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County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

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Nominal data

Type	A3G910-BG02-51	
Motor	M3G112-IA	

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60

Type of data definition		ml
Speed (rpm)	min ⁻¹	640
Power input	W	700
Current draw	A	1.1
Max. back pressure	Pa	85
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data in accordance with ecodesign regulation EU 327/2011 (prEN 17166)

		Actual	Request 2015			
01 Overall efficiency η_{es}	%	45.2	32.6	09 Power input P_{ed}	kW	0.67
02 Measurement category		A		09 Air flow q_v	m ³ /h	13445
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	75
04 Efficiency grade N		52.6	40	10 Speed (rpm) n	min ⁻¹	640
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data definition with optimum efficiency.

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

LU-162803

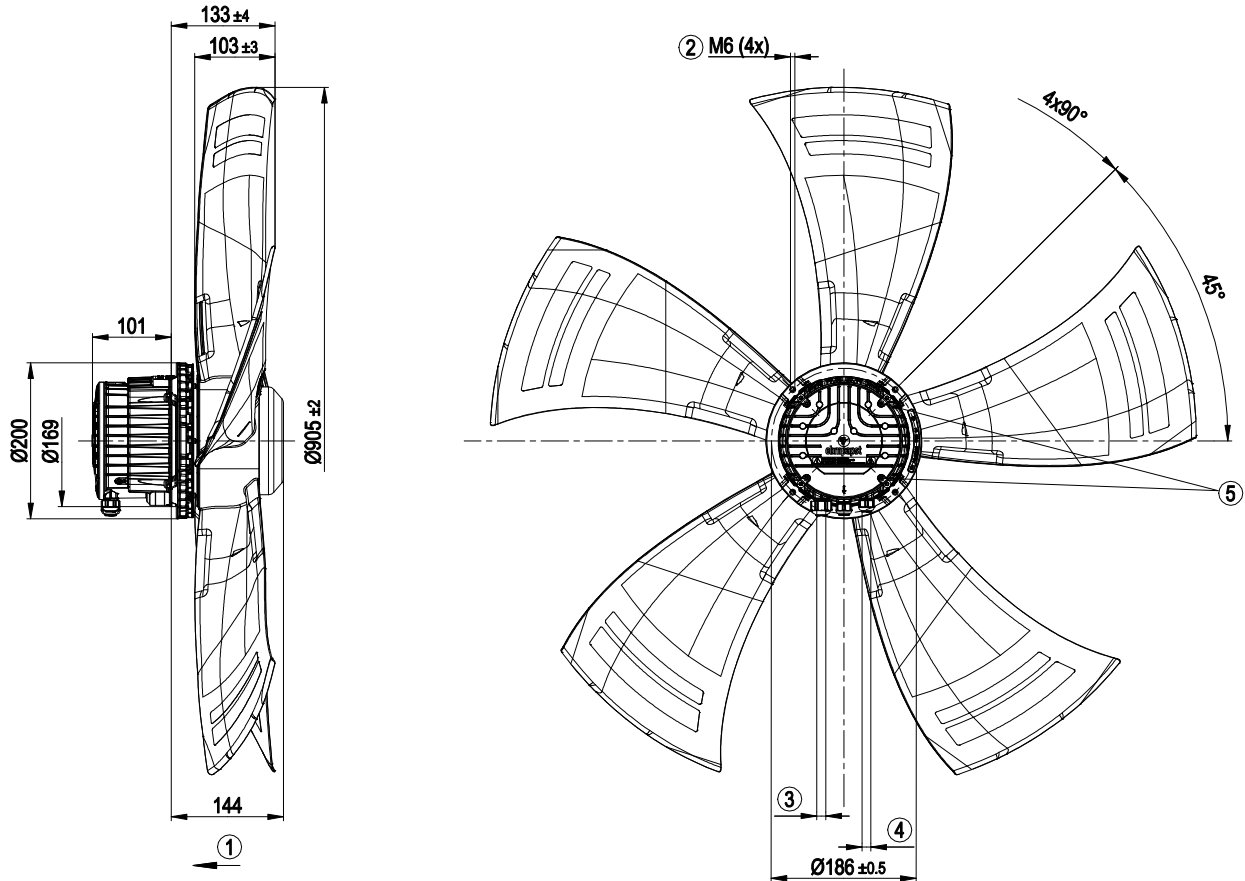
The indicated efficiency values for obtaining conformity with the Ecodesign Directive EU 327/2011 were achieved with defined air conduction components (e.g. inlet nozzles).
The dimensions are to be requested from ebm-papst. If other air guide geometries are used on the installation side, the ebm-papst evaluation loses its validity/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 features

Mass	12 kg
Size	910 mm
Motor size	112
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Number of blades	5
Direction of air flow	V
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (programming) - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start - Maximum EEPROM write cycles 100,000 - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical connection	Terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1
Standard conformity	UKCA
Product conforming to standard	CE
Approval	UL 1004-7 + 60730-1; EAC; CCC; CSA C22.2 no. 77 + CAN/CSA-E60730-1
Remark	Standard conformity in accordance with EN 60335-1 on request

Product drawing



1	Direction of air flow "V"
2	Thread reach max. 16 mm
3	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use the provided seal) 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 the provided seal) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8±0.3 Nm
5	Tightening torque 1.5±0.2 Nm

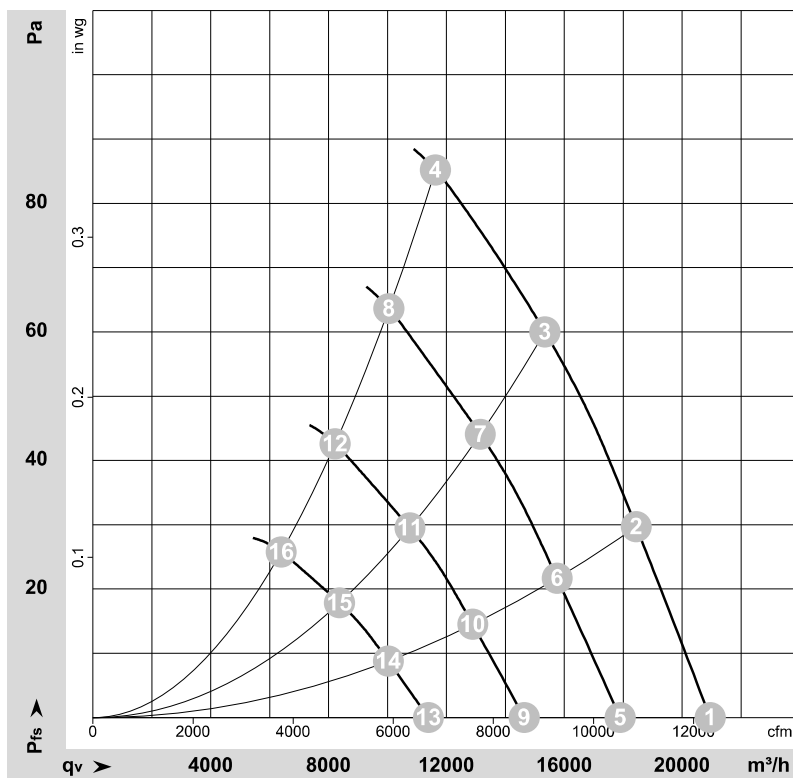
Connection screen

PE	PE	L1	L2	L3	NC	COM	GND	RSA	RSB	0-10 V	+10 V	24 V IN
1	2	3	4	5	6	7	8	9	10	11	12	

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 mains 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 mains side and basic insulation on control interface side
	8	GND	Signal ground for control interface, SELV
	9	RSA	RS-485 interface for MODBUS, RSA; SELV
	10	RSB	RS-485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V +/-3%, max. 10 mA short-circuit-proof, power supply for ext. devices (e.g. potentiometer); Fixed voltage input 24 VDC for parameter setting via MODBUS without mains power supply



Charts: Air flow 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-162803-1

Air performance measured as per ISO 5801
Installation category A. For detailed
information on the measuring set-up, please
contact ebm-papst. Suction-side noise
levels: L_{wA} measured as per ISO 13347 /
 L_{pA} measured with 1m distance to fan axis.
The values given are valid under the
measuring conditions mentioned above and
may vary according to the actual installation
situation. With any deviation from the
standard set-up, the specific values have to
be checked and reviewed with the unit
installed.

Measured values

	U	f	n	P_{ed}	I	$L_{pA_{in}}$	$L_{wA_{in}}$	$L_{wA_{out}}$	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	400	50	640	444	0.76	62	70	69	20955	0	12335	0.00
2	400	50	640	546	0.91	60	67	66	18440	30	10855	0.12
3	400	50	640	630	1.03	59	67	66	15340	60	9030	0.24
4	400	50	640	700	1.10	63	70	70	11625	85	6840	0.34
5	400	50	550	276	0.47	58	66	65	17895	0	10535	0.00
6	400	50	550	340	0.56	56	63	62	15755	22	9275	0.09
7	400	50	550	397	0.65	56	63	62	13150	44	7740	0.18
8	400	50	550	446	0.72	59	67	67	10045	64	5915	0.26
9	400	50	450	151	0.26	53	61	60	14640	0	8615	0.00
10	400	50	450	186	0.31	51	58	57	12890	15	7590	0.06
11	400	50	450	217	0.35	51	58	57	10760	30	6335	0.12
12	400	50	450	244	0.39	54	62	61	8220	43	4840	0.17
13	400	50	350	71	0.12	47	54	53	11390	0	6705	0.00
14	400	50	350	88	0.15	44	52	51	10025	9	5900	0.04
15	400	50	350	102	0.17	44	52	51	8370	18	4925	0.07
16	400	50	350	115	0.19	48	55	55	6395	26	3765	0.10

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · $L_{pA_{in}}$ = Sound pressure level inlet side · $L_{wA_{in}}$ = Sound power level inlet side · $L_{wA_{out}}$ = Sound power level outlet side
 q_v = Air flow · p_{fs} = Pressure increase

