S4D420-AP02-30

AC axial fan

sickled blades (S series), single inlet
with guard grille for short nozzle

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**S4D420-AP02-30**
Motor	**M4D074-GA**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400
Connection		Δ	Δ	Y	Y
Frequency	Hz	50	60	50	60
Type of data definition		fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE
Speed	min^{-1}	1430	1660	1430	1660
Power input	W	160	235	160	235
Current draw	A	0.76	0.78	0.44	0.45
Max. back pressure	Pa	160	120	160	120
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	65	40	65	40

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}	%	34.5	25.5	29.5
Efficiency grade N		45	36	40
Power input P_e	kW	0.22		
Air flow q_v	m^3/h	3540		
Pressure increase p_{fs}	Pa	81		
Speed n	min^{-1}	1395		

Data definition with optimum efficiency. LU-29817
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	6.8 kg
Size	420 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
Material of guard grille	Steel, phosphated and coated with black plastic
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 as per EN 60034-5
Insulation class	"B"
Humidity class	F1-2
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	< 0.75 mA
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

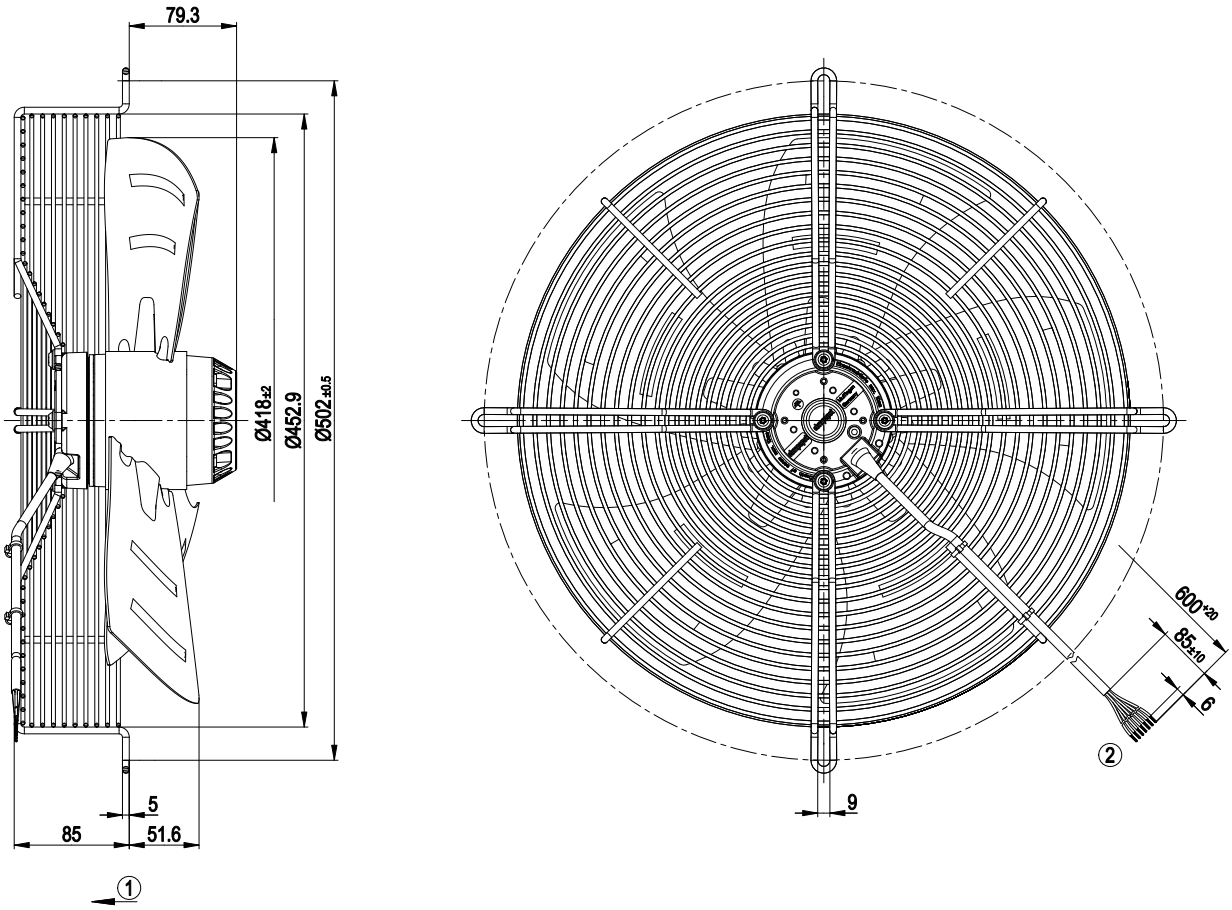
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Product drawing



1	Direction of air flow "V"
2	Connection line A03VV-F7G0.5, 7x lead tips crimped

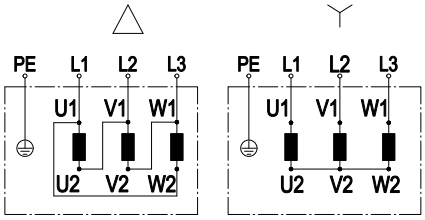
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Connection screen



Change direction of rotation by reversing two phases

	Three-phase motor	Δ	Delta connection	Y	Star connection
L1	= U1 = black	L2	= V1 = blue	L3	= W1 = brown
U2	green	V2	white	W2	yellow
PE	green/yellow				

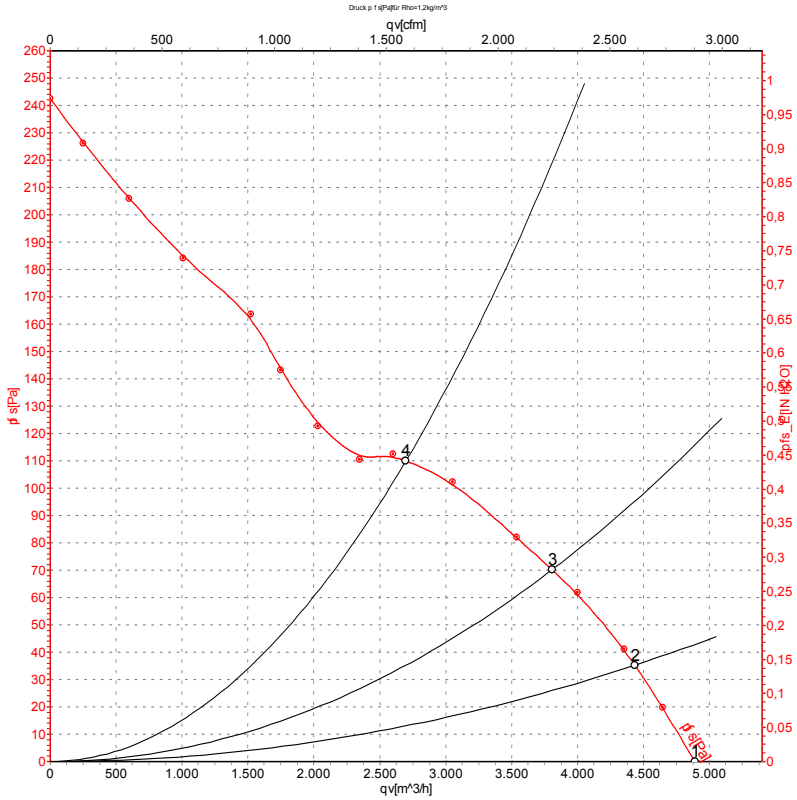
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Charts: Air flow 50 Hz



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

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	50	1430	160	0.44	4890	0
2	400	50	1420	188	0.48	4435	35
3	400	50	1400	218	0.51	3805	70
4	400	50	1375	256	0.55	2700	110

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

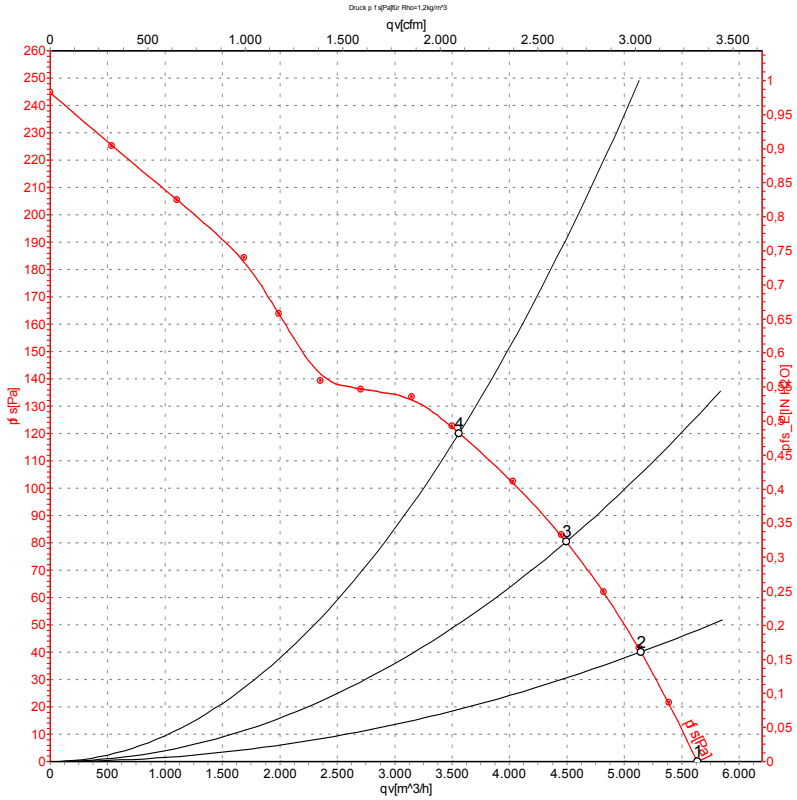
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Charts: Air flow 60 Hz



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

	U	f	n	P_e	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	400	60	1660	235	0.45	5635	0
2	400	60	1635	271	0.52	5145	40
3	400	60	1595	315	0.57	4495	80
4	400	60	1550	365	0.65	3560	120

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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