W3G990-GZ02-91

II 2G Ex d e ib IIB T3 Gb

IBExU14ATEX1123 X /05

EC axial fan - HyBlade

sickled blades (S series)

with full square nozzle

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Nominal data

Type	**W3G990-GZ02-91**
Motor	**M3G150-NA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 440
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed (rpm)	min^{-1}	960
Power input	W	2450
Current draw	A	3.7
Max. back pressure	Pa	180
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

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Technical features

Mass	69 kg
Size	990 mm
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	IP 44
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	Transport -40 °C / Storage -55 °C °C
Mounting position	Shaft horizontal with cable exit ±45° or rotor on bottom; rotor on top not permissible
Condensate discharge 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 - 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
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	II 2G; EAC

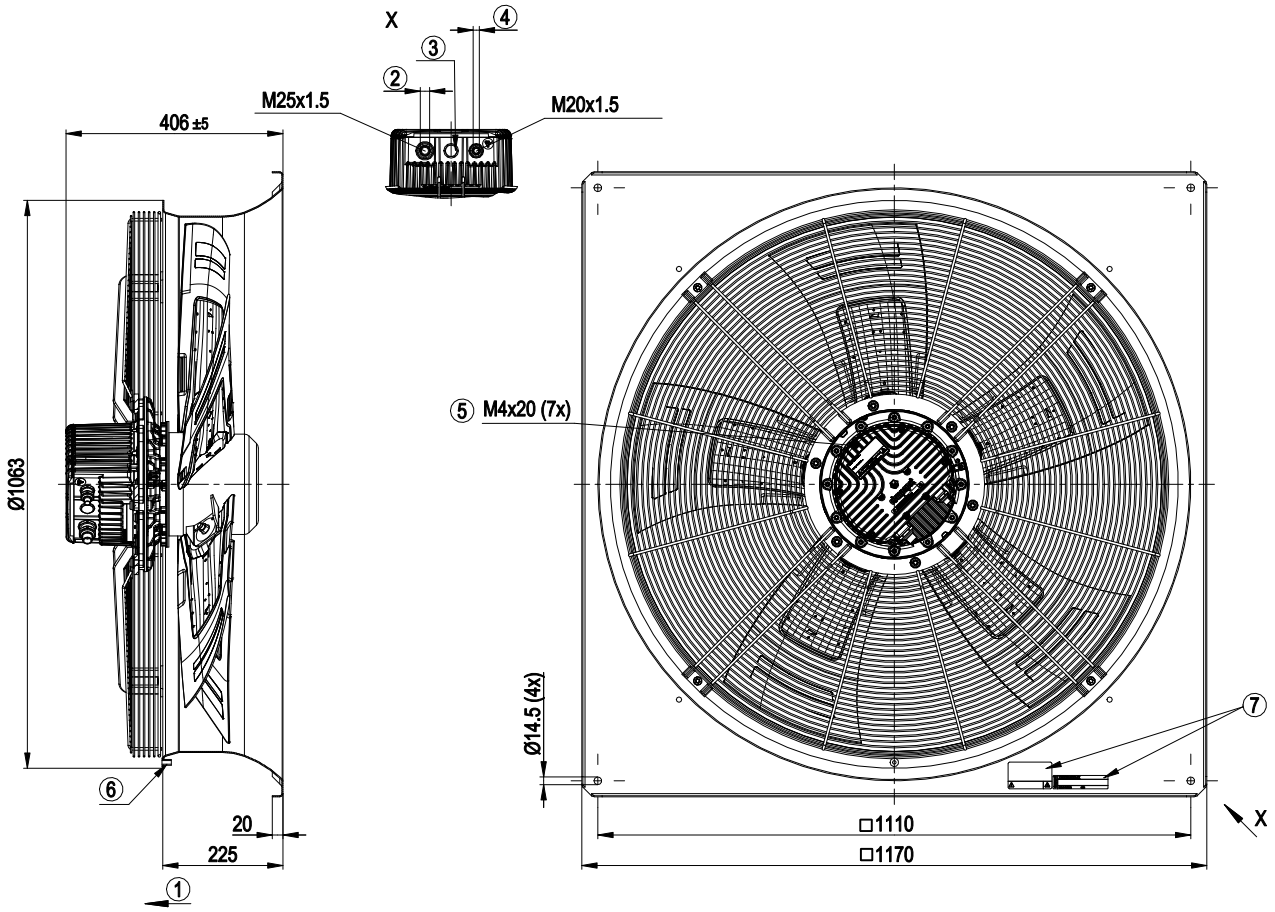
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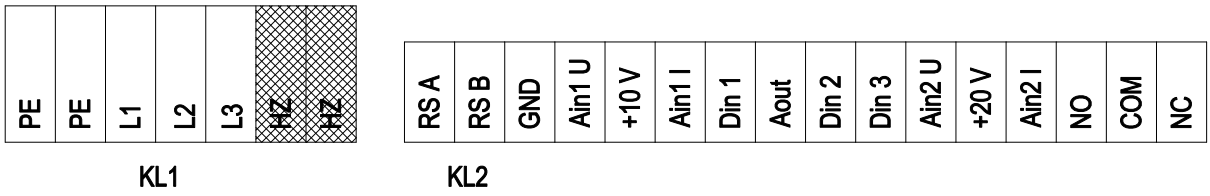
Product drawing



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

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Connection screen



Shading => terminals not assigned

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	Not used (optional: internal heating element)
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 for use as alternative to input Ain1; 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 for use as alternative to input Ain1 U; SELV
2		Din 1	Digital input 1: Enabling of electronics, Enabling: Pin open or applied voltage 5-50 VDC Disabling: Bridge to GND or applied voltage <1 VDC Reset function: Triggers software reset after a level change to <1 VDC; SELV
2		Aout	Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV
2		Din 2	Digital input 2: Parameter set 1/2 switching, depending on EEPROM setting, the valid/used parameter set can be selected via the bus or via the digital input DIN2. Parameter set 1: Pin open or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage <1 VDC; SELV
2		Din 3	Digital input 3: Controller function of integrated controller; depending on EEPROM setting, normal / inverse can be selected for the controller function of the integrated controller via the bus or the digital input Normal: Pin open or applied voltage 5-50 VDC Inverse: bridge to GND or applied voltage <1 VDC; SELV
2		Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; 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 Alternatively: +24 V DC input for parametrisation via MODBUS without mains power
2		Ain2 I	Analogue input 2, actual value: 4-20 mA, Ri = 100 Ω, parametrisable curve, only for use as alternative to input Ain2 U; SELV
2		NO	Status relay; floating status contact; make for failure
2		COM	Status relay, floating status contact, common connection, contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA

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No.	Conn.	Designation	Function / assignment
2		NC	Status relay; floating status contact; break for failure

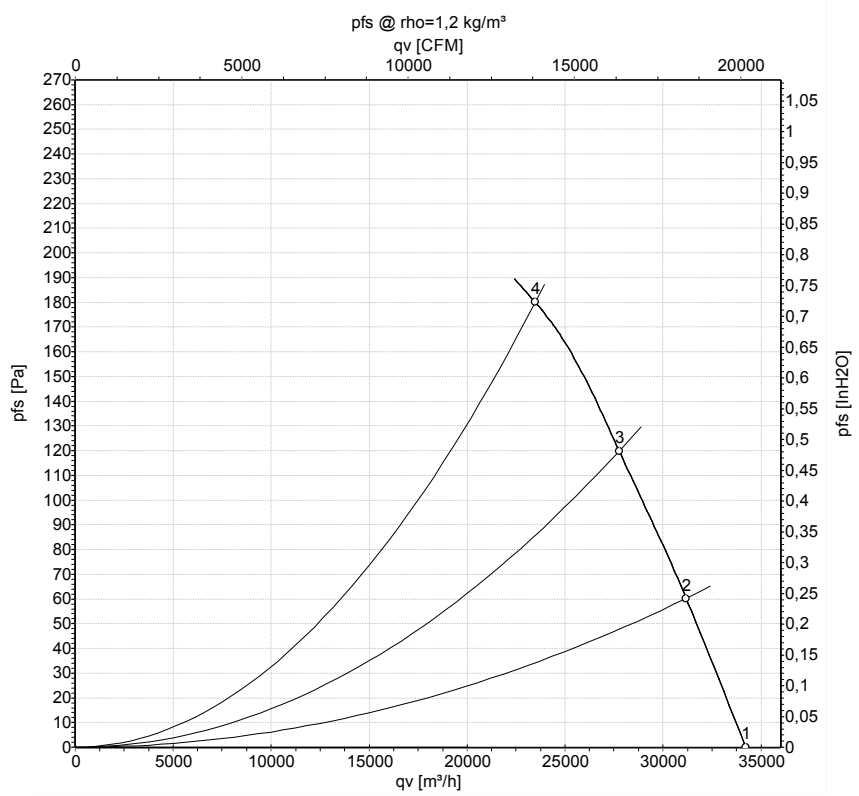
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Charts: Air flow 50 Hz



Measurement: LU-161779-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{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	inH2O
1	400	50	960	1505	2.28	76	84	83	34220	0	20140	0.00
2	400	50	960	1879	2.83	76	83	83	31175	60	18350	0.24
3	400	50	960	2207	3.34	78	86	85	27765	120	16340	0.48
4	400	50	960	2450	3.70	83	91	91	23470	180	13815	0.72

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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