

## W3G630

II 2 G Ex d e ib IIB T3 Gb  
IBExU11ATEX1025 X /01

## EC axial fan - HyBlade®

sickled blades (S series)  
with full round nozzle

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### Nominal data

|                          |                   |            |
|--------------------------|-------------------|------------|
| Type                     | W3G630            |            |
| Motor                    | M3G150-IF         |            |
| Phase                    |                   | 3~         |
| Nominal voltage          | VAC               | 400        |
| Nominal voltage range    | VAC               | 380 .. 440 |
| Frequency                | Hz                | 50/60      |
| Type of data definition  |                   | ml         |
| State                    |                   | prelim.    |
| Speed                    | min <sup>-1</sup> | 1510       |
| Power input              | W                 | 3160       |
| Current draw             | A                 | 5.0        |
| Max. back pressure       | Pa                | 190        |
| Min. ambient temperature | °C                | -55        |
| Max. ambient temperature | °C                | 60         |

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations



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### Technical features

|   |   |
|---|---|
| Leakage current   | <= 3.5 mA   |
| Size  | 630 mm  |
| Operation mode  | S1  |
| Direction of rotation                                   | Clockwise, seen on rotor  |
| Mounting position                                       | Shaft horizontal with cable exit $\pm 45^\circ$ or rotor on bottom; rotor on top on request   |
| Electrical heating                                      | 24 VAC/DC (any polarity)  |
| Electrical leads  | Via terminal box  |
| EMC interference emission                               | Acc. to EN 61000-6-3 (household environment)  |
| EMC interference immunity                               | Acc. to EN 61000-6-2 (industrial environment)   |
| Humidity class  | F4-1  |
| Blade angle   | 0°  |
| Direction of air flow                                   | "V"   |
| Insulation class  | "F"   |
| Condensate discharge holes                              | Rotor-side  |
| Motor bearing   | Ball bearing  |
| Mass  | 44 kg   |
| Material of electronics housing                         | Die-cast aluminium, coated in black   |
| Material of blades                                      | Aluminium sheet insert, sprayed with PP plastic   |
| Material of mounting ring                               | Steel, phosphated and coated in black plastic   |
| Material of wall ring                                   | Sheet steel, pre-galvanised and plastic-coated in sky blue (RAL 5015)   |
| Motor protection  | Reverse polarity and locked-rotor protection  |
| Product conforming to standard                          | EN 61800-5-1  |
| Surface of rotor  | Coated in black   |
| Number of blades  | 5   |
| Type of protection                                      | IP 44   |
| Protection class  | I   |
| 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>- Alarm relay</li><li>- Heating</li><li>- Integrated PID controller</li><li>- Motor current limit</li><li>- PFC, passive</li><li>- RS485 MODBUS RTU</li><li>- Soft start</li><li>- Control input 0-10 VDC / PWM</li><li>- Over-temperature protected electronics / motor</li><li>- Line undervoltage / phase failure detection</li></ul> |
| Max. permissible ambient motor temp. (transp./ storage) | +60 °C  |
| Min. permissible ambient motor temp. (transp./storage)  | Transport -40 °C / storage -55 °C   |
| Approval  | 2G  |



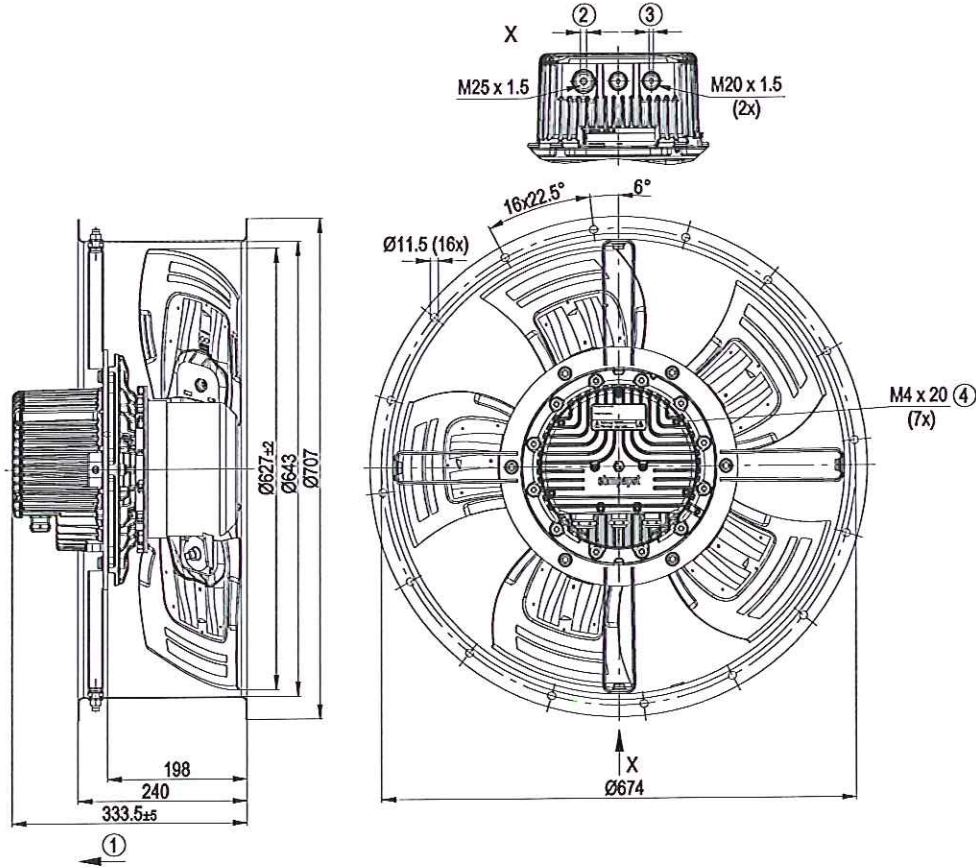
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### Product drawing



- |   |  |
|---|--|
| 1 | Direction of air flow "V"  |
| 2 | Cable diameter min. 10 mm, max. 16 mm, tightening torque $6 \pm 0.6$ Nm; standard value depending on the cable |
| 3 | Cable diameter min. 10 mm, max. 14 mm, tightening torque $6 \pm 0.6$ Nm; standard value depending on the cable |
| 4 | Mounting screws for terminal box cover, tightening torque $3.5 \pm 0.5$ Nm                                     |



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## Connection screen

|    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|
| PE | PE | L1 | L2 | L3 | HZ | HZ |
| 1  | 2  | 3  | 4  | 5  |    |    |

KL1

|     |     |     |        |       |        |       |      |       |       |        |       |        |    |     |    |
|-----|-----|-----|--------|-------|--------|-------|------|-------|-------|--------|-------|--------|----|-----|----|
| RSA | RSB | GND | Ain1 U | +10 V | Ain1 I | Din 1 | Aout | Din 2 | Din 3 | Ain2 U | +20 V | Ain2 I | NO | COM | NC |
| 1   | 2   | 3   | 4      | 10    | 11     | 12    | 13   | 9     | 8     | 7      | 6     | 5      | 15 | 14  | 16 |

KL2

| No. | Pin | Signal | Function / assignment   |
|-----|-----|--------|---|
| 1   |     | PE     | Earth connection, PE connection   |
| 1   | 3   | L1     | Mains supply connection, supply voltage 3-phase, 380- 440 VAC, 50/60 Hz   |
| 1   | 2   | L2     | Mains supply connection, supply voltage 3-phase, 380- 440 VAC, 50/60 Hz   |
| 1   | 1   | L3     | Mains supply connection, supply voltage 3-phase, 380- 440 VAC, 50/60 Hz   |
| 1   | 4,5 | HZ     | Connection of internal heating element; 24 V AC/DC; any polarity; max. startup current 30A  |
| 3   | 10  | RSA    | Bus connection RS485; RSA; MODBUS RTU; double terminal  |
| 3   | 11  | RS B   | Bus connection RS485; RSB; MODBUS RTU; double terminal  |
| 3   | 2   | GND    | Signal ground for control interface   |
| 2   | 4   | Ain1 U | Analogue input 1 (set value); 0 - 10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain1 I  |
| 3   | 4   | +10 V  | Fixed voltage output 10 VDC; +10 V +/-3 %; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)  |
| 2   | 11  | Ain1 I | Analogue input 1 (set value); 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain1 U  |
| 2   | 12  | Din 1  | Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to <1 V  |
| 2   | 13  | Aout   | Analogue output 0 - 10 V; max. 5 mA; output of the current motor level control coefficient/ of the current motor speed. Parametrisable curve.   |
| 2   | 9   | Din 2  | Digital input 2: parameter set switch 1/ 2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input DIN 2.2 Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC  |
| 2   | 8   | Din 3  | Digital input 3: Control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC (control deviation = actual sensor value - set value) inverse: bridge to GND or applied voltage < 1 VDC (control deviation = set value - actual sensor value) |
| 2   | 7   | Ain2 U | Analogue input 2 (actual value); 0 - 10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I   |
| 3   | 5   | +20 V  | Fixed voltage output 20 VDC; +20 V +/- 10 %; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)  |
| 2   | 5   | AIN2 I | Analogue input 2 (actual value); 4 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U  |
| 2   | 3   | NO     | Status relay; floating status contact; normally open for error  |
| 2   | 2   | COM    | Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)  |
| 2   | 1   | NC     | Status relay; floating status contact; normally closed for error  |

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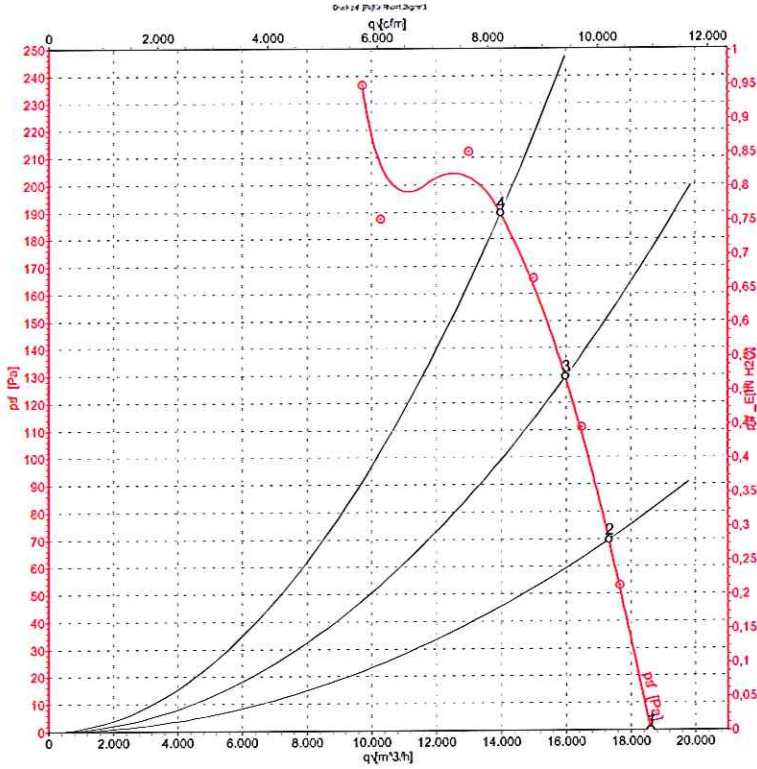
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Charts: Air flow 50 Hz



Measurement: LU-132025

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                 | Pe   | I    | LpA <sub>in</sub> | LwA <sub>in</sub> | LwA <sub>out</sub> | qv                | psf |
|---|-----|----|-------------------|------|------|-------------------|-------------------|--------------------|-------------------|-----|
|   | V   | Hz | min <sup>-1</sup> | W    | A    | dB(A)             | dB(A)             | dB(A)              | m <sup>3</sup> /h | Pa  |
| 1 | 400 | 50 | 1510              | 2745 | 4.48 | 82                | 90                | 90                 | 18600             | 0   |
| 2 | 400 | 50 | 1510              | 2883 | 4.63 | 83                | 90                | 90                 | 17320             | 70  |
| 3 | 400 | 50 | 1510              | 3160 | 5.00 | 83                | 91                | 91                 | 15980             | 130 |
| 4 | 400 | 50 | 1510              | 2907 | 4.69 | 86                | 93                | 93                 | 13980             | 190 |



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