

EC axial panel 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.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

Nominal data

Type	A3G630-BM07-H1	
Motor	M3G084-GF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	900
Power consumption	W	390
Current draw	A	1.7
Max. back pressure	Pa	85
Max. back pressure	in. wg	0.34
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 Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	43.4	31.1	09 Power consumption P_{ed}	kW	0.39
02 Measurement category	A			09 Air flow q_v	m³/h	6680
03 Efficiency category	Static			09 Pressure increase p_{fs}	Pa	83
04 Efficiency grade N	52.3	40		10 Speed (rpm) n	min ⁻¹	900
05 Variable speed drive	Yes			11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

* Specific ratio = $1 + p_s / 100\,000\text{ Pa}$

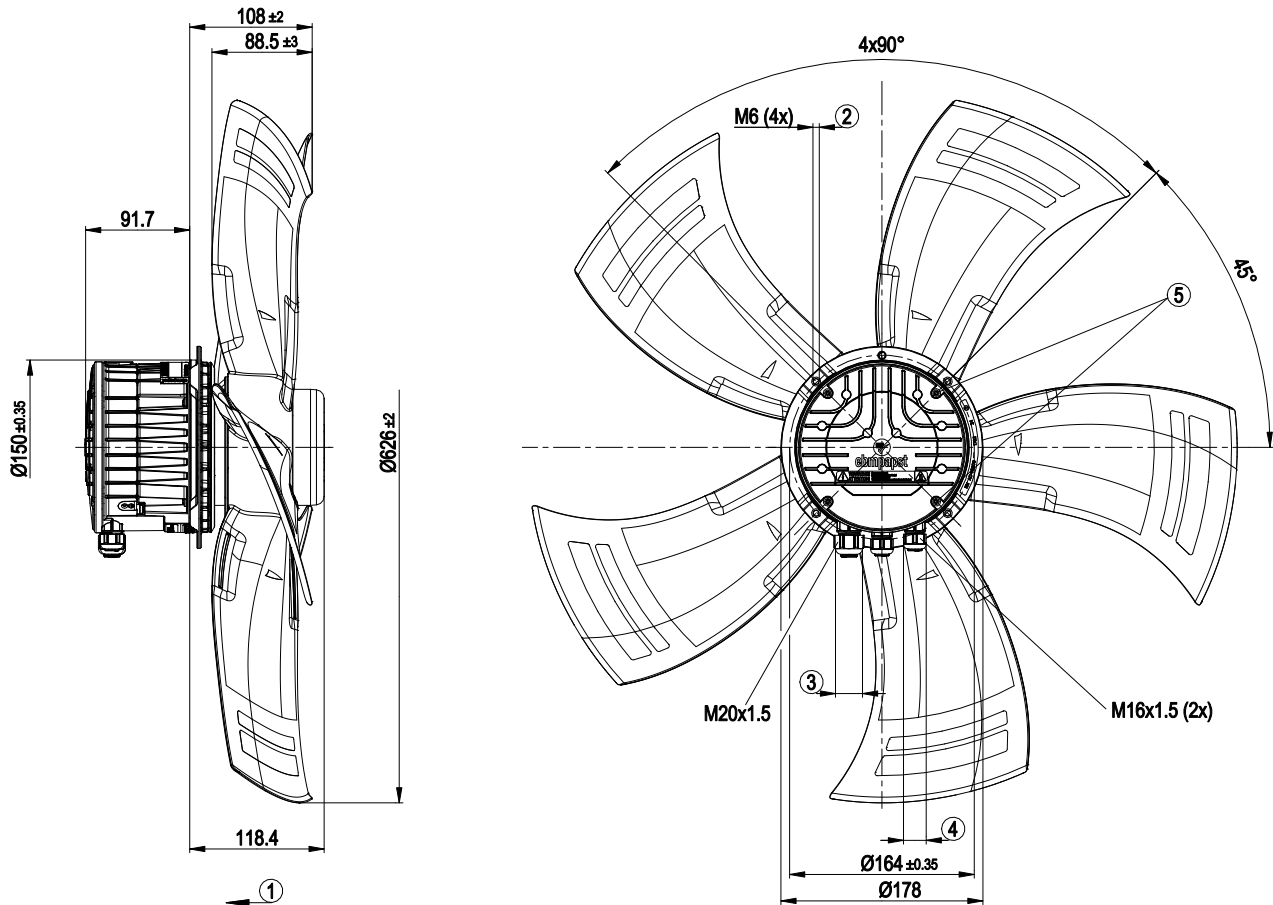
LU-162268

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

Technical description

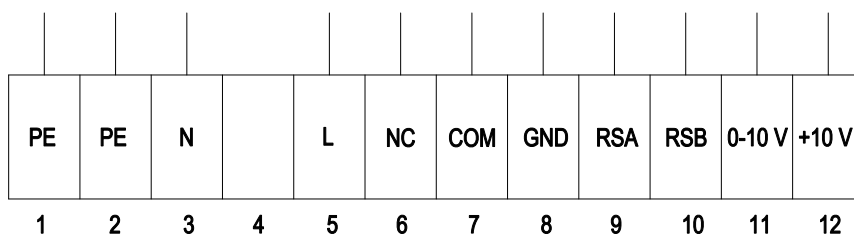
Weight	5.9 kg
Size	630 mm
Motor size	84
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, 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 - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - 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	Terminal box
Motor protection	Thermal switch auto reset, internally connected
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; EN 61800-5-1; CE; UKCA
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

Product drawing



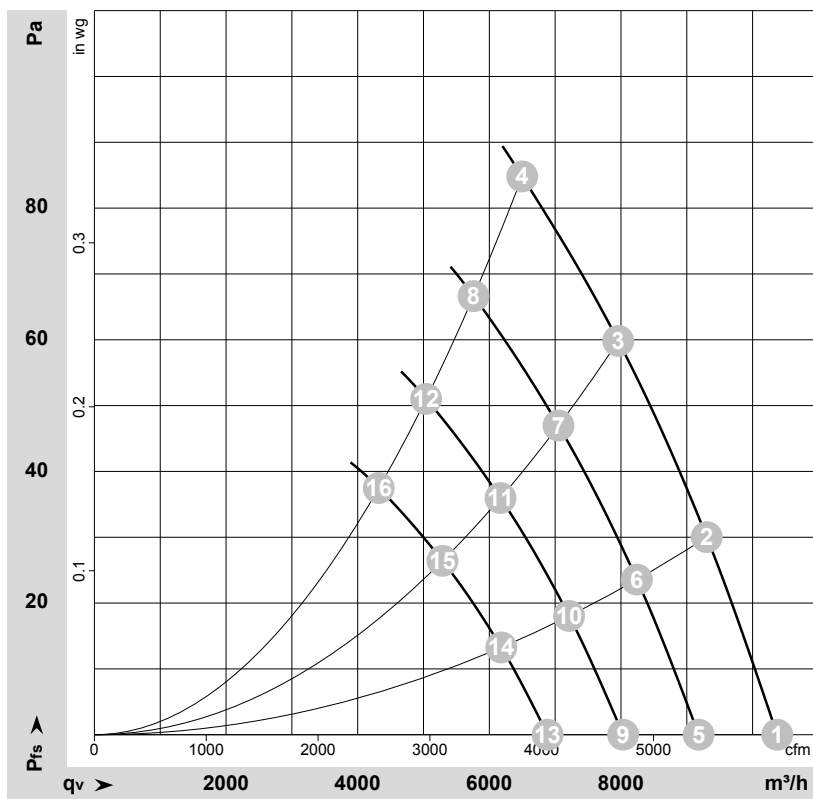
1	Direction of air flow "V"
2	Max. clearance for screw 16 mm
3	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm
4	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8 ± 0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8 ± 0.3 Nm
5	Tightening torque 1.5 ± 0.2 Nm

Connection diagram



No.	Conn.	Designation	Function/assignment
1	PE	PE	Protective earth
2	PE	PE	Protective earth
3	N	N	Power supply, neutral conductor
4	-	-	not used
5	L	L	Power supply, phase
6	NC	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
7	COM	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
8	GND	GND	Reference ground for control interface, SELV
9	RSA	RSA	RS485 interface for MODBUS, RSA; SELV
10	RSB	RSB	RS485 interface for MODBUS, RSB; SELV
11	0-10 V	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
12	+10 V	+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)

Curves: Air performance 50 Hz



$$\rho = 1.174 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-162268-1
Date: 2014-03-13
Housing: 10631-2-4037

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	in. wg
1	230	50	900	258	1.15	60	66	65	10375	0	6105	0.00
2	230	50	900	311	1.38	60	66	64	9305	30	5475	0.12
3	230	50	900	357	1.57	59	65	64	7960	60	4685	0.24
4	230	50	900	390	1.70	61	68	67	6500	85	3825	0.34
5	230	50	800	178	0.80	57	63	62	9180	0	5405	0.00
6	230	50	800	217	0.96	57	63	61	8240	24	4850	0.10
7	230	50	800	248	1.09	56	62	61	7050	47	4150	0.19
8	230	50	800	276	1.21	58	65	64	5760	67	3390	0.27
9	230	50	700	120	0.54	53	60	59	8035	0	4730	0.00
10	230	50	700	145	0.64	54	59	58	7210	18	4245	0.07
11	230	50	700	166	0.73	52	59	57	6170	36	3630	0.14
12	230	50	700	185	0.81	54	61	60	5040	51	2965	0.20
13	230	50	600	75	0.34	50	56	55	6885	0	4050	0.00
14	230	50	600	91	0.40	50	55	54	6180	13	3640	0.05
15	230	50	600	105	0.46	48	55	53	5290	26	3110	0.10
16	230	50	600	116	0.51	51	57	57	4320	38	2545	0.15

U = Voltage · 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