EC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for short nozzle, Automotive

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	**S3G500-AN37-61**	
Motor	**M3G112-GA**	
Nominal voltage	VDC	720
Nominal voltage range	VDC	500 .. 750
Method of obtaining data		ml
Speed (rpm)	min-1	1615
Power consumption	W	1000
Current draw	A	1.4
Max. back pressure	Pa	205
Max. back pressure	in. wg	0.82
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

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Technical description

Weight	12.84 kg
Size	500 mm
Motor size	112
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Cover material	PA plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+S
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a 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; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Alarm relay - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/motor - Reverse polarity protection
Electrical hookup	Terminal box
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1

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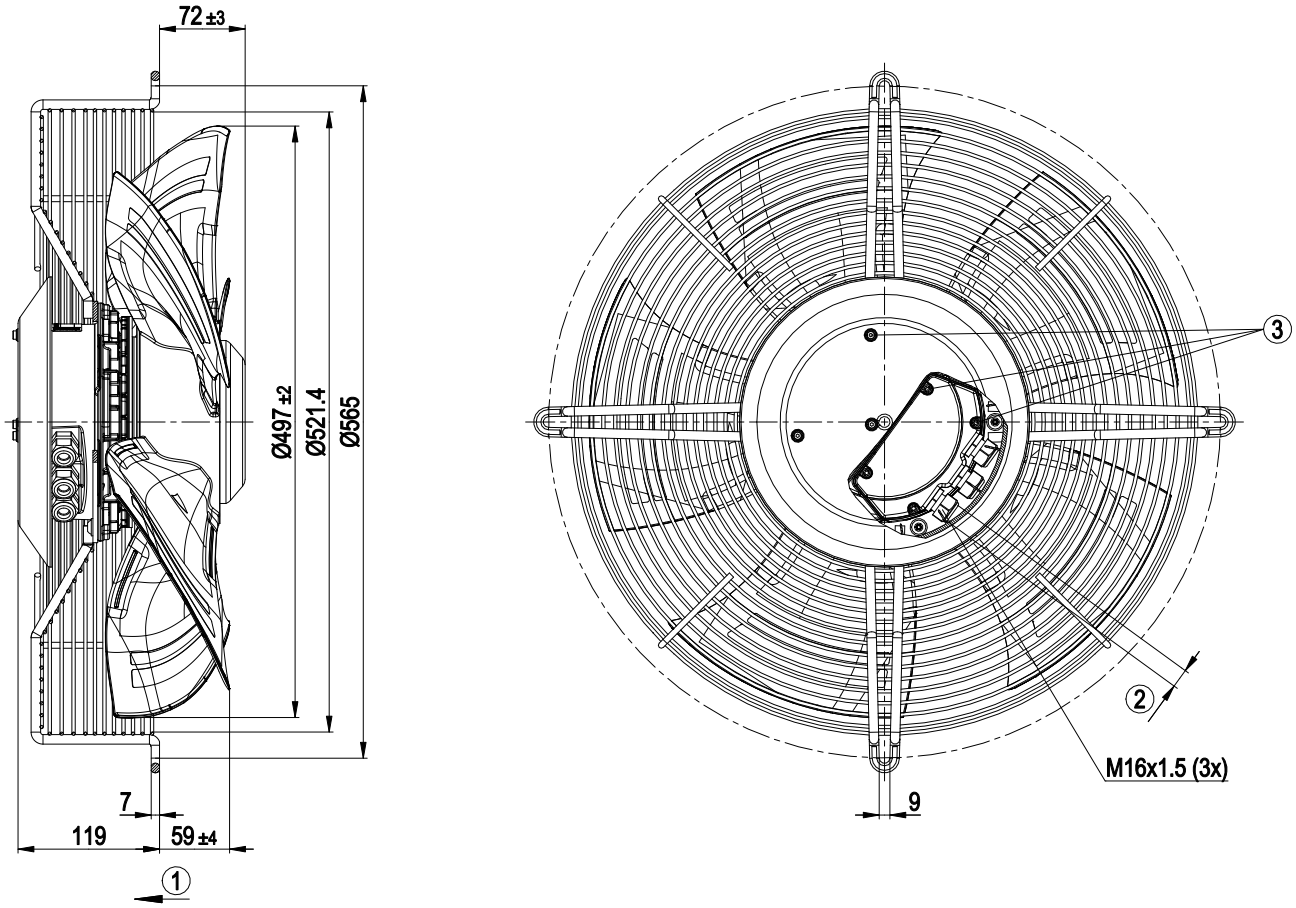
Product drawing



1	Direction of air flow "V"
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm
3	Tightening torque 3.5 ± 0.5 Nm

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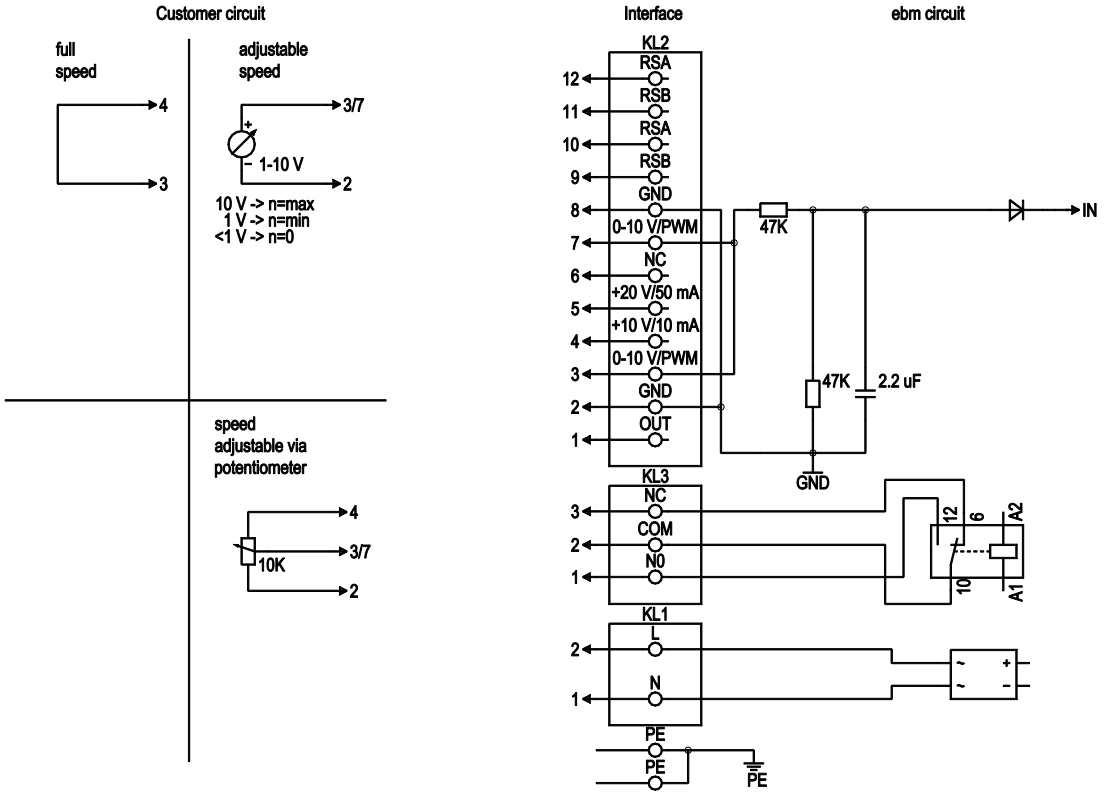
Connection diagram



No.	Conn.	Designation	Function/assignment
PE	-	PE	Protective earth terminal
KL1	1, 2	N, L	Power supply, for voltage range see nameplate, L1 (+) L3 (-)
KL3	1	NO	Alarm relay, break on error message
KL3	2	COM	Relay contact for alarm, contact
KL3	3	NC	Alarm contact, error message causes contact to be made
KL2	1	OUT	not used
KL2	2, 8	GND	Reference ground for control interface, SELV
KL2	3, 7	0-10V	Use control / current sensor value input 0-10 VDC, impedance 100 kOhm only as alternative to 4-20 mA input, SELV
KL2	4	+10V	not used
KL2	5	+20V	not used
KL2	6	NC	not used
KL2	9, 11	RSB	not used
KL2	10, 12	RSA	not used

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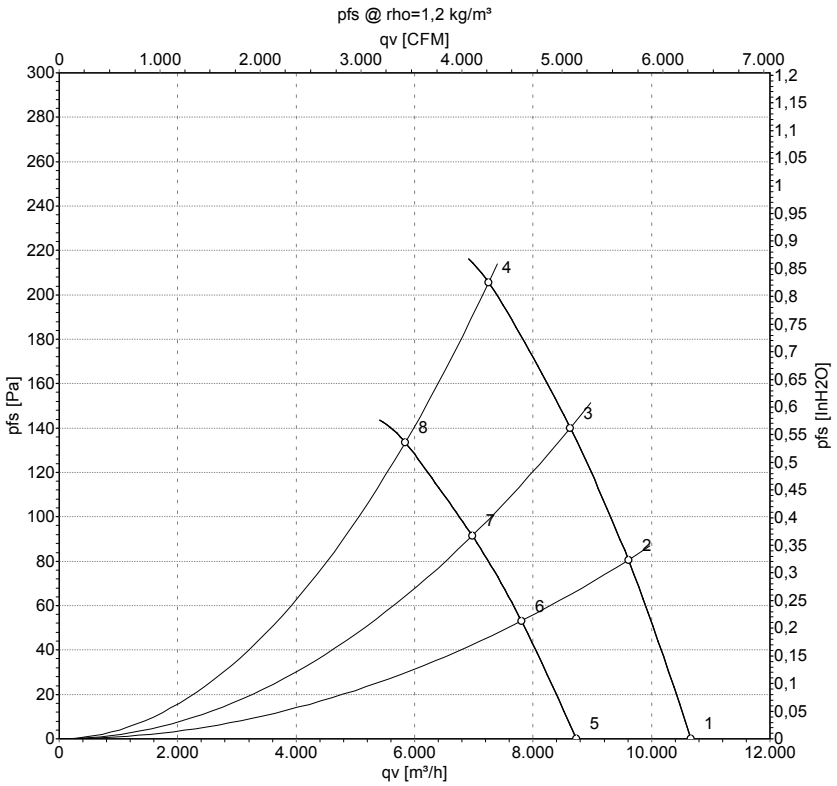
Curves: Air performance



Measurement: LU-144548-1
Measurement: LU-144568-1

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	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	720-750	1610	745	1.04*	10665	0	6275	0.00
2	720-750	1610	856	1.19*	9610	80	5655	0.32
3	720-750	1610	926	1.29*	8625	140	5080	0.56
4	720-750	1615	1000	1.40*	7250	205	4265	0.82
5	500	1330	427	0.86	8735	0	5140	0.00
6	500	1315	466	0.93	7800	54	4590	0.22
7	500	1310	495	0.99	6975	92	4105	0.37
8	500	1300	523	1.05	5845	134	3440	0.54

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · * = Current measured at nominal voltage · q_V = Air flow · p_{fs} = Pressure increase