

EC axial panel fan - AxiCool

sickle-shaped blades (S series)
Fan housing with guide vanes

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	W3G800-NS26-71	
Motor	M3G150-FF	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	930
Power consumption	W	1570
Current draw	A	2.5
Max. back pressure	Pa	190
Max. back pressure	in. wg	0.76
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	40

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}	%	54.9	34.9	09 Power consumption P_{ed}	kW	1.56
02 Measurement category		A		09 Air flow q_v	m³/h	16565
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	174
04 Efficiency grade N		60	40	10 Speed (rpm) n	min ⁻¹	925
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-177905

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	37 kg
Size	800 mm
Motor size	150
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	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) - 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
Power Factor Correction (PFC)	Passive (through low-capacitance DC link)
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box with cable

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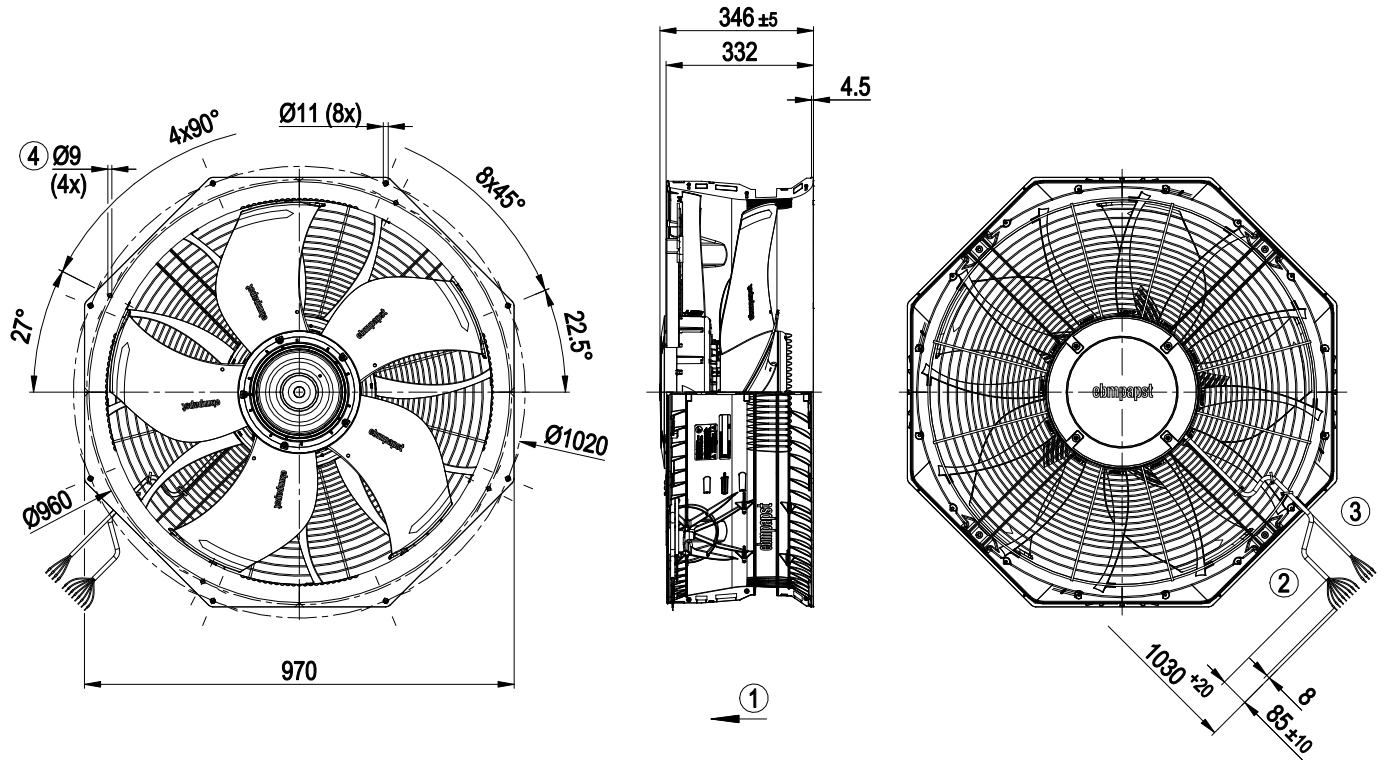
Motor protection	Reverse polarity and locked-rotor protection
Protection class assignment	I; If a protective earth is connected. The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

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Product drawing

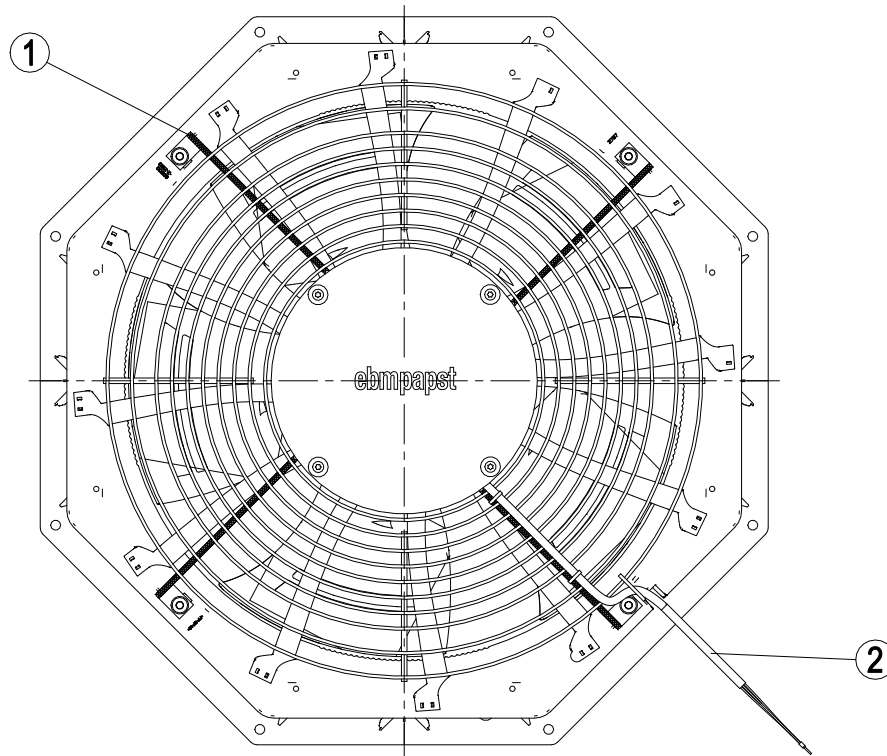


1	Airflow direction "V"
2	Cable silicone 8x0.5 mm ² , 8x crimped ferrules
3	Cable silicone 4G 1.5 mm ² , 4x crimped ferrules
4	Mounting holes for FlowGrid

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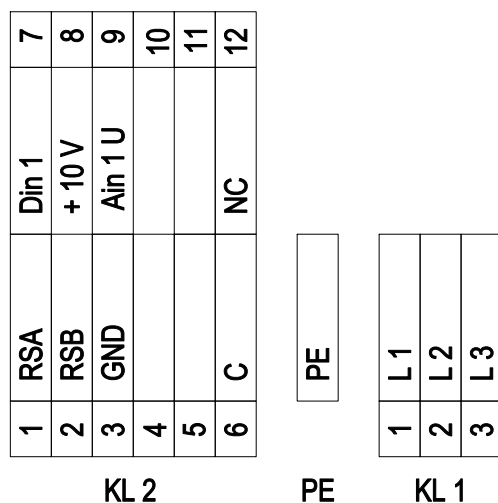
- | | |
|---|---|
| 1 | Installation position: Shaft horizontal (install support struts only in X-position as illustrated) or rotor on bottom |
| 2 | For horizontal shaft installation position, the cable exit must be at the bottom right. |

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Connection diagram



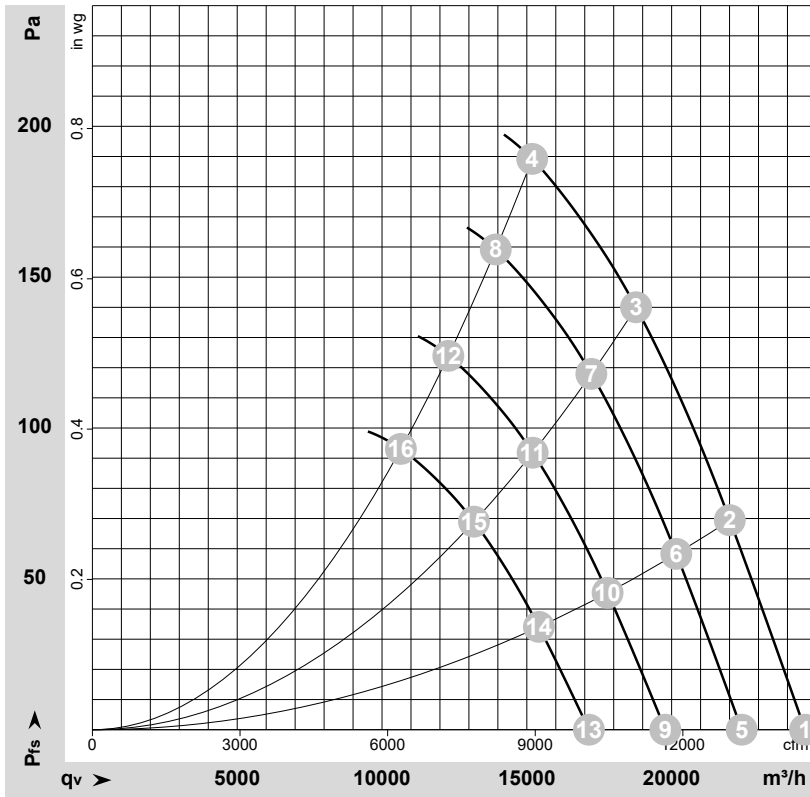
No.	Conn.	Designation	Color	Function/assignment
KL 1	1	L1	black	Supply connection, power supply 3-phase 380-480 VAC; 50/60 Hz
KL 1	2	L2	brown	Supply connection, power supply 3-phase 380-480 VAC; 50/60 Hz
KL 1	3	L3	light blue	Supply connection, power supply 3-phase 380-480 VAC; 50/60 Hz
PE		PE	green/yellow	Ground connection, PE connection
KL 2	1	RSA	gray	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 2	2	RSB	brown	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 2	3	GND	light blue	Reference ground for control interface; SELV
KL2	4	-	-	not used
KL2	5	-	-	not used
KL2	6	C	white 1	Status relay, floating status contact, break for failure; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL 2	7	Din1	green	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 V; SELV
KL 2	8	+10 V	red	Fixed voltage output 10 VDC, +10 V $\pm 3\%$, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); SELV Or: +24 VDC input for parameter setting via MODBUS without line voltage
KL 2	9	Ain1 U	yellow	Analog input 1 (set value) 0-10 V, Ri = 100 k Ω , adjustable curve; SELV
KL2	10	-	-	not used
KL2	11	-	-	not used
KL2	12	NC	white 2	Status relay, floating status contact; break for failure

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Curves: Air performance 50 Hz



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

Measurement: LU-177905-1
Date: 2016-02-22
Housing: 60800-2-2910

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	400	50	930	1179	1.93	69	77	79	24605	0	14485	0.00
2	400	50	930	1365	2.19	68	76	77	22010	70	12955	0.28
3	400	50	930	1526	2.43	71	79	78	18770	140	11050	0.56
4	400	50	930	1570	2.50	79	86	87	15185	190	8940	0.76
5	400	50	850	892	1.46	67	75	76	22420	0	13195	0.00
6	400	50	850	1050	1.69	66	74	75	20160	59	11865	0.24
7	400	50	850	1180	1.88	69	77	76	17230	119	10140	0.48
8	400	50	850	1212	1.92	77	84	85	13930	159	8200	0.64
9	400	50	750	613	1.00	64	72	73	19785	0	11645	0.00
10	400	50	750	722	1.16	63	71	71	17790	46	10470	0.18
11	400	50	750	811	1.29	66	74	73	15200	92	8945	0.37
12	400	50	750	832	1.32	74	81	82	12290	124	7235	0.50
13	400	50	650	399	0.65	60	68	69	17145	0	10090	0.00
14	400	50	650	470	0.75	59	67	68	15415	34	9075	0.14
15	400	50	650	528	0.84	62	70	69	13175	69	7755	0.28
16	400	50	650	542	0.86	70	77	78	10650	93	6270	0.37

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