A4D400-AP16-19

AC axial fan

sickle-shaped blades (S series), single-intake

A4D400-AP16-19 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**A4D400-AP16-19**
Motor	**M4D074-EI**

Phase		3~	3~	3~	3~
Nominal voltage	VAC	400	400	400	400
Wiring		Δ	Y	Δ	Y
Frequency	Hz	50	50	60	60
Method of obtaining data		fa	fa	fa	fa
Valid for approval/standard		CE	CE	CE	CE
Speed (rpm)	min^{-1}	1440	1300	1670	1360
Power consumption	W	170	115	210	160
Current draw	A	0.53	0.21	0.44	0.27
Max. back pressure	Pa	150	100	120	60
Max. back pressure	in. wg	0.6	0.4	0.48	0.24
Min. ambient temperature	°C	-25	-25	-25	-25
Max. ambient temperature	°C	35	65	45	50

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	31.6	29.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.1	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.22
09 Air flow q_v	m^3/h	2610
09 Pressure increase p_{fs}	Pa	100
10 Speed (rpm) n	min^{-1}	1400
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-43060

AC axial fan

sickle-shaped blades (S series), single-intake

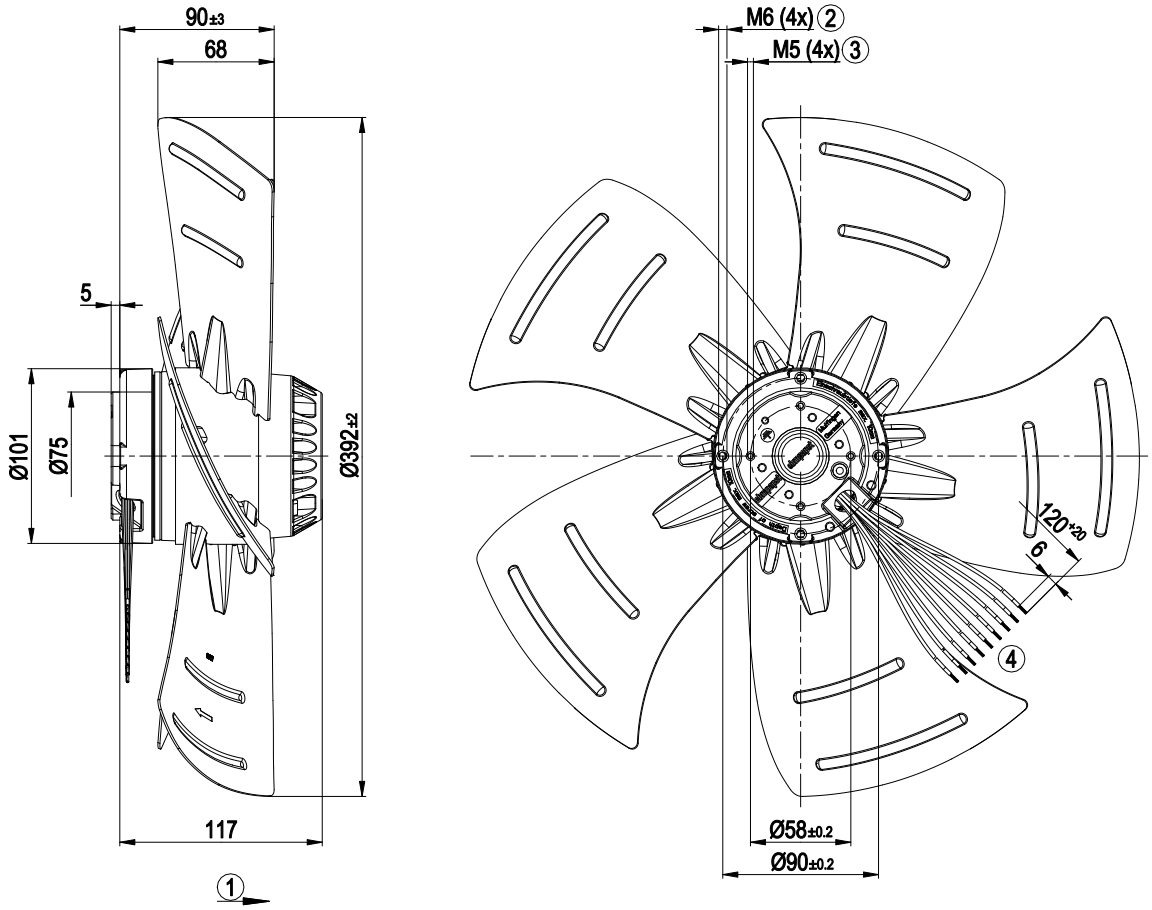
Technical description

Weight	4.2 kg
Size	400 mm
Motor size	74
Rotor surface	Painted black
Blade material	Sheet steel, painted black
Number of blades	5
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5. The degree of protection is only assured when the intended cable guard and terminal box are installed.
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H1+; F2-2
Max. permitted ambient temp. for motor (transport/storage)	+ 70 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing with low-temperature lubricant
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	< 0.75 mA
Electrical hookup	Prepared for terminal box installation
Motor protection	Thermal overload protector (TOP) with basic insulation
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

AC axial fan

sickle-shaped blades (S series), single-intake

Product drawing

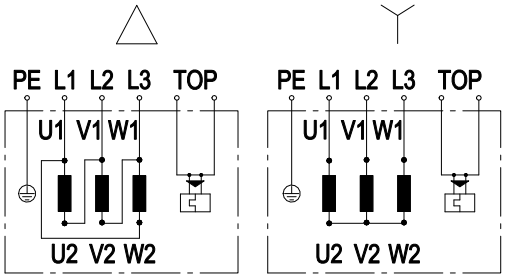


1	Direction of air flow "A"
2	Max. clearance for screw 10 mm
3	Max. clearance for screw 5 mm
4	Cable halogen-silicone-free 9G 0.5 mm², 9x crimped splices

AC axial fan

sickle-shaped blades (S series), single-intake

Connection diagram



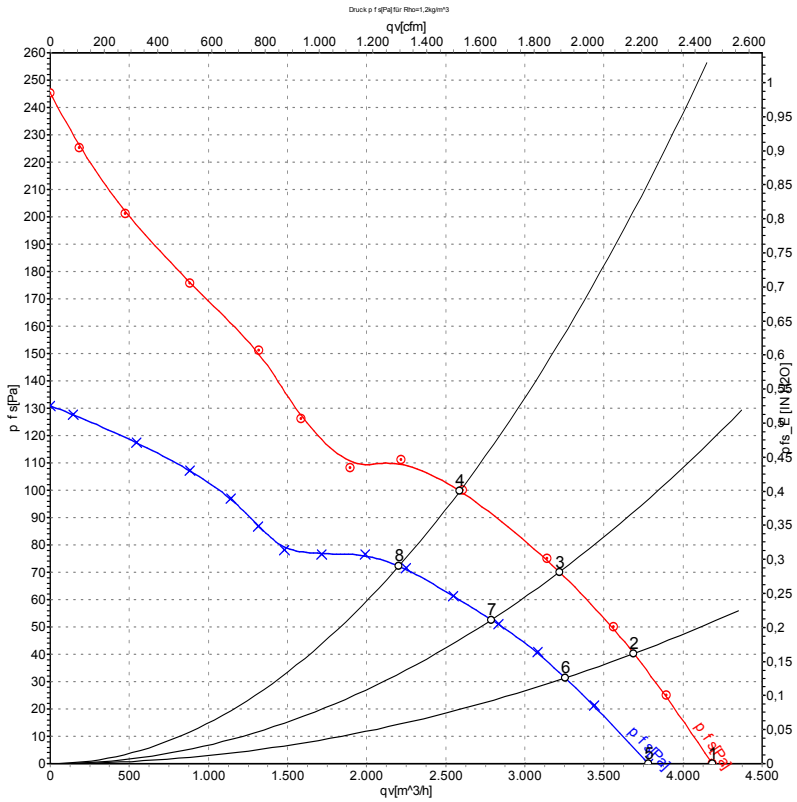
Note: Change of rotation direction by reversing two phases

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

AC axial fan

sickle-shaped blades (S series), single-intake

Curves: Air performance 50 Hz



Measurement: LU-43060-1
Measurement: LU-51669-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

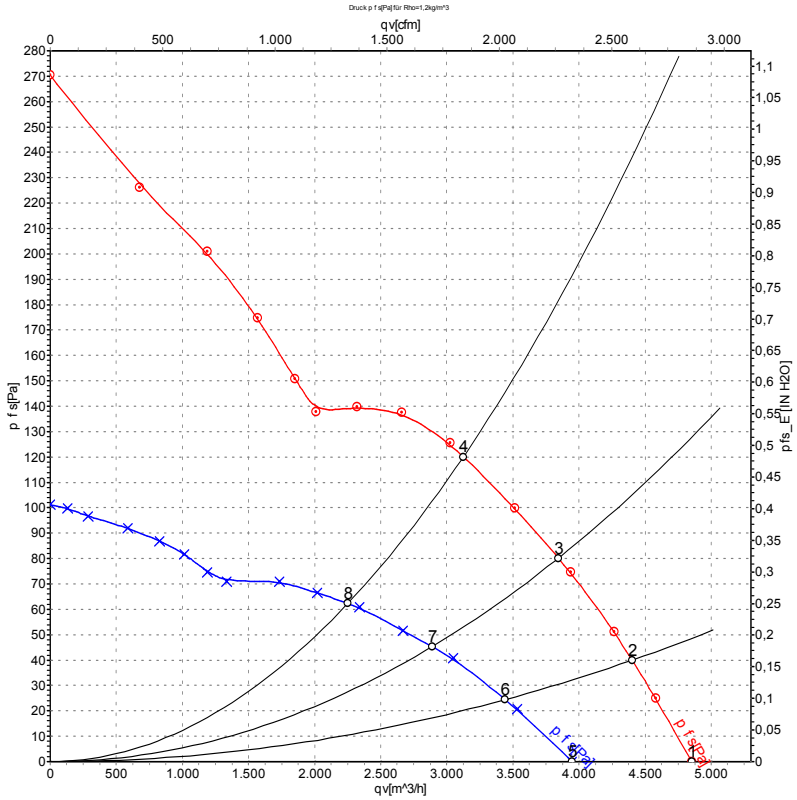
	Wired	U	f	n	P_e	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	Δ	400	50	1440	170	0.53	4185	0	2465	0.00
2	Δ	400	50	1425	192	0.51	3690	40	2170	0.16
3	Δ	400	50	1415	211	0.51	3220	70	1895	0.28
4	Δ	400	50	1400	229	0.53	2590	100	1525	0.40
5	Y	400	50	1300	115	0.21	3780	0	2225	0.00
6	Y	400	50	1255	131	0.23	3255	31	1915	0.12
7	Y	400	50	1220	145	0.25	2790	53	1640	0.21
8	Y	400	50	1180	156	0.27	2205	72	1295	0.29

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

AC axial fan

sickle-shaped blades (S series), single-intake

Curves: Air performance 60 Hz



Measurement: LU-43061-1
Measurement: LU-51672-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	Wired	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	in. wg
1	Δ	400	60	1670	210	0.44	4850	0	2855	0.00
2	Δ	400	60	1650	245	0.47	4400	40	2590	0.16
3	Δ	400	60	1625	279	0.51	3845	80	2260	0.32
4	Δ	400	60	1600	311	0.55	3125	120	1840	0.48
5	Y	400	60	1360	160	0.27	3950	0	2325	0.00
6	Y	400	60	1280	173	0.29	3440	25	2025	0.10
7	Y	400	60	1205	185	0.32	2890	45	1700	0.18
8	Y	400	60	1135	195	0.33	2250	62	1325	0.25

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_e = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase