K3G250-PR04-H1

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

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Nominal data

Type	**K3G250-PR04-H1**
Motor	**M3G084-DF**

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}	3080
Power consumption	W	500
Current draw	A	2.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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 (EN 17166)

		Actual	Req. 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 consumption 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 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-174531

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Technical description

Weight	7.586 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
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	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Connector with cable
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; CCC; EAC; UL 1004-7 + 60730-1

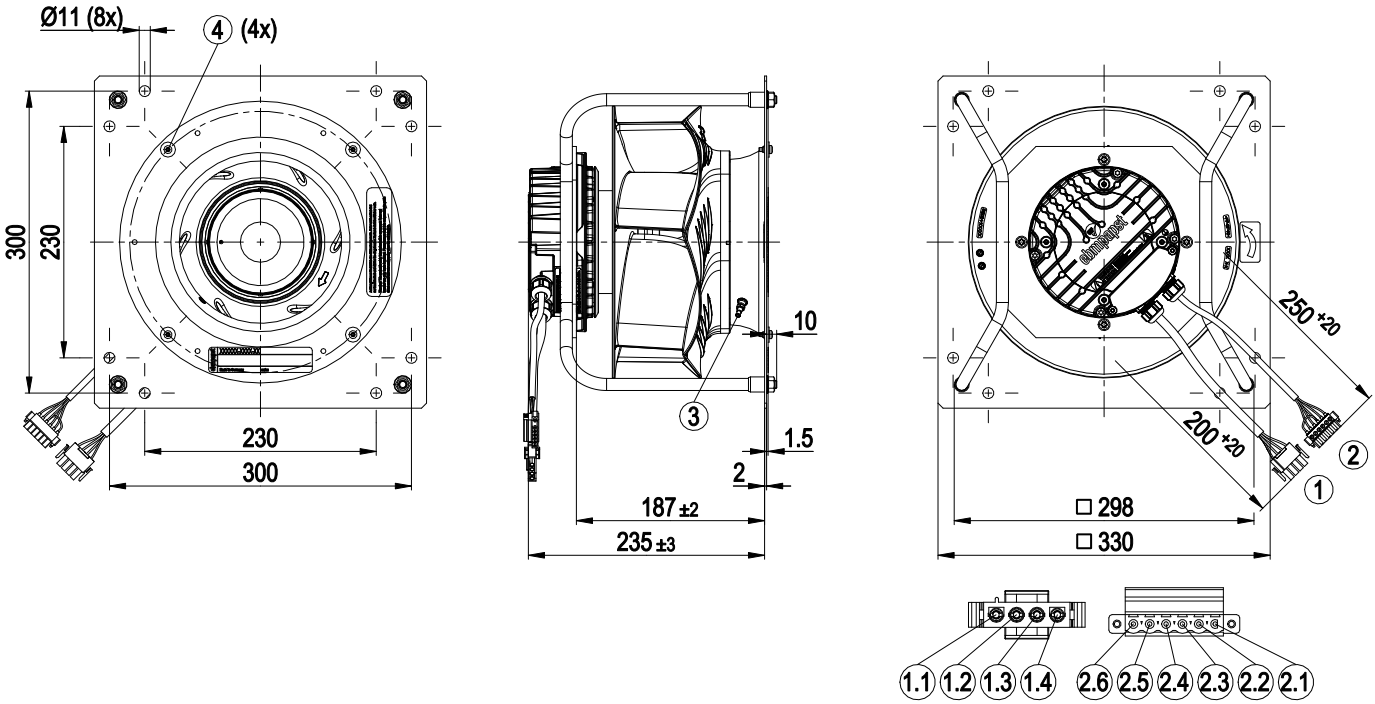
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Product drawing



1	Cable PVC AWG18
	4-pole connector housing TE 1-480702-0, 2x plug pin TE 926883-1, 1x plug pin TE 350654-1
1.1	PE
1.2	not used
1.3	L
1.4	N
2	Cable PVC AWG22
	6-pole connector housing Phoenix 1778027 (MSTB 2.5/6-STF-5.08), 6x wire-end ferrules
2.1	RSA
2.2	RSB
2.3	GND
2.4	0-10 V
2.5	+10 V
2.6	Bridge (GND)
3	Inlet ring with pressure tap (k-factor: 76)
4	Attachment for inlet ring and FlowGrid

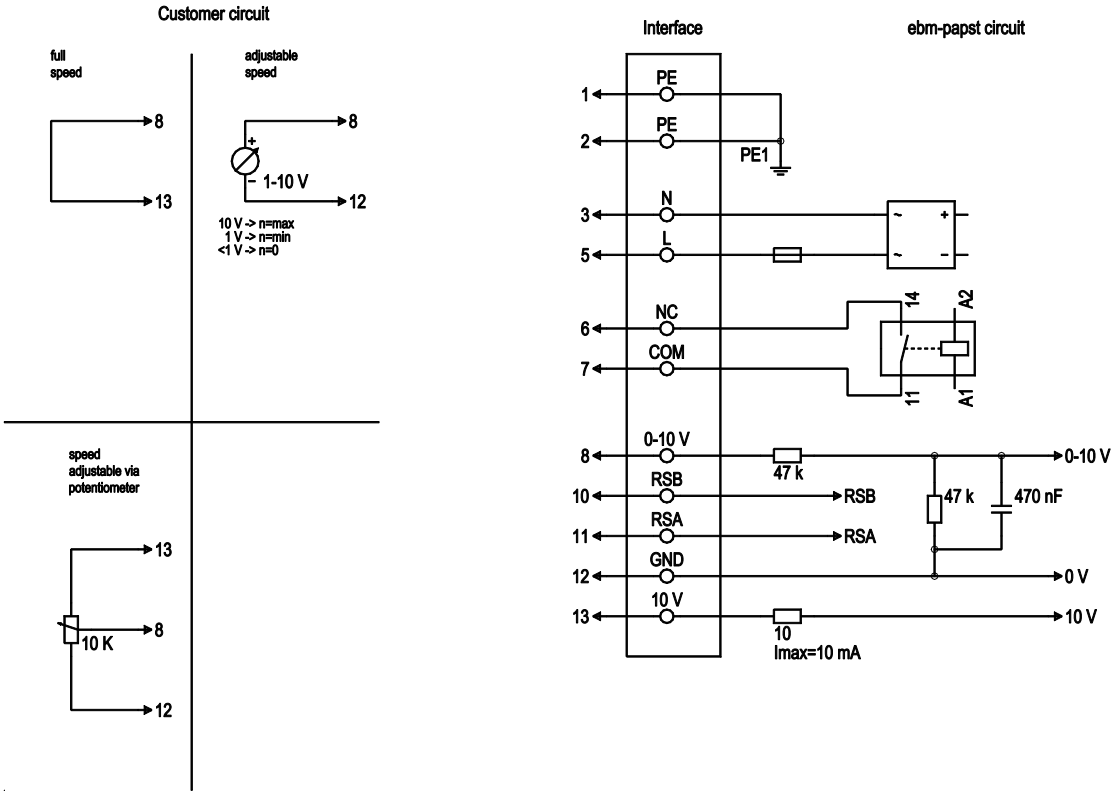
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Connection diagram



No.	Conn.	Designation	Function/assignment
1	1	PE	Protective earth
1	2	PE	not brought out via wire
1	3	N	Supply connection, power supply, neutral conductor, voltage range see nameplate, 50/60 Hz
1	5	L	Supply connection, power supply, phase, voltage range see nameplate, 50/60 Hz
1	6	NC	not brought out via wire
1	7	COM	not brought out via wire
2	8	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
2	10	RSB	RS485 interface for MODBUS, RSB; SELV
2	11	RSA	RS485 interface for MODBUS, RSA; SELV
2	12	GND	Reference ground for control interface, SELV
2	13	+10 V	Fixed voltage output 10 VDC, +10 V ± 3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); SELV

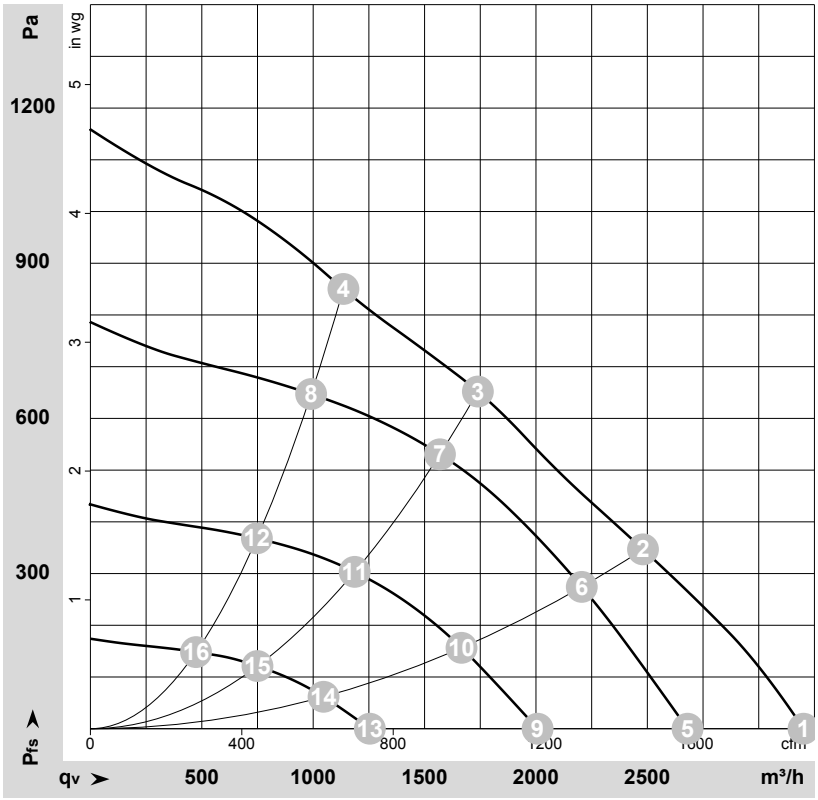
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174531-1

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	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 = Voltage · 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

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