S4D500-ZL09-01

AC axial fan - AxiEco

with guard grille

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

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	**S4D500-ZL09-01**
Motor	**M4E110-GF**

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}	1310	1010	1540	1140
Power consumption	W	780	505	1180	725
Current draw	A	1.5	0.85	1.8	1.0
Max. back pressure	Pa	240	145	240	135
Max. back pressure	in. wg	0.96	0.58	0.96	0.54
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	45	40
Starting current	A	5.5	1.7	6.0	1.9

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}	%	41.5	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		48.7	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.73
09 Air flow q_v	m^3/h	6345
09 Pressure increase p_{fs}	Pa	181
10 Speed (rpm) n	min^{-1}	1325
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-210452

AC axial fan - AxiEco

with guard grille

Technical description

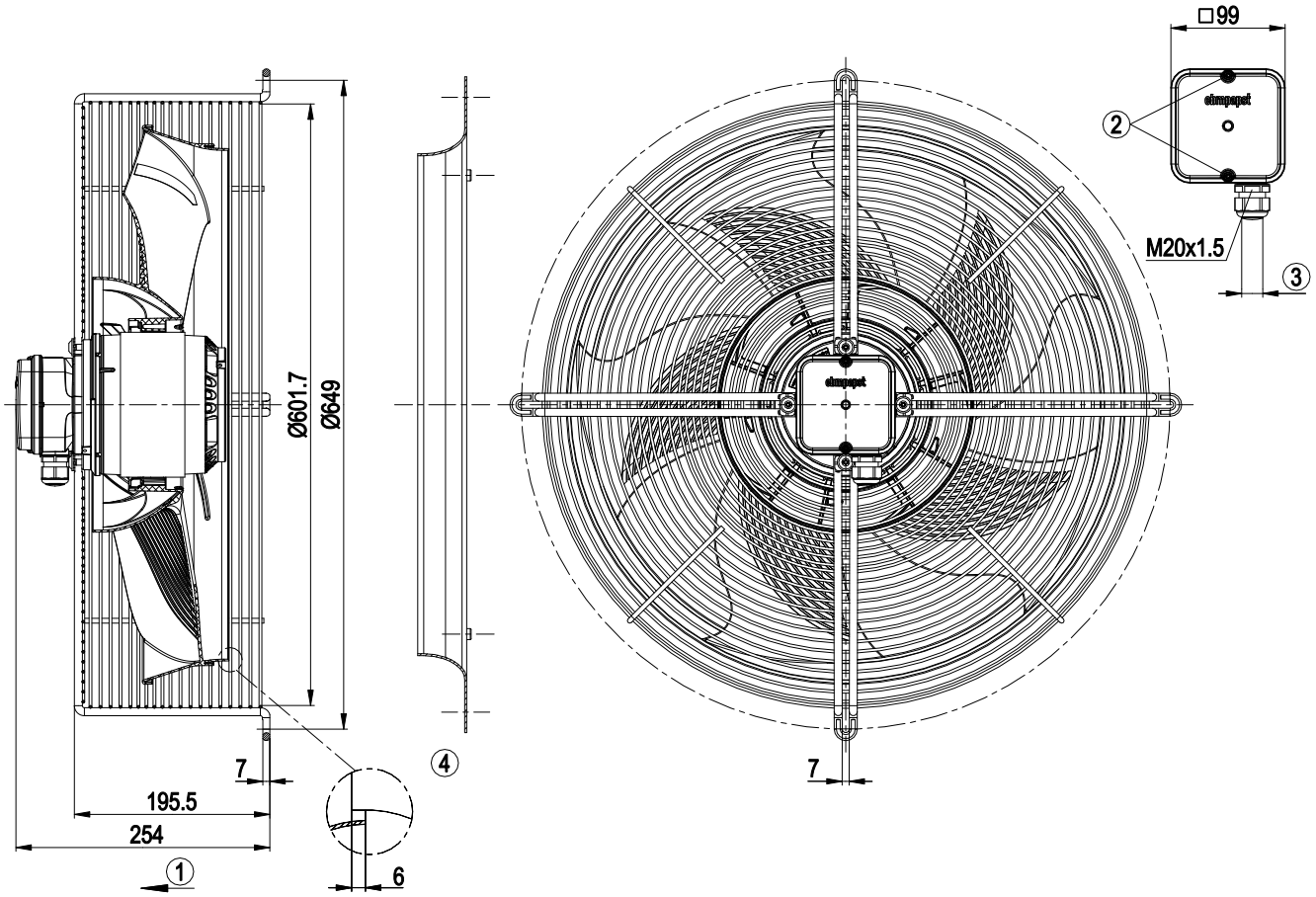
Size	500 mm
Motor size	110
Rotor surface	Painted black
Terminal box material	PP plastic
Impeller material	PP plastic, galvanized sheet-metal plate
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Clockwise, viewed toward rotor
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)
Motor capacitor according to EN 60252-1 in safety protection class	S0
Conformity with standards	EN 60034-1; CE
Approval	CSA C22.2 No. 100; EAC; UL 1004-1

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - AxiEco

with guard grille

Product drawing



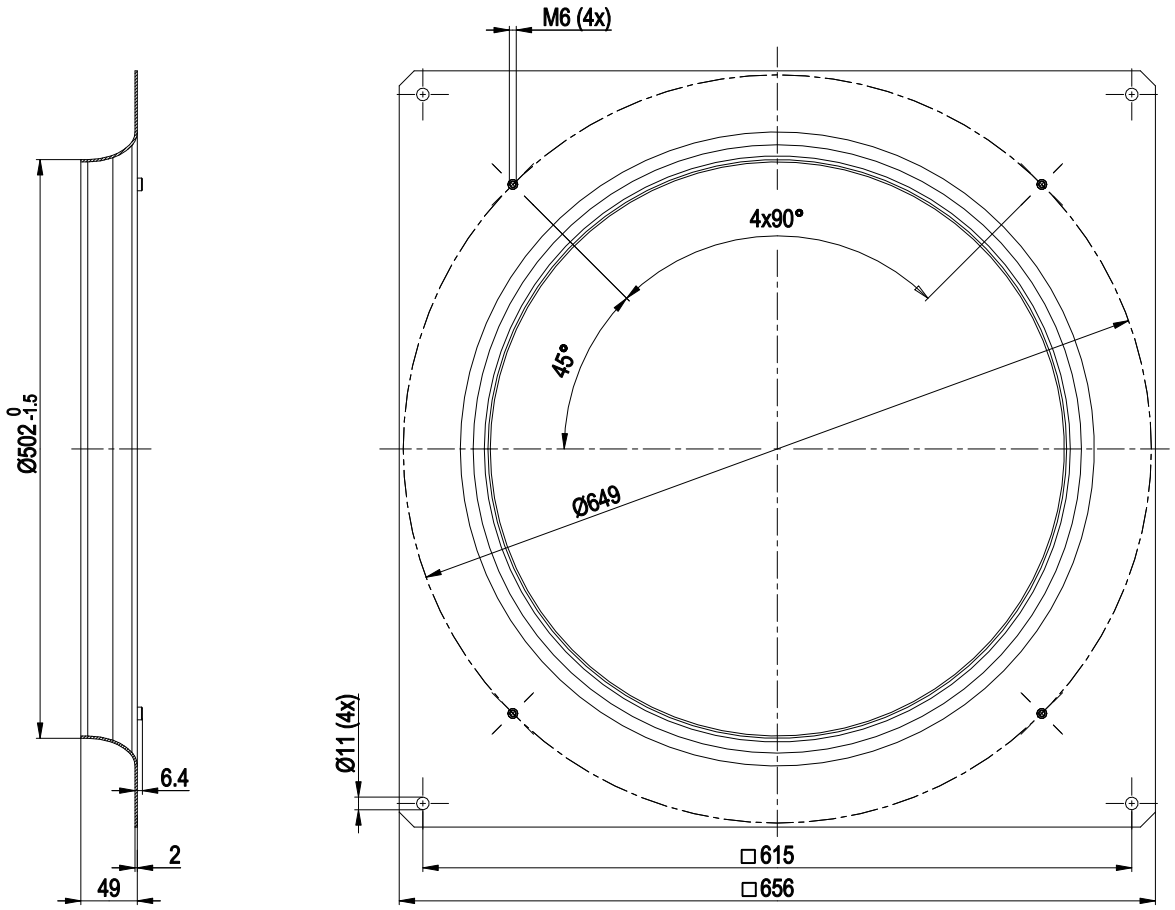
1	Airflow direction "V"
2	Tightening torque 1.5 ± 0.2 Nm
3	Cable diameter min. 6 mm, max. 12 mm, tightening torque 2 ± 0.3 Nm
4	Accessory part: Inlet ring 50100-2-4013 not included in scope of delivery

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - AxiEco

with guard grille

Accessory part



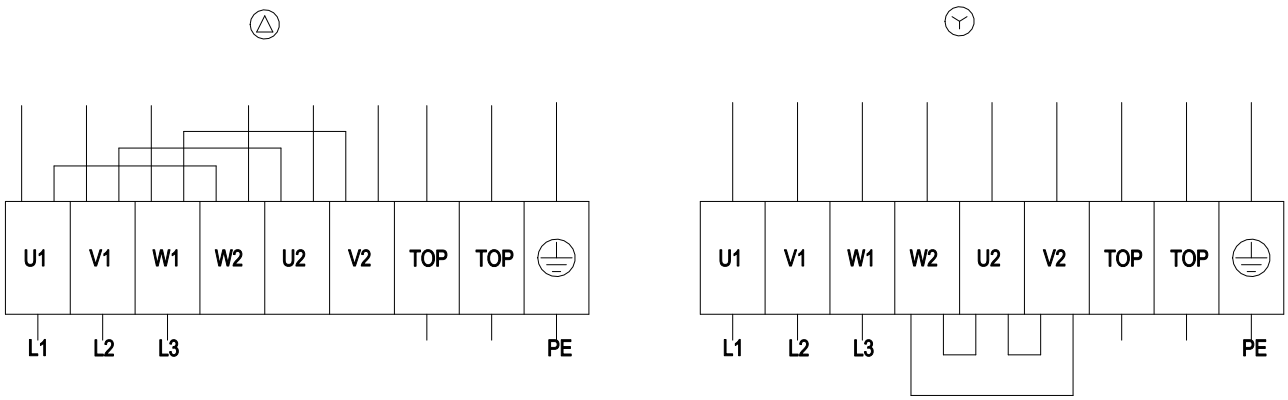
Inlet ring 50100-2-4013

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - AxiEco

with guard grille

Connection diagram



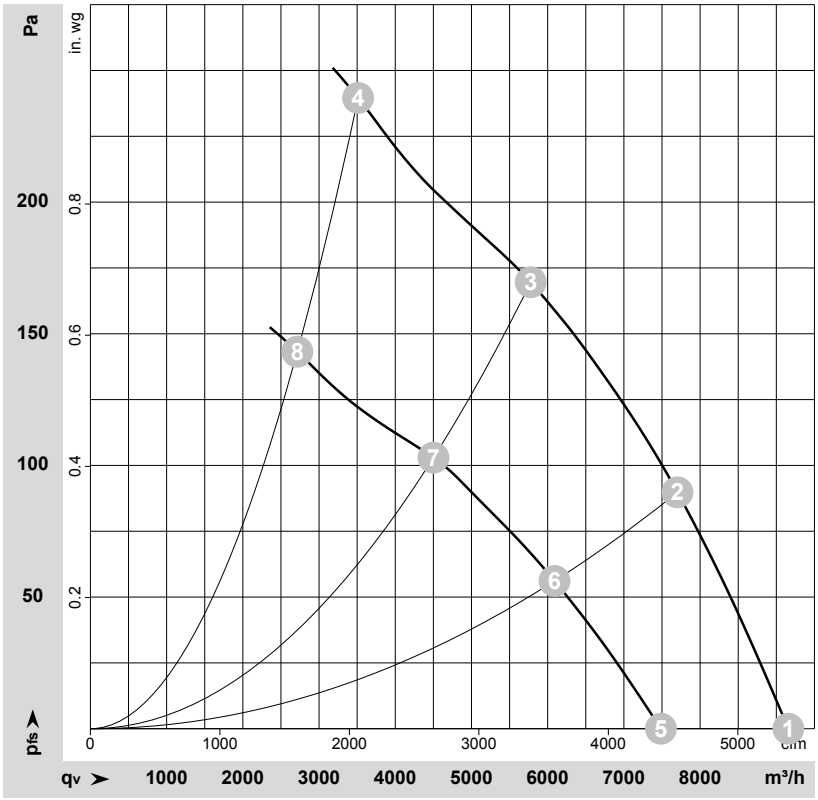
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - AxiEco

with guard grille

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-211287-1
Measurement: LU-213286-1

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	1360	595	1.23	69	76	79	9160	0	5390	0.00
2	Δ	400	50	1335	682	1.34	65	72	75	7700	90	4535	0.36
3	Δ	400	50	1315	745	1.41	64	71	75	5780	170	3400	0.68
4	Δ	400	50	1310	780	1.50	70	77	81	3510	240	2065	0.96
5	Y	400	50	1120	421	0.69	64	71	74	7485	0	4405	0.00
6	Y	400	50	1065	468	0.76	60	67	70	6090	56	3585	0.22
7	Y	400	50	1030	493	0.80	58	65	69	4500	103	2650	0.41
8	Y	400	50	1010	505	0.85	63	70	75	2715	145	1600	0.58

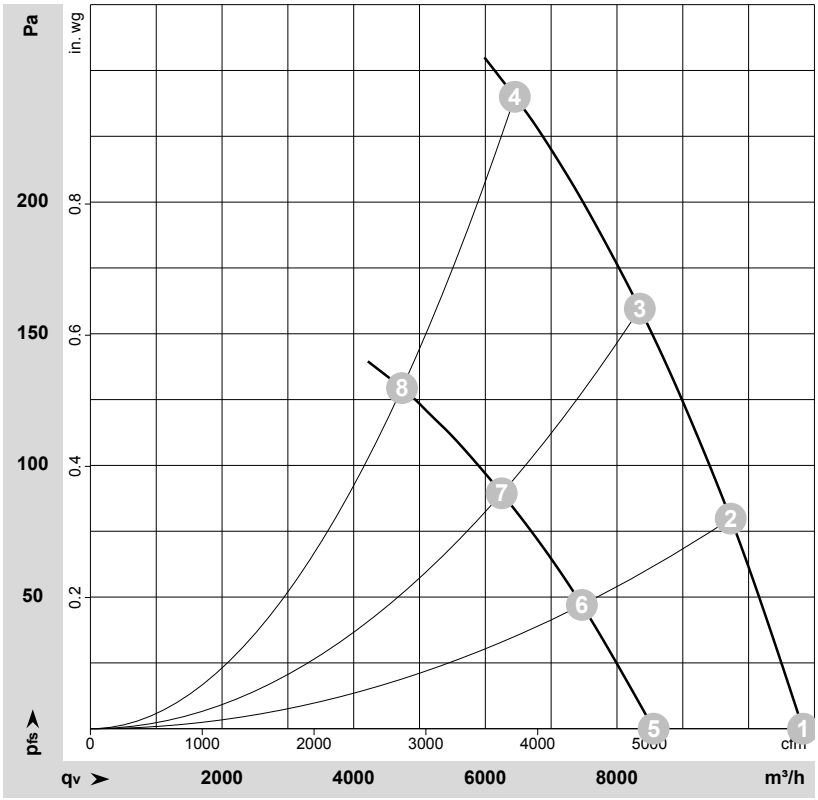
Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

AC axial fan - AxiEco

with guard grille

Curves: Air performance 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-212171-1
Measurement: LU-213291-1

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	1615	972	1.51	73	79	84	10825	0	6370	0.00
2	Δ	480	60	1585	1075	1.63	70	77	81	9730	80	5725	0.32
3	Δ	480	60	1560	1161	1.72	67	75	79	8345	160	4915	0.64
4	Δ	480	60	1540	1180	1.80	68	75	80	6450	240	3795	0.96
5	Y	480	60	1275	665	0.91	68	74	77	8555	0	5035	0.00
6	Y	480	60	1225	701	0.96	64	71	74	7465	47	4395	0.19
7	Y	480	60	1170	727	0.99	61	68	72	6250	90	3680	0.36
8	Y	480	60	1140	725	1.00	61	68	72	4735	130	2785	0.52

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

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com