S4D500-AD01-23

AC axial fan

sickled blades (S series)

with guard grille for short nozzle

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ErP2013 EXCEEDS THE NORM

Nominal data

Type	**S4D500-AD01-23**
Motor	**M4D110-GF**

Phase		3~	3~	3~	3~	3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	230	277	277	400	400	400	480	480
Connection		Δ	Δ	Δ	Δ	Δ	Y	Y	Y	Y	Y
Frequency	Hz	50	60	60	60	60	50	60	60	60	60
Type of data definition		ml	ml	ml	ml	ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE	CE	CE	CE	CE
Speed	min^{-1}	1325	1445	1480	1545	1570	1325	1480	1445	1545	1570
Power input	W	820	1180	1095	1315	1215	820	1095	1180	1315	1215
Current draw	A	2.77	3.55	3.31	3.43	3.22	1.59	1.91	2.05	1.98	1.86
Max. back pressure	Pa	160	190	135	215	150	160	135	190	215	150
Min. ambient temperature	°C	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
Max. ambient temperature	°C	80	45	55	45	55	80	55	45	45	55

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive integrated	No
Specific ratio*	1,00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		30,7	29	33
Efficiency grade N		37,7	36	40
Power input P_e	kW	0,77		
Air flow q_v	m^3/h	6000		
Pressure increase p_{fs}	Pa	144		
Speed n	min^{-1}	1340		

Data established at point of optimum efficiency

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Technical features

Mass	13 kg
Size	500 mm
Surface of rotor	Cast in aluminium
Material of terminal box	ABS plastic, black
Material of blades	Aluminium sheet
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Number of blades	5
Blade angle	0°
Direction of air flow	"A"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Leakage current	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Axial
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	VDE; CSA C22.2 Nr.100; UL 1004-1

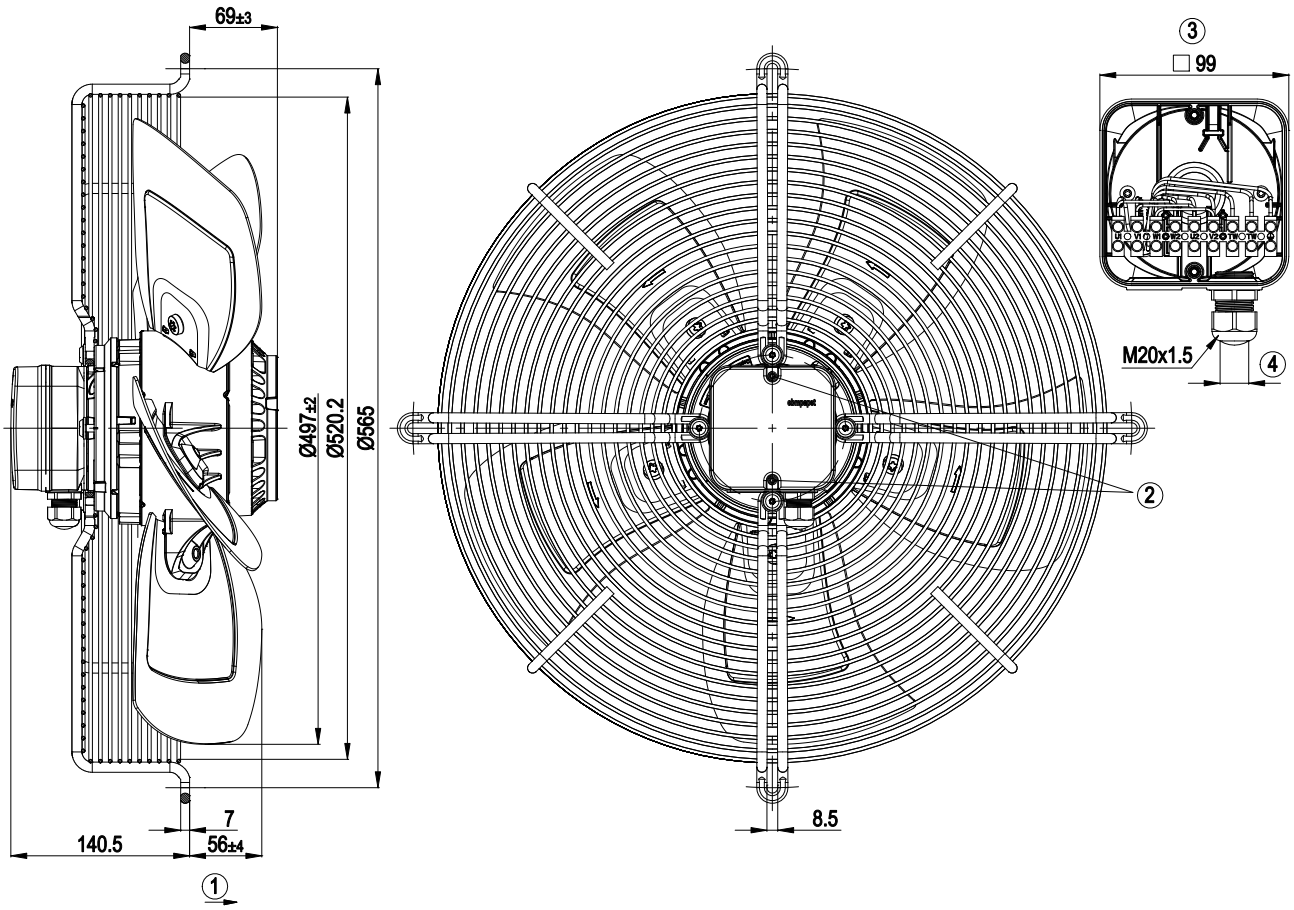
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 0.8±0.15 Nm
3	Illustration without terminal box cover
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque: 2±0.3 Nm

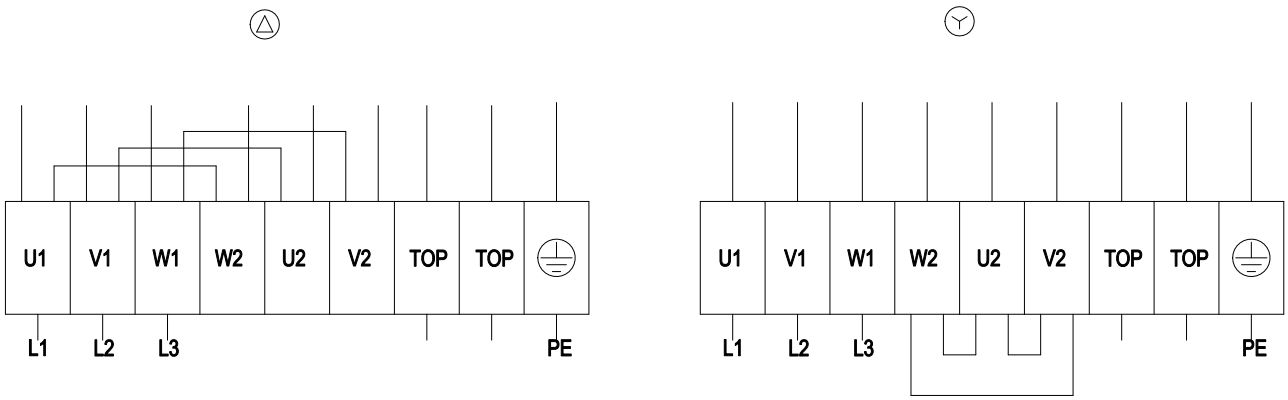
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Connection screen



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

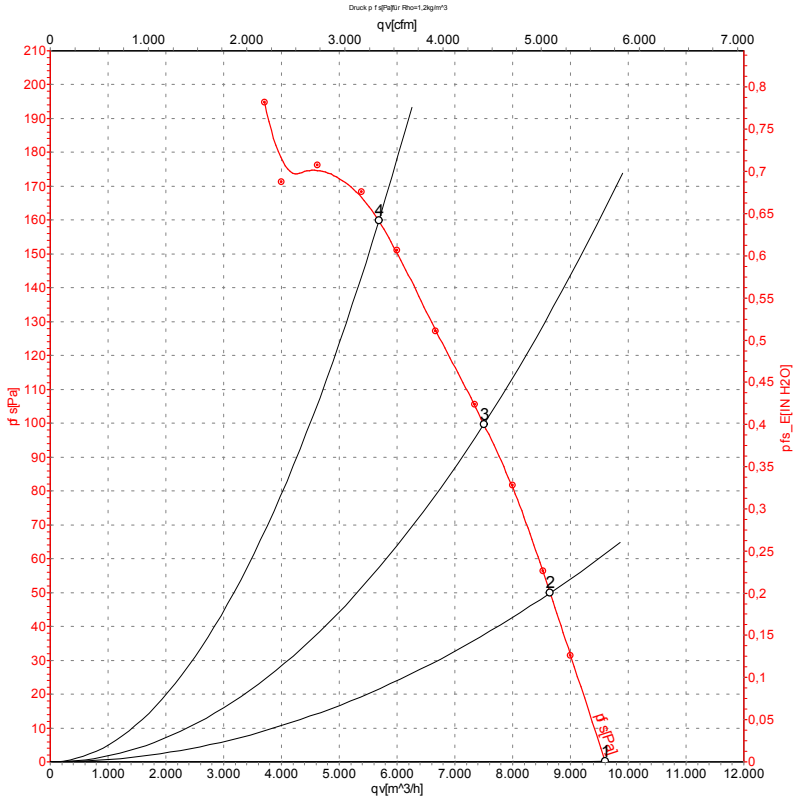
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Charts: Air flow 50 Hz



Measurement: LU-101309

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y	400	50	1380	619	1.35	69	76	9600	0
2	Y	400	50	1365	677	1.42	70	77	8650	50
3	Y	400	50	1355	733	1.49	70	77	7500	100
4	Y	400	50	1325	820	1.59	73	80	5685	160

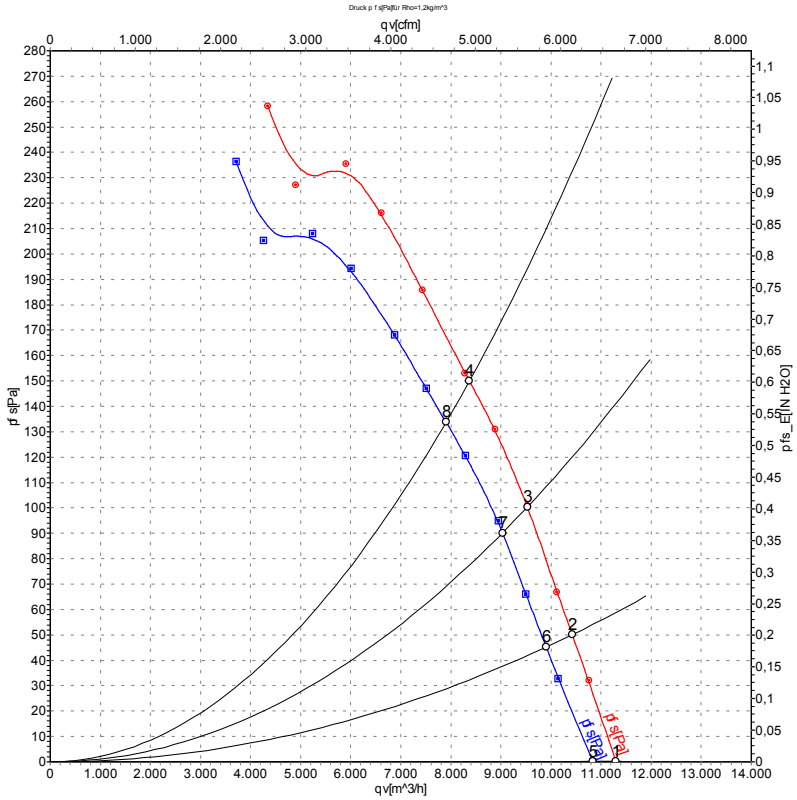
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Charts: Air flow 60 Hz



Measurement: LU-101311
Measurement: LU-101310

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	Conn.	U	f	n	P_e	I	LpA_{in}	LwA_{in}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Y	480	60	1620	1004	1.61	72	80	11290	0
2	Y	480	60	1605	1076	1.69	73	80	10430	50
3	Y	480	60	1590	1142	1.76	74	80	9525	100
4	Y	480	60	1570	1215	1.86	74	81	8370	150
5	Y	400	60	1555	923	1.63	72	79	10840	0
6	Y	400	60	1530	984	1.74	72	79	9900	45
7	Y	400	60	1510	1041	1.83	72	79	9030	91
8	Y	400	60	1480	1095	1.91	72	79	7905	135

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