

AC axial fan

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



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Nominal data

Type	S4D400-AP12-77		
Motor	M4D074-EI		
Phase		3~	3~
Nominal voltage	VAC	400	460
Connection		Y	Y
Frequency	Hz	50	60
Type of data definition		fa	fa
Valid for approval / standard		CE	CE
Speed	min ⁻¹	1450	1695
Power input	W	135	235
Current draw	A	0.44	0.5
Max. back pressure	Pa	150	130
Min. ambient temperature	°C	-25	-25
Max. ambient temperature	°C	60	55
Starting current	A	1.7	

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 = $1 + p_{fs} / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		32.7	25.1	29.1
Efficiency grade N		43.6	36	40
Power input P_e	kW	0.19		
Air flow q_v	m ³ /h	2595		
Pressure increase p_{fs}	Pa	91		
Speed n	min ⁻¹	1415		

Data established at point of optimum efficiency



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Technical features

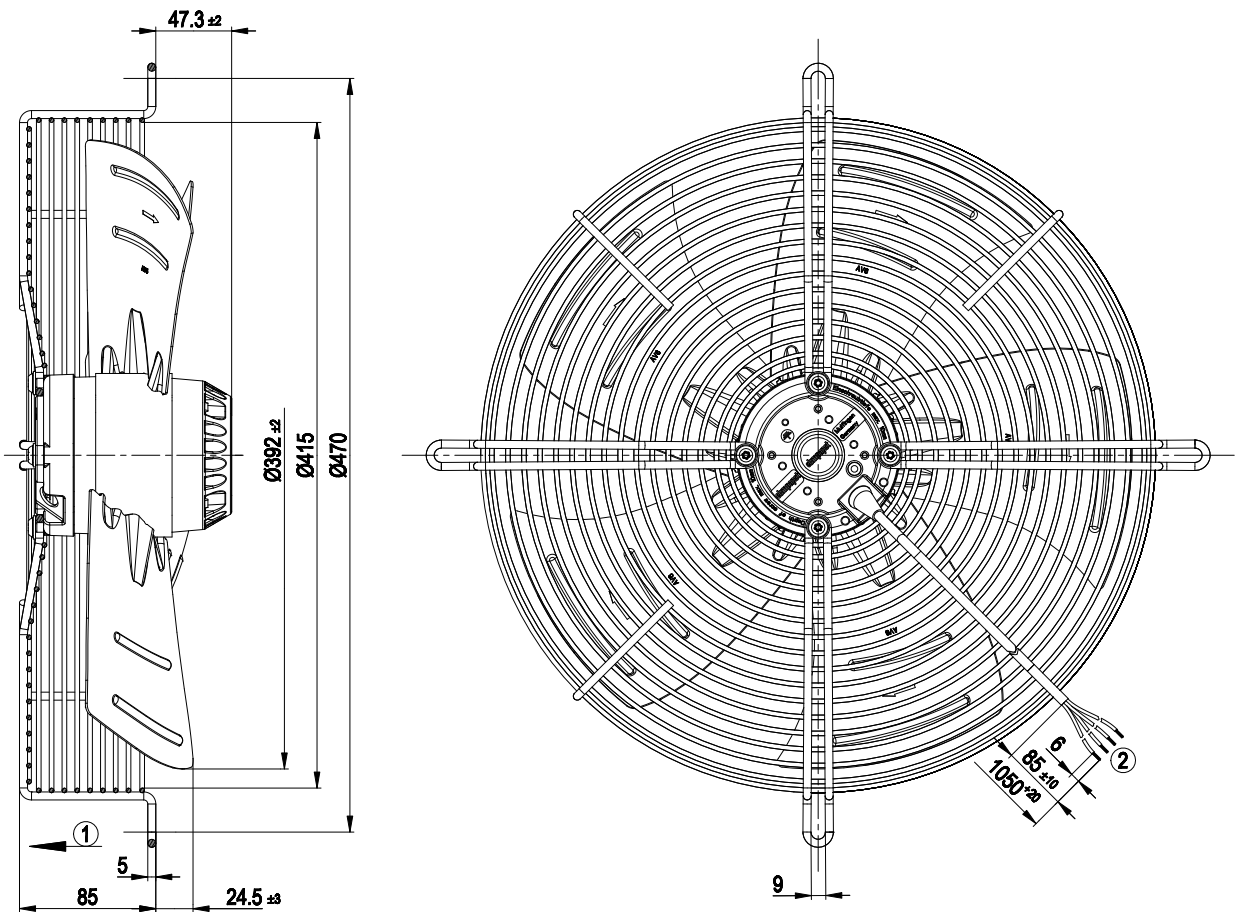
Mass	5.1 kg
Size	400 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	"V"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44
Insulation 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 bottom; rotor on top on request
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)
Approval	UL 1004-1; CSA C22.2 Nr.100



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Product drawing

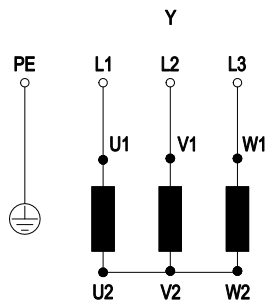


- | | |
|---|--|
| 1 | Direction of air flow "V" |
| 2 | Connection line PFA 4G AWG20, 4x brass lead tips crimped |

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Connection screen



Changing the direction of rotation by reversing the two phases

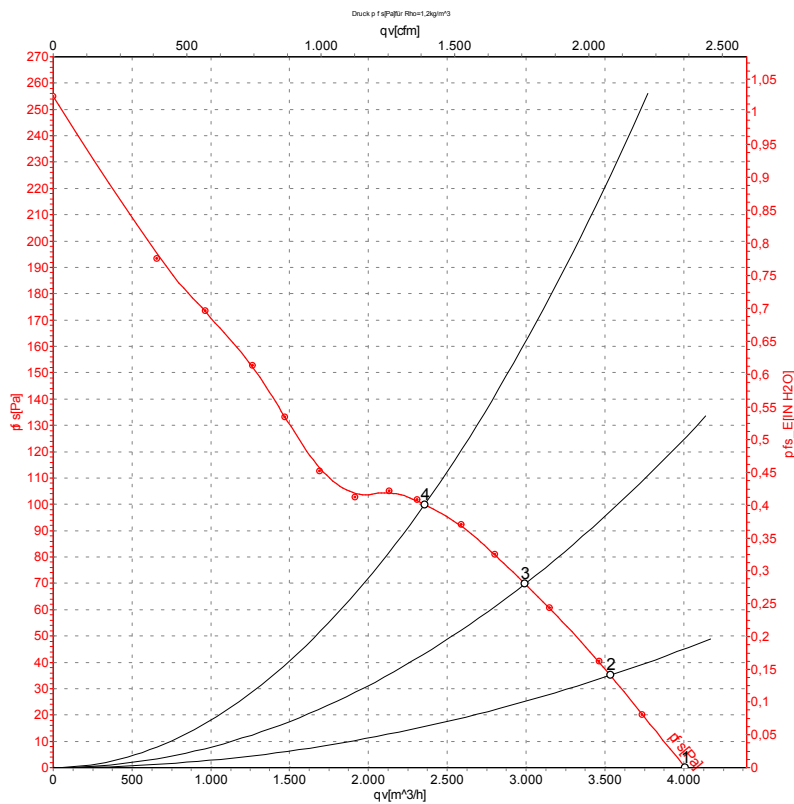
PE	green/yellow	L1	black	L2	blue
L3	brown	Y	Star connection		



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Charts: Air flow 50 Hz



Measurement: LU-27622

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: L_{wA} measured as per ISO 13347 /
 L_{pA} 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	$L_{pA_{in}}$	$L_{wA_{in}}$	q_v	p_{fs}
		V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	m³/h	Pa
1	Y	400	50	1450	135	0.44	65	74	4000	0
2	Y	400	50	1435	161	0.47	65	73	3535	35
3	Y	400	50	1420	182	0.49	65	72	2995	70
4	Y	400	50	1410	203	0.50	67	74	2355	100

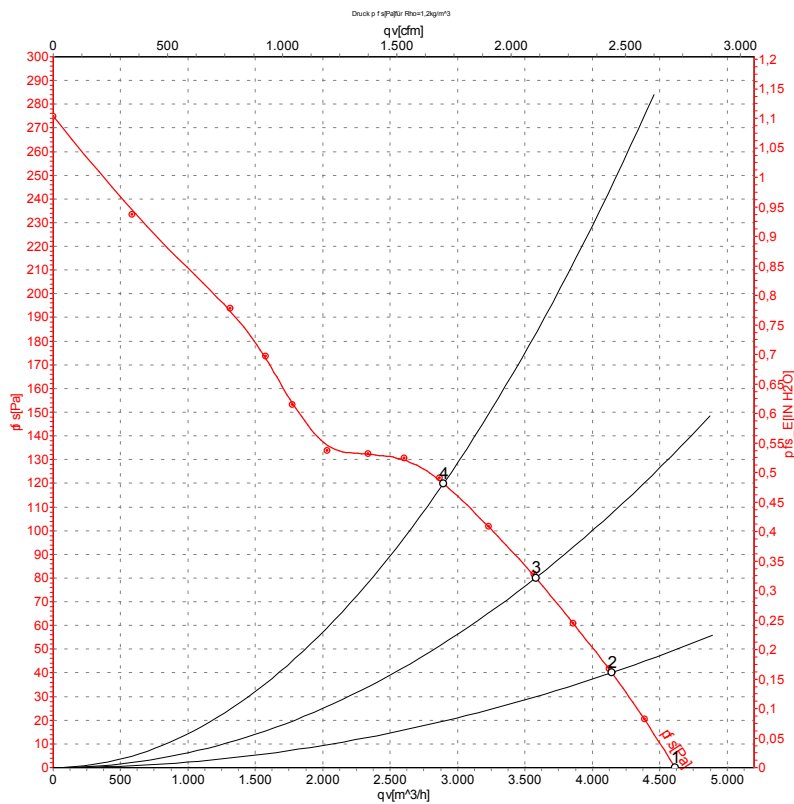
Conn. = Connection · U = Supply voltage · f = Frequency · n = Speed · P_e = Power input · I = Current draw · $L_{pA_{in}}$ = Sound pressure level inlet side · $L_{wA_{in}}$ = Sound power level inlet side
 q_v = Air flow · p_{fs} = Pressure increase



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Charts: Air flow 60 Hz



Measurement: LU-27623

Air performance measured as per ISO 5801
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contact ebm-papst. Suction-side noise
levels: L_{wA} measured as per ISO 13347 /
L_{pA} 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)	m³/h	Pa
1	Y	400	60	1690	185	0.39	69	76	4615	0
2	Y	400	60	1660	223	0.45	70	76	4145	40
3	Y	400	60	1635	256	0.49	69	76	3580	80
4	Y	400	60	1605	290	0.54	70	76	2895	120

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

