

ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.fansco.com

www.fansco.com

Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	W3G800-NE57-51	
Motor	M3G112-GA	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min ⁻¹	720
Power consumption	W	660
Current draw	A	1.0
Max. back pressure	Pa	110
Max. back pressure	in. wg	0.44
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · oe = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	55.8	32.3	09 Power consumption P_{ed}	kW	0.6
02 Measurement category		A		09 Air flow q_v	m ³ /h	12060
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	91
04 Efficiency grade N		63.5	40	10 Speed (rpm) n	min ⁻¹	720
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-181702



Technical description

Weight	28.4 kg
Size	800 mm
Motor size	112
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Fan housing material	PP plastic
Material guide vanes	PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	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
Ambient temperature note	If there is a risk of ice formation, the fan is only to be operated with a heating tape in the fan housing. Further information can be obtained from ebm-papst. As fan only suitable for use with industrial evaporators
Max. permitted ambient temp. for motor (transport/storage)	+70 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	See fitting instructions
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing with low-temperature lubricant
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - 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 circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)



W3G800-NE57-51

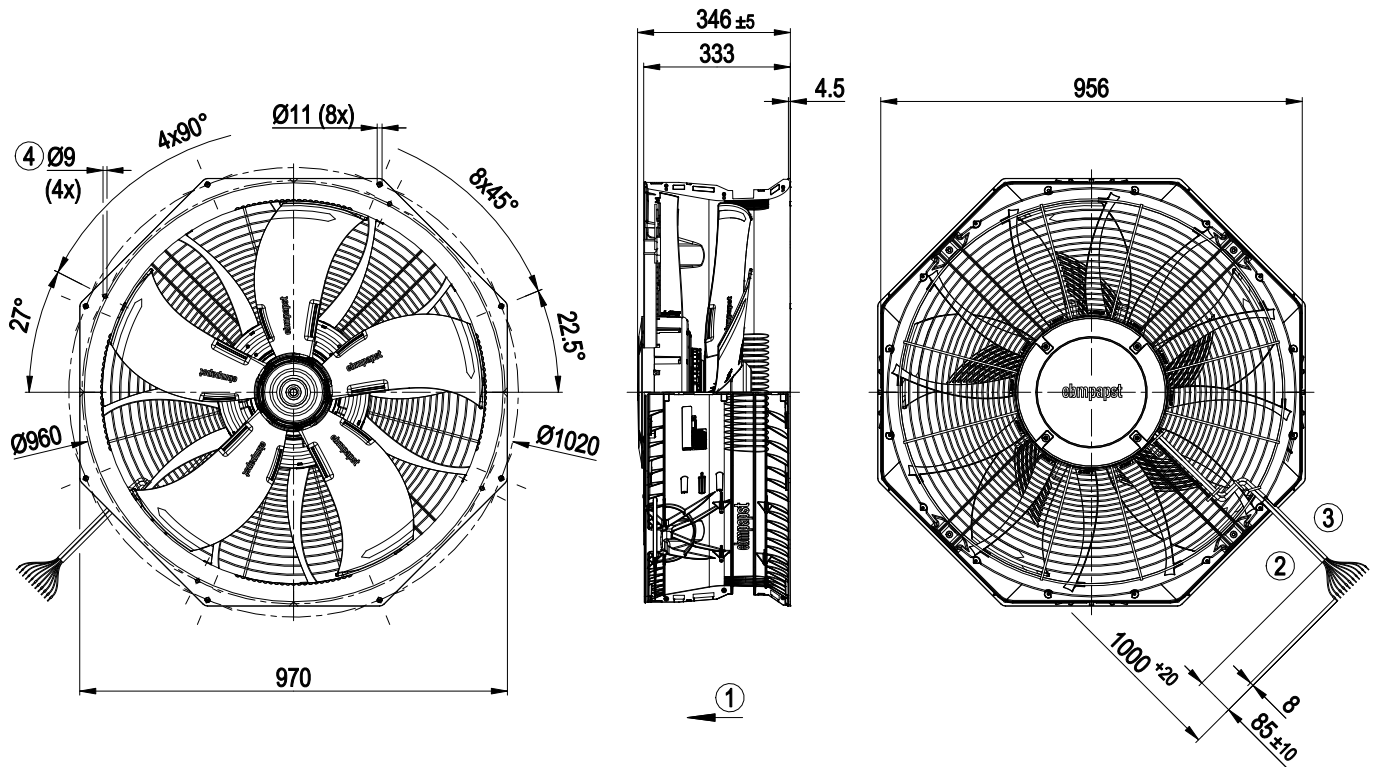
EC axial fan - AxiCool

sickle-shaped blades (S series)

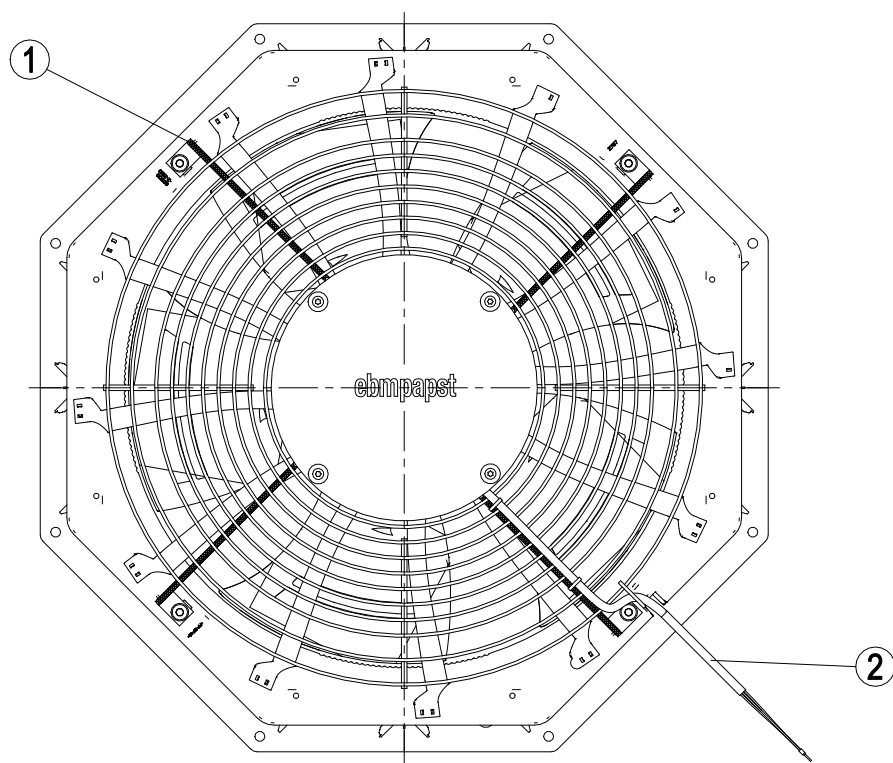
Conformity with standards	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730-1; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1



Product drawing

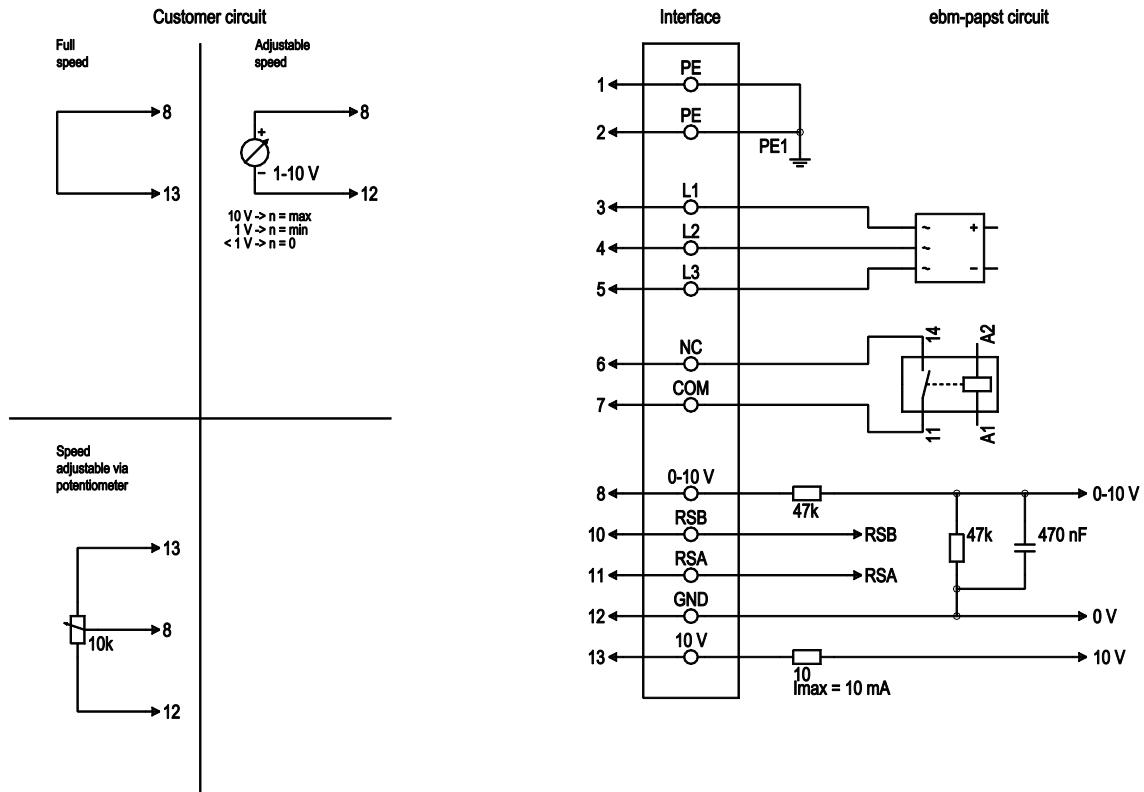


1	Airflow direction "V"
2	Cable PVC AWG18, 6x crimped ferrules
3	Cable PVC AWG22, 5x crimped ferrules
4	Mounting holes for FlowGrid



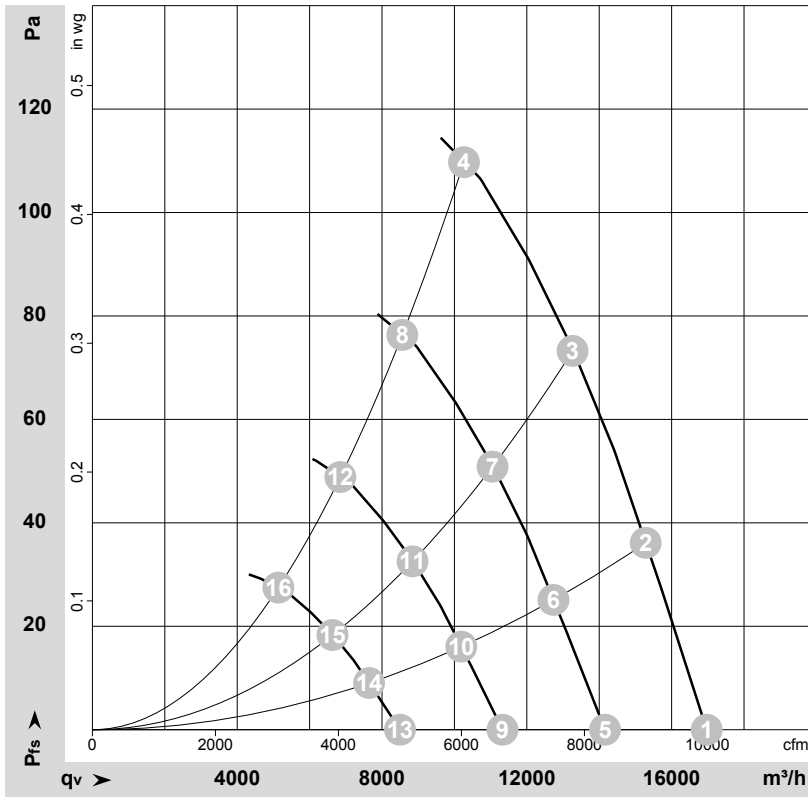
- | | |
|---|---|
| 1 | Installation position: Shaft horizontal (install support struts only in X-position as illustrated) or rotor on bottom |
| 2 | For horizontal shaft installation position, the cable exit must be at the bottom right. |

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	L1	black	Power supply
1	4	L2	black	Power supply
1	5	L3	black	Power supply
1	6	NC	white 1	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
2	8	0-10V	yellow	Analog input (set value), 0-10 V, $R_i = 100\text{ k}\Omega$, adjustable curve, SELV
2	10	RSB	brown	RS485 interface for MODBUS, RSB; SELV
2	11	RSA	white	RS485 interface for MODBUS, RSA; SELV
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, $+10\text{ V} \pm 3\%$, max. 10 mA, short-circuit-proof power supply for external devices (e.g. pot), SELV fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-181702-1

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)	m³/h	Pa	cfm	in. wg
1	400	50	720	404	0.66	63	70	70	16970	0	9990	0.00
2	400	50	720	487	0.78	62	69	68	15285	35	8995	0.14
3	400	50	720	571	0.90	62	70	69	13265	75	7805	0.30
4	400	50	720	660	1.00	69	77	77	10265	110	6040	0.44
5	400	50	600	235	0.39	58	66	65	14160	0	8335	0.00
6	400	50	600	282	0.45	57	64	64	12735	25	7495	0.10
7	400	50	600	330	0.52	58	65	64	11055	51	6505	0.20
8	400	50	600	376	0.59	64	72	72	8560	76	5040	0.31
9	400	50	480	120	0.20	53	60	59	11330	0	6670	0.00
10	400	50	480	144	0.23	51	59	58	10190	16	6000	0.06
11	400	50	480	169	0.27	52	59	59	8840	33	5205	0.13
12	400	50	480	192	0.30	59	66	67	6850	49	4030	0.20
13	400	50	360	51	0.08	45	53	52	8495	0	5000	0.00
14	400	50	360	61	0.10	44	51	51	7640	9	4500	0.04
15	400	50	360	71	0.11	45	52	51	6630	18	3905	0.07
16	400	50	360	81	0.13	51	59	59	5135	28	3025	0.11

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

