A4D450-AN14-01

AC axial fan

sickle-shaped blades (S series)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A4D450-AN14-01**
Motor	**M4D094-FA**

Phase		3~	3~
Nominal voltage	VAC	400	400
Wiring		Δ	Y
Frequency	Hz	50	50
Method of obtaining data		ml	ml
Valid for approval/standard		CE	CE
Speed	min^{-1}	1330	1040
Power consumption	W	460	310
Current draw	A	0.95	0.52
Max. back pressure	Pa	130	78
Min. ambient temperature	°C	-40	-40
Max. ambient temperature	°C	65	65
Starting current	A	3.3	1.1

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

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.3	31.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		42.8	40
05 Variable speed drive		No	

09 Power consumption P_e	kW	0.45
09 Air flow q_v	m^3/h	4530
09 Pressure increase p_{fs}	Pa	124
10 Speed n	min^{-1}	1335
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-108389

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Technical description

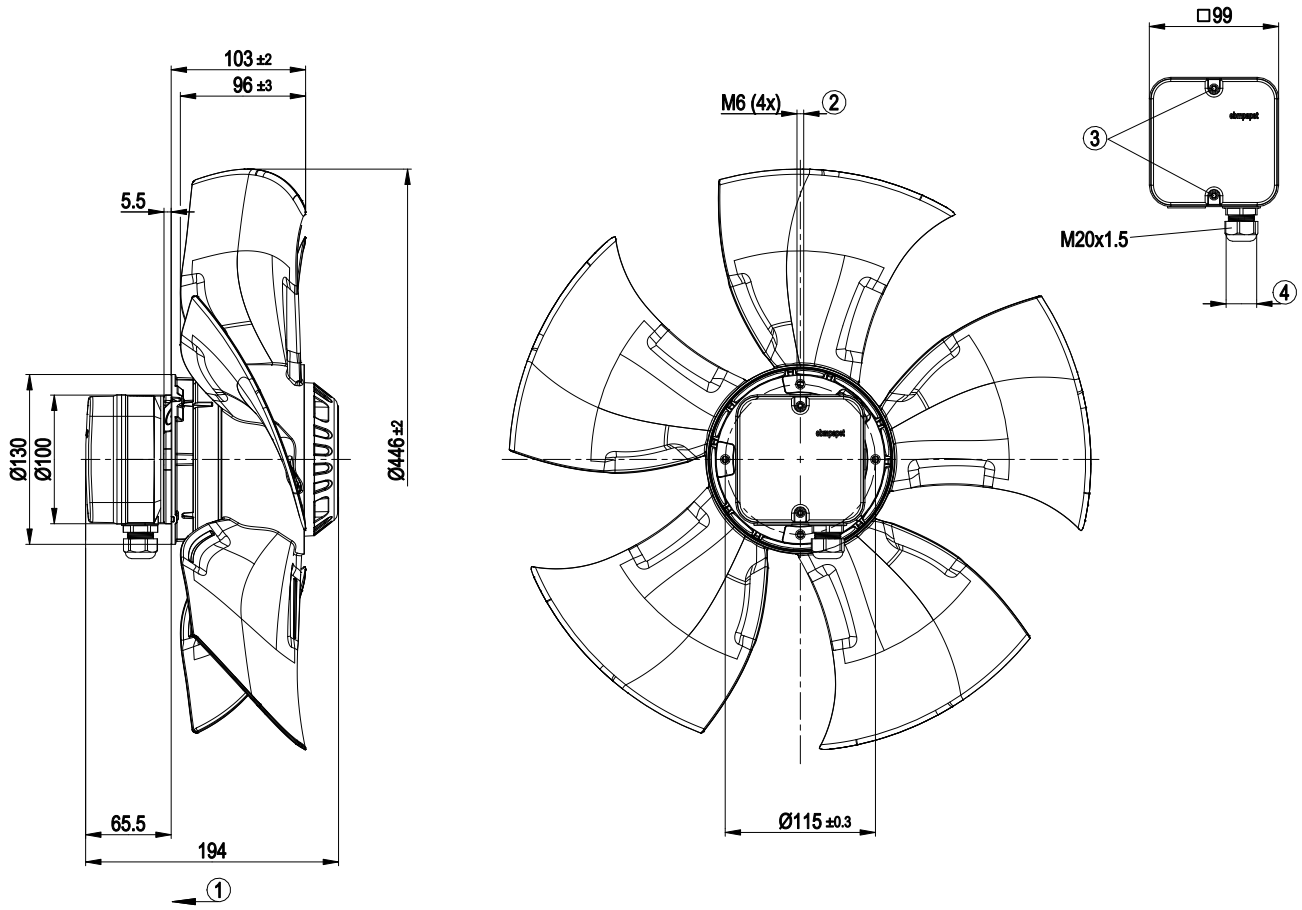
Weight	5.9 kg
Fan size	450 mm
Rotor surface	Painted black
Terminal box material	ABS plastic
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) externally wired
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1 (2010); CE
Approval	CCC

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Product drawing



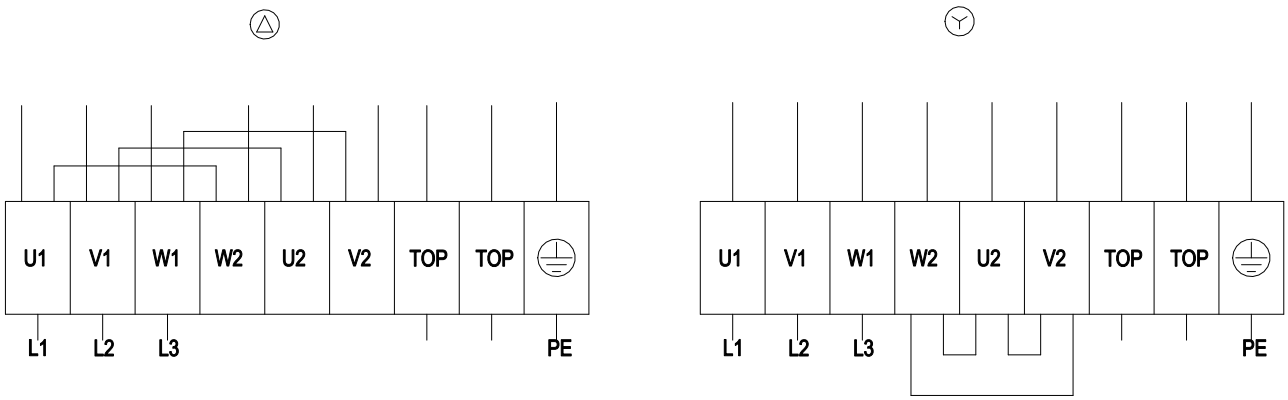
1	Direction of air flow "V"
2	Max. clearance for screw 12 mm
3	Tightening torque 0.8 ± 0.15 Nm
4	Cable diameter: min. 6 mm, max. 12 mm; tightening torque 2±0.3 Nm

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Connection diagram



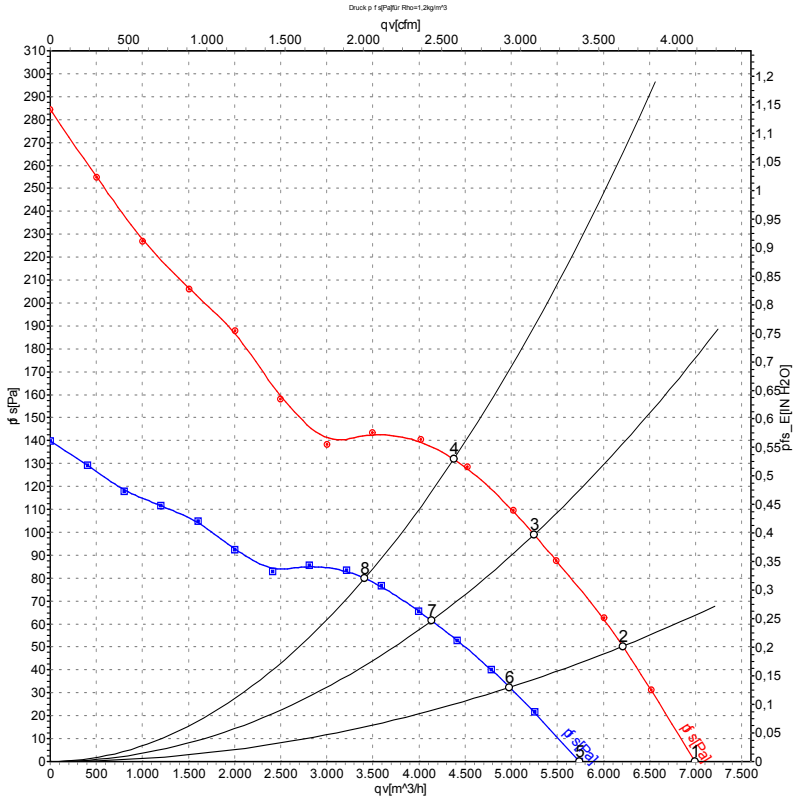
Δ	Delta connection	Y	Star connection	L1	= U1 = black
L2	= V1 = blue	L3	= W1 = brown	W2	yellow
U2	green	V2	white	TOP	2x gray
PE	green/yellow				

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Curves: Air performance 50 Hz



Measurement: LU-108389
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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	LpA_{in}	LwA_{in}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	Δ	400	50	1375	369	0.86	65	71	6995	0
2	Δ	400	50	1360	410	0.90	62	68	6210	50
3	Δ	400	50	1345	440	0.93	61	68	5250	100
4	Δ	400	50	1330	460	0.95	62	69	4380	130
5	Y	400	50	1145	269	0.45	61	67	5740	0
6	Y	400	50	1090	293	0.49	58	64	4980	32
7	Y	400	50	1060	306	0.51	56	62	4135	62
8	Y	400	50	1040	310	0.52	57	63	3410	80

Wired = Wiring · U = Power supply · f = Frequency · n = Speed · P_e = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase

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