S4D400-AP16-74

AC axial fan

sickled blades (S series)

with guard grille for short nozzle



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4D400-AP16-74**
Motor	**M4D074-EI**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Connection		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Type of data definition		fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1440	1300	1670	1360
Power input	W	170	115	210	160
Current draw	A	0.53	0.21	0.44	0.27
Max. back pressure	Pa	150	100	120	60
Min. ambient temperature	°C	-40	-40	-40	-40
Max. ambient temperature	°C	55	85	65	70

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}	%	31.6	25.5	29.5
Efficiency grade N		42.1	36	40
Power input P_e	kW	0.22		
Air flow q_v	m^3/h	2610		
Pressure increase p_{fs}	Pa	100		
Speed n	min^{-1}	1400		

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	4.9 kg
Size	400 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
Material of guard grille	Steel, coated in pure white plastic (RAL 9010)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"F"
Humidity class	F2-2
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 top; rotor on bottom on request
Condensate discharge holes	On the stator side
Operation mode	S1
Motor bearing	Ball bearing with anti-freezing grease
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) brought out
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

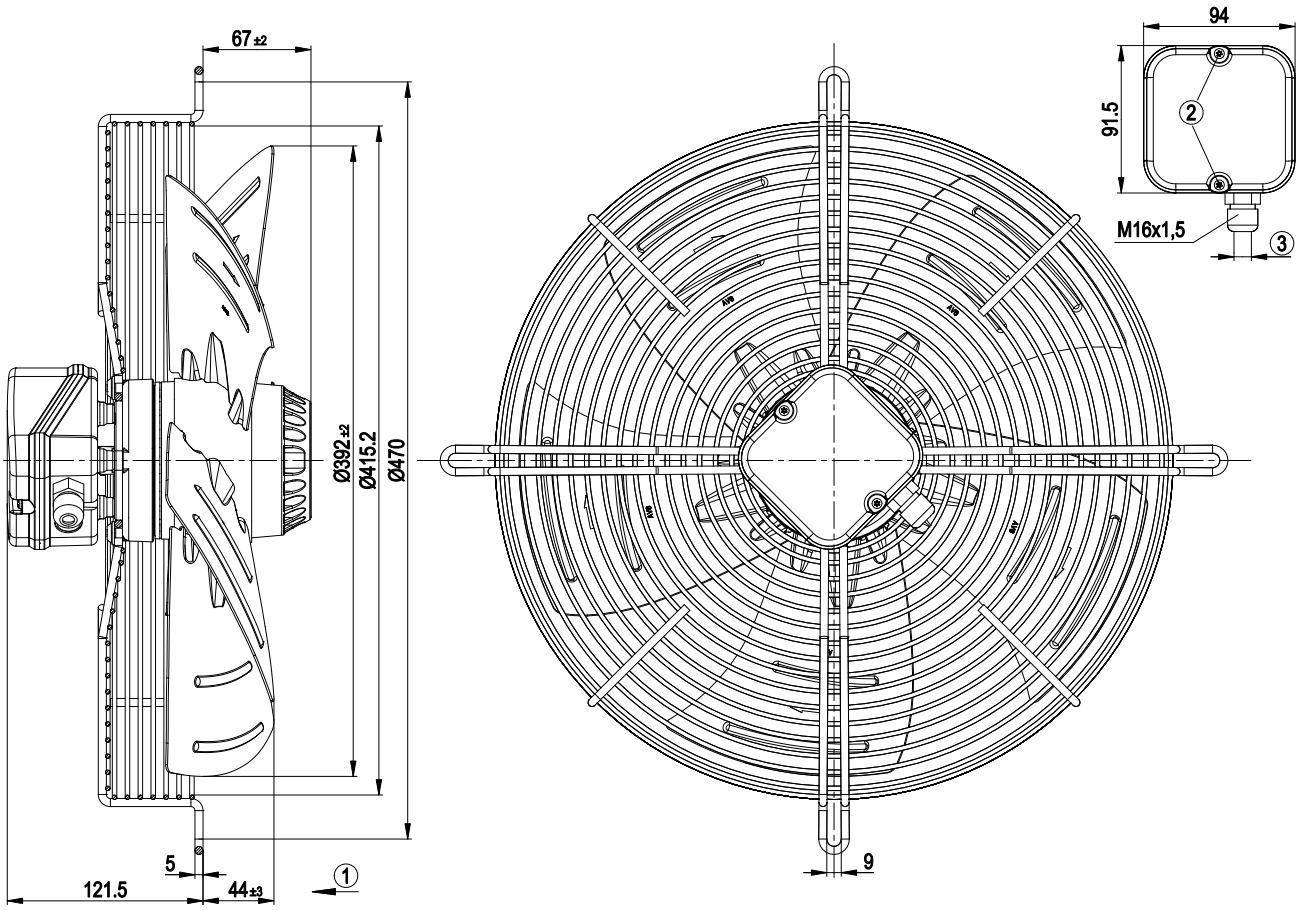
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Product drawing



1	Direction of air flow "V"
2	Tightening torque 0.5±0.1 Nm
3	Cable diameter: max. 7.5 mm, tightening torque 1.3±0.2 Nm

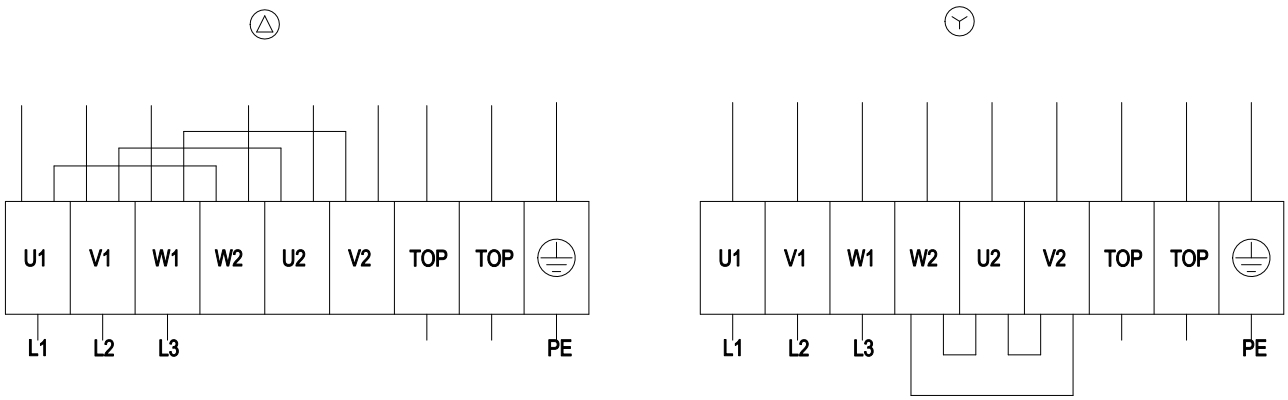
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Connection screen



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				

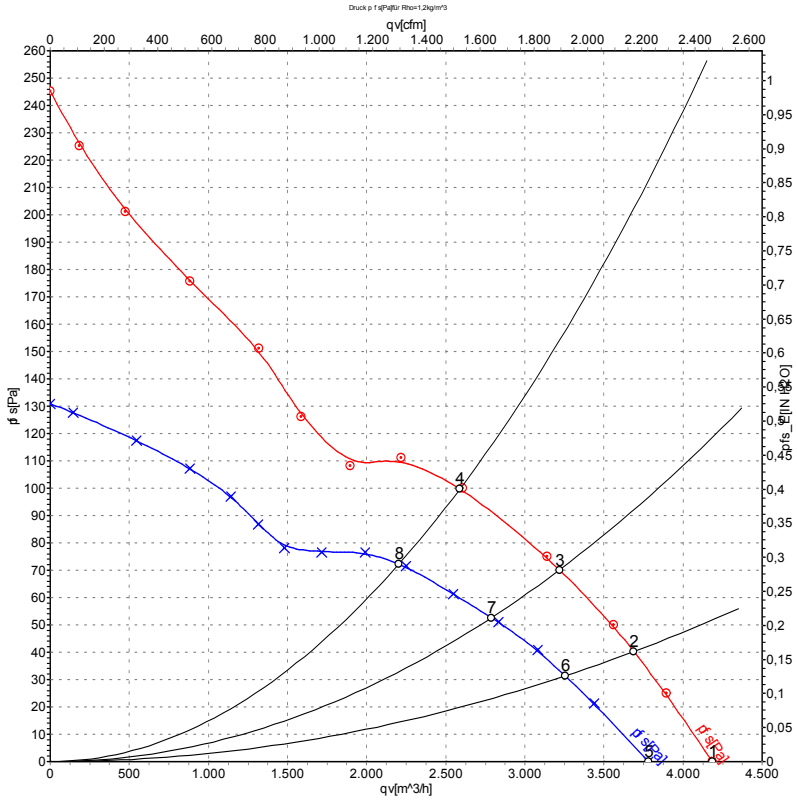
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Charts: Air flow 50 Hz



Measurement: LU-43060
Measurement: LU-51669

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	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Δ	400	50	1440	170	0.53	4185	0
2	Δ	400	50	1425	192	0.51	3690	40
3	Δ	400	50	1415	211	0.51	3220	70
4	Δ	400	50	1400	229	0.53	2590	100
5	Y	400	50	1300	115	0.21	3780	0
6	Y	400	50	1255	131	0.23	3255	31
7	Y	400	50	1220	145	0.25	2790	53
8	Y	400	50	1180	156	0.27	2205	72

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

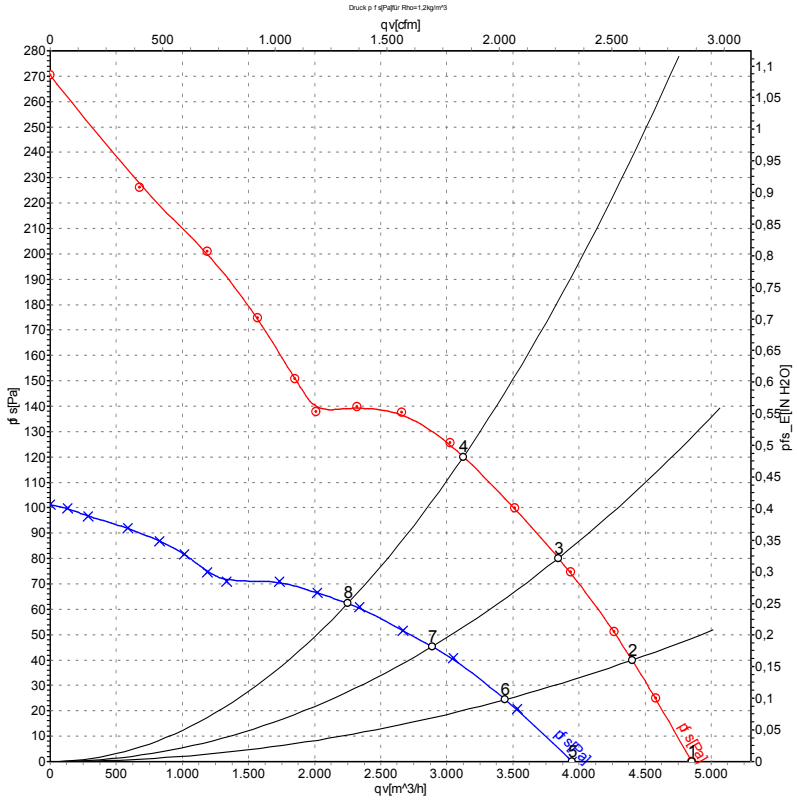
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Charts: Air flow 60 Hz



Measurement: LU-43061
Measurement: LU-51672

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	qv	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa
1	Δ	400	60	1670	210	0.44	4850	0
2	Δ	400	60	1650	245	0.47	4400	40
3	Δ	400	60	1625	279	0.51	3845	80
4	Δ	400	60	1600	311	0.55	3125	120
5	Y	400	60	1360	160	0.27	3950	0
6	Y	400	60	1280	173	0.29	3440	25
7	Y	400	60	1205	185	0.32	2890	45
8	Y	400	60	1135	195	0.33	2250	62

Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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