

EC axial fan - HyBlade

sickle-shaped blades (S series)



A3G910-AV02-06 ebmpapst Datasheet
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Nominal data

Type	A3G910-AV02-06	
Motor	M3G150-NA	
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	1000
Power consumption	W	2880
Current draw	A	4.4
Max. back pressure	Pa	190
Max. back pressure	in. wg	0.76
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	65

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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	44.5	36.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		48	40
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_{ed}	kW	2.81
09 Air flow q_v	m³/h	24440
09 Pressure increase p_{fs}	Pa	175
10 Speed (rpm) n	min ⁻¹	1005
11 Specific ratio*		1.00

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

LU-119173



Technical description

Weight	31.8 kg
Size	910 mm
Motor size	150
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Sheet aluminum insert, sprayed with PP plastic
Number of blades	5
Blade pitch	0°
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	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our fan design with special low-temperature bearings.
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
Condensation drainage holes	On rotor side
Mode	S1
Motor mounting	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Operation and alarm display - 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 - 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
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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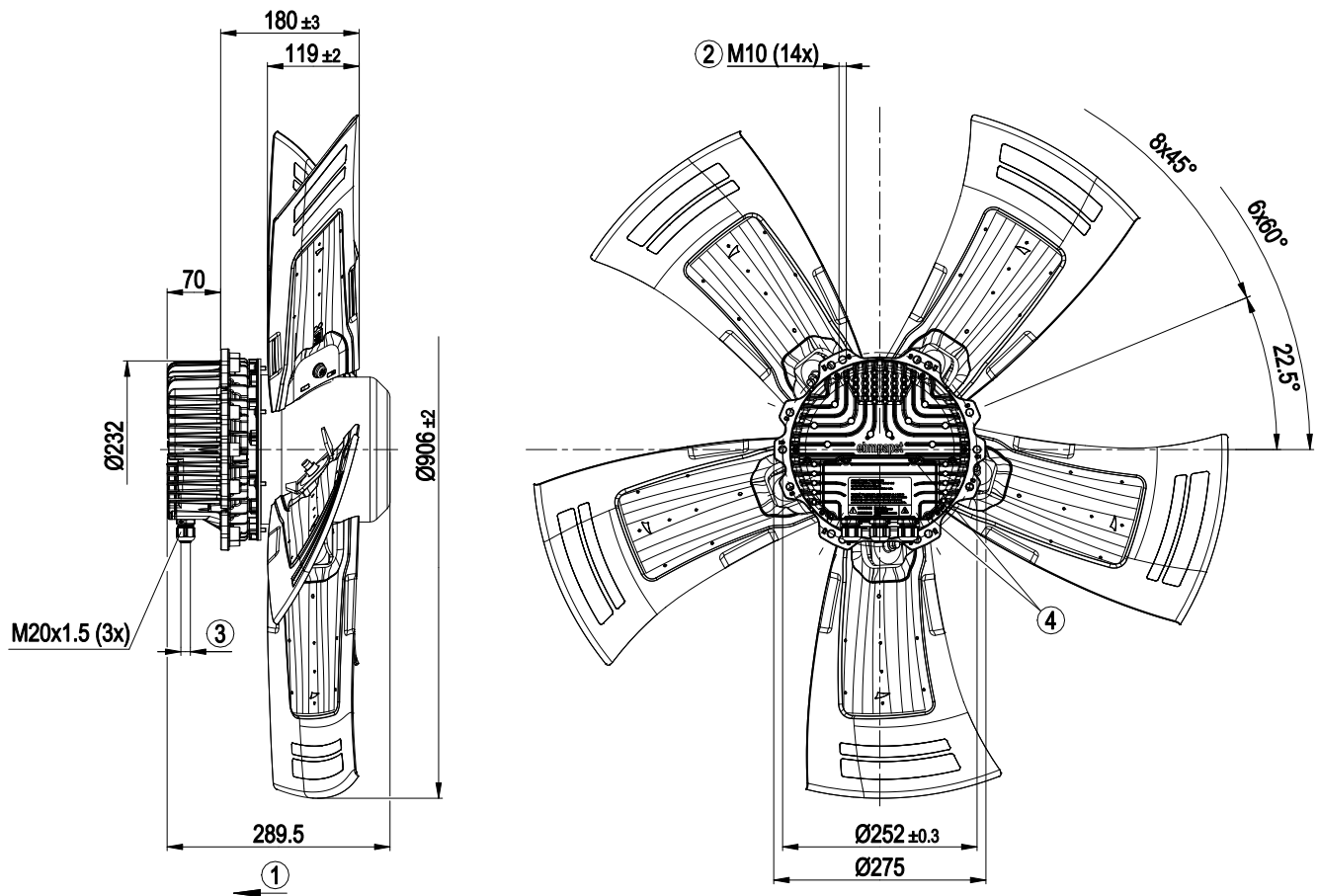
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Approval

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



Product drawing



1	Airflow direction "V"
2	Max. clearance for screw 25 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
4	Tightening torque 3.5 ± 0.5 Nm

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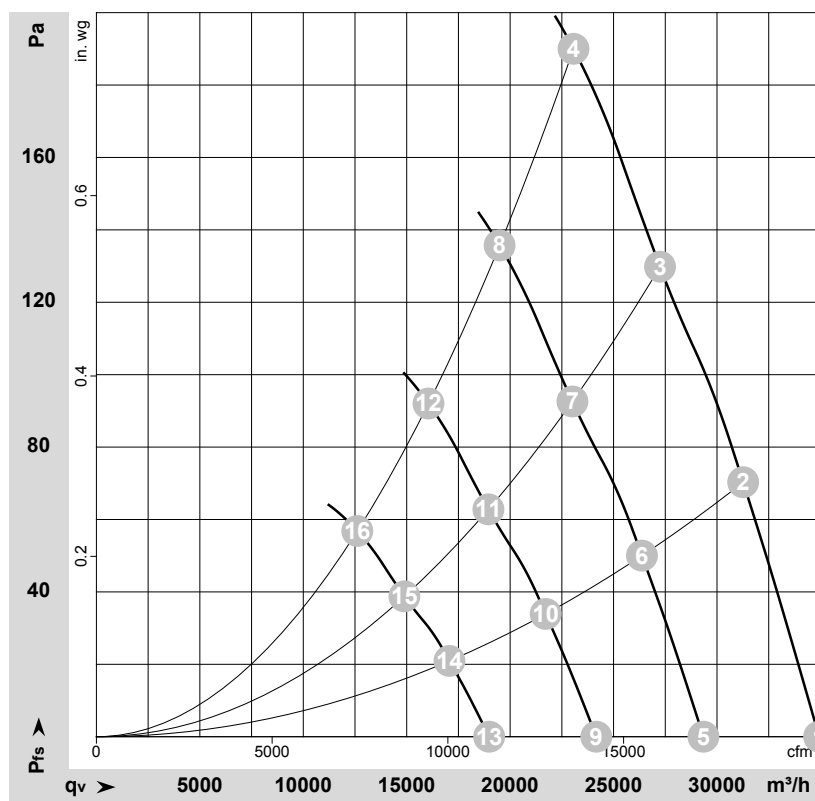
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No.	Conn.	Designation	Function/assignment
KL 3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, $R_i = 100\ \Omega$, adjustable curve, only usable as alternative to input Ain2U; SELV
KL 3	14	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV



Curves: Air performance 50 Hz



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

Measurement: LU-119173-1

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

	Wired	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	3~	400	50	1000	1921	2.91	72	79	80	34935	0	20565	0.00
2	3~	400	50	1000	2300	3.51	70	78	78	31265	70	18400	0.28
3	3~	400	50	1000	2600	3.97	71	79	78	27245	130	16035	0.52
4	3~	400	50	1000	2880	4.40	75	82	81	23065	190	13575	0.76
5	3~	400	50	850	1139	1.72	67	75	75	29345	0	17270	0.00
6	3~	400	50	850	1380	2.11	66	74	74	26375	50	15525	0.20
7	3~	400	50	850	1566	2.39	67	74	74	23010	93	13545	0.37
8	3~	400	50	850	1740	2.69	71	78	77	19490	136	11470	0.55
9	3~	400	50	700	636	0.96	62	70	70	24165	0	14225	0.00
10	3~	400	50	700	771	1.18	61	69	69	21720	34	12785	0.14
11	3~	400	50	700	875	1.34	62	69	69	18950	63	11155	0.25
12	3~	400	50	700	972	1.50	66	73	72	16050	92	9445	0.37
13	3~	400	50	550	308	0.47	56	64	64	18985	0	11175	0.00
14	3~	400	50	550	374	0.57	55	63	63	17065	21	10045	0.08
15	3~	400	50	550	424	0.65	56	63	63	14890	39	8765	0.16
16	3~	400	50	550	471	0.73	60	67	66	12610	57	7425	0.23

Wired = Wiring · U = Power supply · 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

