W3G710-GZ11-19

EC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

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Nominal data

Type	**W3G710-GZ11-19**
Motor	**M3G150-NA**

Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1630
Power consumption	W	4990
Current draw	A	15.3
Max. back pressure	Pa	420
Max. back pressure	in. wg	1.69
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	41.7	38.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.6	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	4.98
09 Air flow q_v	m^3/h	17980
09 Pressure increase p_{fs}	Pa	422
10 Speed (rpm) n	min^{-1}	1635
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-165976

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	51.7 kg
Size	710 mm
Motor size	150
Rotor surface	Painted black
Blade material	Sheet aluminum insert, sprayed with PP plastic
Housing material	Die-cast aluminum, painted black
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	-5°
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - External 24 V input (parameter setting) - External release input - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
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
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE

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Approval	EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

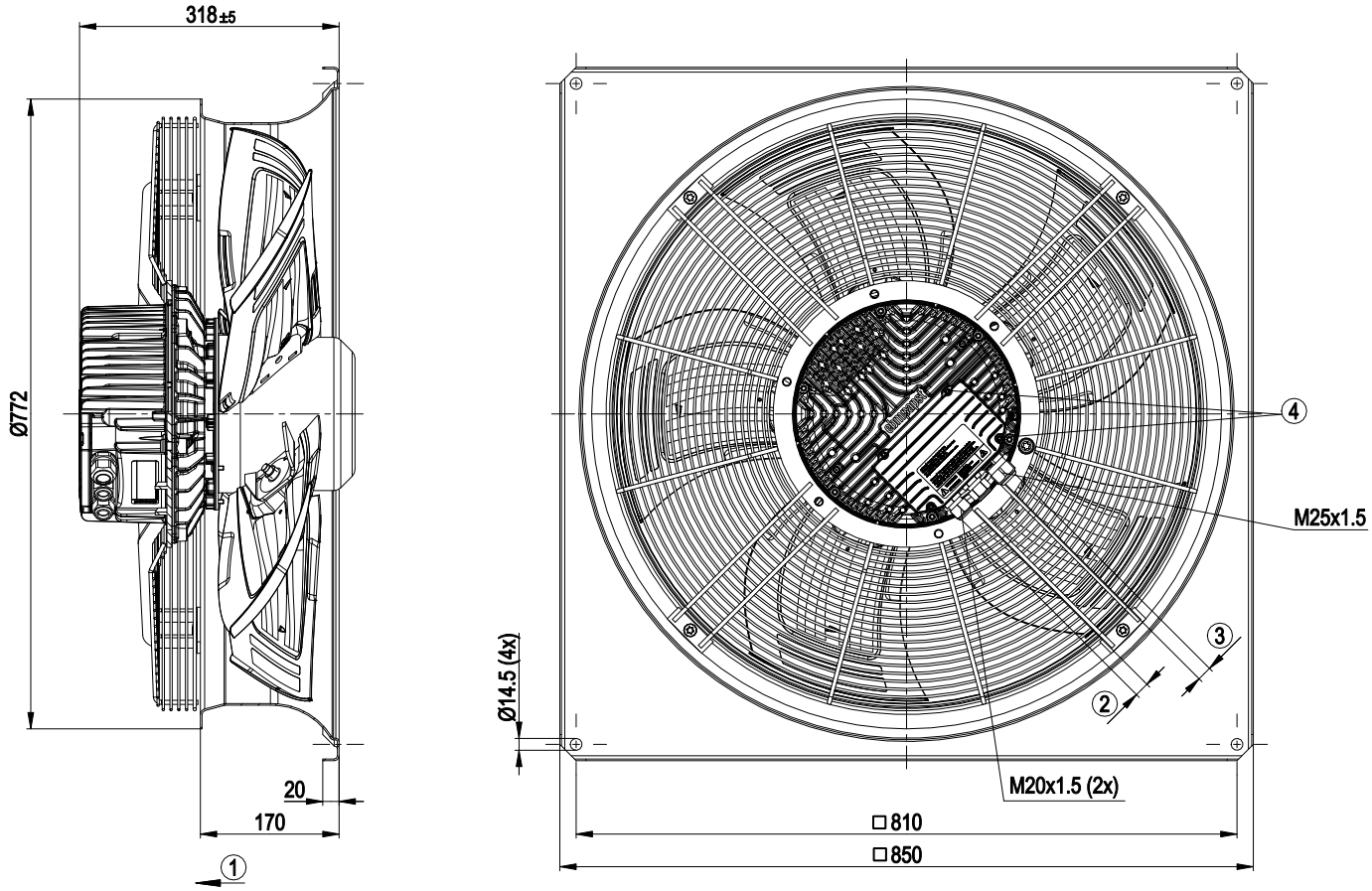
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Product drawing



1	Direction of air flow "V"
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
3	Cable diameter min. 9 mm, max. 16 mm, tightening torque 6 ± 0.9 Nm
4	Tightening torque 3.5 ± 0.5 Nm

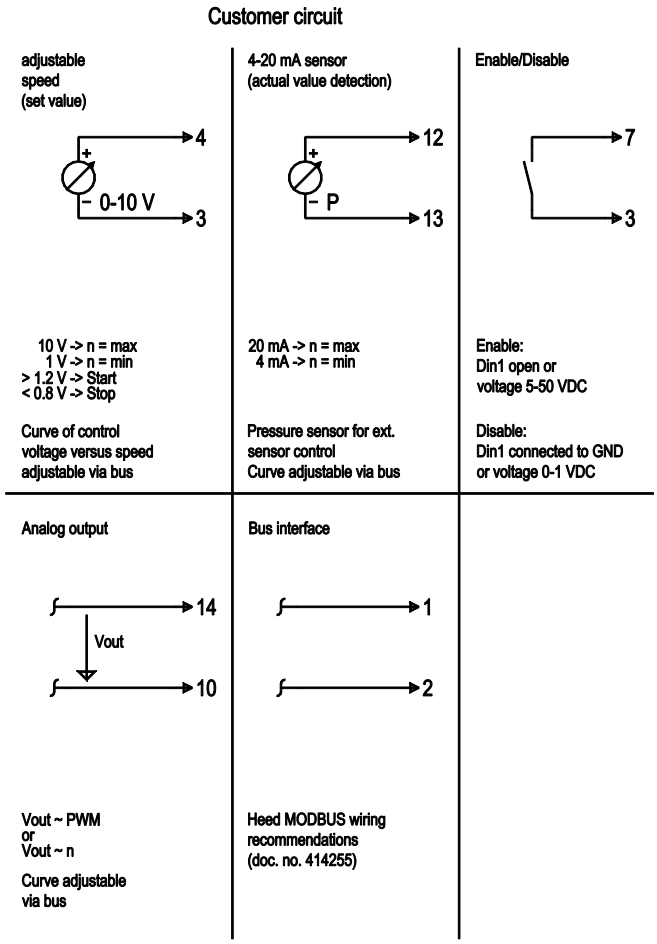
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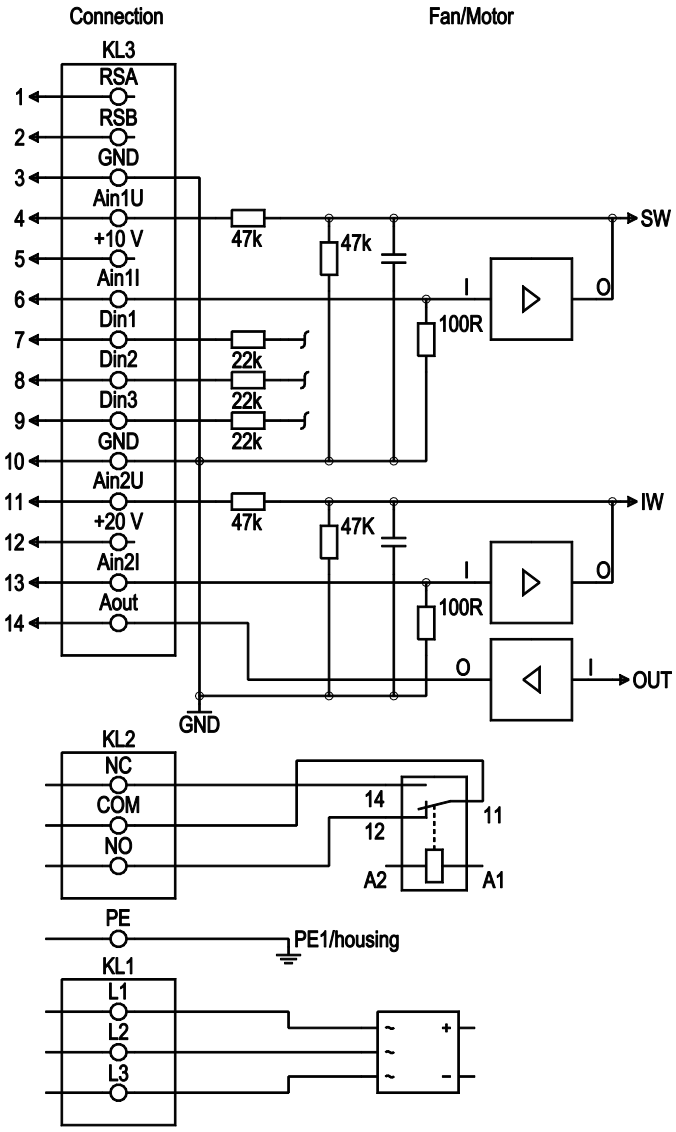
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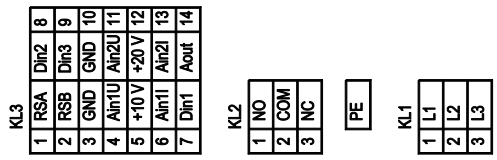
with square full nozzle

Connection diagram





Terminal box connection diagram



No.	Conn.	Designation	Function/assignment
KL 1	1	L1	Supply connection, power supply, phase, see nameplate for voltage range
KL 1	2	L2	Supply connection, power supply, phase, see nameplate for voltage range
KL 1	3	L3	Supply connection, power supply, phase, see nameplate for voltage range
PE		PE	Ground connection, PE connection
KL 2	1	NO	Status relay, floating status contact, make for failure
KL 2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating, max. 250 VAC/2 A (AC1)/min. 10 mA
KL 2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS RTU; SELV
KL 3	3 / 10	GND	Reference ground for control interface, SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV

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No.	Conn.	Designation	Function/assignment
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V ± 3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); SELV
KL 3	6	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain1 U; SELV
KL 3	7	Din1	Digital input 1: enable electronics, enable: pin open or applied voltage 5-50 VDC disable: bridge to GND or applied voltage < 1 VDC reset function: triggers software reset after a level change to < 1 VDC; SELV
KL 3	8	Din2	Digital input 2: Switching parameter sets 1/2, according to EEPROM setting, the valid or used parameter set can be selected via bus or via 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
KL 3	9	Din3	Digital input 3: Direction of action of integrated controller, according to EEPROM setting, the direction of action of the integrated controller can be selected as normal/inverse via bus or digital input Normal: Pin open or applied voltage 5-50 VDC Inverse: Bridge to GND or applied voltage < 1 VDC; SELV
KL 3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2 I; SELV
KL 3	12	+ 20 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof, power supply for external devices (e.g. sensors); SELV Alternatively: +24 VDC input for parameterization without line voltage
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analog output 0-10 V, max. 5 mA, output of current motor modulation level; adjustable curve; SELV

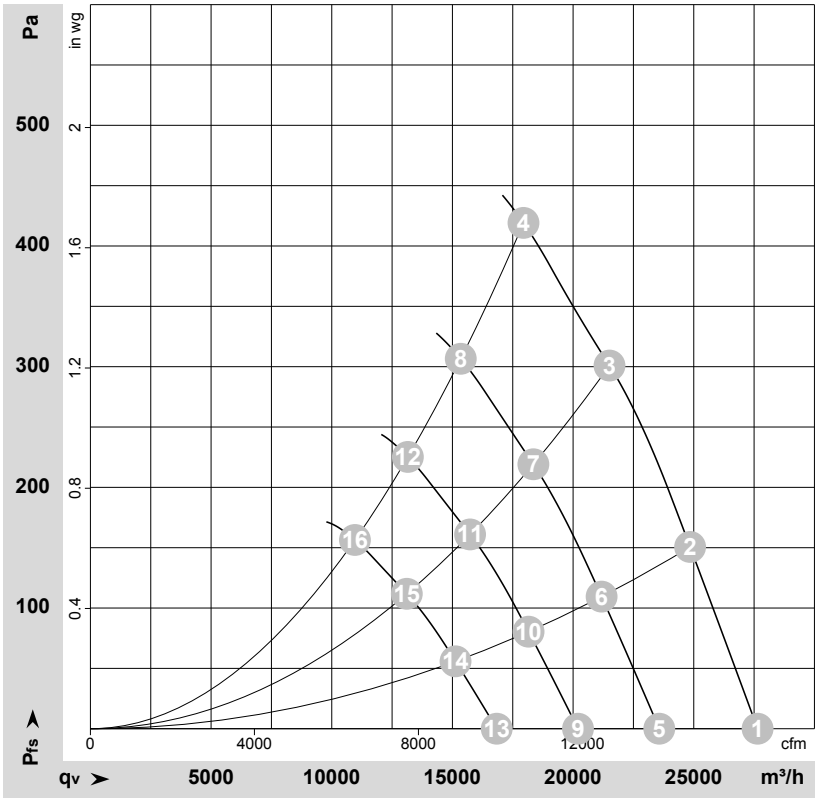
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-165976-1

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

	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	200	50	1630	3570	10.95	76	84	86	27645	0	16270	0.00
2	200	50	1630	4194	12.85	76	84	85	24850	150	14625	0.60
3	200	50	1630	4723	14.37	78	85	85	21510	300	12660	1.20
4	200	50	1630	4990	15.30	84	90	89	17945	420	10560	1.69
5	200	50	1400	2212	6.79	72	80	82	23570	0	13875	0.00
6	200	50	1400	2601	7.97	72	80	81	21180	110	12465	0.44
7	200	50	1400	2934	8.93	74	81	81	18355	219	10805	0.88
8	200	50	1400	3120	9.51	80	86	85	15345	309	9030	1.24
9	200	50	1200	1393	4.27	68	77	78	20205	0	11890	0.00
10	200	50	1200	1638	5.02	68	76	77	18155	81	10685	0.33
11	200	50	1200	1848	5.62	70	77	77	15730	161	9260	0.65
12	200	50	1200	1965	5.99	76	83	82	13155	227	7740	0.91
13	200	50	1000	806	2.47	64	72	73	16835	0	9910	0.00
14	200	50	1000	948	2.90	64	72	72	15130	56	8905	0.22
15	200	50	1000	1069	3.25	66	73	73	13110	112	7715	0.45
16	200	50	1000	1137	3.46	71	78	77	10960	158	6450	0.63

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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