W3G800-HD57-31

EC axial fan - HyBlade

sickled blades (S series)

with full square nozzle with AxiTop diffuser

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**W3G800-HD57-31**
Motor	**M3G112-GA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	630
Power input	W	480
Current draw	A	2.1
Max. back pressure	Pa	80
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}	%	50.9	31.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		59.4	40
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.45
09 Air flow q_v	m^3/h	10245
09 Pressure increase p_{fs}	Pa	74
10 Speed (rpm) n	min^{-1}	630
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

LU-171311

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Technical features

Mass	33 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
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 - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - 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)
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)

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Product conforming to standard	EN 61800-5-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730; EAC

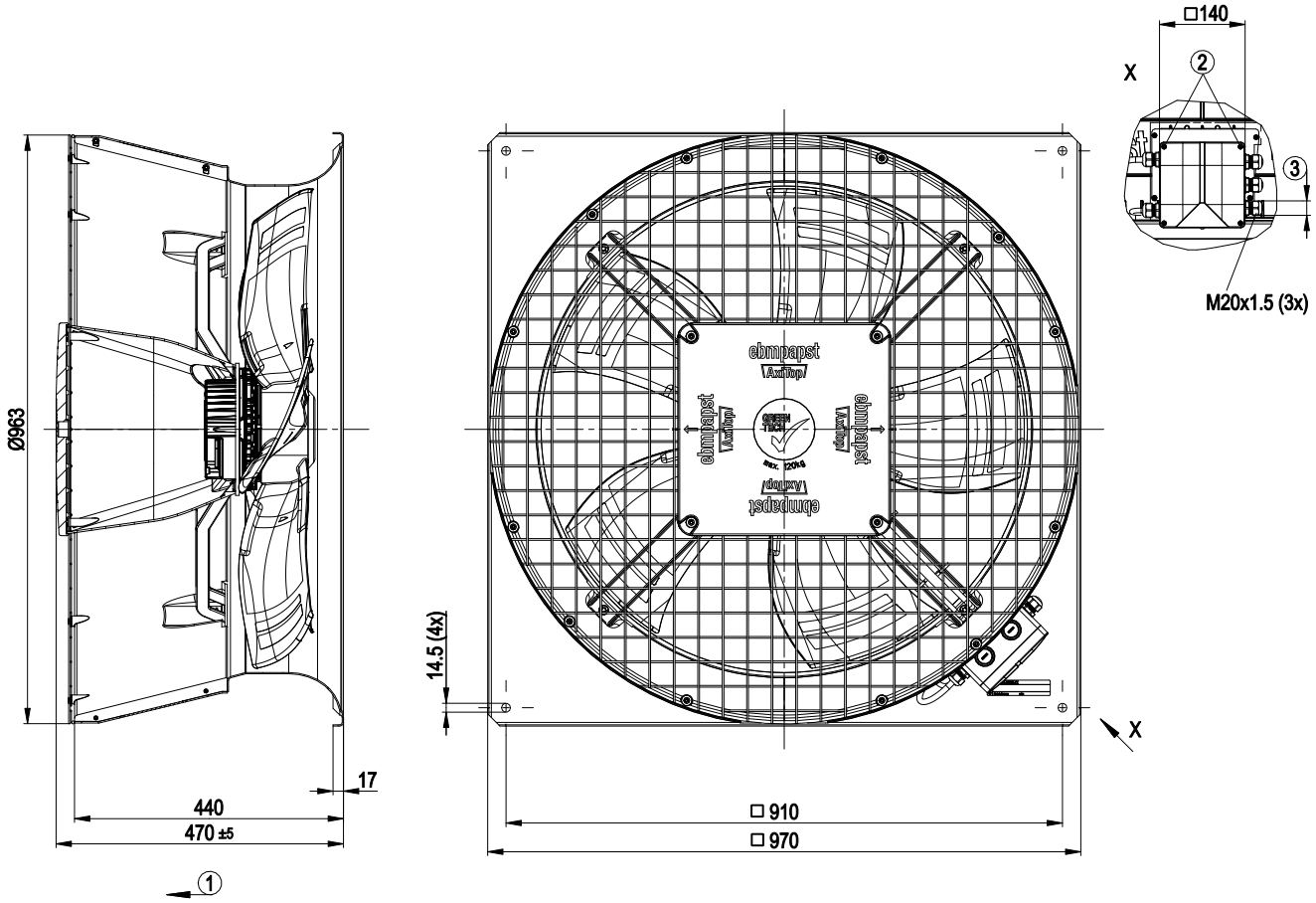
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Product drawing



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

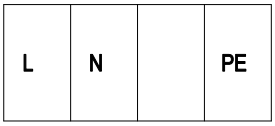
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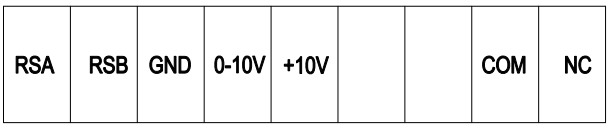
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Connection screen



KL 1



KL 2

No.	Conn.	Designation	Colour	Function / assignment
KL 1		L	black	Mains connection, power supply 1~ 200-277 VAC, 50/60 Hz
KL 1		N	blue	Mains connection, power supply 1~ 200-277 VAC, 50/60 Hz
KL1			-	not used
KL 1		PE	green/yellow	Earth connection, PE connection
KL 2		RSA	white	Bus connection RS-485; RSA; MODBUS RTU
KL 2		RSB	brown	Bus connection RS-485; RSB; MODBUS RTU
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

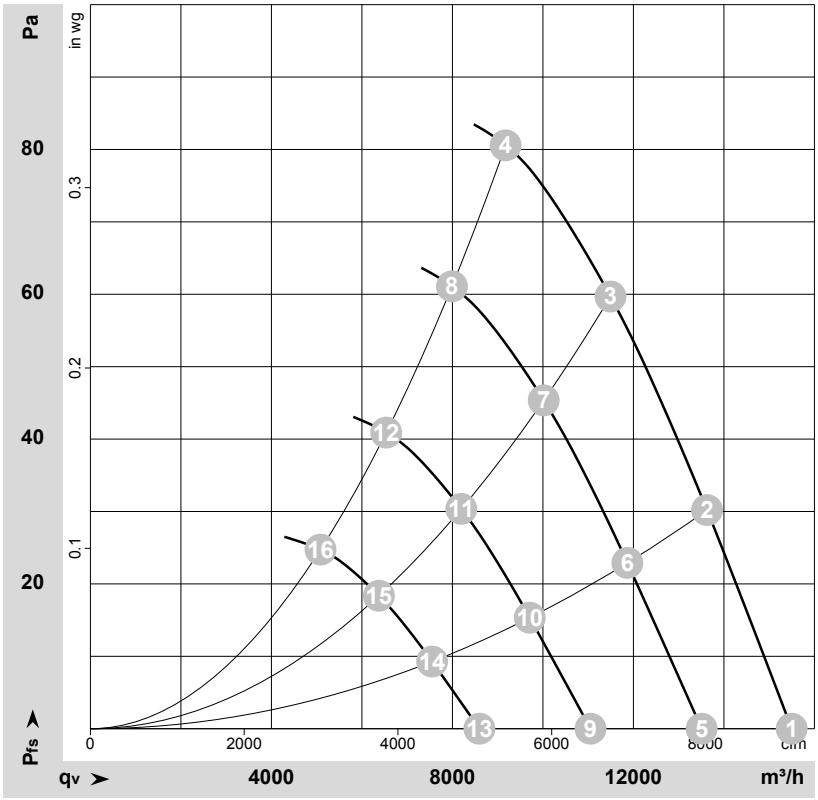
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-171311-1

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	230	50	630	293	1.30	60	67	67	15500	0	9120	0.00
2	230	50	630	365	1.60	57	64	64	13625	30	8020	0.12
3	230	50	630	424	1.85	55	62	63	11495	60	6765	0.24
4	230	50	630	480	2.10	59	67	67	9175	80	5400	0.32
5	230	50	550	194	0.86	56	64	64	13510	0	7950	0.00
6	230	50	550	241	1.06	53	60	61	11865	23	6985	0.09
7	230	50	550	281	1.23	51	59	59	10020	46	5895	0.18
8	230	50	550	315	1.37	56	63	64	7990	61	4705	0.24
9	230	50	450	106	0.47	51	58	59	11050	0	6505	0.00
10	230	50	450	132	0.58	48	55	56	9710	15	5715	0.06
11	230	50	450	154	0.67	46	54	54	8195	30	4825	0.12
12	230	50	450	172	0.75	51	58	59	6535	41	3850	0.16
13	230	50	350	50	0.22	45	52	52	8595	0	5060	0.00
14	230	50	350	62	0.27	42	49	49	7550	9	4445	0.04
15	230	50	350	72	0.32	40	47	48	6375	18	3750	0.07
16	230	50	350	81	0.35	44	52	52	5085	25	2990	0.10

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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