S6D500-ZM03-01

AC axial fan - AxiEco

with guard grille

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General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**S6D500-ZM03-01**
Motor	**M6D110-EF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		ml	ml	ml	ml
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	910	770	1080	840
Power consumption	W	300	210	470	325
Current draw	A	0.7	0.36	0.8	0.47
Max. back pressure	Pa	120	85	165	100
Max. back pressure	in. wg	0.48	0.34	0.66	0.4
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	60	60
Starting current	A	2.4	0.8	2.7	0.9

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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	36.3	30.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		46.1	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.28
09 Air flow q_v	m^3/h	4120
09 Pressure increase p_{fs}	Pa	94
10 Speed (rpm) n	min^{-1}	925
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-210494

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Technical description

Size	500 mm
Motor size	110
Rotor surface	Painted black
Terminal box material	PP plastic
Impeller material	PP plastic, galvanized sheet-metal plate
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	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Terminal box
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; CE
Approval	CSA C22.2 No. 100; EAC; UL 1004-1

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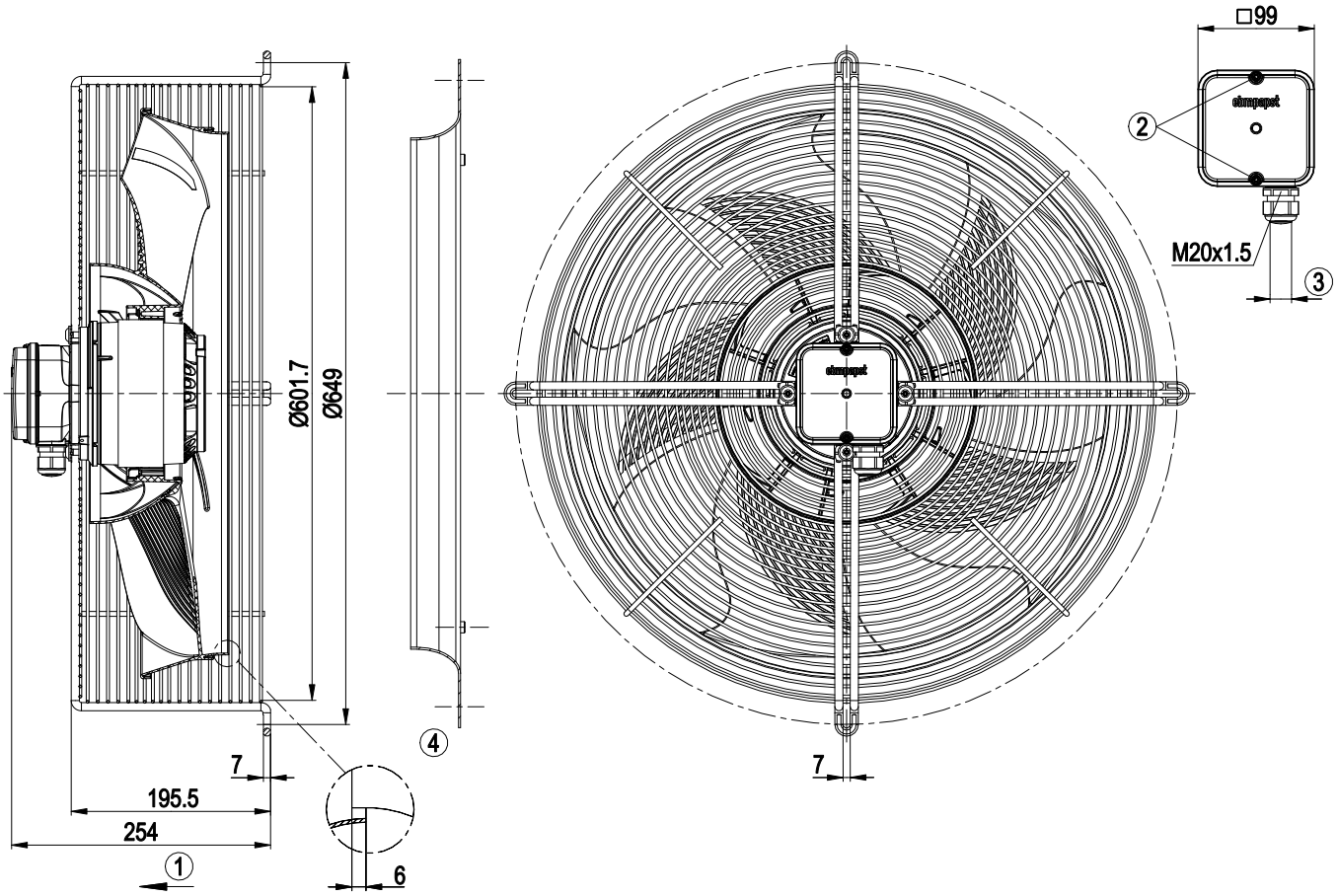
Product drawing



1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm
4	Accessory part: Inlet ring 50100-2-4013 not included in scope of delivery

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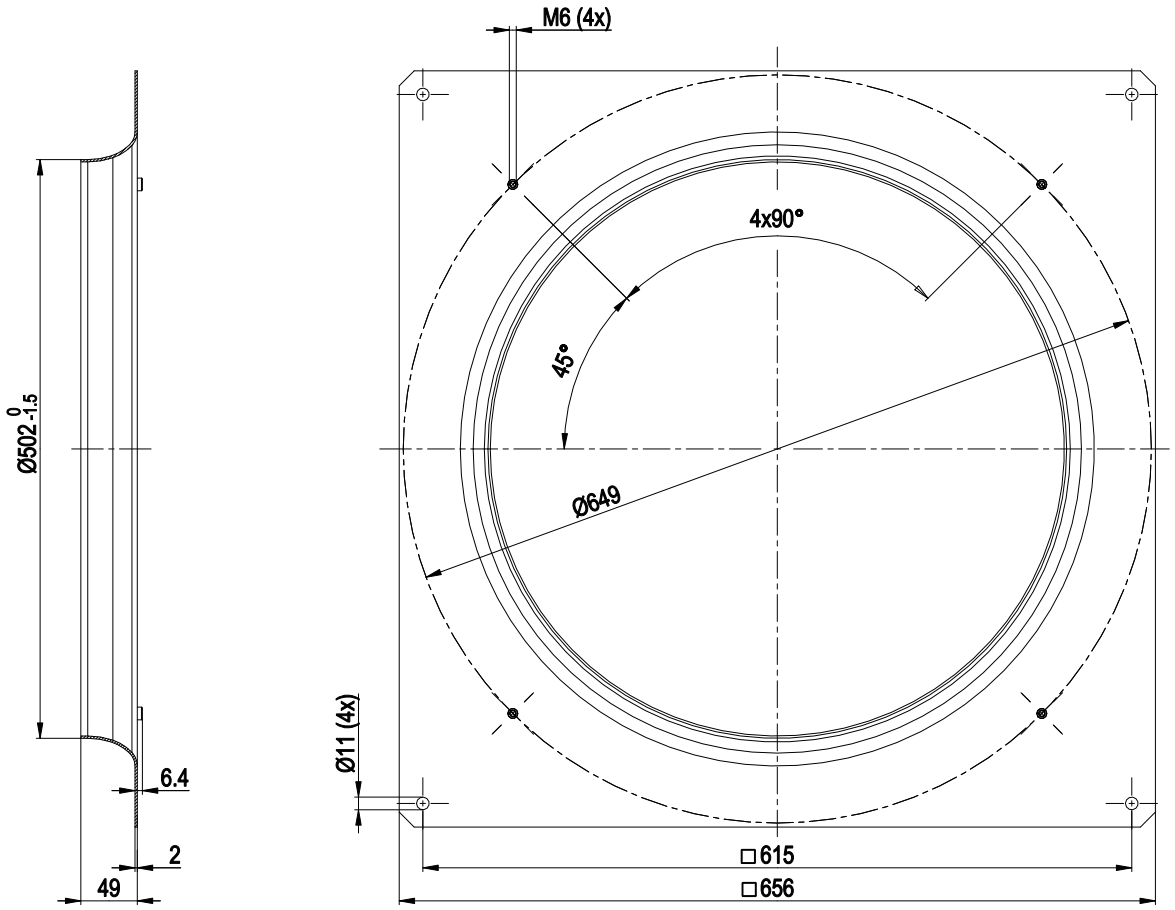
Accessory part



Inlet ring 50100-2-4013

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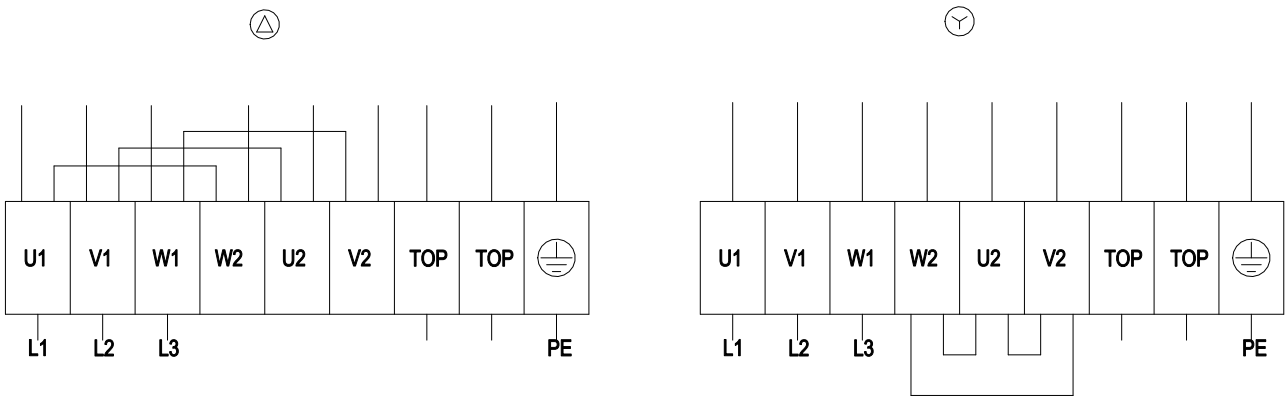
Connection diagram



Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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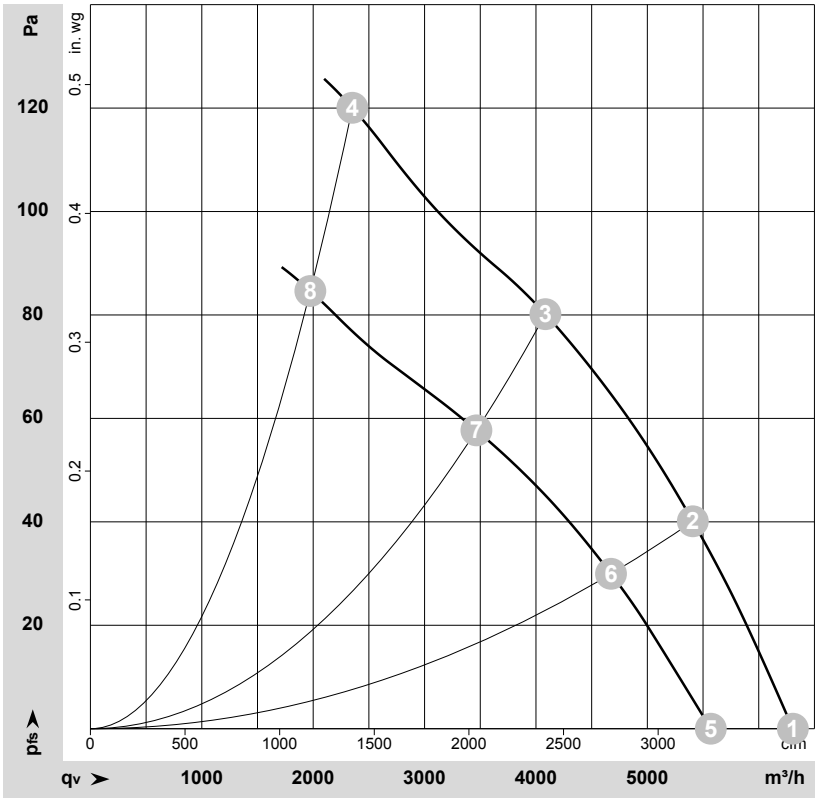
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-211285-1
Measurement: LU-212172-1

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_e	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	Δ	400	50	940	231	0.65	60	66	69	6305	0	3710	0.00
2	Δ	400	50	930	262	0.67	57	64	66	5410	40	3185	0.16
3	Δ	400	50	920	285	0.68	55	63	66	4085	80	2405	0.32
4	Δ	400	50	910	300	0.70	60	67	73	2350	120	1385	0.48
5	Y	400	50	835	167	0.29	57	64	66	5570	0	3280	0.00
6	Y	400	50	805	186	0.32	54	60	63	4675	30	2750	0.12
7	Y	400	50	780	201	0.34	52	59	62	3465	58	2040	0.23
8	Y	400	50	770	210	0.36	55	63	68	1975	85	1160	0.34

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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

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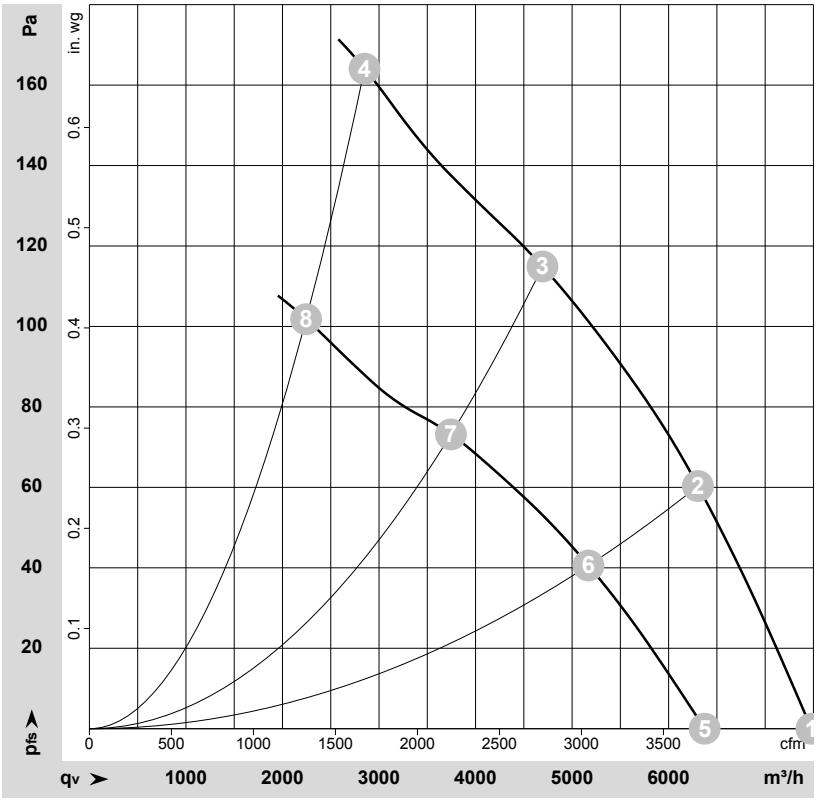
Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-212522-1
Measurement: LU-212521-1

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_e	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	Δ	480	60	1110	360	0.70	64	71	74	7480	0	4400	0.00
2	Δ	480	60	1095	416	0.74	60	67	70	6305	60	3710	0.24
3	Δ	480	60	1080	452	0.77	59	66	71	4695	115	2765	0.46
4	Δ	480	60	1080	470	0.80	64	72	77	2850	165	1675	0.66
5	Y	480	60	950	263	0.37	60	67	69	6375	0	3750	0.00
6	Y	480	60	900	294	0.41	56	63	66	5170	41	3040	0.16
7	Y	480	60	865	313	0.43	54	61	65	3745	74	2205	0.30
8	Y	480	60	840	325	0.47	58	65	71	2245	100	1320	0.40

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = 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

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