A3G800-BG95-01

EC axial fan - HyBlade

sickle-shaped blades (S series)

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.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

Nominal data

Type	**A3G800-BG95-01**
Motor	**M3G112-IA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	770
Power consumption	W	900
Current draw	A	1.5
Max. back pressure	Pa	120
Max. back pressure	inH2O	0.48
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}	%	44.1	33.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		50.9	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.83
09 Air flow q_v	m^3/h	12245
09 Pressure increase p_{fs}	Pa	100
10 Speed (rpm) n	min^{-1}	765
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-155353

EC axial fan - HyBlade

sickle-shaped blades (S series)

Technical description

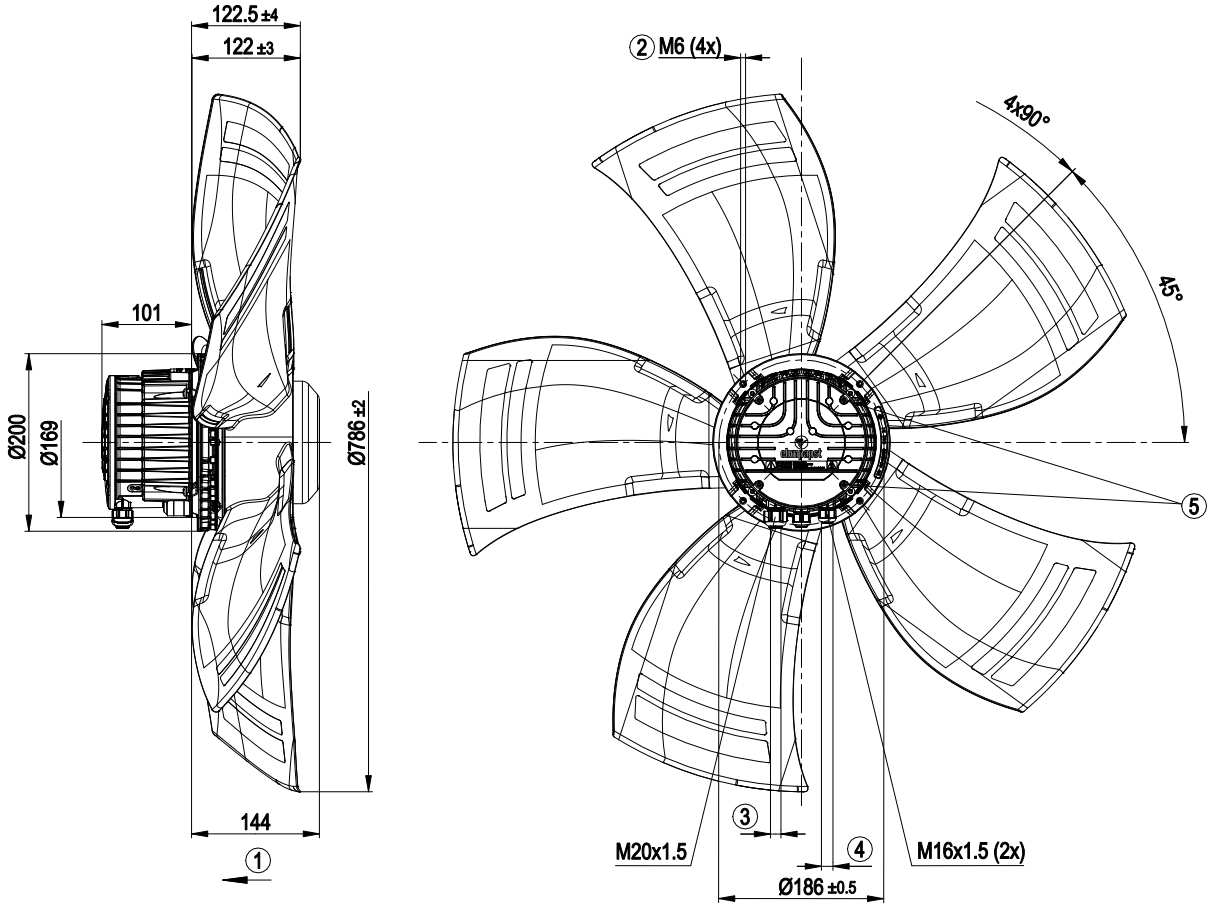
Weight	12.2 kg
Fan size	800 mm
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	"V"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
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	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Temperature derating - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
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
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	C22.2 No.77 + CAN/CSA-E60730-1; CCC; EAC; UL 1004-7 + 60730
Comment	Conformity with EN 60335-1 in preparation

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan - HyBlade

sickle-shaped blades (S series)

Product drawing



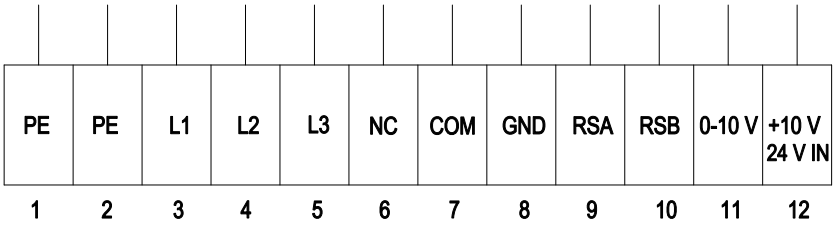
1	Direction of air flow "V"
2	Max. clearance for screw 16 mm
3	Cable diameter min. 8 mm, max. 12 mm, tightening torque 2.5 ± 0.4 Nm
4	Cable diameter min. 6 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm Cable diameter min. 4 mm, max. 7 mm, tightening torque 2.5 ± 0.4 Nm (included seal must be used)
5	Tightening torque 1.5 ± 0.2 Nm

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan - HyBlade

sickle-shaped blades (S series)

Connection diagram



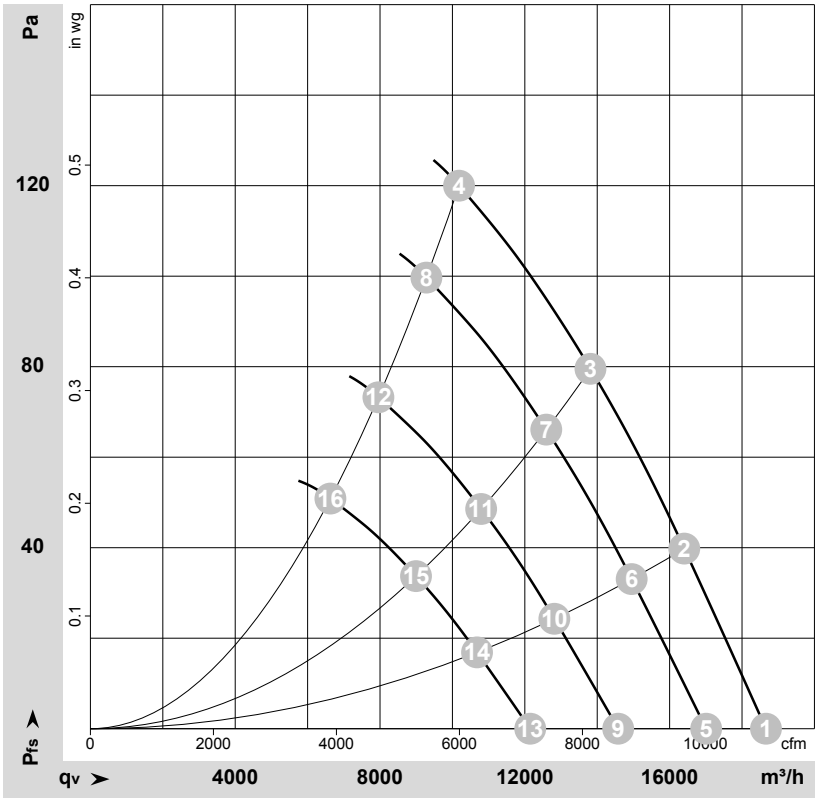
No.	Conn.	Designation	Function/assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	L1	Power supply
	4	L2	Power supply
	5	L3	Power supply
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
	7	COM	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
	8	GND	Reference ground for control interface, SELV
	9	RSA	RS485 interface for MODBUS, RSA; SELV
	10	RSB	RS485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC axial fan - HyBlade

sickle-shaped blades (S series)

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-155353-1

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}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	400	50	770	550	0.93	63	70	70	18660	0	10985	0.00
2	400	50	770	670	1.12	60	67	66	16405	40	9655	0.16
3	400	50	770	780	1.29	58	65	65	13815	80	8130	0.32
4	400	50	770	900	1.50	66	73	73	10185	120	5995	0.48
5	400	50	700	417	0.71	61	68	68	17010	0	10010	0.00
6	400	50	700	508	0.85	57	64	64	14950	33	8800	0.13
7	400	50	700	590	0.98	56	63	62	12595	66	7410	0.26
8	400	50	700	678	1.12	63	71	71	9280	100	5465	0.40
9	400	50	600	262	0.45	57	64	64	14580	0	8580	0.00
10	400	50	600	320	0.53	53	61	60	12815	24	7545	0.10
11	400	50	600	372	0.62	52	59	58	10795	49	6355	0.20
12	400	50	600	427	0.70	59	67	67	7955	73	4680	0.29
13	400	50	500	152	0.26	52	59	59	12150	0	7150	0.00
14	400	50	500	185	0.31	49	56	55	10680	17	6285	0.07
15	400	50	500	215	0.36	47	54	54	8995	34	5295	0.14
16	400	50	500	247	0.41	55	62	62	6630	51	3900	0.20

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
LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com