S6D710-BN01-05

AC axial fan

sickled blades (S series)

with guard grille for full nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S6D710-BN01-05**
Motor	**M6D138-HF**

Phase		3~	3~	3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400	480	480
Connection		Δ	Y	Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60	60	60
Type of data definition		ml	ml	ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE	CE	CE
Speed	min^{-1}	910	750	1010	685	1070	810
Power input	W	1010	700	1490	780	1640	1040
Current draw	A	2.4	1.33	2.8	1.6	2.88	1.7
Max. back pressure	Pa	130	87	160	72	180	100
Max. ambient temperature	°C	80	80	60	80	60	80
Starting current	A	9	3	7	2.35	10	3.35

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	No
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		35.3	29.6	33.6
Efficiency grade N		41.7	36	40
Power input P_e	kW	0.98		
Air flow q_v	m^3/h	10460		
Pressure increase p_{fs}	Pa	120		
Speed n	min^{-1}	915		

Data established at point of optimum efficiency

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Technical features

Mass	30 kg
Size	710 mm
Surface of rotor	Cast in aluminium
Material of terminal box	ABS plastic, black
Material of blades	Die-cast aluminum
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	-5°
Direction of air flow	"A"
Direction of rotation	Counter-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	Any
Condensate discharge holes	On rotor and stator sides
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 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 60034; EN 61800-5-1; CE
Approval	VDE

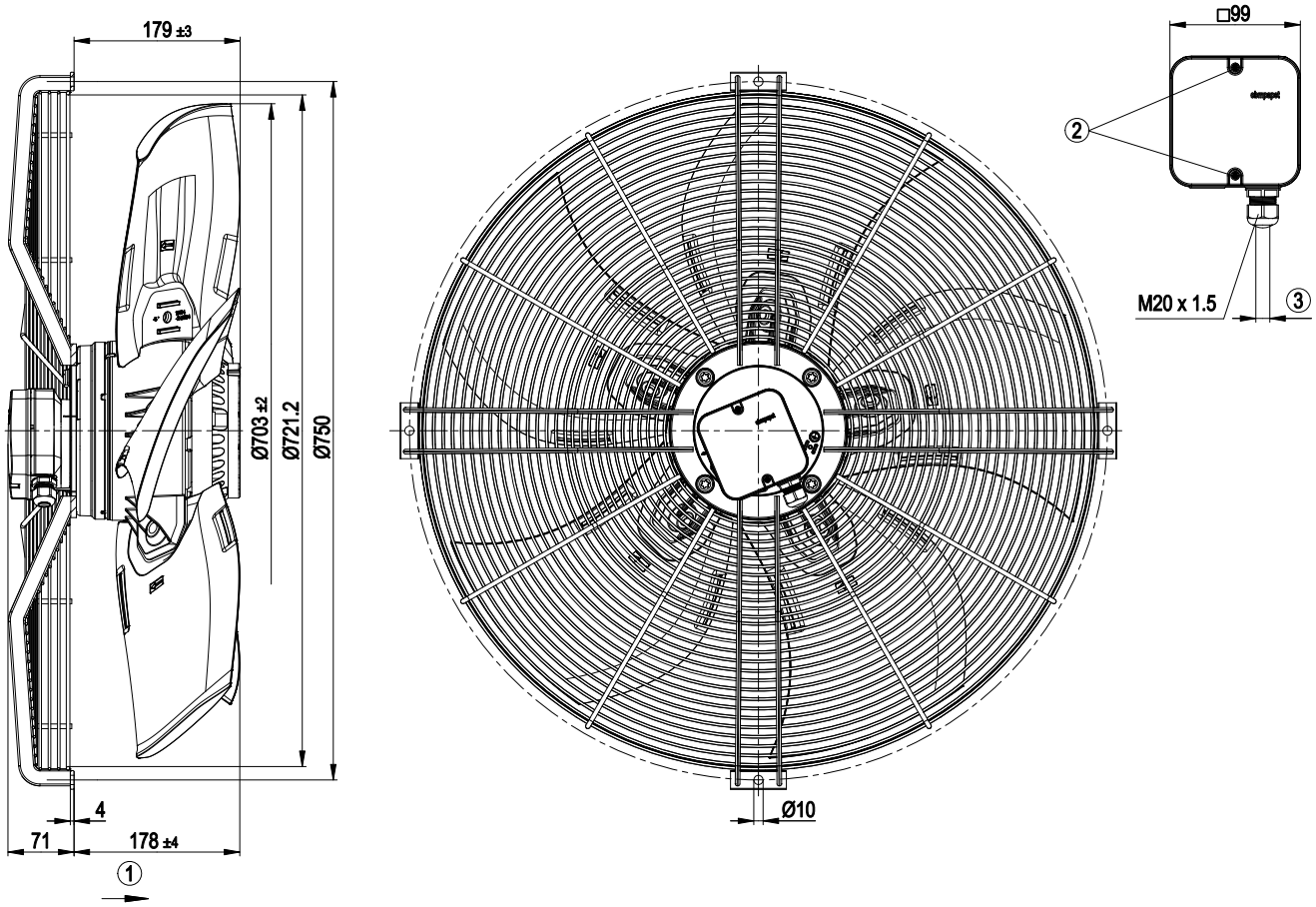
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Product drawing



1	Direction of air flow "A"
2	Tightening torque 1.5±0.2 Nm
3	Cable diameter: min. 7 mm, max. 14 mm, tightening torque: 2±0.3 Nm

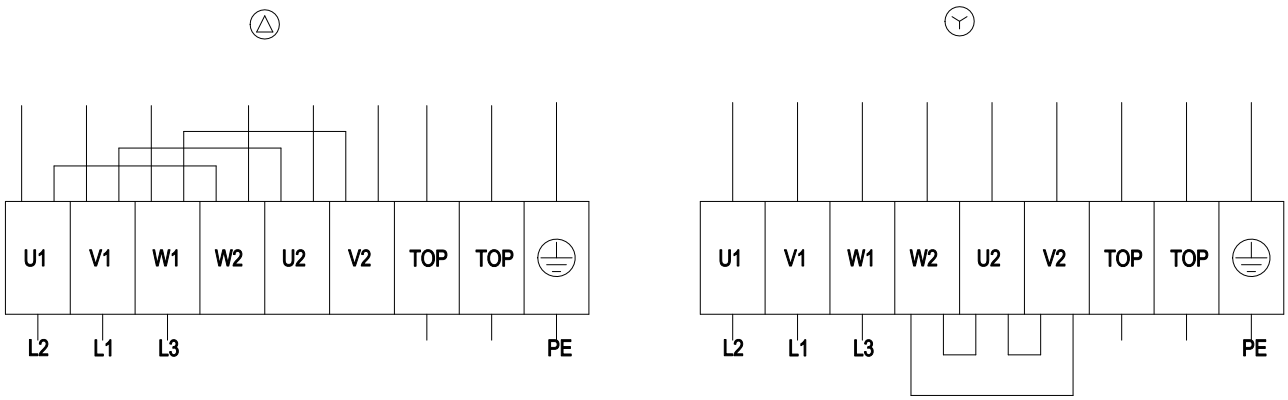
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Connection screen



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

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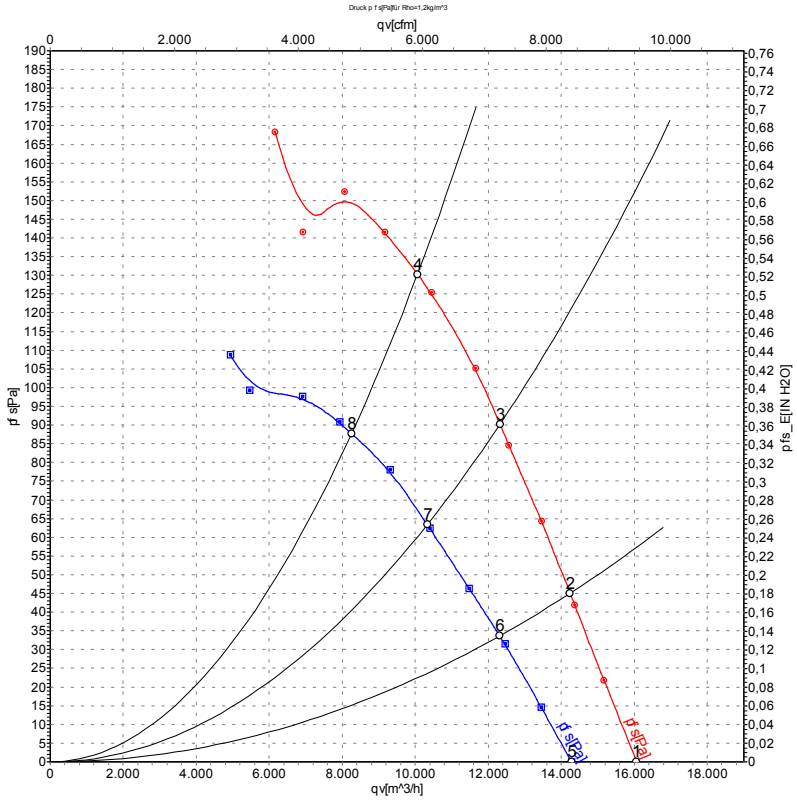
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Charts: Air flow 50 Hz



Measurement: LU-101211
Measurement: LU-101216

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	Δ	400	50	945	711	2.09	66	72	16060	0
2	Δ	400	50	935	820	2.17	65	71	14240	45
3	Δ	400	50	925	922	2.26	67	73	12320	90
4	Δ	400	50	910	1010	2.40	70	77	10060	130
5	Y	400	50	835	530	1.02	63	69	14280	0
6	Y	400	50	805	603	1.14	62	68	12310	34
7	Y	400	50	780	656	1.24	63	69	10330	63
8	Y	400	50	750	700	1.33	66	72	8255	88

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
qv = Air flow · p_{fs} = Pressure increase

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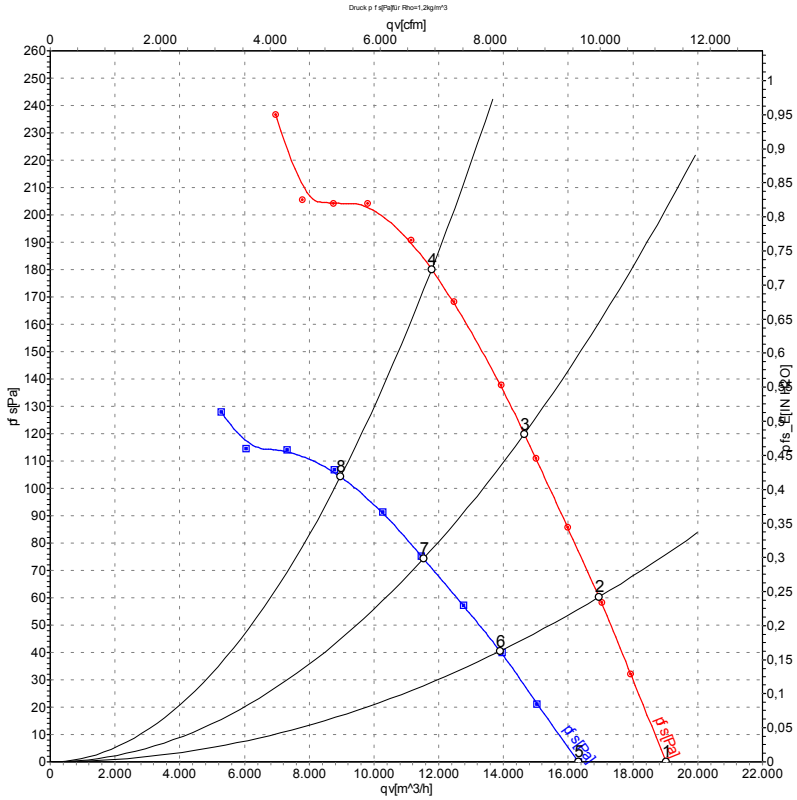
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Charts: Air flow 60 Hz



Measurement: LU-101209
Measurement: LU-101213

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	Δ	480	60	1120	1159	2.37	69	76	19020	0
2	Δ	480	60	1105	1326	2.51	68	75	16950	60
3	Δ	480	60	1090	1484	2.66	70	76	14640	120
4	Δ	480	60	1070	1640	2.88	74	81	11780	180
5	Y	480	60	955	845	1.35	65	72	16310	0
6	Y	480	60	905	929	1.49	64	70	13890	41
7	Y	480	60	855	988	1.60	64	71	11530	74
8	Y	480	60	810	1040	1.70	68	74	8965	105

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side
qv = Air flow · p_{fs} = Pressure increase

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