EC hot-air circulation blower

R3G180-AJ53-10 ebmpapst Datasheet
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Nominal data

Type	**R3G180-AJ53-10**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	115
Nominal voltage range	VAC	100 .. 130
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2670
Power input	W	65
Current draw	A	1.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50
Max. temp. of flow medium	°C	150

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

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Technical features

Mass	2 kg
Size	180 mm
Surface of rotor	Thick layer passivated
Material of impeller	Sheet steel, rust-resistant
Number of blades	6
Motor suspension	Motor anti-vibration mounted on one side via mounting plate
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H0 - dry environment
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE
Approval	UL 1004-7 + 60730

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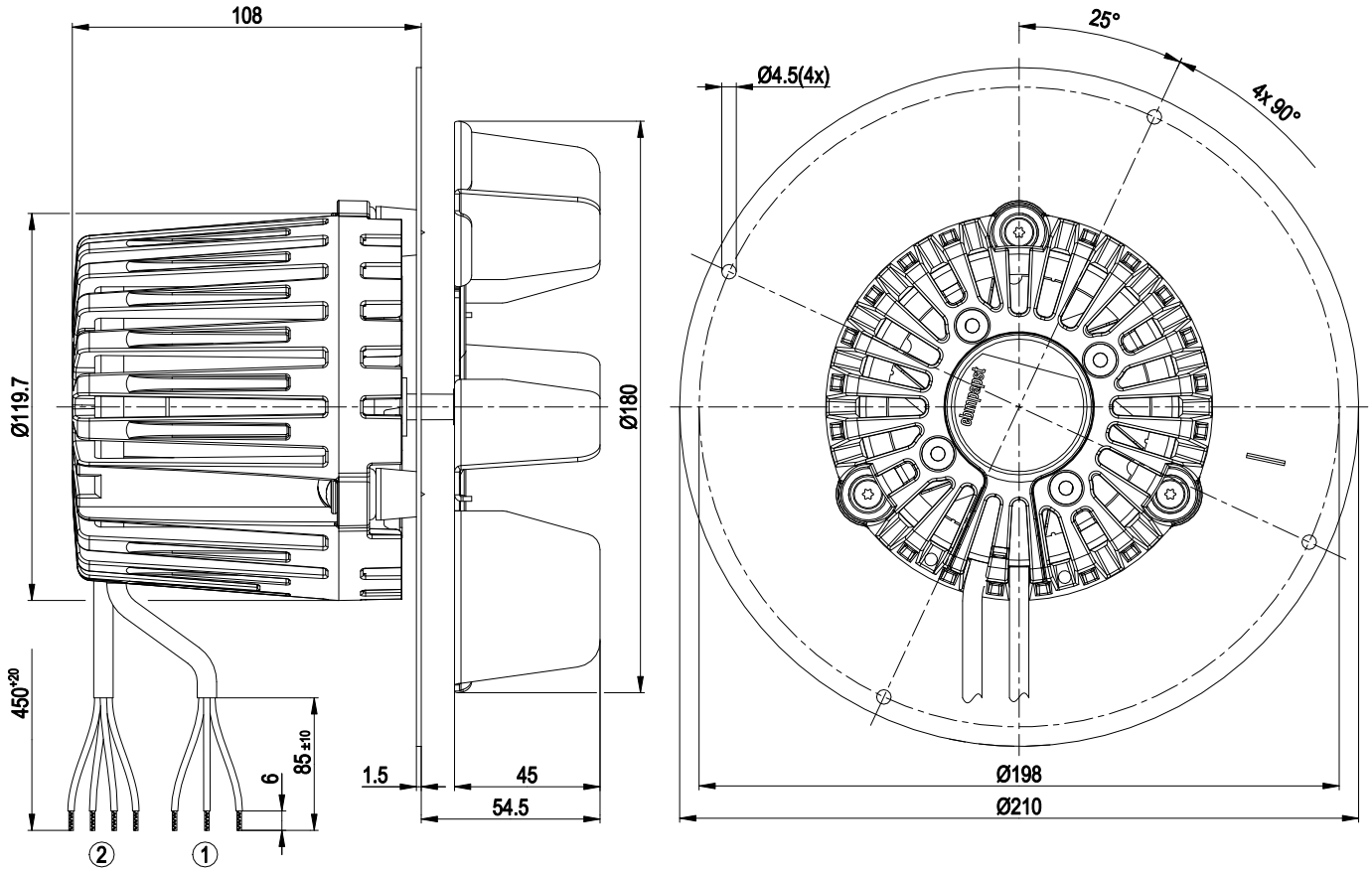
Product drawing



1	Connection line PVC 3G AWG20, 3x lead tips crimped
2	Connection line PVC 4x AWG22, 4x lead tips crimped

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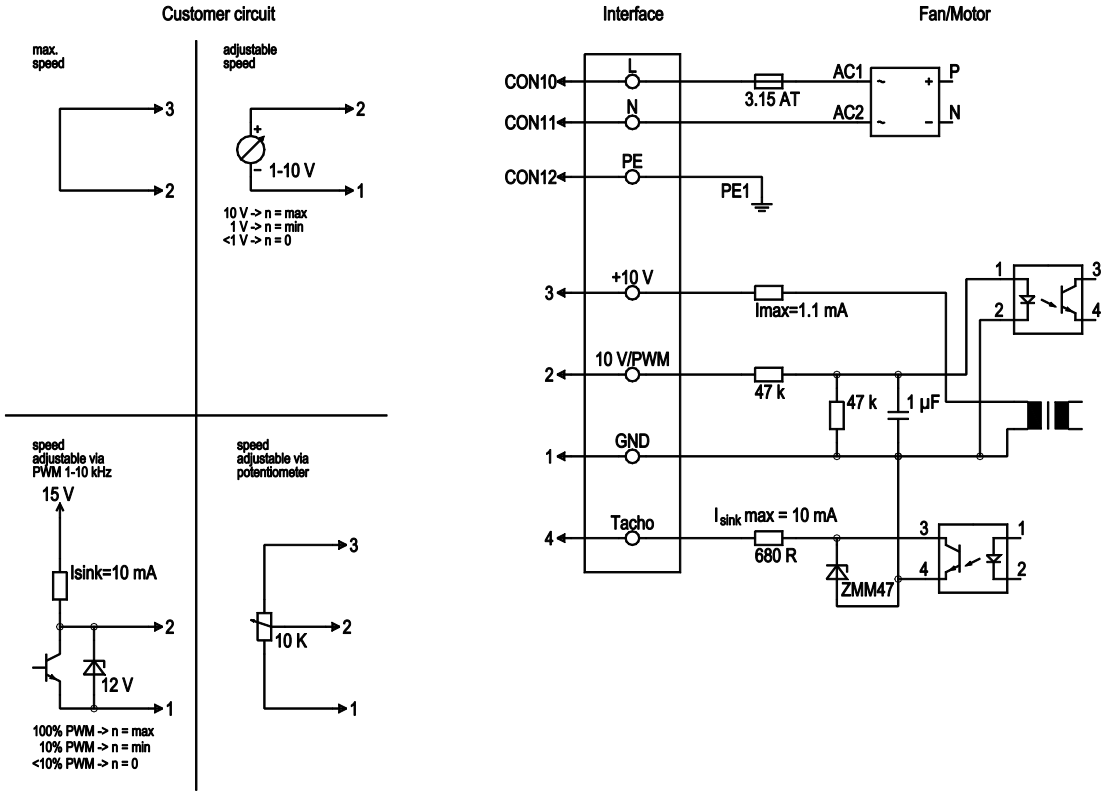
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 115 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA

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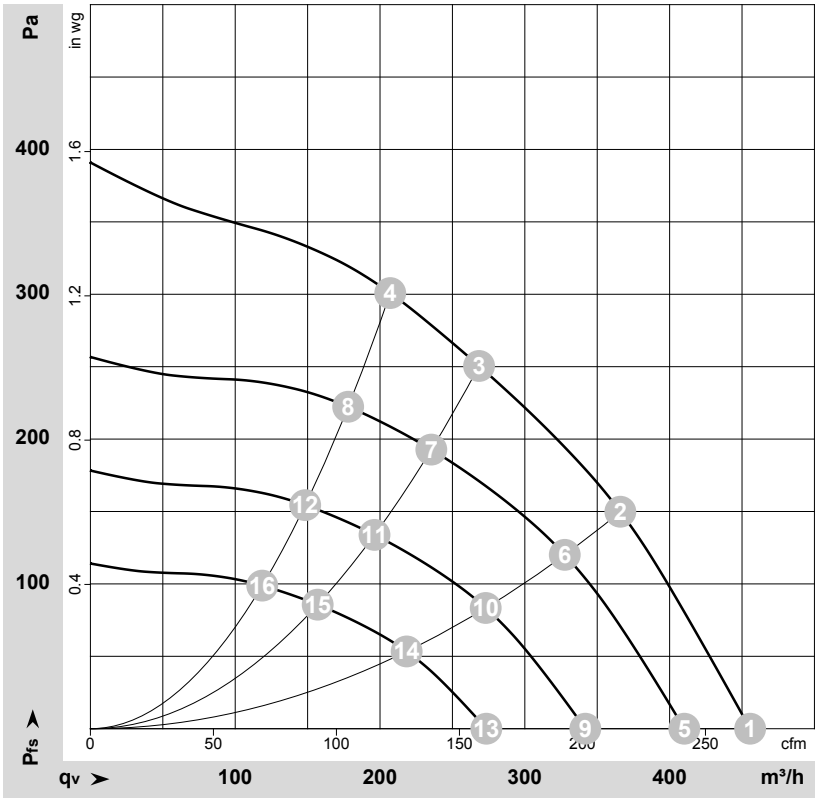
Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-167640-1

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: LwA measured as per ISO 13347 / LpA 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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	115	50	2670	65	1.00	64	73	455	0	270	0.00
2	115	50	2680	62	0.98	60	69	365	150	215	0.60
3	115	50	2735	58	0.93	59	67	270	250	160	1.00
4	115	50	2790	55	0.88	61	69	205	300	120	1.20
5	115	50	2400	46	0.72	62	70	410	0	240	0.00
6	115	50	2400	44	0.70	58	66	330	122	195	0.49
7	115	50	2400	39	0.63	56	64	235	194	140	0.78
8	115	50	2400	35	0.56	57	65	180	223	105	0.90
9	115	50	2000	26	0.42	57	65	340	0	200	0.00
10	115	50	2000	26	0.40	53	61	275	85	160	0.34
11	115	50	2000	23	0.36	51	60	195	134	115	0.54
12	115	50	2000	20	0.32	52	60	150	155	85	0.62
13	115	50	1600	14	0.21	52	60	275	0	160	0.00
14	115	50	1600	13	0.21	47	56	220	54	130	0.22
15	115	50	1600	12	0.19	46	54	155	86	90	0.35
16	115	50	1600	10.0	0.17	47	55	120	99	70	0.40

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase