S4D630-AI01-01

AC axial fan - HyBlade®

sickled blades (S series)

with guard grille for short nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4D630-AI01-01**
Motor	**M4D138-HF**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	480	480
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		ml	ml	ml	ml
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1350	1105	1615	1310
Power input	W	1630	1150	2270	1590
Current draw	A	2.86	1.88	3.26	2.2
Max. back pressure	Pa	220	150	150	98
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	60	60	60	60
Starting current	A	14	4.5	16	5.3

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}		35.5	30.9	34.9
Efficiency grade N		40.6	36	40
Power input P_e	kW	1.58		
Air flow q_v	m^3/h	10345		
Pressure increase p_{fs}	Pa	197		
Speed n	min^{-1}	1355		

Data established at point of optimum efficiency

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Technical features

Mass	24 kg
Size	630 mm
Surface of rotor	Cast in aluminium
Material of terminal box	ABS plastic, black
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	-10°
Direction of air flow	"V"
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	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 61800-5-1; EN 60034; CE
Approval	VDE

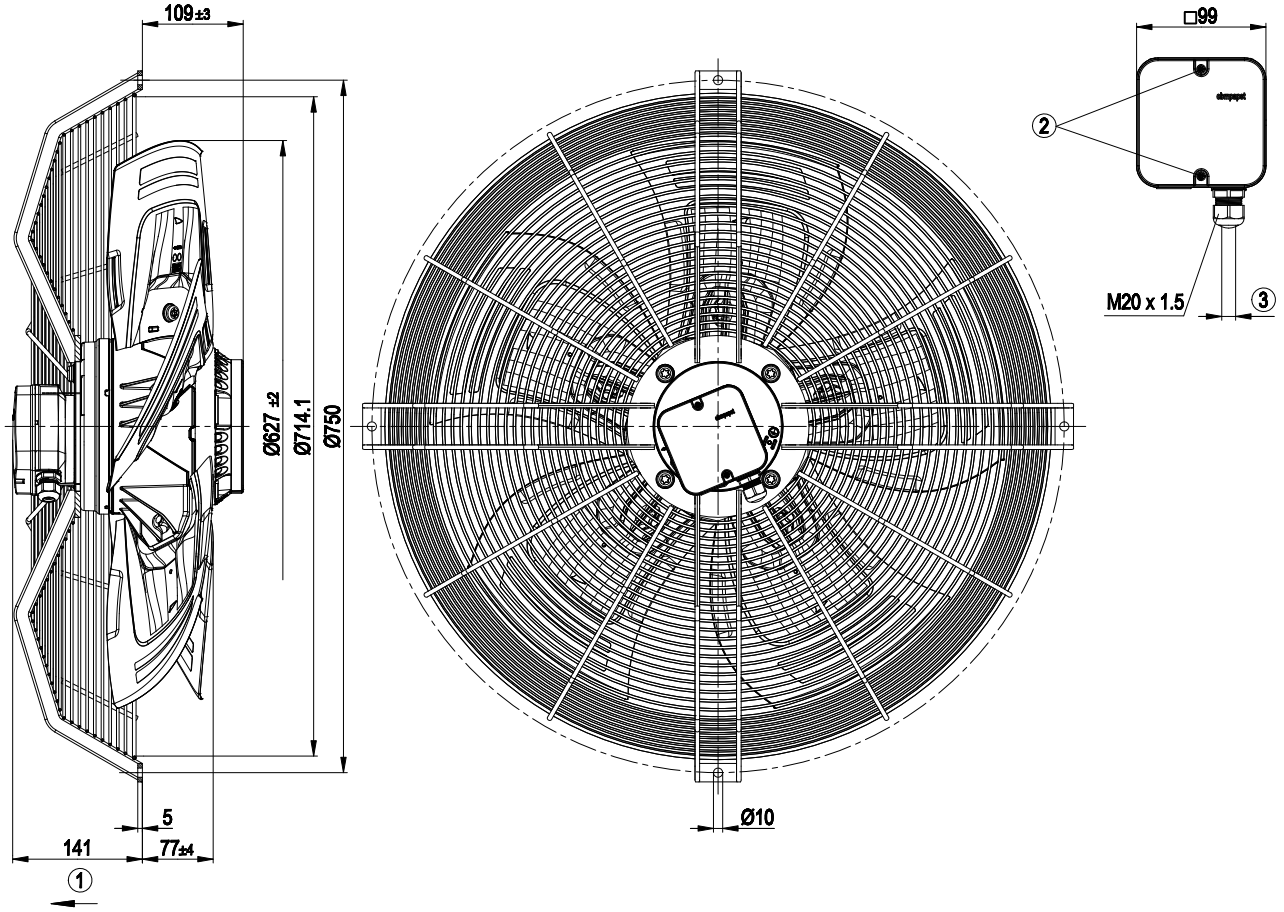
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Product drawing



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

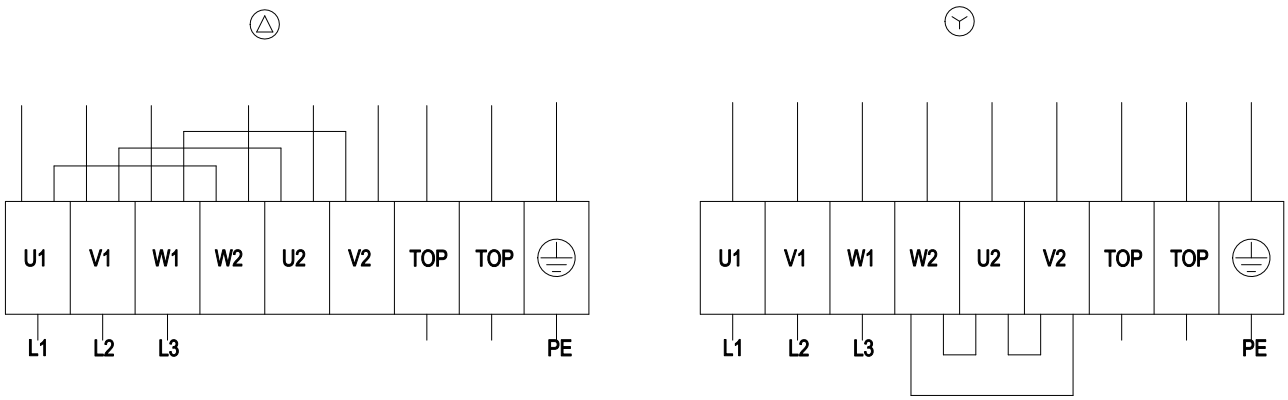
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Connection screen



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

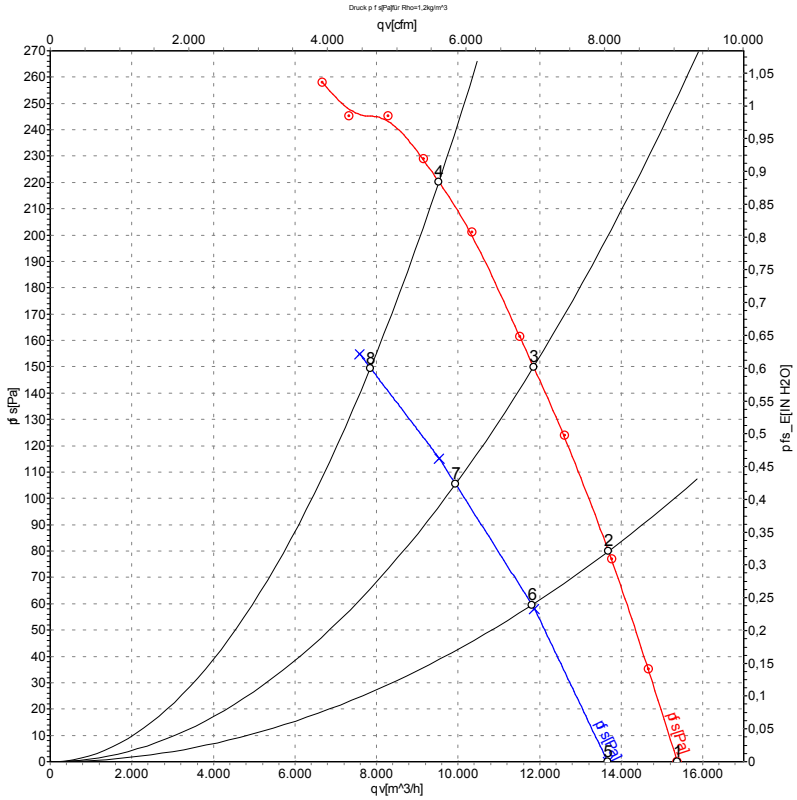
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Charts: Air flow 50 Hz



Measurement: LU-115601
Measurement: LU-120164

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}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	1410	1074	2.21	71	78	78	15370	0
2	Δ	400	50	1390	1286	2.46	69	75	75	13690	80
3	Δ	400	50	1370	1472	2.68	71	77	77	11850	150
4	Δ	400	50	1350	1630	2.86	74	81	81	9530	220
5	Y	400	50	1250	843	1.37	68	74	75	13660	0
6	Y	400	50	1195	970	1.57	65	71	71	11810	60
7	Y	400	50	1145	1070	1.74	66	72	72	9935	105
8	Y	400	50	1105	1150	1.88	69	76	75	7850	150

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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

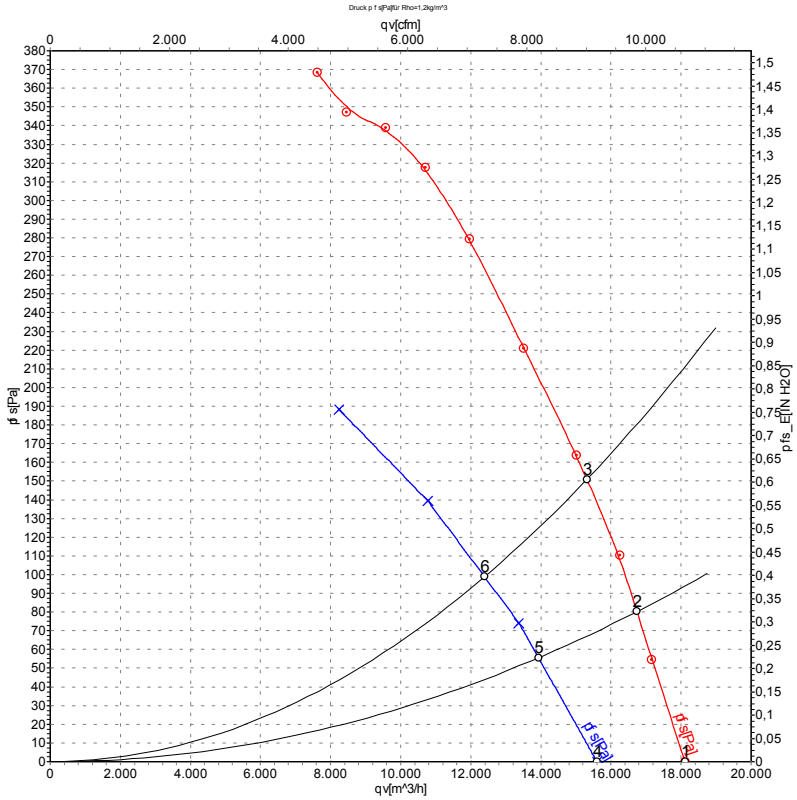
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Charts: Air flow 60 Hz



Measurement: LU-115609
Measurement: LU-120166

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}	LwA_{out}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	Δ	480	60	1665	1791	2.73	75	82	82	18110	0
2	Δ	480	60	1640	2040	3.01	73	80	80	16740	80
3	Δ	480	60	1615	2270	3.26	73	80	80	15310	150
4	Y	480	60	1425	1356	1.85	71	78	78	15600	0
5	Y	480	60	1365	1484	2.03	69	75	75	13930	56
6	Y	480	60	1310	1590	2.20	68	75	75	12390	100

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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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