W3G800-GV01-90

II 2G Ex db eb ib IIB T3 Gb

IBExU14ATEX1123 X /03

EC axial fan - HyBlade

sickled blades (S series)

with full square nozzle

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Nominal data

Type	**W3G800-GV01-90**
Motor	**M3G150-NA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 440
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1090
Power input	W	2750
Current draw	A	4.2
Max. back pressure	Pa	250
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

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

Occasional start-up between -40°C and -25°C is permissible. At ambient temperatures between -55 °C and -40 °C, the unit must be pre-heated with the integrated heating element for at least 1 hour before start-up. For continuous operation at ambient temperatures below -25 °C (such as refrigeration applications), a fan design with special low-temperature bearings must be used.

Technical features

Mass	58 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
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	0°
Direction of air flow	V
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP44
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
Note ambient temperature	Occasional start-up between -40 °C and -25 °C is permissible. At ambient temperatures between -55 °C and -40 °C, the unit must be pre-heated with the integrated heating element for at least 1 hour before start-up. For continuous operation at ambient temperatures below -25 °C (e.g. refrigeration applications), a fan version with special low-temperature bearings must be used.
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40/-55 °C
Mounting position	Shaft horizontal with cable exit ±45° or rotor on bottom; rotor on top not permissible
Condensation drainage holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Operation and alarm display - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Heating - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Temperature derating - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)

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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
Safety classification	I; If a protective earth is connected by the customer This component to be built-in can have several local protection class ratings. The specification refers to the basic design of this component. The final protection class is based on the intended installation and connection of the component.
Product conforming to standard	EN 14986; EN 60079-0; EN 60079-1; EN 60079-7; EN 60079-11; EN 61800-5-1; CE
Approval	EAC; II 2G

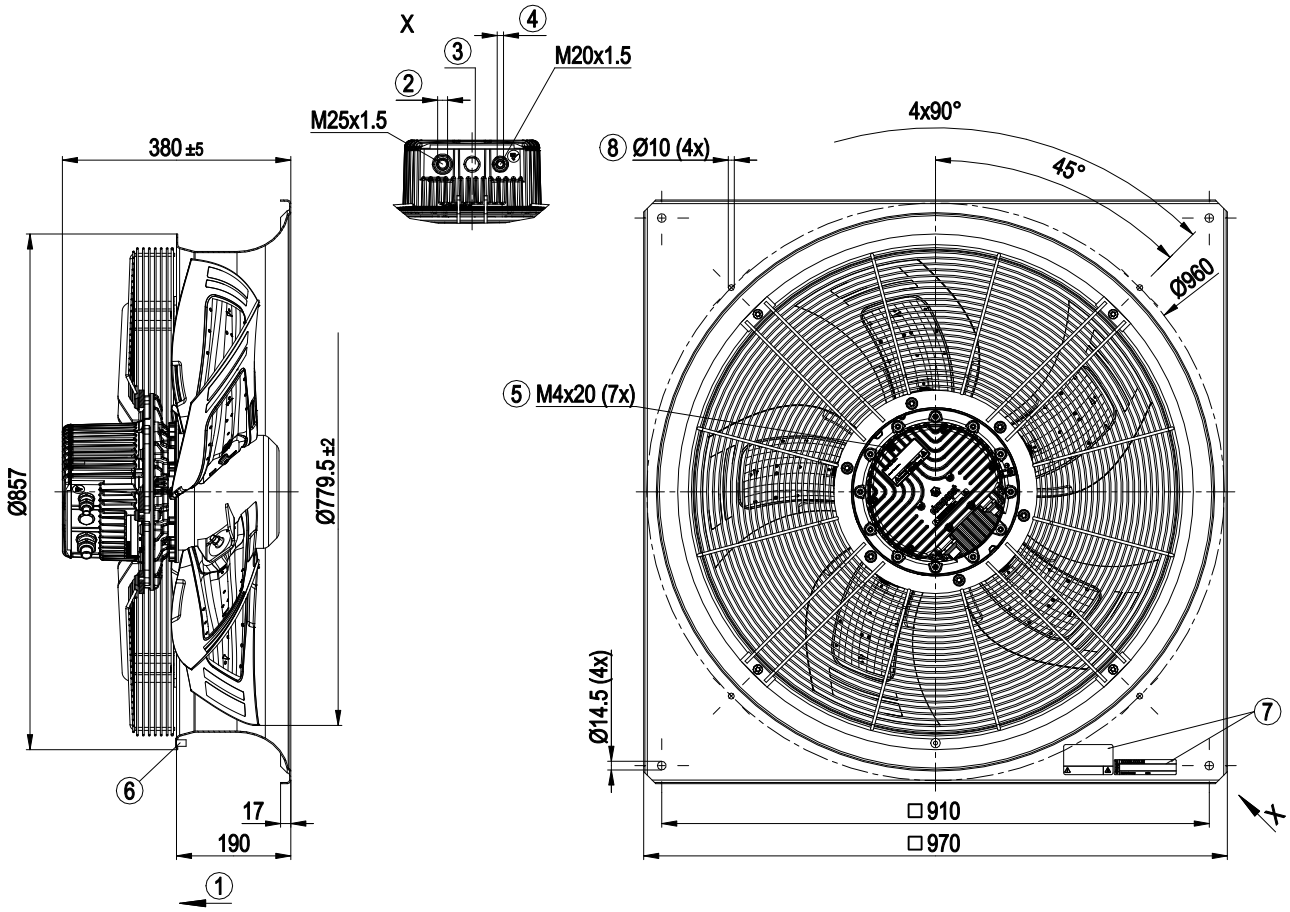
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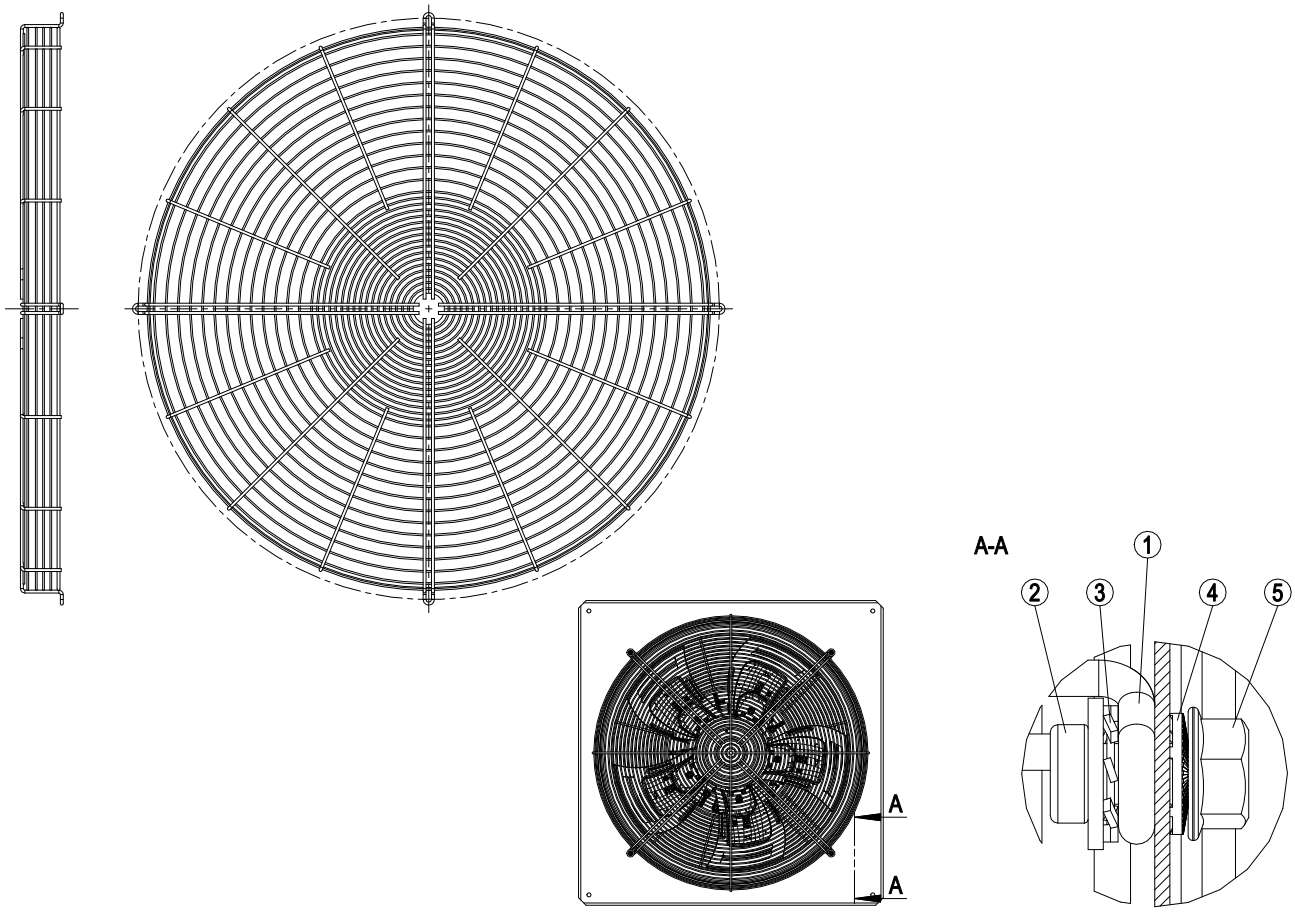
Product drawing



1	Direction of air flow "V"
2	Cable diameter min. 10 mm, max. 16 mm, tightening torque 6±0.6 Nm; standard value depending on cable
3	Screw plug M20x1.5
4	Cable diameter min. 10 mm, max. 14 mm, tightening torque 6±0.6 Nm; standard value depending on cable
5	Attachment screws for terminal box cover M4x20, tightening torque 3.5±0.5 Nm
6	Earth connection point M8 (functional earth to dissipate electrostatic charge, no protective earth)
7	Additional type plate and warning sticker in Russian
8	Mounting holes for the optionally available guard grill (60803-2-4039)

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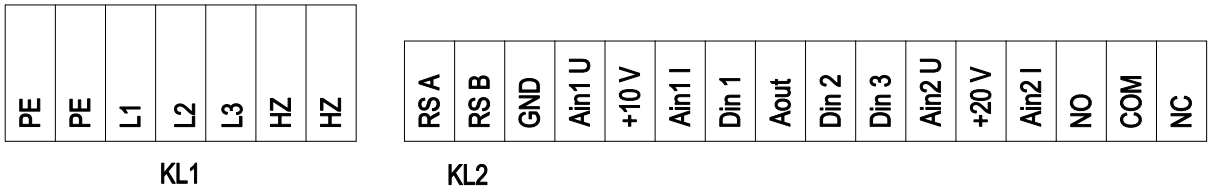
Accessory part



	This drawing shows how to install the guard grille with the article numbers specified in the product drawing. The necessary bolts, nuts and washers are available from ebm-papst.
1	Guard grille as protection against contact
2	Screw M8x18 microencapsulated
3	Toothed lock washer
4	Contact disc (only necessary at one fastening point)
5	Nut M8
	Attention! The guard grille may only be fastened at the four fastening points marked in the product drawing.
	Use the fastening components available from ebm-papst for assembly.
	At one fastening point, the contact disc (4) must also be inserted between the housing and the nut.
	Tighten the bolts to a torque of 20 Nm ± 3 Nm.
	If a guard grille other than the one specified in the product drawing is installed, the operator must ensure proper installation in accordance with the ATEX directive. In particular, it is essential to ensure the necessary distance from rotating parts and the safe dissipation of any static charge that arises. If you have any questions, please contact ebm-papst.

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Connection screen



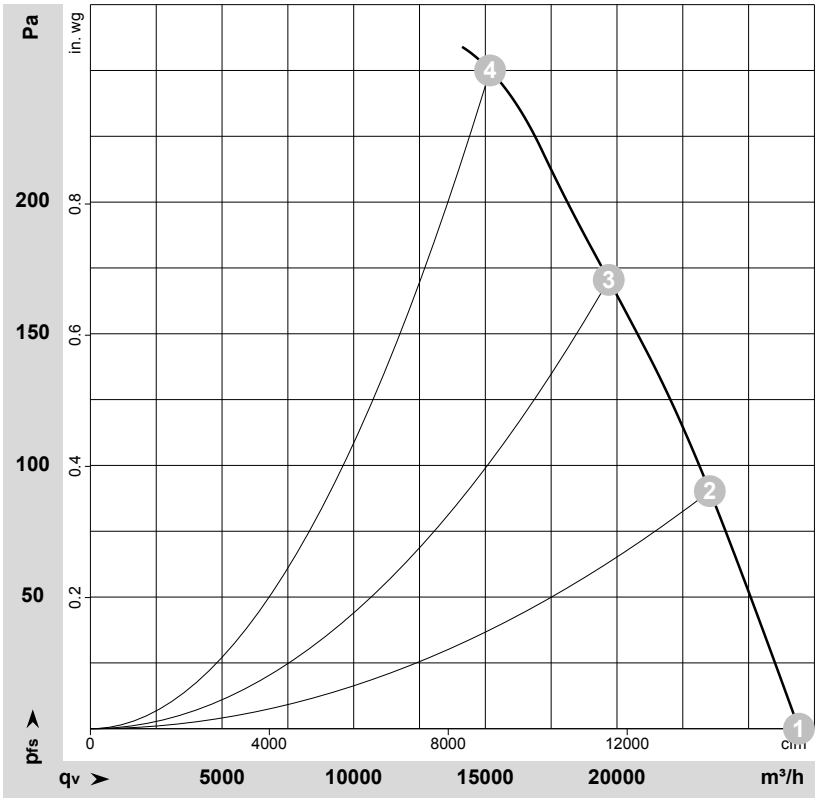
No.	Conn.	Designation	Function / assignment
1		PE	Earth connection, PE connection
1		L1	Mains supply connection, supply voltage 3-phase, 380- 440 VAC, 50/60 Hz
1		L2	Mains supply connection, supply voltage 3-phase, 380- 440 VAC, 50/60 Hz
1		L3	Mains supply connection, supply voltage 3-phase, 380- 440 VAC, 50/60 Hz
1		HZ	Connection of internal heating element; 24 V AC/DC; any polarity; max. startup current 30A
2		RSA	Bus connection RS485; RSA; MODBUS RTU; double terminal (SELV)
2		RSB	Bus connection RS485; RSB; MODBUS RTU; double terminal (SELV)
2		GND	Signal ground for control interface (SELV)
2		Ain1 U	Analogue input 1 (set value); 0 - 10 V; Ri = 100 kΩ; parametrisable curve; only usable as alternative to input Ain1 I (SELV)
2		+10 V	Fixed voltage output 10 VDC; +10 V ±3 %; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer) (SELV)
2		Ain1 I	Analogue input 1 (set value); 4 - 20 mA; Ri = 100 Ω; parametrisable curve; only usable as alternative to input Ain1 U (SELV)
2		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 (SELV)
2		Aout	Analogue output 0 - 10 V; max. 5 mA; output of the current motor level control coefficient/ of the current motor speed. Parametrisable curve. (SELV)
2		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. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC (SELV)
2		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) (SELV)
2		Ain2 U	Analogue input 2 (actual value); 0 - 10 V; Ri = 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I (SELV)
2		+20 V	Fixed voltage output 20 VDC; +20 V + 25 / - 10 %; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors) (SELV)
2		AIN2 I	Analogue input 2 (actual value); 4 - 20 mA; Ri = 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U (SELV)
2		NO	Status relay; floating status contact; make for failure
2		COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)
2		NC	Status relay; floating status contact; break for failure

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-161777-1

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

	Conn.	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	3~	400	50	1090	1956	2.97	74	81	81	26915	0	15840	0.00
2	3~	400	50	1090	2279	3.45	76	83	82	23525	90	13845	0.36
3	3~	400	50	1090	2502	3.77	78	85	84	19690	170	11590	0.68
4	3~	400	50	1090	2750	4.20	82	89	88	15180	250	8935	1.00

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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