S3G450-AP02-60

EC axial fan

sickle-shaped blades (S series)

with guard grille for short nozzle

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Nominal data

Type	**S3G450-AP02-60**
Motor	**M3G074-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	980
Power consumption	W	163
Current draw	A	1.34
Max. back pressure	Pa	74
Max. back pressure	in. wg	0.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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}	%	39.7	28.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	3505
09 Pressure increase p_{fs}	Pa	61
10 Speed (rpm) n	min^{-1}	1000
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-138244

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Technical description

Weight	4.7 kg
Size	450 mm
Motor size	74
Rotor surface	Painted black
Terminal box material	PC/ABS plastic
Blade material	PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2
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	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing made of stainless steel
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

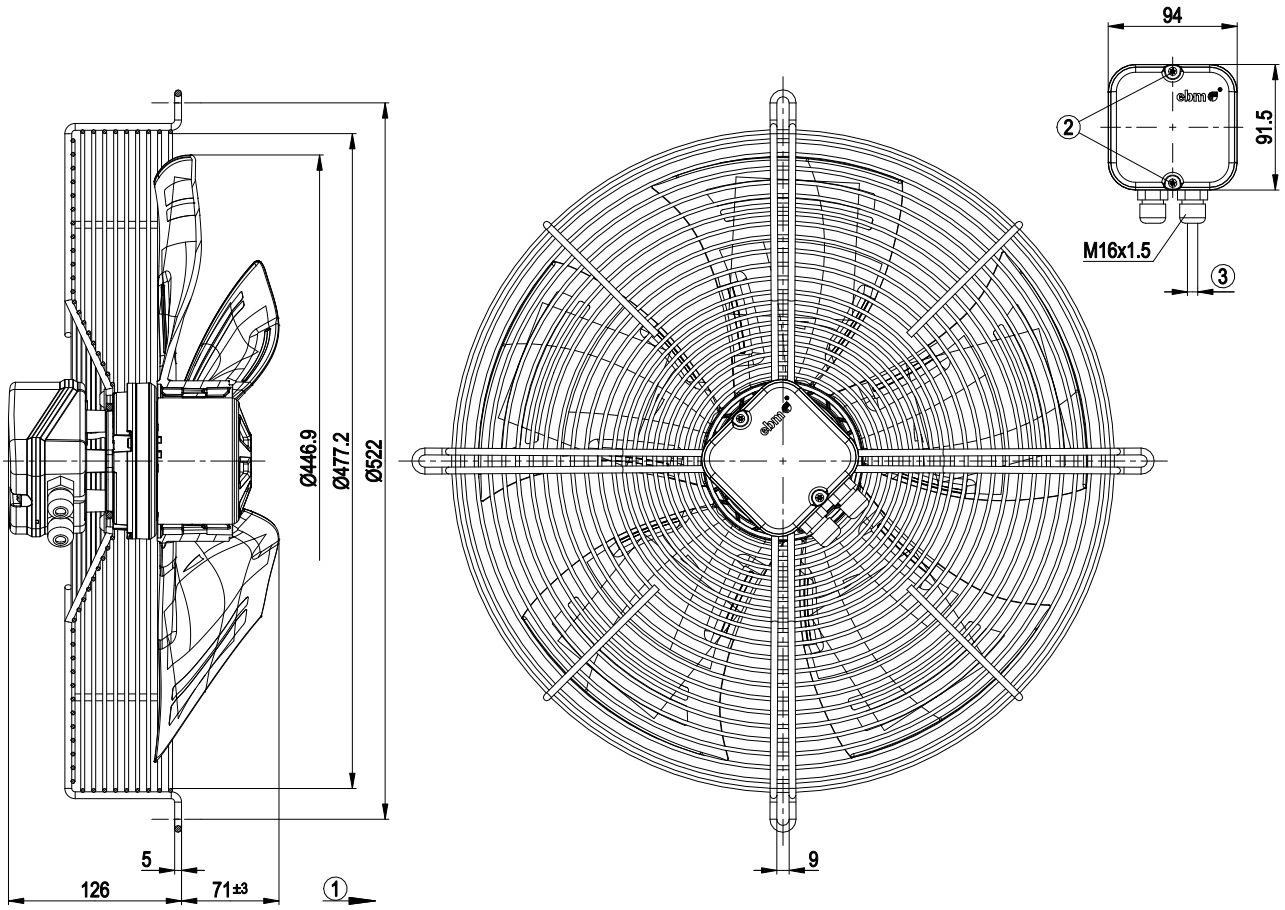
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 0.5 ± 0.1 Nm
3	Cable diameter max. 7.5 mm, tightening torque 1.3 ± 0.2 Nm

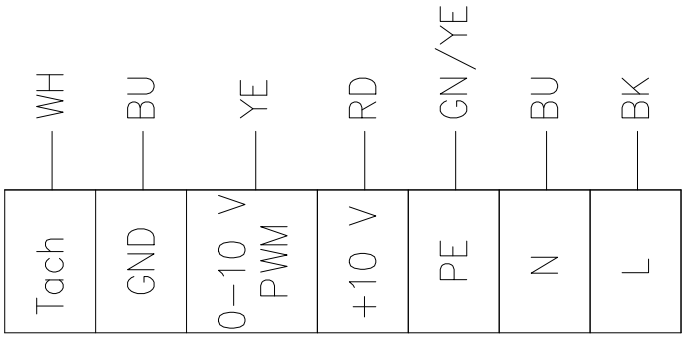
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	Tacho	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
1	2	GND	blue	Reference ground for control interface, SELV
1	3	0-10 V / PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
1	4	+10 V	red	Fixed voltage output 10 VDC +/-3%, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers), SELV
1	5	PE	green/yellow	Ground connection
1	6	N	blue	Supply connection, power supply, neutral conductor, voltage range see nameplate, 50/60 Hz
1	7	L	black/brown	Supply connection, power supply, phase, voltage range see nameplate, 50/60 Hz

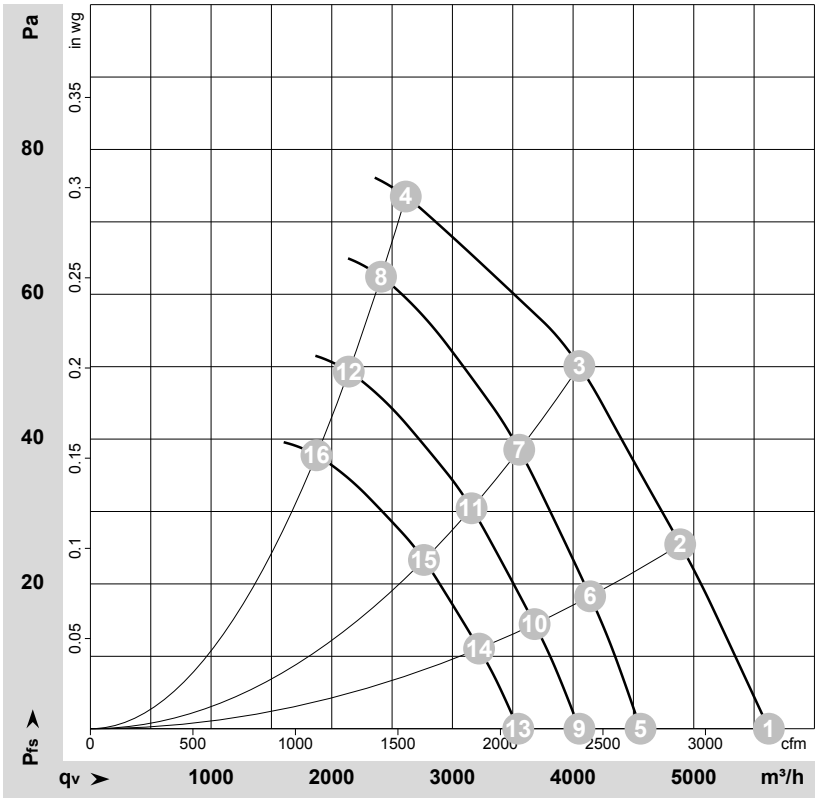
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-138244-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	1110	163	1.34	59	66	5620	0	3310	0.00
2	230	50	1060	163	1.34	57	64	4890	25	2875	0.10
3	230	50	1025	163	1.34	54	61	4050	50	2385	0.20
4	230	50	980	163	1.34	61	68	2615	74	1540	0.30
5	230	50	900	89	0.72	54	60	4560	0	2685	0.00
6	230	50	900	102	0.83	53	60	4140	18	2435	0.07
7	230	50	900	113	0.93	51	58	3555	39	2090	0.16
8	230	50	900	131	1.09	59	66	2410	63	1415	0.25
9	230	50	800	63	0.51	51	57	4050	0	2385	0.00
10	230	50	800	72	0.58	50	57	3680	14	2165	0.06
11	230	50	800	80	0.65	48	55	3160	31	1860	0.12
12	230	50	800	92	0.76	56	63	2140	49	1260	0.20
13	230	50	700	42	0.34	48	54	3545	0	2085	0.00
14	230	50	700	48	0.39	47	53	3220	11	1895	0.04
15	230	50	700	53	0.44	45	51	2765	23	1625	0.09
16	230	50	700	62	0.51	52	60	1875	38	1100	0.15

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

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