K3G250-PR04-H2

EC centrifugal module - RadiPac

backward curved, single inlet

with support bracket

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Nominal data

Type	**K3G250-PR04-H2**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	3080
Power input	W	500
Current draw	A	2.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	67.8	48.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		81.3	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.51
09 Air flow q_v	m^3/h	1800
09 Pressure increase p_{fs}	Pa	635
10 Speed (rpm) n	min^{-1}	3065
11 Specific ratio*		1.01

Data definition with optimum efficiency.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-174531

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).

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Technical features

Mass	8.18 kg
Size	250 mm
Motor size	84
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Material of mounting plate	Sheet steel, galvanised
Material of support bracket	Steel, coated in black
Material of inlet nozzle	Sheet steel, galvanised
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H1
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; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - 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
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable

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Safety classification	I; If a protective earth is connected by the customer This component to be built-in can have several local protection class ratings. The specification refers to the basic design of this component. The final protection class is based on the intended installation and connection of the component.
Product conforming to standard	EN 61800-5-1; EN 60335-1; CE
Standard conformity	UKCA
Approval	CSA C22.2 no. 77 + CAN/CSA-E60730-1; CCC; EAC; UL 1004-7 + 60730-1

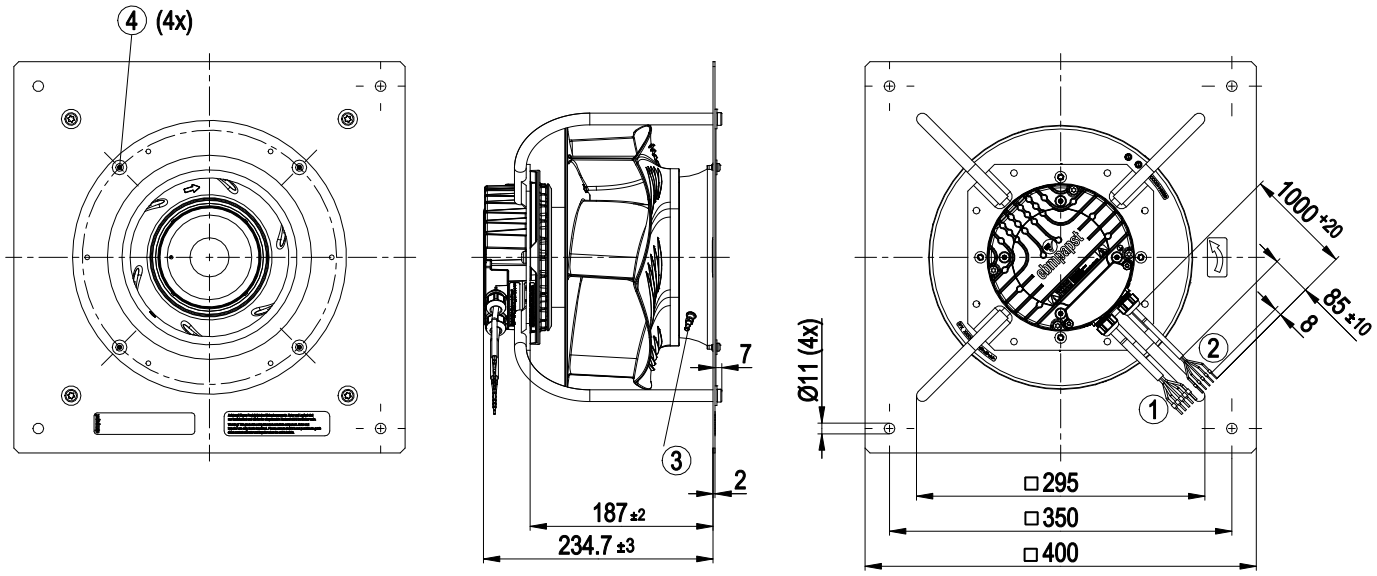
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Product drawing



1	Connection line PVC AWG18
	5x core-end sleeve
2	Connection line PVC AWG22
	5x core-end sleeve
3	Inlet nozzle 96355-2-4013 with a pressure tap (k-factor: 76)
4	Mounting for inlet nozzle and FlowGrid

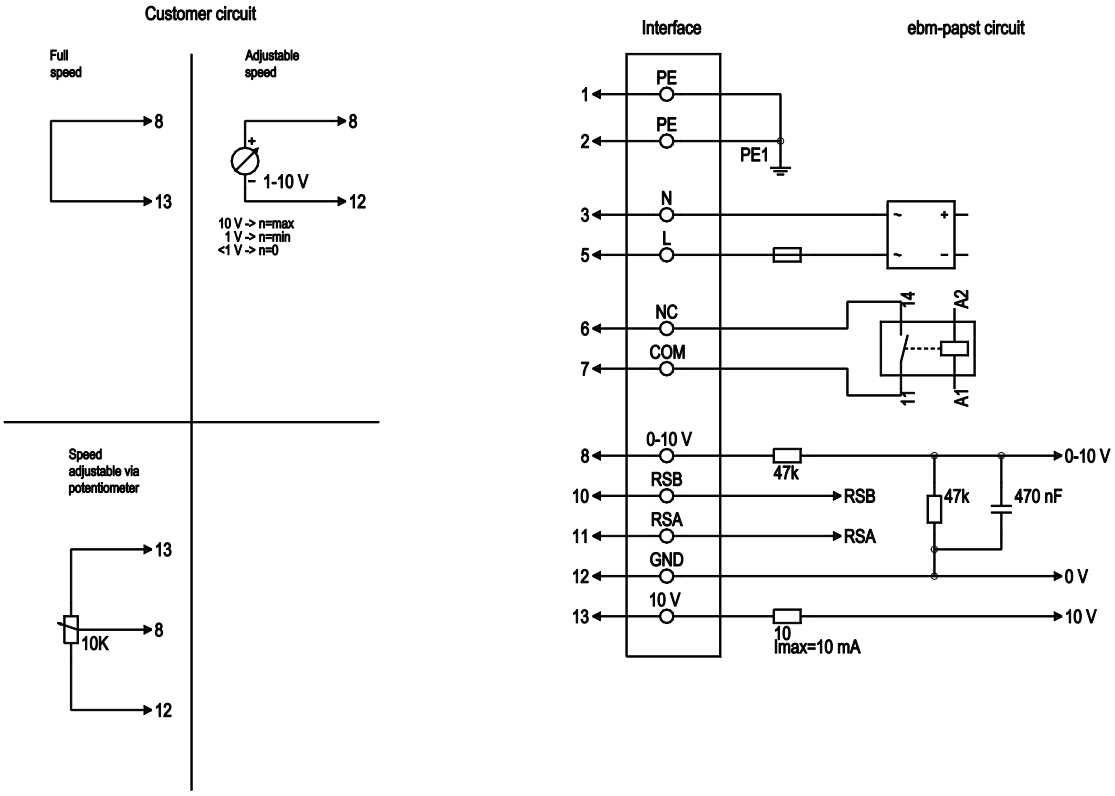
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	5	L	black	Supply voltage, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve
2	10	RSB	brown	RS485 interface for Modbus, RSB
2	11	RSA	white	RS485 interface for Modbus, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. potentiometer)

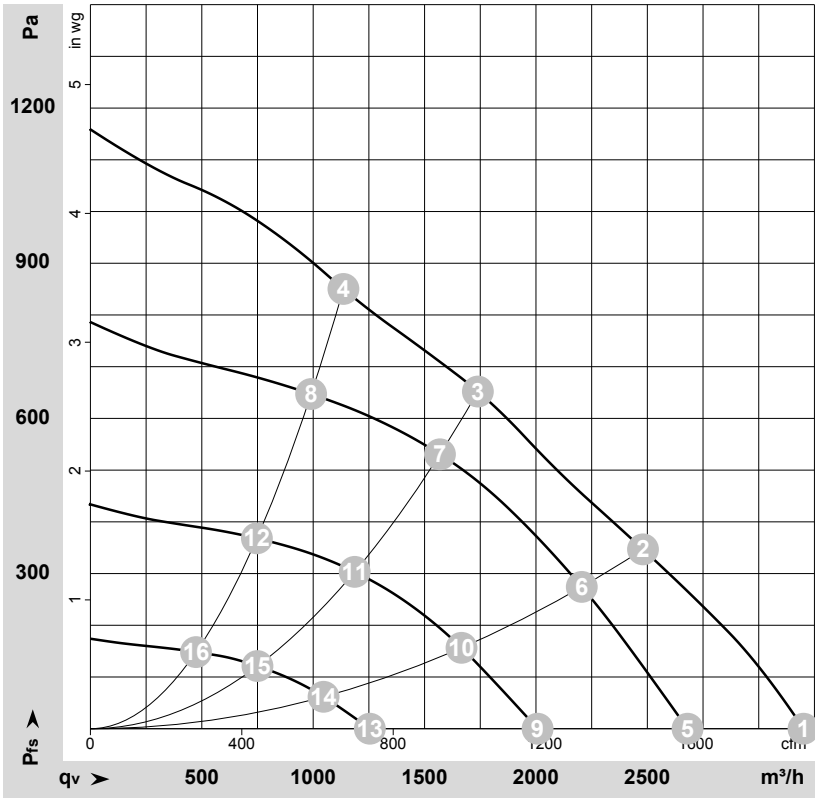
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174531-1

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	in. wg
1	230	50	3380	494	2.16	77	84	3200	0	1885	0.00
2	230	50	3125	500	2.30	70	77	2480	350	1460	1.41
3	230	50	3080	500	2.30	66	74	1740	650	1025	2.61
4	230	50	3220	500	2.30	70	78	1135	850	670	3.41
5	230	50	2840	296	1.31	73	80	2680	0	1575	0.00
6	230	50	2790	374	1.64	67	75	2205	275	1300	1.10
7	230	50	2775	386	1.70	64	72	1570	531	925	2.13
8	230	50	2805	359	1.58	67	74	990	648	585	2.60
9	230	50	2140	137	0.62	66	73	2005	0	1180	0.00
10	230	50	2115	174	0.78	60	67	1665	157	980	0.63
11	230	50	2105	181	0.81	56	63	1185	304	700	1.22
12	230	50	2120	164	0.74	59	67	745	368	440	1.48
13	230	50	1355	49	0.26	55	63	1255	0	740	0.00
14	230	50	1345	57	0.29	51	58	1045	62	615	0.25
15	230	50	1340	59	0.30	45	53	750	121	440	0.49
16	230	50	1345	55	0.29	46	54	475	148	280	0.59

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

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