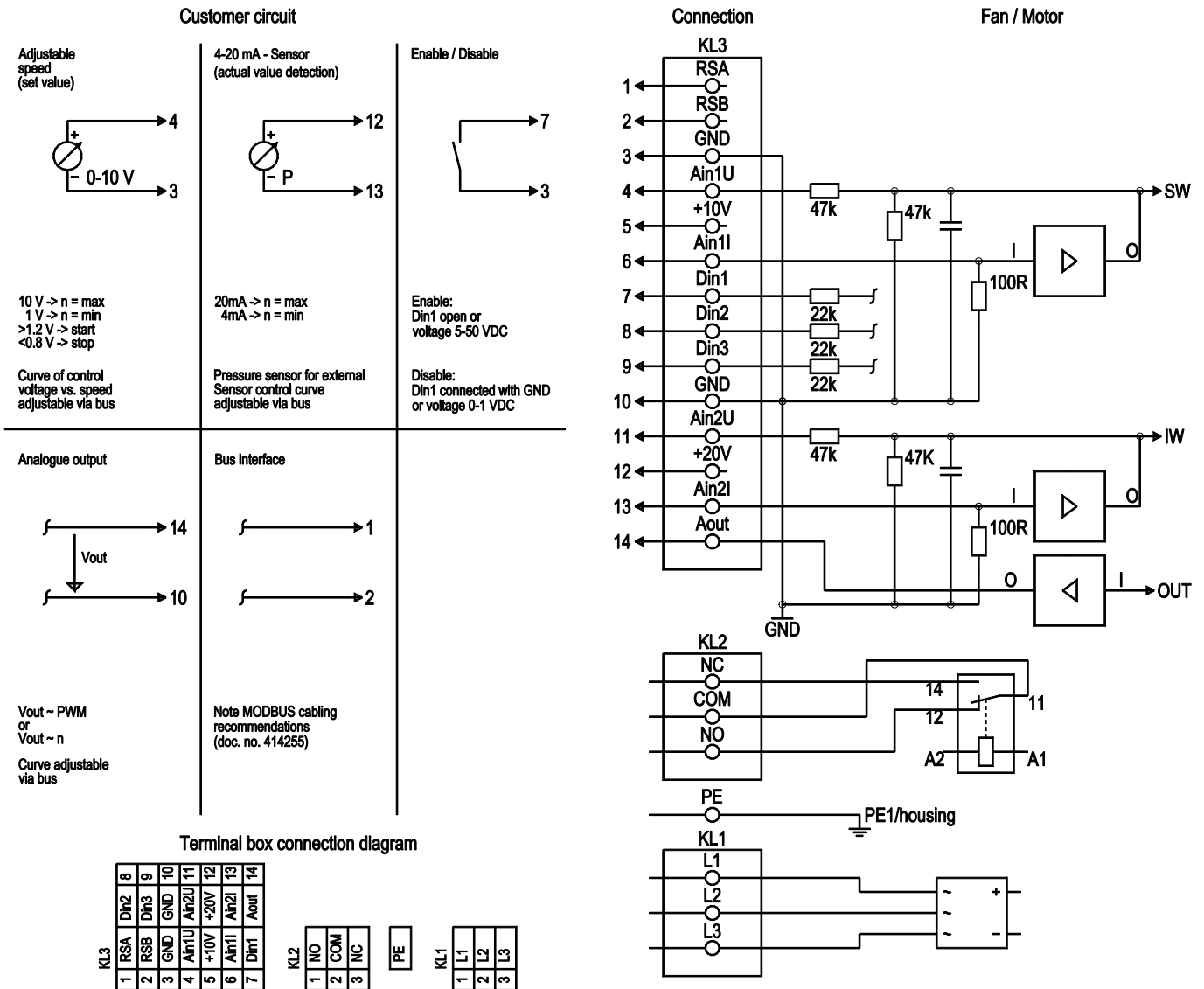
|   |                                                                        |
|---|------------------------------------------------------------------------|
| 1 | Direction of air flow "V"                                              |
| 2 | Depth of screw max. 25 mm                                              |
| 3 | Cable diameter min. 4 mm, max. 10 mm, tightening torque $4 \pm 0.6$ Nm |
| 4 | Tightening torque $3.5 \pm 0.5$ Nm                                     |

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## Connection screen



| No.  | Conn.  | Designation | Function / assignment                                                                                                              |
|------|--------|-------------|------------------------------------------------------------------------------------------------------------------------------------|
| KL 1 | 1      | L1          | Mains connection, power supply; see technical data for nominal voltage range                                                       |
| KL 1 | 2      | L2          | Mains connection, power supply; see technical data for nominal voltage range                                                       |
| KL 1 | 3      | L3          | Mains connection, power supply; see technical data for nominal voltage range                                                       |
| PE   |        | PE          | Earth 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 RS-485, RSA, MODBUS RTU; SELV                                                                                       |
| KL 3 | 2      | RSB         | Bus connection RS-485, RSB, MODBUS RTU; SELV                                                                                       |
| KL 3 | 3 / 10 | GND         | Signal ground for control interface; SELV                                                                                          |
| KL 3 | 4      | Ain1 U      | Analogue input 1, set value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain1; SELV             |

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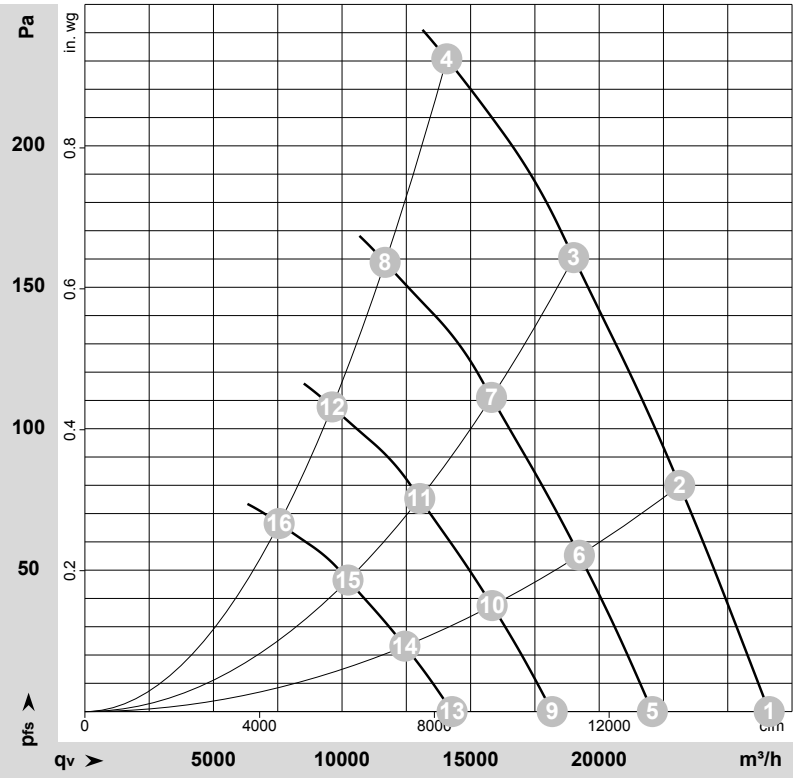
| No.  | Conn. | Designation | Function / assignment                                                                                                                                                                                                                                                                                                          |
|------|-------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KL 3 | 5     | + 10 V      | Fixed voltage output 10 VDC, +10 V $\pm 3\%$ , max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometer); SELV                                                                                                                                                                                   |
| KL 3 | 6     | Ain1 I      | Analogue input 1, set value: 4-20 mA; $R_i = 100 \Omega$ , parametrisable curve, only usable as alternative to input Ain1 U; SELV                                                                                                                                                                                              |
| KL 3 | 7     | 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 VDC; SELV                                                                                              |
| KL 3 | 8     | Din2        | Digital input 2: parameter set switch 1/2, according to EEPROM setting, the valid/used parameter set can be selected via bus or via digital input DIN2.<br>Parameter set 1: open pin or applied voltage 5-50 VDC<br>Parameter set 2: bridge to GND or applied voltage <1 VDC; SELV                                             |
| KL 3 | 9     | Din3        | Digital input 3: controller function of integrated controller, according to EEPROM setting, the controller function of the integrated controller is normally/inversely selectable per bus or per digital input Din 3<br>normal: open pin or applied voltage 5-50 VDC<br>inverse: bridge to GND or applied voltage <1 VDC; SELV |
| KL 3 | 11    | Ain2 U      | Analogue input 2, actual value: 0-10 V, $R_i = 100 \text{ k}\Omega$ , parametrisable curve, only usable as alternative to input Ain2; SELV                                                                                                                                                                                     |
| KL 3 | 12    | + 20 V      | Fixed voltage output 20 VDC; +20 V $\pm 25/-10\%$ , max. 50 mA; short-circuit-proof; supply voltage for external devices (e.g. sensors); SELV<br>Alternatively: +24 VDC input for parametrization without mains power                                                                                                          |
| KL 3 | 13    | Ain2 I      | Analogue input 2, actual value: 4-20 mA, $R_i = 100 \Omega$ , parametrisable curve, only usable as alternative to input Ain2 U; SELV                                                                                                                                                                                           |
| KL 3 | 14    | Aout        | Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV                                                                                                                                                                                            |

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Charts: Air flow 50 Hz



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

Measurement: LU-136917-1

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> | 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)              | m³/h           | Pa              | cfm            | in. wg          |
| 1  | 400 | 50 | 1020              | 1585            | 2.74 | 68                | 75                | 75                 | 26610          | 0               | 15665          | 0.00            |
| 2  | 400 | 50 | 1020              | 1892            | 3.19 | 67                | 74                | 74                 | 23130          | 80              | 13615          | 0.32            |
| 3  | 400 | 50 | 1020              | 2154            | 3.58 | 70                | 77                | 75                 | 19010          | 160             | 11190          | 0.64            |
| 4  | 400 | 50 | 1020              | 2560            | 3.90 | 75                | 83                | 82                 | 14075          | 230             | 8285           | 0.92            |
| 5  | 400 | 50 | 850               | 904             | 1.56 | 63                | 70                | 71                 | 22070          | 0               | 12990          | 0.00            |
| 6  | 400 | 50 | 850               | 1087            | 1.83 | 63                | 70                | 69                 | 19230          | 55              | 11320          | 0.22            |
| 7  | 400 | 50 | 850               | 1240            | 2.06 | 65                | 72                | 71                 | 15815          | 111             | 9305           | 0.45            |
| 8  | 400 | 50 | 850               | 1417            | 2.33 | 71                | 78                | 78                 | 11675          | 159             | 6870           | 0.64            |
| 9  | 400 | 50 | 700               | 505             | 0.87 | 58                | 65                | 66                 | 18175          | 0               | 10695          | 0.00            |
| 10 | 400 | 50 | 700               | 607             | 1.02 | 58                | 65                | 64                 | 15835          | 37              | 9320           | 0.15            |
| 11 | 400 | 50 | 700               | 693             | 1.15 | 60                | 67                | 66                 | 13020          | 75              | 7665           | 0.30            |
| 12 | 400 | 50 | 700               | 792             | 1.30 | 66                | 73                | 73                 | 9615           | 108             | 5660           | 0.43            |
| 13 | 400 | 50 | 550               | 245             | 0.42 | 52                | 59                | 60                 | 14280          | 0               | 8405           | 0.00            |
| 14 | 400 | 50 | 550               | 295             | 0.50 | 52                | 59                | 58                 | 12445          | 23              | 7325           | 0.09            |
| 15 | 400 | 50 | 550               | 336             | 0.56 | 54                | 61                | 60                 | 10230          | 46              | 6020           | 0.18            |
| 16 | 400 | 50 | 550               | 384             | 0.63 | 60                | 67                | 67                 | 7555           | 66              | 4445           | 0.26            |

U = Supply voltage · f = Frequency · n = Speed (rpm) · 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  
q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

