AC axial fan

sickled blades (S series)

A4D400-AP12-25 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**A4D400-AP12-25**
Motor	**M4D074-EI**

Phase		3~	3~	3~	3~	3~
Nominal voltage	VAC	230	230	400	400	460
Connection		Δ	Δ	Y	Y	Y
Frequency	Hz	50	60	50	60	60
Type of data definition		fa	fa	fa	fa	fa
Valid for approval / standard		CE	CE	CE	CE	CE
Speed (rpm)	min^{-1}	1450	1690	1450	1690	1695
Power input	W	135	185	135	185	235
Current draw	A	0.76	0.68	0.44	0.39	0.5
Max. back pressure	Pa	105	120	105	120	130
Min. ambient temperature	°C	-25	-25	-25	-25	-25
Max. ambient temperature	°C	60	60	60	60	55
Starting current	A	3.0	3.0	1.7	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

		Actual	Request 2015
01 Overall efficiency η_{es}	%	32.7	29.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		43.6	40
05 Variable speed drive		No	

09 Power input P_e	kW	0.19
09 Air flow q_v	m^3/h	2595
09 Pressure increase p_{fs}	Pa	91
10 Speed (rpm) n	min^{-1}	1415
11 Specific ratio*		1.00

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

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

LU-27622

AC axial fan

sickled blades (S series)

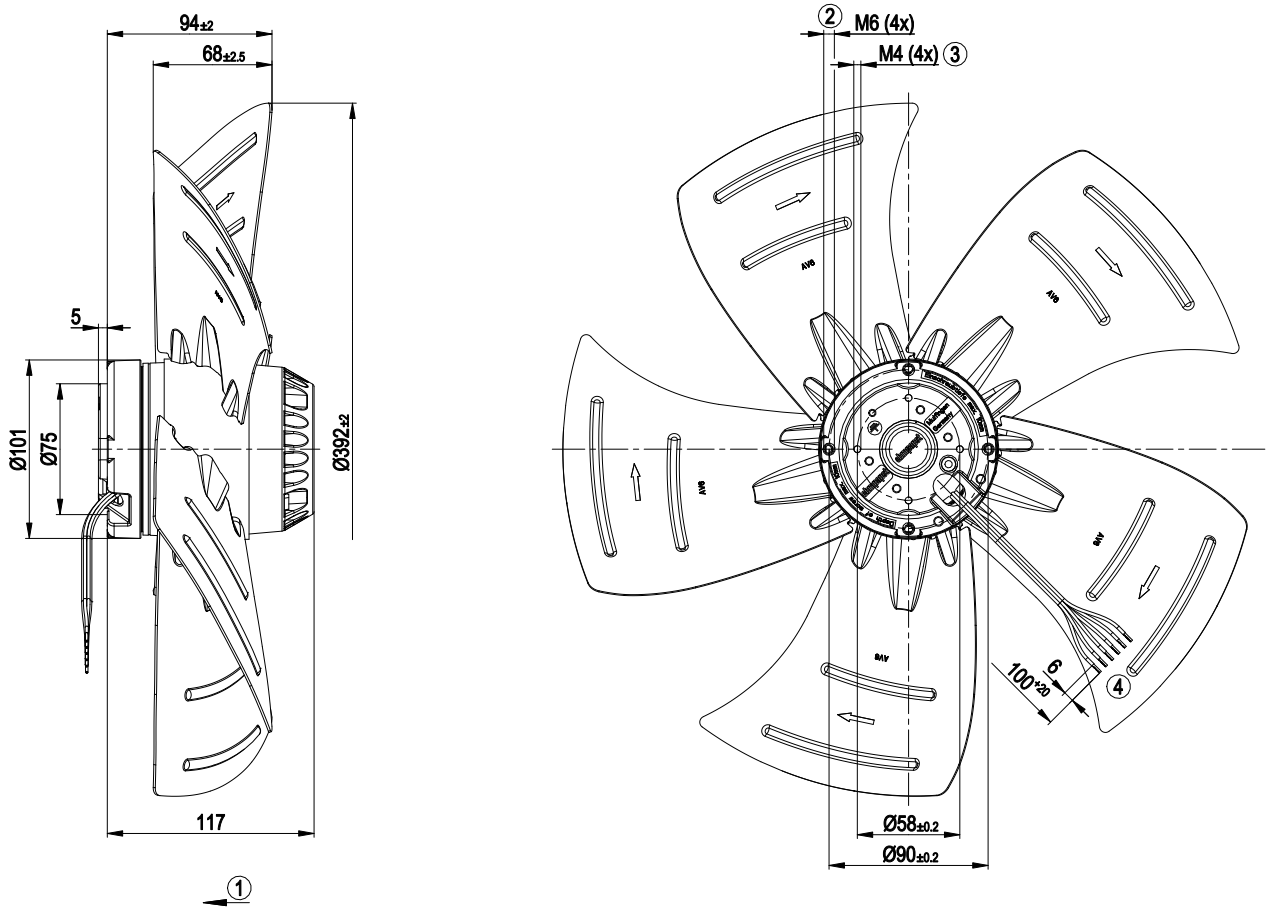
Technical features

Mass	4.2 kg
Size	400 mm
Surface of rotor	Coated in black
Material of blades	Sheet steel, coated in black
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 The IP protection is guaranteed only if the provided cable guard and terminal box are installed.
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F2-2
Max. permissible ambient motor temp. (transp./ storage)	+ 70 °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
Electrical leads	Prepared for terminal box installation/assembly
Motor protection	Thermal overload protector (TOP) brought out, basic insulation
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	CSA C22.2 No.100; UL 1004-1

AC axial fan

sickled blades (S series)

Product drawing

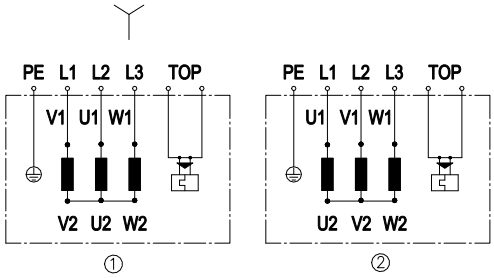


1	Direction of air flow "V"
2	Thread reach max. 10 mm
3	Thread reach max. 5 mm
4	Connection line PFA AWG20 (green/yellow AWG18), 6x lead tips crimped

AC axial fan

sickled blades (S series)

Connection screen



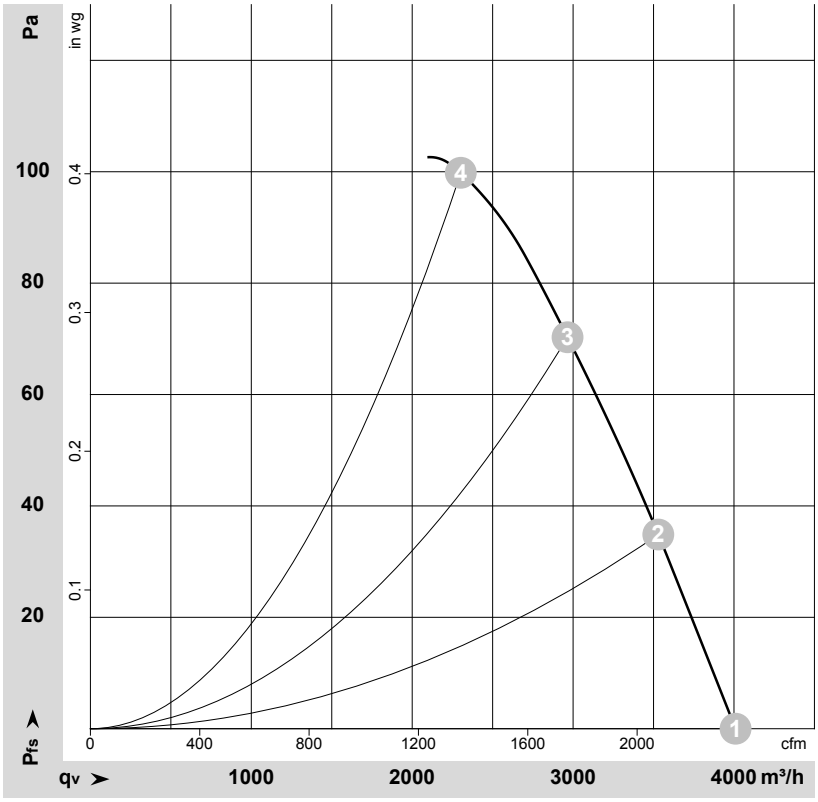
Change direction of rotation by reversing two phases

	Three-phase motor
Y	Star connection
1	Anti-clockwise operation
L1	= V1 = blue
L2	= U1 = black
L3	= W1 = brown
2	Clockwise operation
L1	= U1 = black
L2	= V1 = blue
L3	= W1 = brown
PE	green/yellow
TOP	2x grey

AC axial fan

sickled blades (S series)

Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-27622-1

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

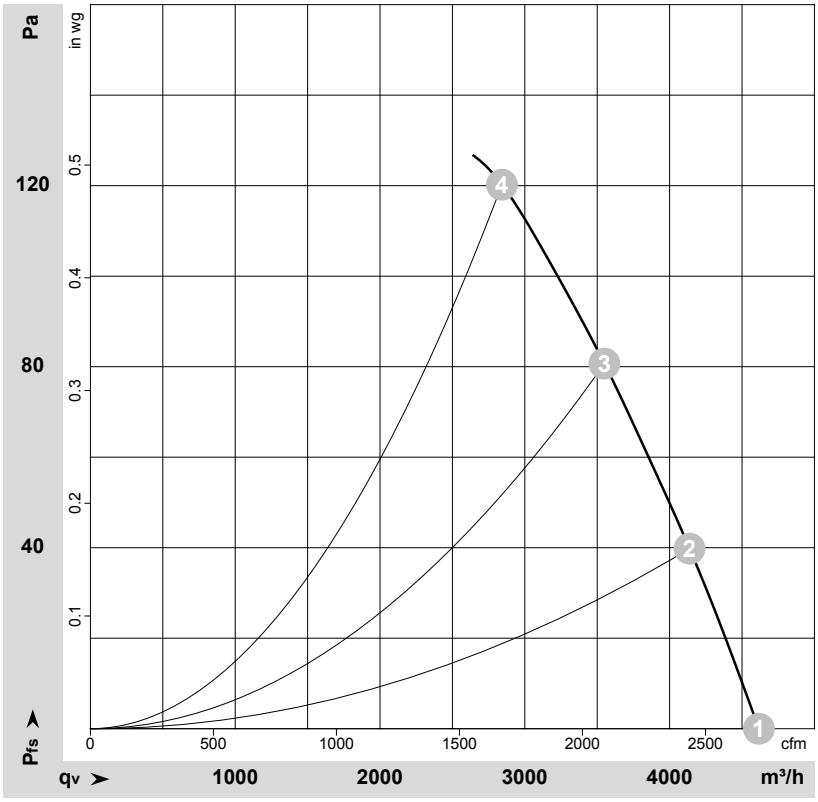
	Conn.	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	400	50	1450	135	0.44	4010	0	2360	0.00
2	Y	400	50	1435	161	0.47	3530	35	2080	0.14
3	Y	400	50	1420	183	0.49	2965	70	1745	0.28
4	Y	400	50	1410	204	0.50	2300	100	1355	0.40

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

AC axial fan

sickled blades (S series)

Charts: Air flow 60 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-27623-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	Y	400	60	1690	185	0.39	4615	0	2715	0.00
2	Y	400	60	1660	223	0.45	4140	40	2435	0.16
3	Y	400	60	1635	257	0.49	3550	80	2090	0.32
4	Y	400	60	1605	292	0.54	2840	120	1675	0.48

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