R3G225-AH54-01

EC centrifugal fan

backward-curved, single-intake

R3G225-AH54-01 ebmpapst Datasheet FansCo

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Nominal data

Type	**R3G225-AH54-01**
Motor	**M3G074-CF**

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}	2920
Power consumption	W	170
Current draw	A	1.27
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}	%	49.4	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		68.3	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	705
09 Pressure increase p_{fs}	Pa	363
10 Speed (rpm) n	min^{-1}	2890
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-111834

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Technical description

Weight	2.25 kg
Fan size	225 mm
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
Impeller material	PA 6.6 plastic, glass-fiber reinforced
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44; installation- and position-dependent
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 top; rotor on bottom on request
Condensation drainage holes	None
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 electronics/motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial 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)
Conformity with standards	EN 60335-1; EN 61800-5-1; EN 60950-1; CE
Approval	CCC; CSA C22.2 No. 77; UL 2111; EAC

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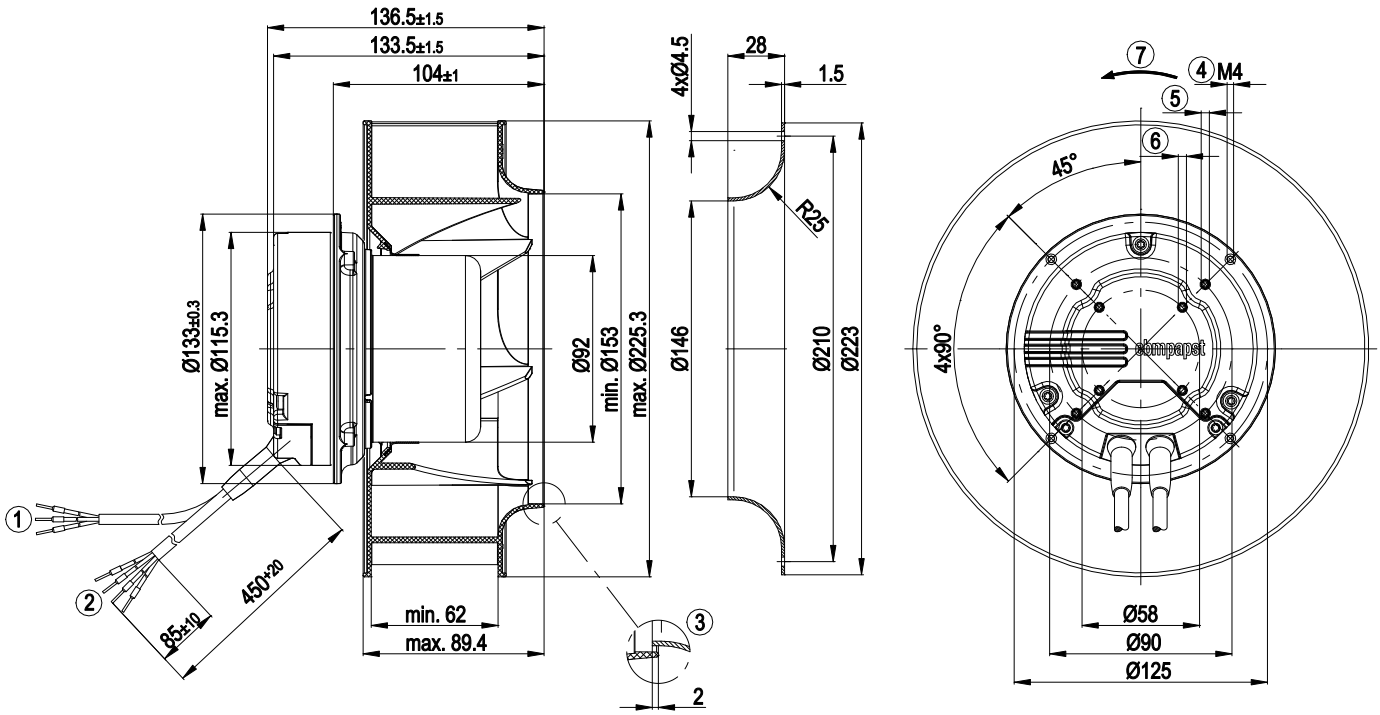
Product drawing



1	Cable AWG18, 3x crimped ferrules
2	Cable AWG22, 4x crimped ferrules
3	Accessory part: inlet ring 96358-2-4013 not included in scope of delivery
4	Clearance for screw 8-10 mm; tightening torque 2.5 ± 0.2 Nm; gluing the screws is recommended
5	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 6 mm
6	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 8 mm
7	Direction of rotation clockwise, viewed toward rotor

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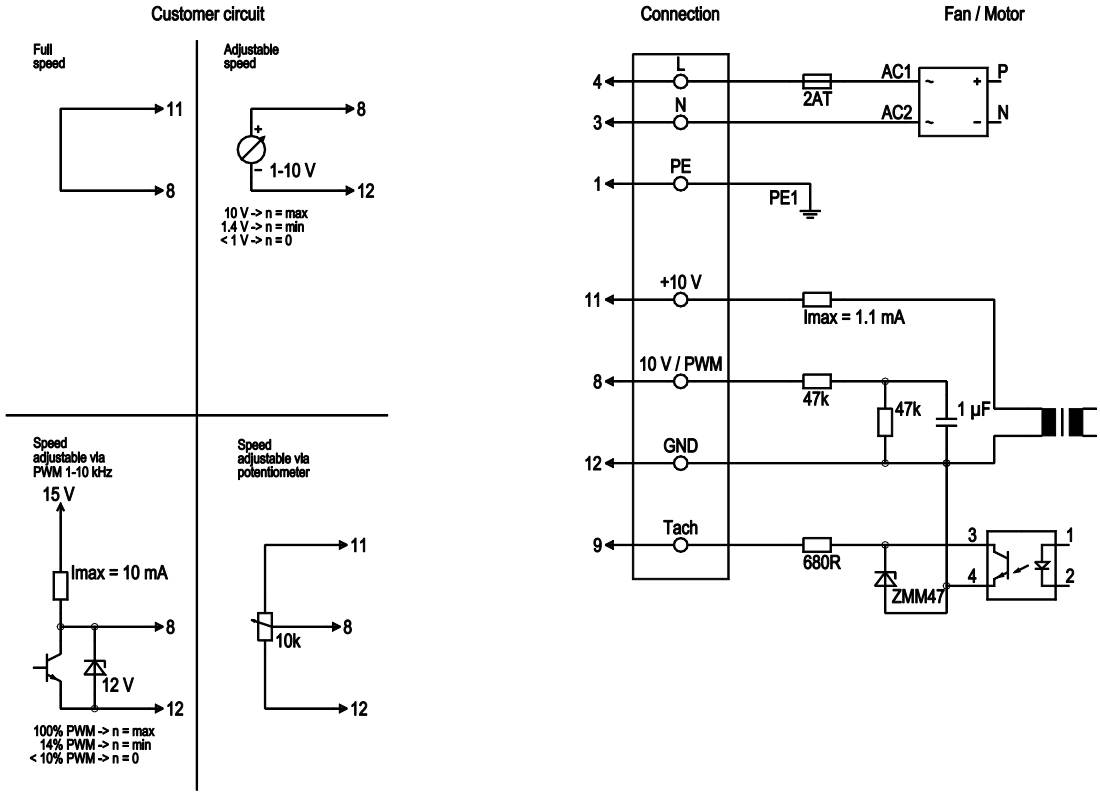
Connection diagram



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

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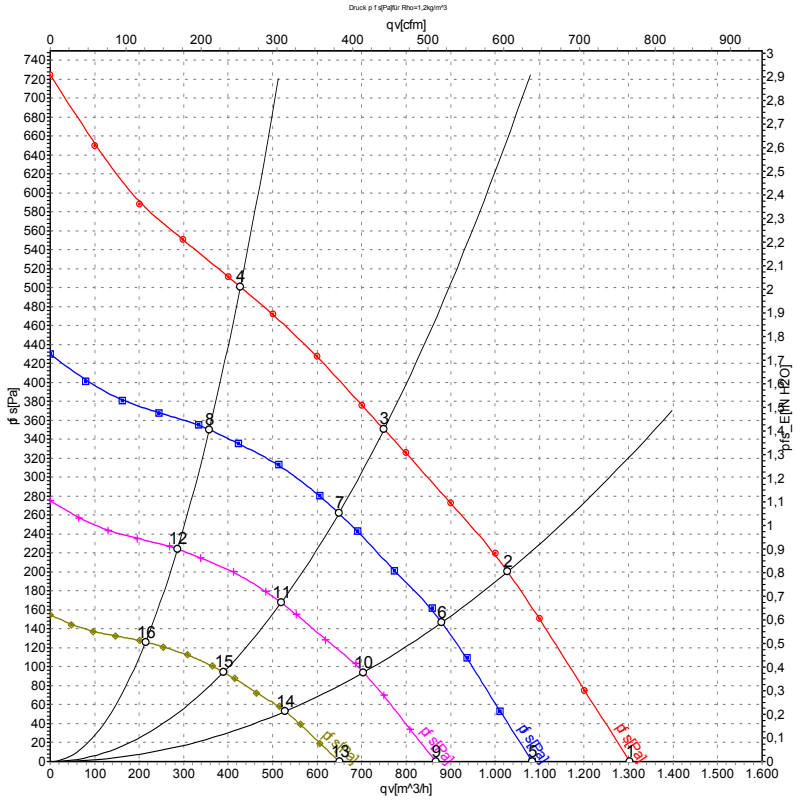
Curves: Air performance 50 Hz



Measurement: LU-111834-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	3005	149	1.11	1305	0	765	0.00
2	230	50	2920	170	1.27	1030	200	605	0.80
3	230	50	2890	164	1.24	750	350	440	1.41
4	230	50	2990	162	1.21	425	500	250	2.01
5	230	50	2500	86	0.64	1085	0	640	0.00
6	230	50	2500	106	0.79	880	147	520	0.59
7	230	50	2500	106	0.80	650	262	380	1.05
8	230	50	2500	95	0.71	355	350	210	1.41
9	230	50	2000	44	0.33	865	0	510	0.00
10	230	50	2000	54	0.41	705	94	415	0.38
11	230	50	2000	54	0.41	520	168	305	0.67
12	230	50	2000	48	0.36	285	224	170	0.90
13	230	50	1500	19	0.14	650	0	385	0.00
14	230	50	1500	23	0.17	530	53	310	0.21
15	230	50	1500	23	0.17	390	94	230	0.38
16	230	50	1500	20	0.15	215	126	125	0.51

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase