S3G420-AO03-34

EC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S3G420-AO03-34**
Motor	**M3G074-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1090
Power consumption	W	165
Current draw	A	1.35
Max. back pressure	Pa	70
Max. back pressure	inH2O	0.28
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	38	28.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		49.4	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	3205
09 Pressure increase p_{fs}	Pa	62
10 Speed (rpm) n	min^{-1}	1095
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 Pa

LU-139132

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Technical description

Fan size	420 mm
Blade material	PP-GF40 plastic
Guard grille material	Steel, phosphated and coated in black plastic
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/motor
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC thermistor
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	CE

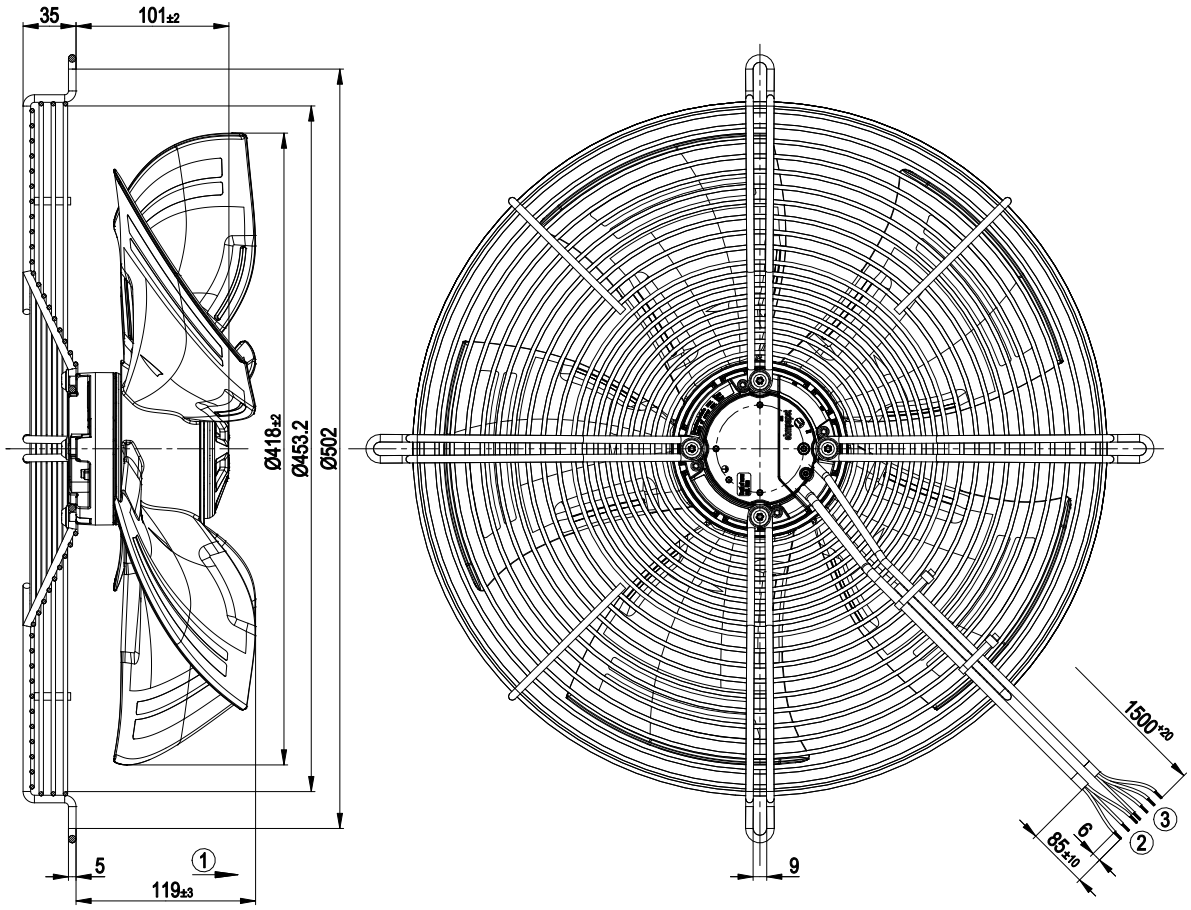
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Product drawing



1	Direction of air flow "A"
2	Cable PVC 3G AWG20, 3x crimped splices
3	Cable PVC 4x AWG22, 4x crimped splices

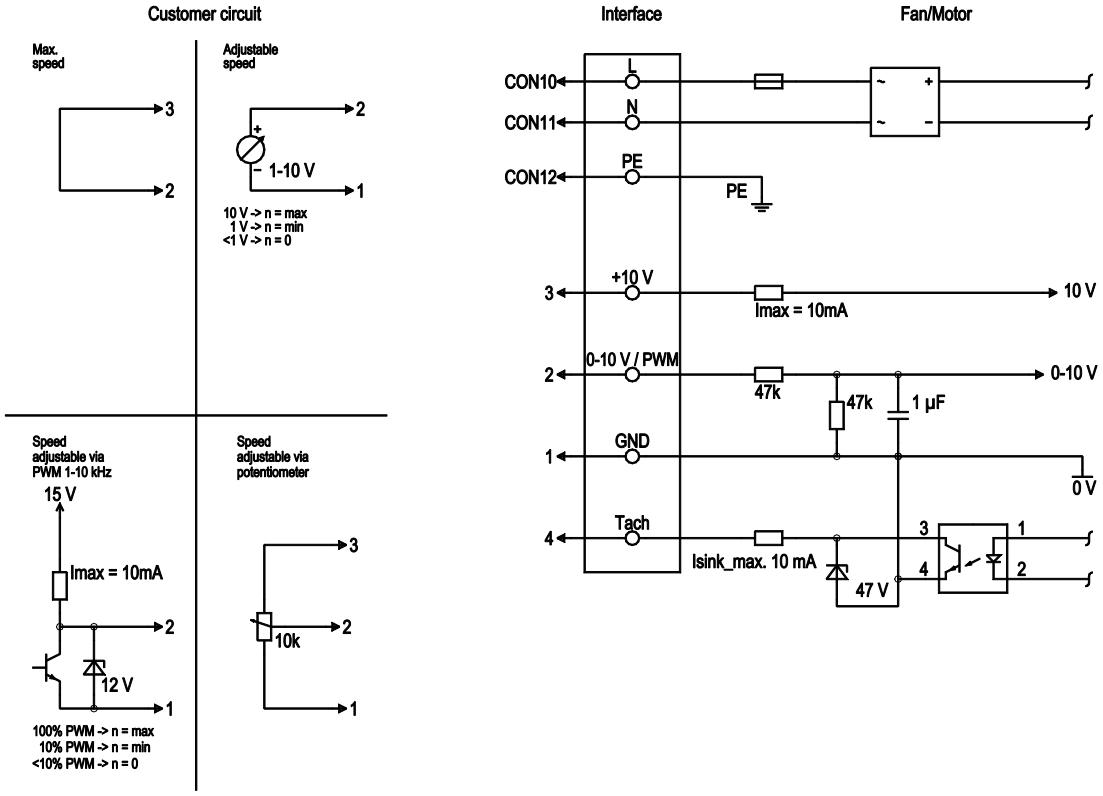
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

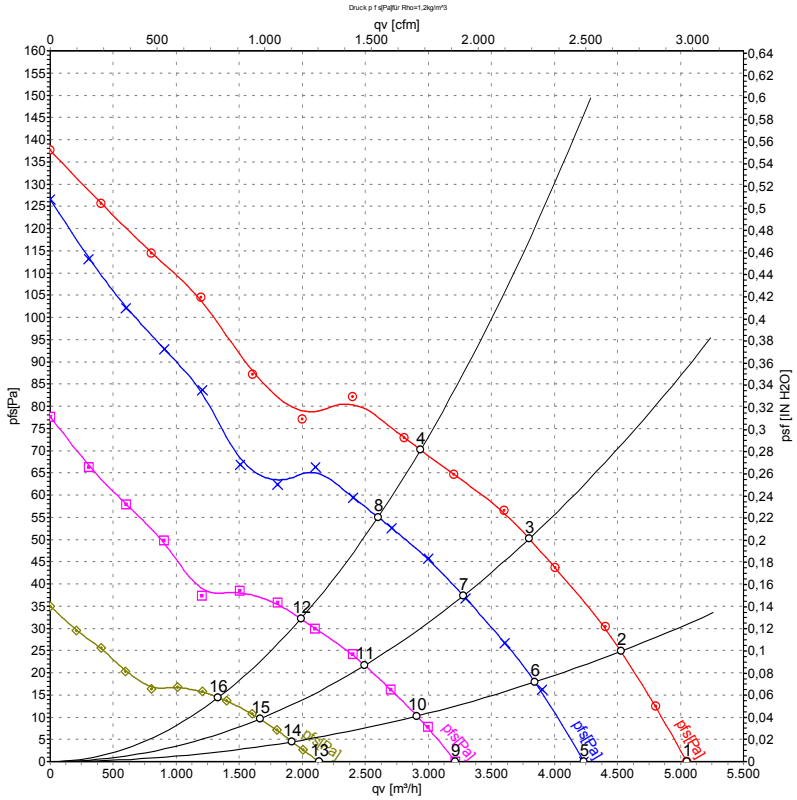
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Curves: Air performance 50 Hz



Measurement: LU-139132-1
Measurement: LU-139137-1
Measurement: LU-139138-1
Measurement: LU-139141-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1185	152	1.24	60	67	5050	0	2970	0.00
2	230	50	1170	162	1.32	59	65	4525	25	2665	0.10
3	230	50	1130	165	1.35	56	63	3800	50	2235	0.20
4	230	50	1090	165	1.35	54	62	2935	70	1730	0.28
5	230	50	1000	93	0.80			4235	0	2490	0.00
6	230	50	990	100	0.86			3845	18	2265	0.07
7	230	50	980	106	0.92			3275	37	1930	0.15
8	230	50	960	114	0.96			2600	55	1530	0.22
9	230	50	760	42	0.38			3215	0	1890	0.00
10	230	50	755	46	0.41			2910	10	1715	0.04
11	230	50	745	49	0.44			2495	22	1470	0.09
12	230	50	740	53	0.48			1990	32	1170	0.13
13	230	50	510	15	0.15			2135	0	1255	0.00
14	230	50	505	16	0.16			1920	4	1130	0.02
15	230	50	500	17	0.17			1665	10	980	0.04
16	230	50	495	18	0.18			1330	14	785	0.06

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
qv = Air flow · p_{fs} = Pressure increase

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