K3G225-RF53-10

EC centrifugal module - RadiCal

backward-curved, single-intake

with housing

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Nominal data

Type	**K3G225-RF53-10**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	2800
Power consumption	W	160
Current draw	A	1.3
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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	59	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		78.2	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.15
09 Air flow q_v	m^3/h	700
09 Pressure increase p_{fs}	Pa	421
10 Speed (rpm) n	min^{-1}	2815
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-185633

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Technical description

Weight	3 kg
Size	225 mm
Motor size	74
Rotor surface	Galvanized
Impeller material	PA plastic
Housing material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1+
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing made of stainless steel
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
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	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	UL 1004-7 + 60730; CSA C22.2 No. 77 + CAN/CSA-E60730-1

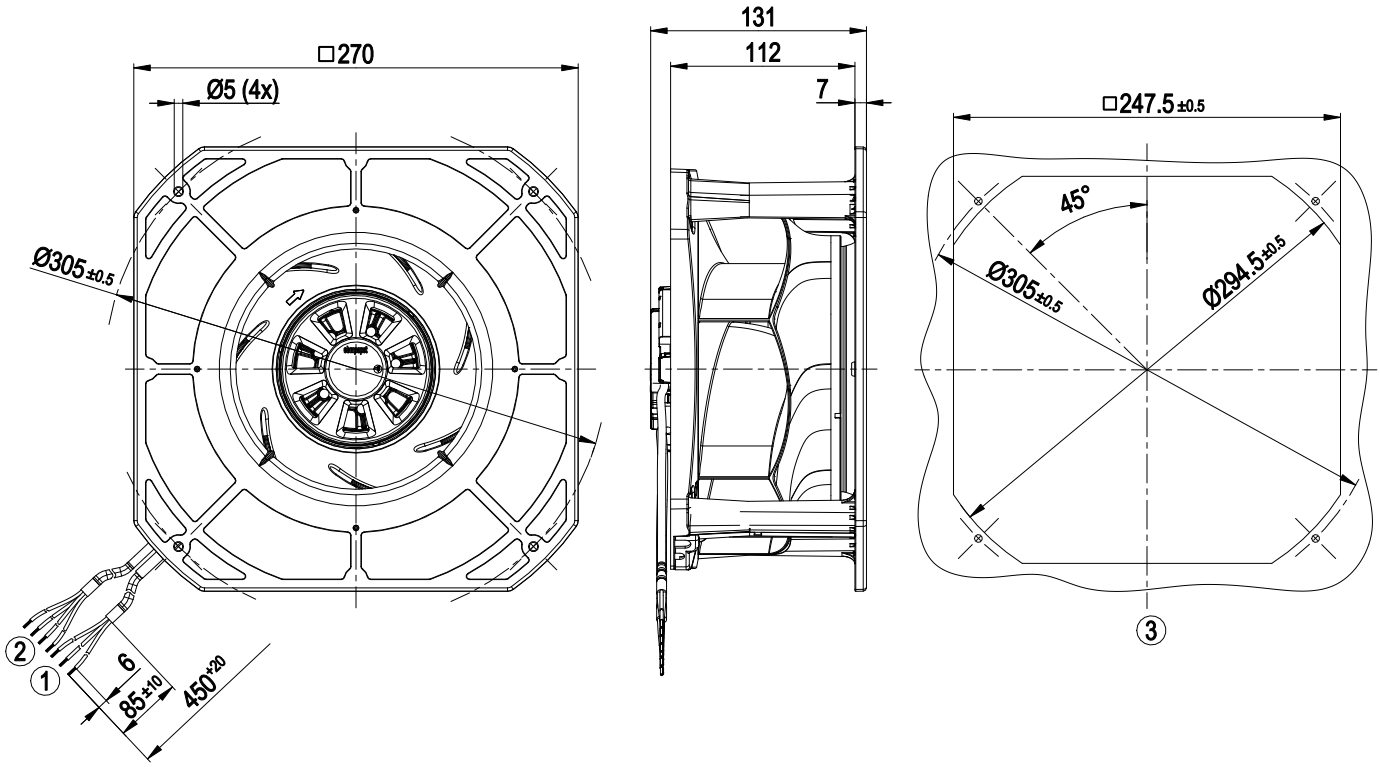
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Product drawing



1	Cable PVC AWG20, 3x crimped splices
2	Cable PVC AWG22, 4x crimped splices
3	Mounting dimensions

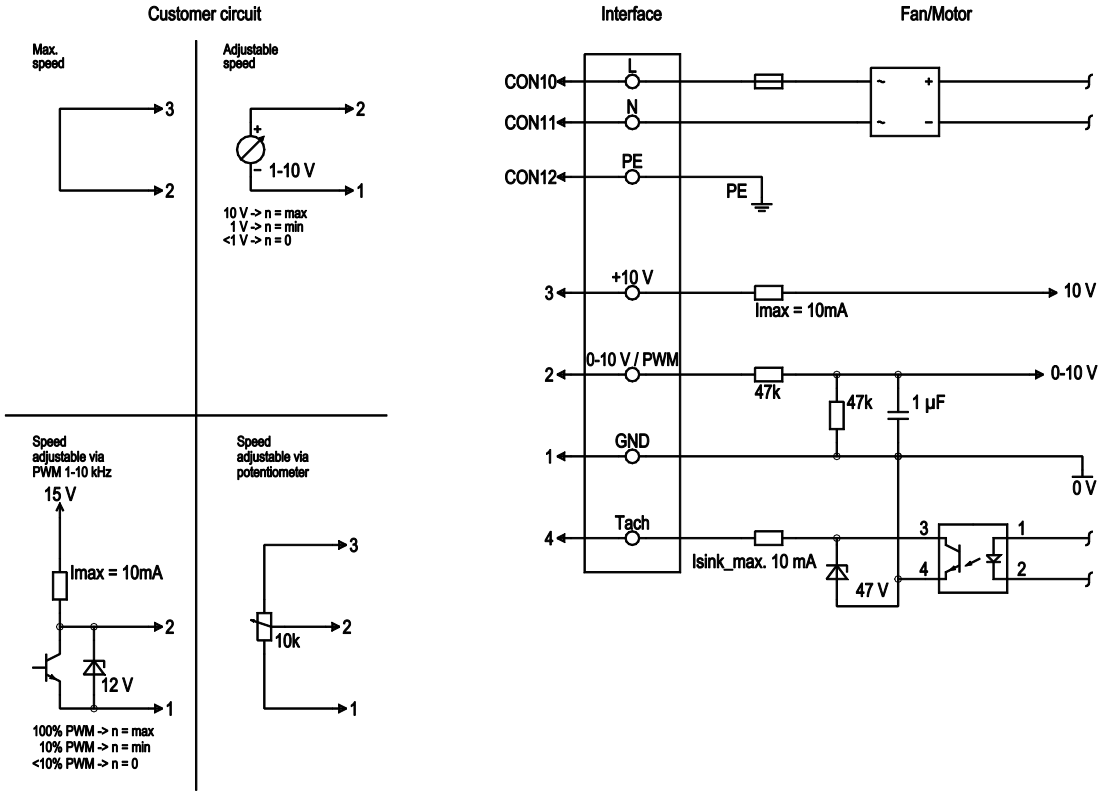
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

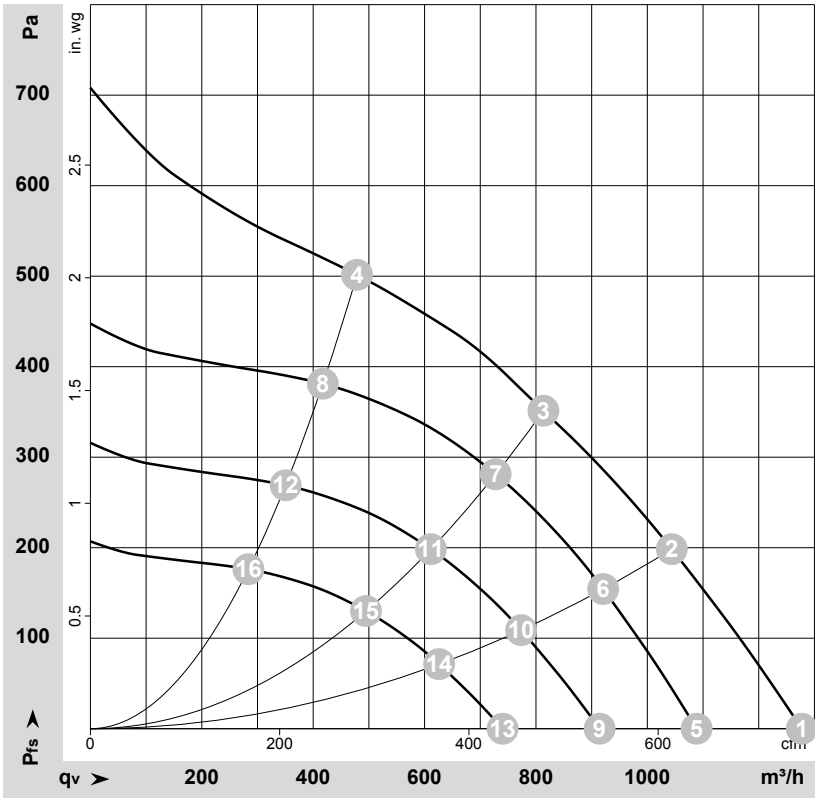
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185633-1

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	in. wg
1	230	50	2935	134	1.11	1275	0	750	0.00
2	230	50	2835	155	1.26	1045	200	615	0.80
3	230	50	2800	160	1.30	815	350	480	1.41
4	230	50	2865	149	1.22	480	500	280	2.01
5	230	50	2500	83	0.69	1090	0	640	0.00
6	230	50	2500	106	0.87	920	154	540	0.62
7	230	50	2500	116	0.95	730	282	430	1.13
8	230	50	2500	99	0.81	415	381	245	1.53
9	230	50	2100	49	0.41	915	0	540	0.00
10	230	50	2100	63	0.51	775	109	455	0.44
11	230	50	2100	69	0.56	610	199	360	0.80
12	230	50	2100	59	0.48	350	269	205	1.08
13	230	50	1700	26	0.22	740	0	435	0.00
14	230	50	1700	33	0.27	625	71	370	0.29
15	230	50	1700	37	0.30	495	130	290	0.52
16	230	50	1700	31	0.26	285	176	165	0.71

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

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