

W3G800-GS26-03

# EC axial fan - HyBlade

sickle-shaped blades (S series)

Fan housing with guard grille

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## Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | W3G800-GS26-03    |            |
| Motor                    | M3G150-FF         |            |
| 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> | 1000       |
| Power consumption        | W                 | 2200       |
| Current draw             | A                 | 3.4        |
| Max. back pressure       | Pa                | 200        |
| Max. back pressure       | in. wg            | 0.8        |
| Min. ambient temperature | °C                | -40        |
| Max. ambient temperature | °C                | 60         |

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 $\eta_{es}$ | %                 | 43     |  | 35.7      |       |
| 02 Measurement category           |                   | A      |  |           |       |
| 03 Efficiency category            |                   | Static |  |           |       |
| 04 Efficiency grade N             |                   | 47.3   |  | 40        |       |
| 05 Variable speed drive           |                   | Yes    |  |           |       |
| 09 Power consumption $P_{ed}$     | kW                |        |  |           | 2.13  |
| 09 Air flow $q_v$                 | m <sup>3</sup> /h |        |  |           | 17030 |
| 09 Pressure increase $p_{fs}$     | Pa                |        |  |           | 183   |
| 10 Speed (rpm) n                  | min <sup>-1</sup> |        |  |           | 1000  |
| 11 Specific ratio*                |                   |        |  |           | 1.00  |

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-205508



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## Technical description

|                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                                                                     | 40.8 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Size                                                                       | 800 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Motor size                                                                 | 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Rotor surface                                                              | Painted black                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Electronics housing material                                               | Die-cast aluminum, painted gray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Blade material                                                             | Sheet aluminum insert, sprayed with PP plastic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Fan housing material                                                       | Sheet steel, galvanized and coated with black plastic (RAL 9005)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Guard grille material                                                      | Steel, coated with black plastic (RAL 9005)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Number of blades                                                           | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Blade pitch                                                                | 0°                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Airflow direction                                                          | V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Direction of rotation                                                      | Clockwise, viewed toward rotor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Degree of protection                                                       | IP55                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Insulation class                                                           | "F"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Moisture (F) / Environmental (H) protection class                          | H2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 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                                                      | Shaft horizontal or rotor on bottom; rotor on top on request                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Condensation drainage holes                                                | On rotor side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mode                                                                       | S1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Motor bearing                                                              | Ball bearing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Technical features                                                         | <ul style="list-style-type: none"> <li>- Operation and alarm display with LED</li> <li>- External 15-50 VDC input (parameterization)</li> <li>- Alarm relay</li> <li>- Integrated PI controller</li> <li>- Configurable inputs/outputs (I/O)</li> <li>- MODBUS V6.0</li> <li>- Motor current limitation</li> <li>- RFID - ISO 15693 compatible</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- Voltage output 3,3-24 VDC, Pmax = 800 mW</li> <li>- Control interface with SELV potential safely disconnected from the mains</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 61000-6-3 (household environment), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



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|                           |                                                               |
|---------------------------|---------------------------------------------------------------|
| Protection class          | I (with customer connection of protective earth)              |
| Conformity with standards | EN 61800-5-1; CE                                              |
| Approval                  | UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC |

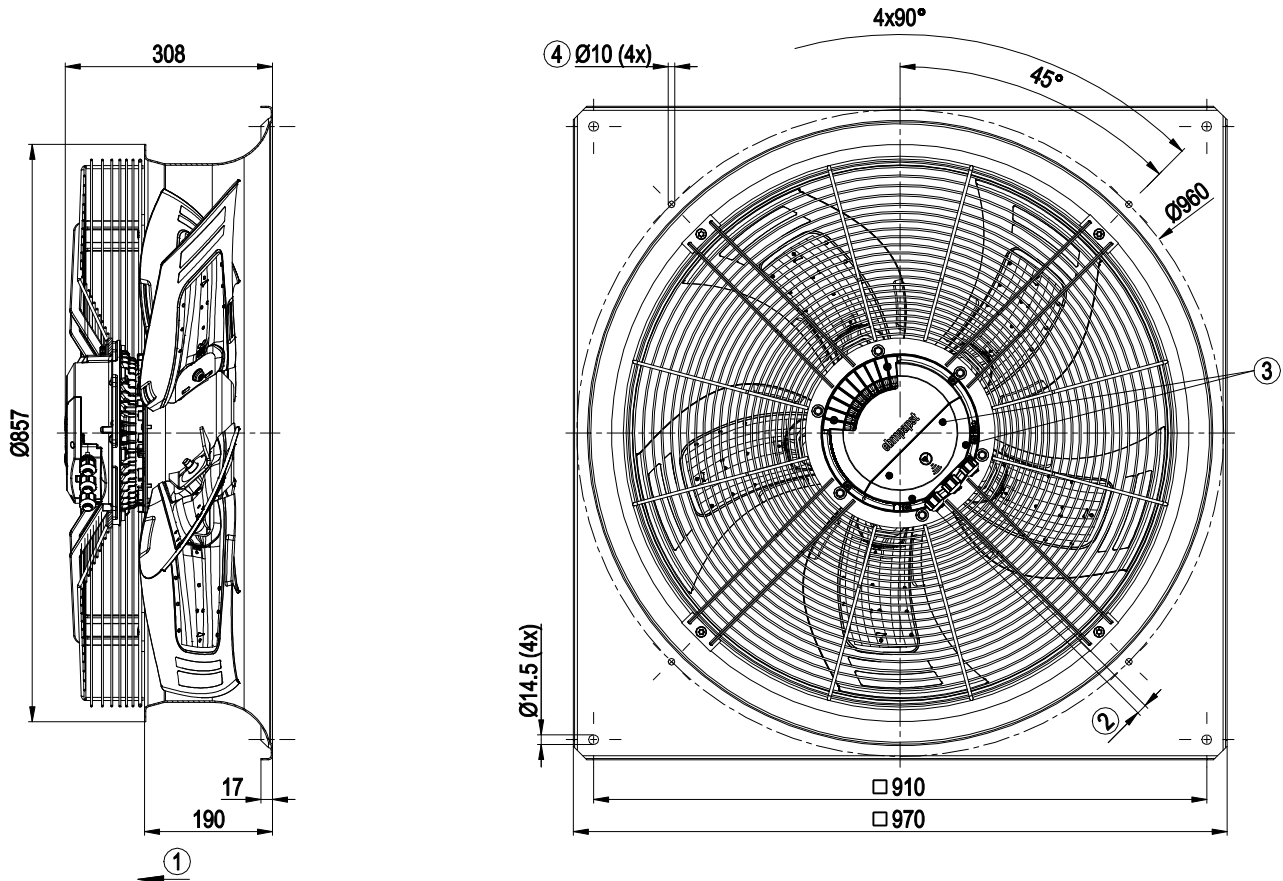


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## Product drawing



|   |                                                                                |
|---|--------------------------------------------------------------------------------|
| 1 | Airflow direction "V"                                                          |
| 2 | Cable diameter min. 4 mm, max. 10 mm, tightening torque $4 \pm 0.6$ Nm         |
| 3 | Tightening torque $1.5 \pm 0.2$ Nm                                             |
| 4 | Attachment holes for FlowGrid (80000-2-2957 not included in scope of delivery) |

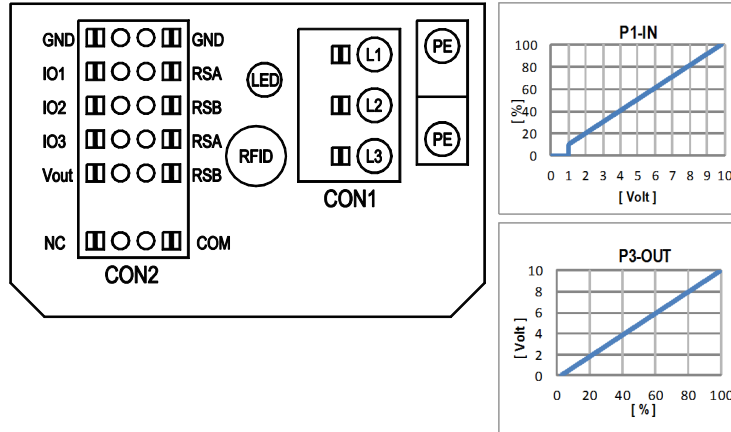


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## Connection diagram



| No. | Conn. | Designation | Function/assignment                                                                                                                                                                                                                                                                                                                             |
|-----|-------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | CON1  | L1, L2, L3  | Power supply, phase, see nameplate for voltage range                                                                                                                                                                                                                                                                                            |
|     | PE    | PE          | Protective earth                                                                                                                                                                                                                                                                                                                                |
|     | CON2  | RSA         | RS485 interface for MODBUS, RSA; SELV                                                                                                                                                                                                                                                                                                           |
|     | CON2  | RSB         | RS485 interface for MODBUS, RSB; SELV                                                                                                                                                                                                                                                                                                           |
|     | CON2  | GND         | Reference ground for control interface, SELV                                                                                                                                                                                                                                                                                                    |
|     | CON2  | IO1         | Function parameterizable (see "Optional interface functions" table)<br>Factory setting:<br>Digital input - high active, function: Disable input, SELV<br>- inactive: Pin open or applied voltage < 1.5 VDC<br>- active: applied voltage 3.5-50 VDC<br>Reset function: Triggering of error reset on change of state from "enabled" to "disabled" |
|     | CON2  | IO2         | Function parameterizable (see "Optional interface functions" table)<br>Factory setting:<br>Analog input 0-10 V / PWM, Ri=100 kΩ, function: Set value<br>Characteristic curve parameterizable (see input characteristic curve P1-IN), SELV                                                                                                       |
|     | CON2  | IO3         | Function parameterizable (see "Optional interface functions" table)<br>Factory setting:<br>Analog output 0-10 V, max. 5 mA, function: Fan modulation level<br>Characteristic curve parameterizable (see output characteristic curve P3-OUT), SELV                                                                                               |
|     | CON2  | Vout        | Voltage output 3.3-24 VDC ±5%, Pmax=800 mW, voltage parameterizable<br>Factory setting: 10 VDC<br>short-circuit-proof, supply for external devices, SELV<br>alternatively: 15-50 VDC input for parameterization via MODBUS without line voltage                                                                                                 |
|     | CON2  | COM         | Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA, reinforced insulation on supply side and on control interface side                                                                                                                                                                   |
|     | CON2  | NC          | Status relay, floating status contact, break for failure                                                                                                                                                                                                                                                                                        |
|     |       | LED         | green: status = good, ready for operation<br>orange: status = warning<br>red: status = failure                                                                                                                                                                                                                                                  |
|     |       | P1-IN       | Input characteristic curve                                                                                                                                                                                                                                                                                                                      |
|     |       | P3-OUT      | Output characteristic curve                                                                                                                                                                                                                                                                                                                     |



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## Terminal/plug assignment

|                                             |                |                                                                                                            |                                                                                                                                |                                           |                                      |                                                                                                                                              |          |                                          |            |            |            |            |            |                                         |                                         |          |          |                                |                                |                         |                                   |                      |                                     |                                   |                                     |                                     |                                  |                                 |                                  |                                  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|---------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------|------------|------------|------------|------------|------------|-----------------------------------------|-----------------------------------------|----------|----------|--------------------------------|--------------------------------|-------------------------|-----------------------------------|----------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|----------------------------------|---------------------------------|----------------------------------|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| configurable IO functions: normal / inverse | CON2           | configurable IO mode                                                                                       | electrical specification                                                                                                       | MODBUS Register for IO mode configuration | D158 [0]                             | not active: pin open or applied voltage < 1.5VDC<br>active: applied voltage 3.5-50VDC, SELV                                                  | ○        | source: set value                        | D101 [...] | D147 [...] | D104 [...] | D12E [...] | D148 [...] | D16C [...]                              | D16A [...]                              | INPUT    | OUTPUT   | D130 [0]                       | signal: fan modulation level % | D130 [1]                | signal: actual speed              | D130 [2]             | signal: system modulation level %   | D130 [5]                          | signal: remote control output 0-10V | D00C [1]                            | pulse input for auto-addressing  | D130 [4]                        | pulse output for auto-addressing |                                  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D158 [2]                             | Ri=100K, characteristic curve parameterizable, f <sub>PWM</sub> =1k..10KHz SELV                                                              | ○        | switch: parameter set: #1 / #2           | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | signal: tach out                        | signal: diagnostics out                 |          |          | signal: fan modulation level % | signal: actual speed           | D130 [2]                | signal: system modulation level % | D130 [5]             | signal: remote control output 0-10V | D00C [1]                          | pulse input for auto-addressing     | D130 [4]                            | pulse output for auto-addressing |                                 |                                  |                                  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D158 [5]                             | Umax=50VDC, Imax=20mA SELV                                                                                                                   | ○        | switch: control function: heating (pos.) | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: direction of rotation: cw / ccw | switch: set value source                |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D158 [6]                             | Umax=50VDC, Imax=20mA, SELV                                                                                                                  | ○        | switch: cooling (neg.)                   | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: direction of rotation: cw / ccw | switch: set value source                |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D159 [0]                             | not active: pin open or applied voltage < 1.5VDC<br>active: applied voltage 3.5-50VDC, SELV                                                  | ○        | switch: parameter set: #1 / #2           | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: cooling (neg.)                  | switch: direction of rotation: cw / ccw |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D159 [2]                             | Ri=100K, characteristic curve parameterizable, f <sub>PWM</sub> =1k..10KHz, SELV                                                             | ○        | switch: control function: heating (pos.) | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: direction of rotation: cw / ccw | switch: set value source                |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D159 [3]                             | Ri=125R, characteristic curve parameterizable, SELV                                                                                          | ○        | switch: cooling (neg.)                   | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: direction of rotation: cw / ccw | switch: set value source                |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D15A [0]                             | not active: pin open or applied voltage < 1.5VDC<br>active: applied voltage 3.5-50VDC, SELV                                                  | ○        | switch: parameter set: #1 / #2           | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: cooling (neg.)                  | switch: direction of rotation: cw / ccw |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D15A [1]                             | active: pin open or applied voltage 3.5-50VDC<br>not active: applied voltage < 1.5VDC, SELV                                                  | ○        | switch: control function: heating (pos.) | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: direction of rotation: cw / ccw | switch: set value source                |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|                                             |                |                                                                                                            |                                                                                                                                |                                           | D15A [7]                             | 40Hz - 10KHz, characteristics parameterizable<br>not active: pin open or applied voltage 3.5-50VDC<br>active: applied voltage < 1.5VDC, SELV | ○        | switch: cooling (neg.)                   | D104 [...] | D12E [...] | D148 [...] | D16C [...] | D16A [...] | switch: direction of rotation: cw / ccw | switch: set value source                |          |          | switch: fan enable / disable   | signal: tach out               | signal: diagnostics out | signal: fan modulation level %    | signal: actual speed | D130 [2]                            | signal: system modulation level % | D130 [5]                            | signal: remote control output 0-10V | D00C [1]                         | pulse input for auto-addressing | D130 [4]                         | pulse output for auto-addressing |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| IO3                                         | voltage output | alternatively: Input auxiliary power supply for parameterization via RS485/MODBUS RTU without line voltage | voltage parameterizable 3.3...24VDC +/- 5.5%, Pmax=800mW, short-circuit-proof, supply for external devices, SELV<br>15...50VDC | D18E [...]                                | MODBUS RTU, specification V6.0, SELV | D15A [4]                                                                                                                                     | D15A [5] | D15A [6]                                 | D15A [7]   | D15A [4]   | D15A [5]   | D15A [6]   | D15A [7]   | D15A [4]                                | D15A [5]                                | D15A [6] | D15A [7] | D15A [4]                       | D15A [5]                       | D15A [6]                | D15A [7]                          | D15A [4]             | D15A [5]                            | D15A [6]                          | D15A [7]                            | D15A [4]                            | D15A [5]                         | D15A [6]                        | D15A [7]                         | D15A [4]                         | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] | D15A [4] | D15A [5] | D15A [6] | D15A [7] |

- configurable option

For further information and additional functions see EC Control Software, Fan-Set-App, or MODBUS Parameter Specification V6.0

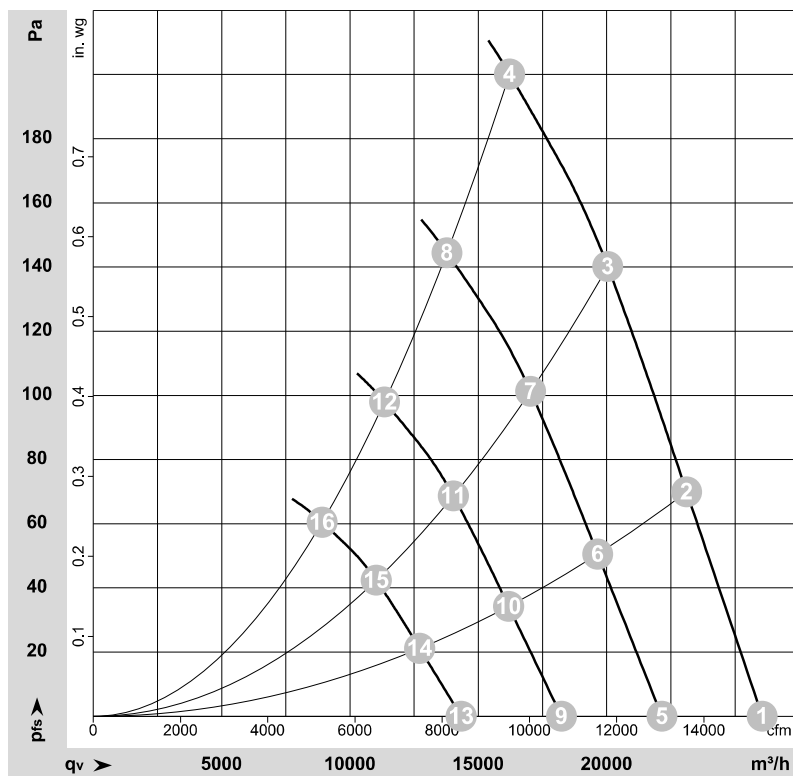


# EC axial fan - HyBlade

sickle-shaped blades (S series)

Fan housing with guard grille

## Curves: Air performance 50 Hz



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

Measurement: LU-205697-1

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

|    | Wired | 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  | 3~    | 400 | 50 | 1000              | 1539            | 2.46 | 67                | 74                | 74                 | 26060          | 0               | 15340          | 0.00            |
| 2  | 3~    | 400 | 50 | 1000              | 1784            | 2.81 | 67                | 74                | 74                 | 23115          | 70              | 13605          | 0.28            |
| 3  | 3~    | 400 | 50 | 1000              | 2002            | 3.13 | 69                | 76                | 75                 | 20040          | 140             | 11795          | 0.56            |
| 4  | 3~    | 400 | 50 | 1000              | 2200            | 3.40 | 72                | 79                | 78                 | 16215          | 200             | 9545           | 0.80            |
| 5  | 3~    | 400 | 50 | 850               | 945             | 1.51 | 63                | 70                | 70                 | 22150          | 0               | 13040          | 0.00            |
| 6  | 3~    | 400 | 50 | 850               | 1096            | 1.73 | 63                | 70                | 69                 | 19650          | 51              | 11565          | 0.20            |
| 7  | 3~    | 400 | 50 | 850               | 1230            | 1.92 | 65                | 72                | 70                 | 17035          | 101             | 10025          | 0.41            |
| 8  | 3~    | 400 | 50 | 850               | 1332            | 2.08 | 68                | 75                | 74                 | 13775          | 144             | 8110           | 0.58            |
| 9  | 3~    | 400 | 50 | 700               | 528             | 0.84 | 58                | 65                | 65                 | 18240          | 0               | 10735          | 0.00            |
| 10 | 3~    | 400 | 50 | 700               | 612             | 0.96 | 58                | 65                | 65                 | 16180          | 34              | 9525           | 0.14            |
| 11 | 3~    | 400 | 50 | 700               | 687             | 1.07 | 60                | 67                | 66                 | 14030          | 69              | 8255           | 0.28            |
| 12 | 3~    | 400 | 50 | 700               | 744             | 1.16 | 63                | 70                | 69                 | 11345          | 98              | 6680           | 0.39            |
| 13 | 3~    | 400 | 50 | 550               | 256             | 0.41 | 52                | 59                | 59                 | 14335          | 0               | 8435           | 0.00            |
| 14 | 3~    | 400 | 50 | 550               | 297             | 0.47 | 52                | 59                | 58                 | 12715          | 21              | 7485           | 0.08            |
| 15 | 3~    | 400 | 50 | 550               | 333             | 0.52 | 54                | 61                | 59                 | 11020          | 42              | 6485           | 0.17            |
| 16 | 3~    | 400 | 50 | 550               | 361             | 0.56 | 57                | 64                | 63                 | 8915           | 60              | 5245           | 0.24            |

Wired = Wiring · 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

