EC centrifugal module - RadiCal

backward-curved

with housing

K3G225-RE07-12 ebmpapst Datasheet
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Nominal data

Type	**K3G225-RE07-12**
Motor	**M3G055-DF**

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}	2860
Power consumption	W	170
Current draw	A	1.4
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}	%	61.7	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		80.6	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	458
10 Speed (rpm) n	min^{-1}	2865
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-127001

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Technical description

Weight	2.5 kg
Fan size	225 mm
Rotor surface	Thick-film passivated
Electronics housing material	Die-cast aluminum
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"
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
Mode	S1
Motor bearing	Ball bearing
Technical features	- 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	Locked-rotor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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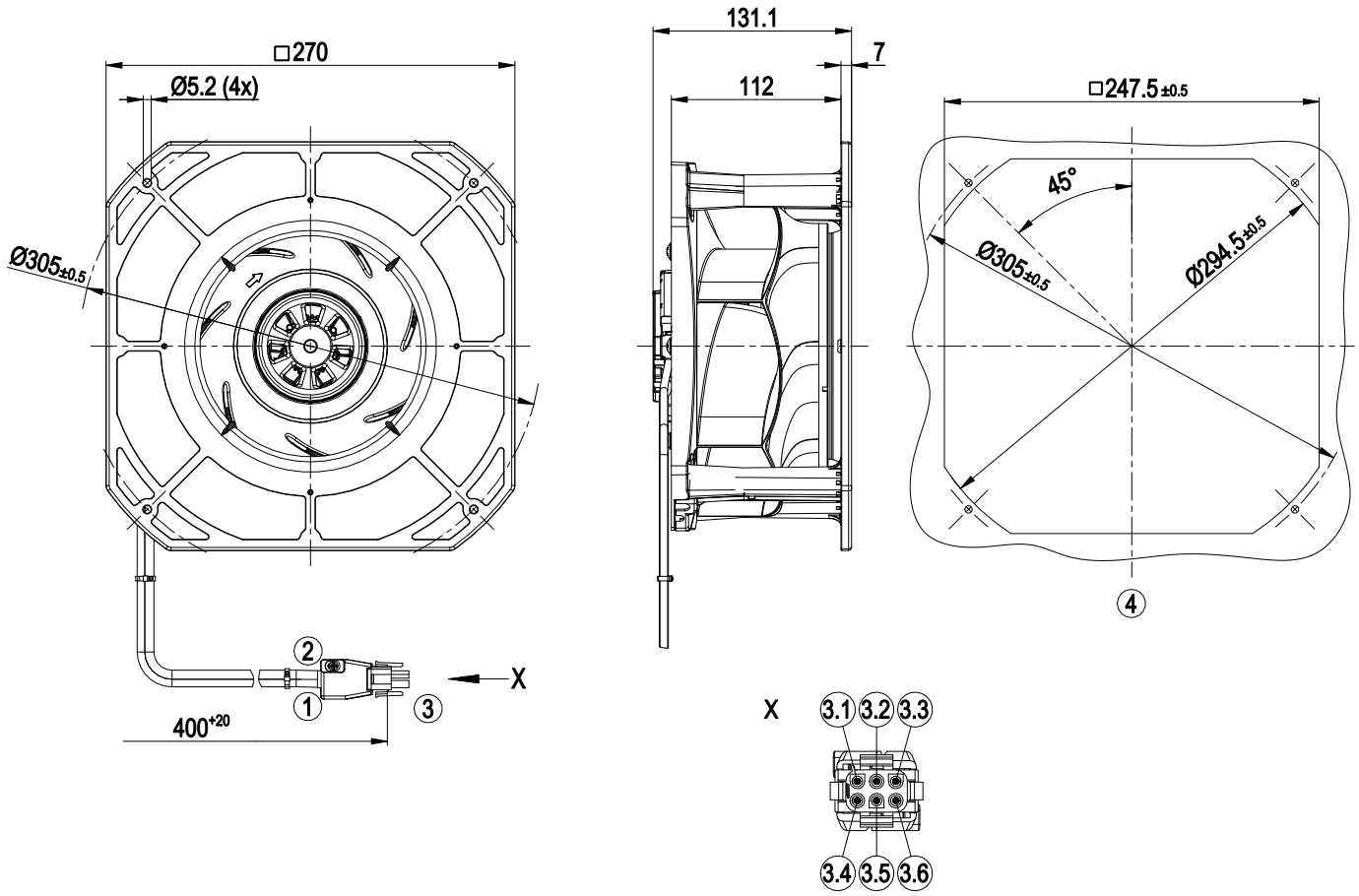
Product drawing



1	Cable PVC AWG22, 3x crimped plug pin tyco 926885-1
2	Cable PVC AWG20, 2x plug pin tyco 926885-1 crimped, 1x plug pin 350654-1 crimped
3	6-pole connector housing tyco 1586846-1, 2x strain relief tyco 640715-1
3.1	0-10 V PWM (yellow)
3.2	GND (blue)
3.3	Tach (white)
3.4	L (black)
3.5	N (blue)
3.6	PE (green/yellow)
4	Mounting dimensions

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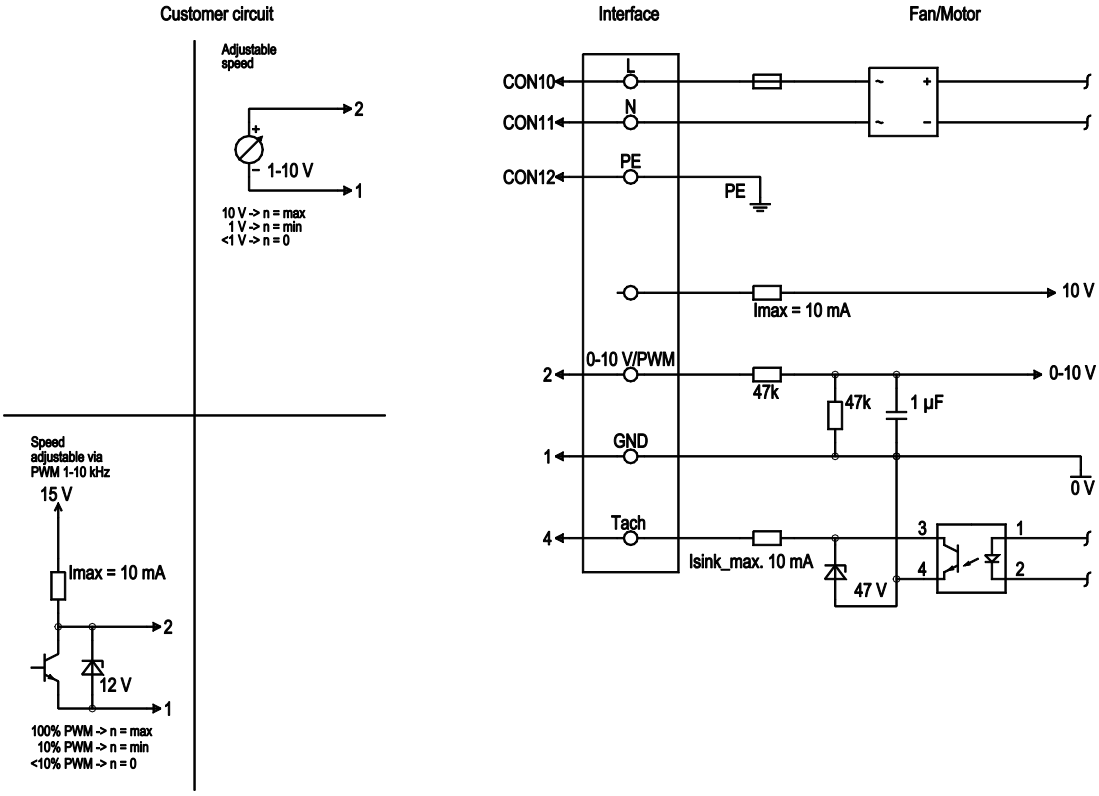
Connection diagram



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
	1	GND	blue	Reference ground for control interface, SELV

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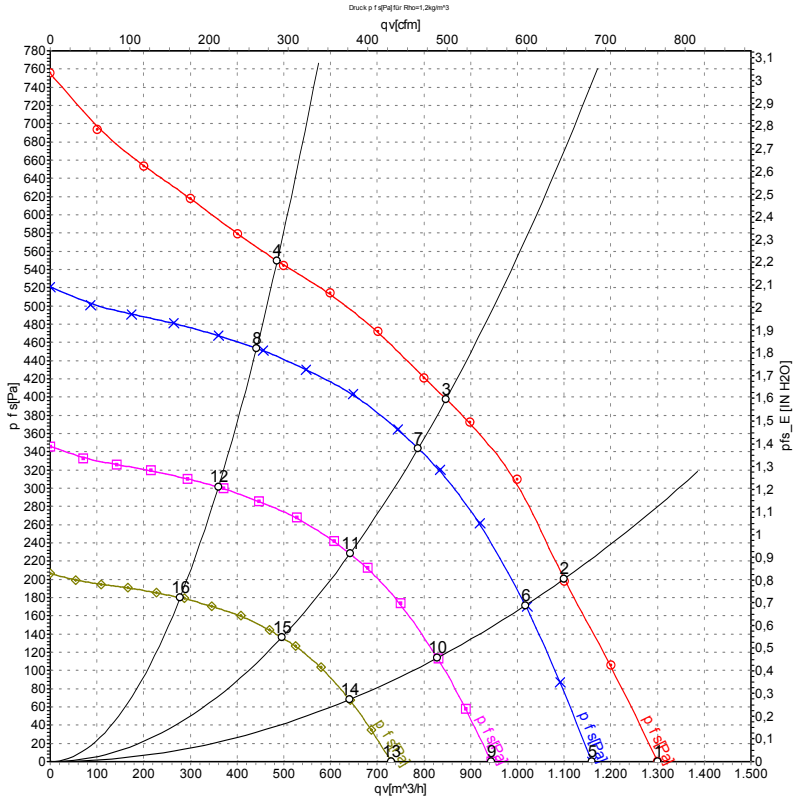
Curves: Air performance 50 Hz



Measurement: LU-129100-1

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	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	230	50	3030	151	1.25	70	78	1300	0	765	0.00
2	230	50	2910	168	1.40	66	74	1100	200	645	0.80
3	230	50	2860	170	1.40	60	68	850	400	500	1.61
4	230	50	2970	157	1.35	65	73	485	550	285	2.21
5	230	50	2700	107	0.89	68	76	1160	0	680	0.00
6	230	50	2700	134	1.11	65	72	1015	174	600	0.70
7	230	50	2700	135	1.15	59	67	790	344	465	1.38
8	230	50	2700	118	1.01	62	70	440	454	260	1.82
9	230	50	2200	58	0.48	63	70	945	0	555	0.00
10	230	50	2200	73	0.60	59	67	830	115	490	0.46
11	230	50	2200	73	0.62	54	62	640	228	380	0.92
12	230	50	2200	64	0.55	57	65	360	301	210	1.21
13	230	50	1700	27	0.22	56	64	730	0	430	0.00
14	230	50	1700	33	0.28	53	61	640	69	375	0.28
15	230	50	1700	34	0.29	48	56	495	136	290	0.55
16	230	50	1700	29	0.25	50	59	280	180	165	0.72

U = Power supply · 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
q_V = Air flow · p_{fs} = Pressure increase