W3G800-HG95-01

EC axial fan - HyBlade

sickled blades (S series)

with full square nozzle with AxiTop diffuser

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Nominal data

Type	**W3G800-HG95-01**
Motor	**M3G112-IA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	770
Power input	W	900
Current draw	A	1.5
Max. back pressure	Pa	120
Min. ambient temperature	°C	-25
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

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	49.7	33.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		56.6	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.81
09 Air flow q_v	m^3/h	12825
09 Pressure increase p_{fs}	Pa	104
10 Speed (rpm) n	min^{-1}	770
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

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Technical features

Mass	38.5 kg
Size	800 mm
Surface of rotor	Coated in black
Material of terminal box	PC plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of mounting ring	Steel, coated in black plastic (RAL 9005)
Material of wall ring	Sheet steel, galvanised and coated in black plastic (RAL 9005)
Material of guard grille	Steel, coated in black plastic (RAL9005)
Material of outer diffuser	PP plastic
Material of inner diffuser including lid	PP plastic
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	H2
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (programming) - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start -Maximum EEPROM write cycles 100,000 - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Temperature derating - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)

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Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730
Remark	Standard conformity as per EN 60335-1 in preparation

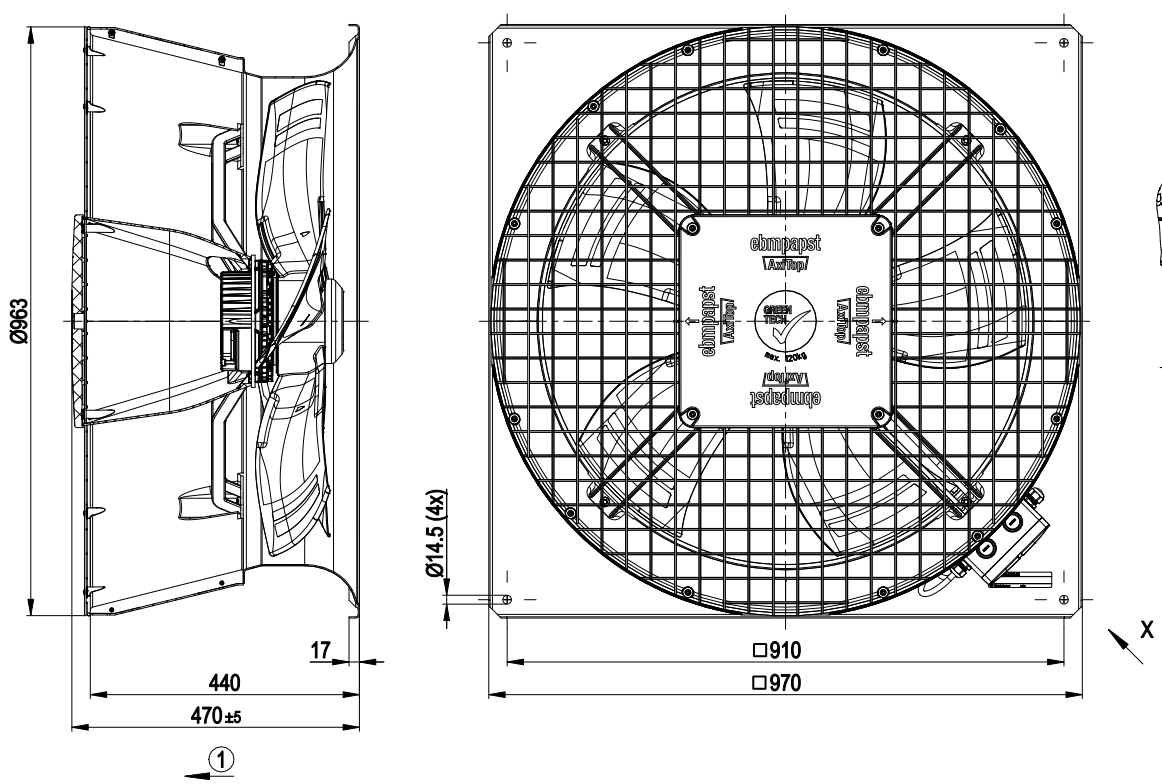
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Product drawing



1	Direction of air flow "V"
2	Tightening torque 1.7±0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 4±0.6 Nm

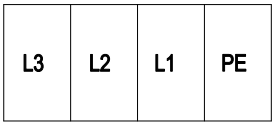
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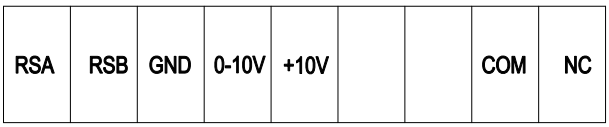
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Connection screen



KL 1



KL 2

No.	Conn.	Designation	Colour	Function / assignment
KL 1		L3	black	Mains connection, power supply 3-phase 380-480 VAC; 50/60 Hz
KL 1		L2	black	Mains connection, power supply 3-phase 380-480 VAC; 50/60 Hz
KL 1		L1	black	Mains connection, power supply 3-phase 380-480 VAC; 50/60 Hz
KL 1		PE	green/yellow	Earth connection, PE connection
KL 2		RSA	white	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 2		RSB	brown	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 2		GND	blue	Reference earth for control interface; SELV
KL 2		0-10 V	yellow	Control/current sensor value input 0-10 VDC, impedance 100 kΩ, use only as alternative to 4-20 mA input; SELV
KL 2		+10 V	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer); SELV
KL2			-	not used
KL2			-	not used
KL2		COM	white 2	Alarm relay, Common (2 A, 250 VAC, AC1)
KL2		NC	white 1	Alarm relay, break for failure

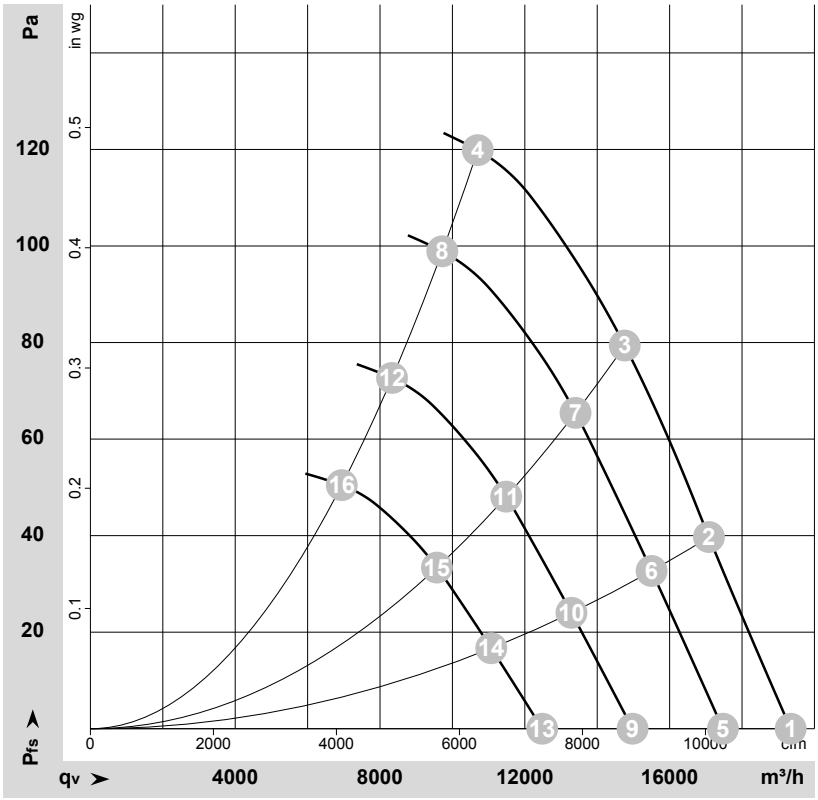
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-157406-1

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	770	514	0.88	64	71	72	19345	0	11385	0.00
2	400	50	770	641	1.07	60	68	68	17085	40	10055	0.16
3	400	50	770	752	1.24	59	66	67	14760	80	8685	0.32
4	400	50	770	900	1.50	67	74	75	10700	120	6300	0.48
5	400	50	700	379	0.65	61	69	69	17470	0	10285	0.00
6	400	50	700	480	0.80	58	65	66	15500	33	9125	0.13
7	400	50	700	563	0.93	56	64	65	13400	66	7890	0.26
8	400	50	700	647	1.06	64	72	73	9720	99	5720	0.40
9	400	50	600	239	0.41	58	65	65	14975	0	8815	0.00
10	400	50	600	302	0.51	54	61	62	13285	24	7820	0.10
11	400	50	600	355	0.58	53	60	61	11485	48	6760	0.19
12	400	50	600	407	0.67	61	68	69	8330	73	4905	0.29
13	400	50	500	138	0.24	53	60	61	12480	0	7345	0.00
14	400	50	500	175	0.29	50	57	57	11075	17	6515	0.07
15	400	50	500	205	0.34	48	55	56	9570	34	5635	0.14
16	400	50	500	236	0.39	56	64	64	6945	50	4085	0.20

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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