EC axial fan - HyBlade

sickle-shaped blades (S series)

A3G400-AK56-01 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**A3G400-AK56-01**	
Motor	**M3G074-CF**	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		me
Speed (rpm)	min^{-1}	1100
Power consumption	W	135
Current draw	A	1.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	36.6	28.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		48.5	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.13
09 Air flow q_v	m^3/h	2405
09 Pressure increase p_{fs}	Pa	67
10 Speed (rpm) n	min^{-1}	1085
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-124733

EC axial fan - HyBlade

sickle-shaped blades (S series)

Technical description

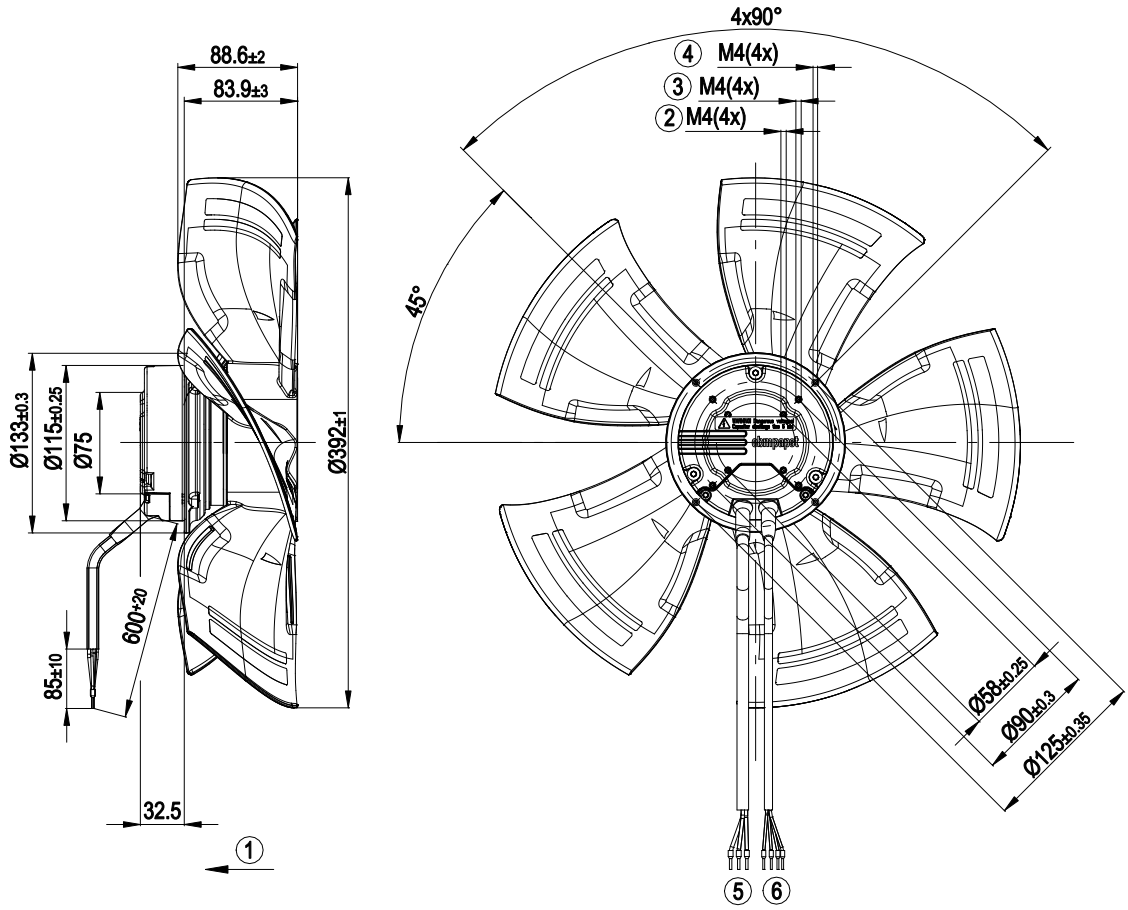
Weight	2.55 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"V"
Degree of protection	IP44; installation- and position-dependent as per EN 60034-5
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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
Technical features	- Control input 0-10 VDC / PWM - Output 10 VDC, max. 1.1 mA - Tach output - Thermal overload protection for motor - Soft start
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Approval	CSA C22.2 No. 77; UL 2111

A3G400-AK56-01 ebmpapst Datasheet FansCo sales@fansco.com www.fansco.com

EC axial fan - HyBlade

sickle-shaped blades (S series)

Product drawing

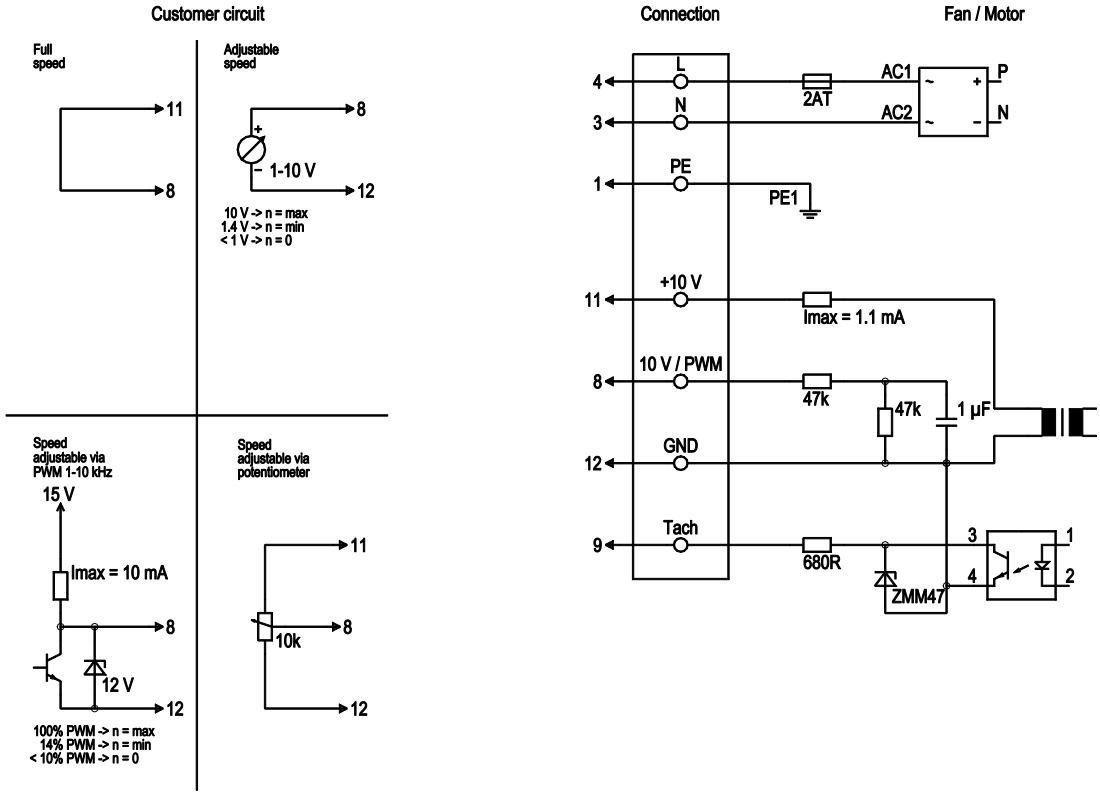


1	Direction of air flow "V"
2	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 8 mm
3	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 6 mm
4	Clearance for screw 8 - 10 mm
5	Cable AWG 18, 3 x crimped ferrules
6	Cable AWG 22, 4 x crimped ferrules

EC axial fan - HyBlade

sickle-shaped blades (S series)

Connection diagram



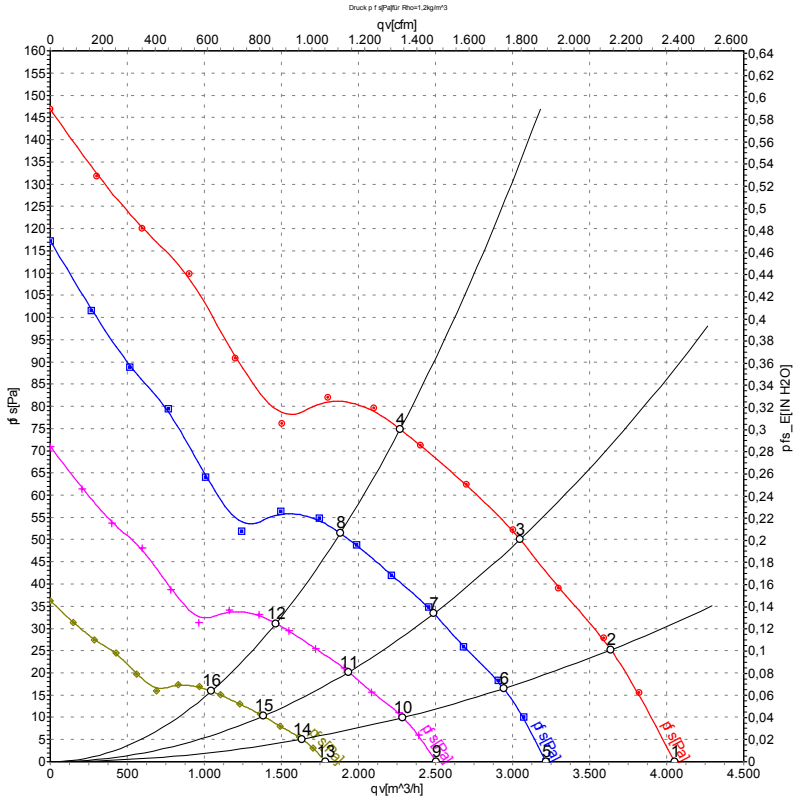
No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V/max. 1.1 mA, electrically isolated
	12	GND	blue	GND connection for control interface

A3G400-AK56-01 ebmpapst Datasheet FansCo sales@fansco.com www.fansco.com

EC axial fan - HyBlade

sickle-shaped blades (S series)

Curves: Air performance 50 Hz



Measurement: LU-124733-1

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

	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1135	120	0.85	62	69	4050	0	2385	0.00
2	230	50	1115	129	0.91	60	66	3635	25	2140	0.10
3	230	50	1100	134	0.95	57	64	3050	50	1795	0.20
4	230	50	1100	135	1.10	58	66	2270	75	1335	0.30
5	230	50	900	60	0.43	57	64	3220	0	1895	0.00
6	230	50	900	68	0.48	55	62	2940	17	1730	0.07
7	230	50	900	73	0.52	52	59	2490	34	1465	0.14
8	230	50	900	80	0.56	54	62	1880	51	1110	0.20
9	230	50	700	28	0.20	51	58	2505	0	1475	0.00
10	230	50	700	32	0.23	50	56	2290	10	1345	0.04
11	230	50	700	34	0.24	47	54	1935	20	1140	0.08
12	230	50	700	37	0.27	49	56	1465	31	860	0.12
13	230	50	500	10	0.07	44	51	1790	0	1050	0.00
14	230	50	500	12	0.08	42	49	1635	5	960	0.02
15	230	50	500	13	0.09	39	46	1385	10	815	0.04
16	230	50	500	14	0.10	41	49	1045	16	615	0.06

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = 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

A3G400-AK56-01 ebmpapst Datasheet FansCo sales@fansco.com www.fansco.com