K3G250-BB04-H1

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**K3G250-BB04-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}	3170
Power consumption	W	500
Current draw	A	2.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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}	%	64.7	48.5
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	0.52
09 Air flow q_v	m^3/h	1750
09 Pressure increase p_{fs}	Pa	628
10 Speed (rpm) n	min^{-1}	3135
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-161079

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Technical description

Weight	8.2 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	7
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	EAC; UL 1004-7 + 60730; CSA C22.2 No. 77 + CAN/CSA-E60730-1

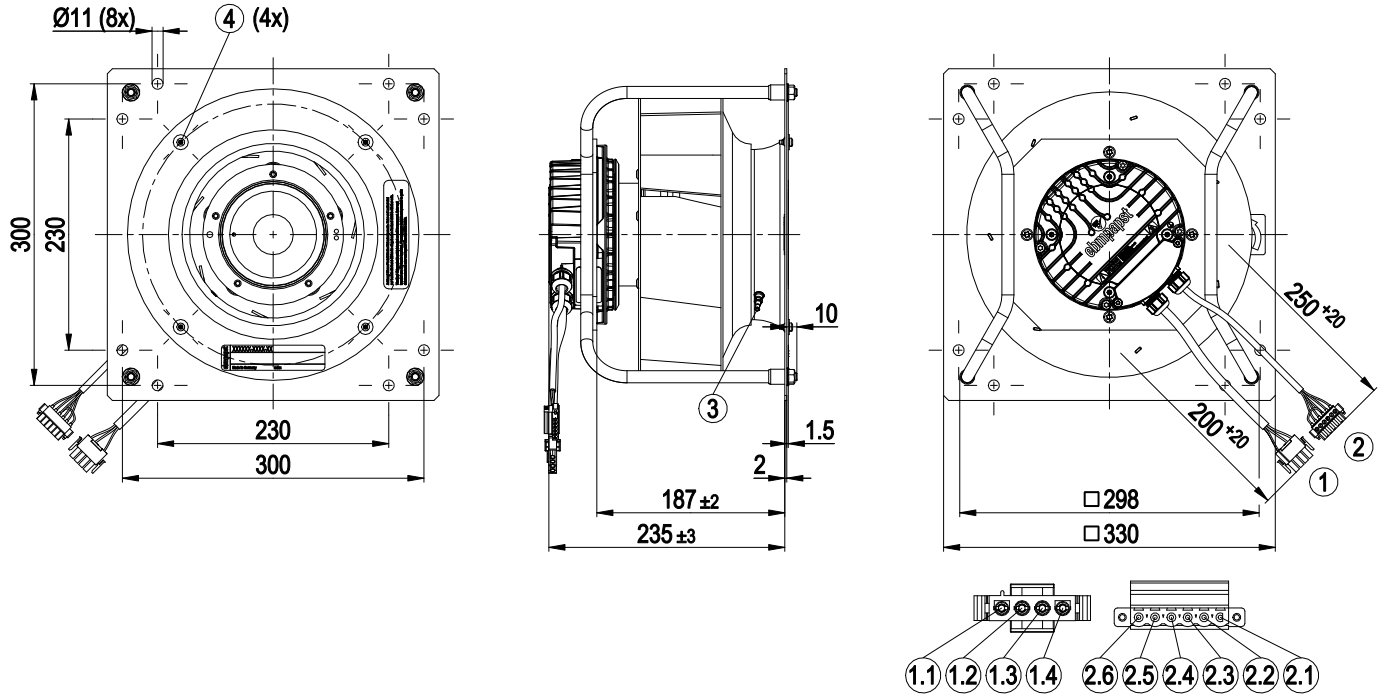
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Product drawing



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: 70)
4	Attachment for inlet ring and FlowGrid

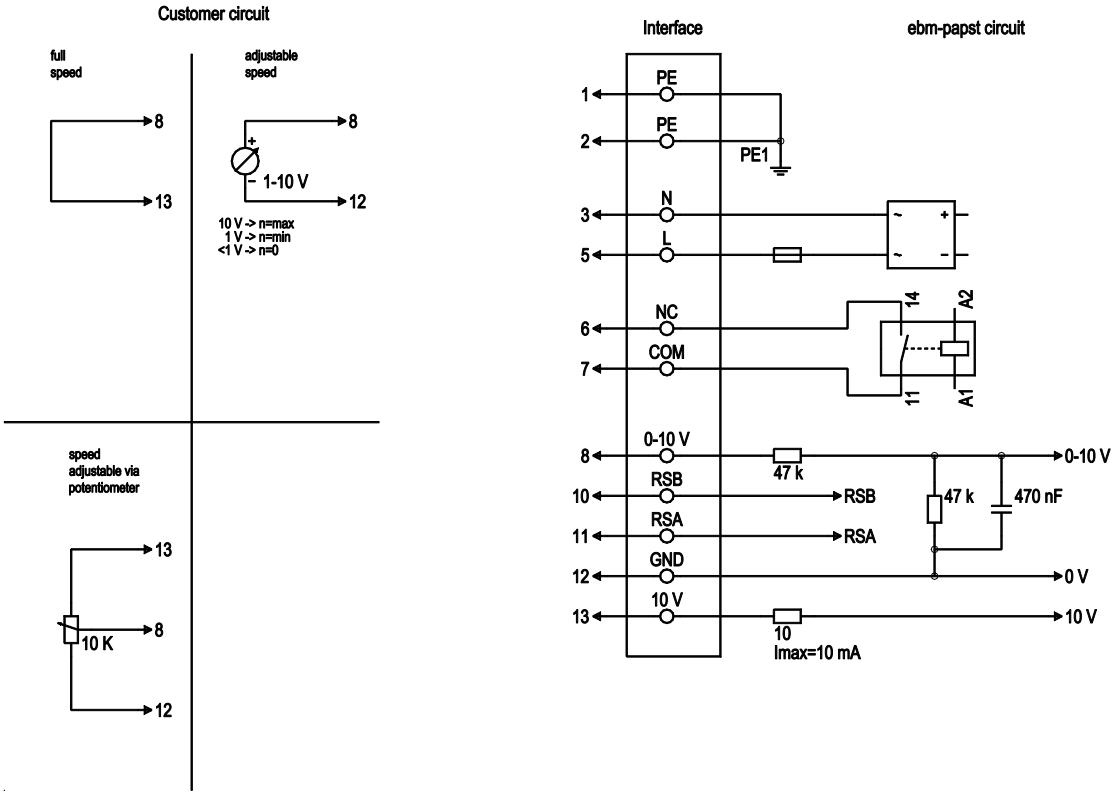
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Connection diagram



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

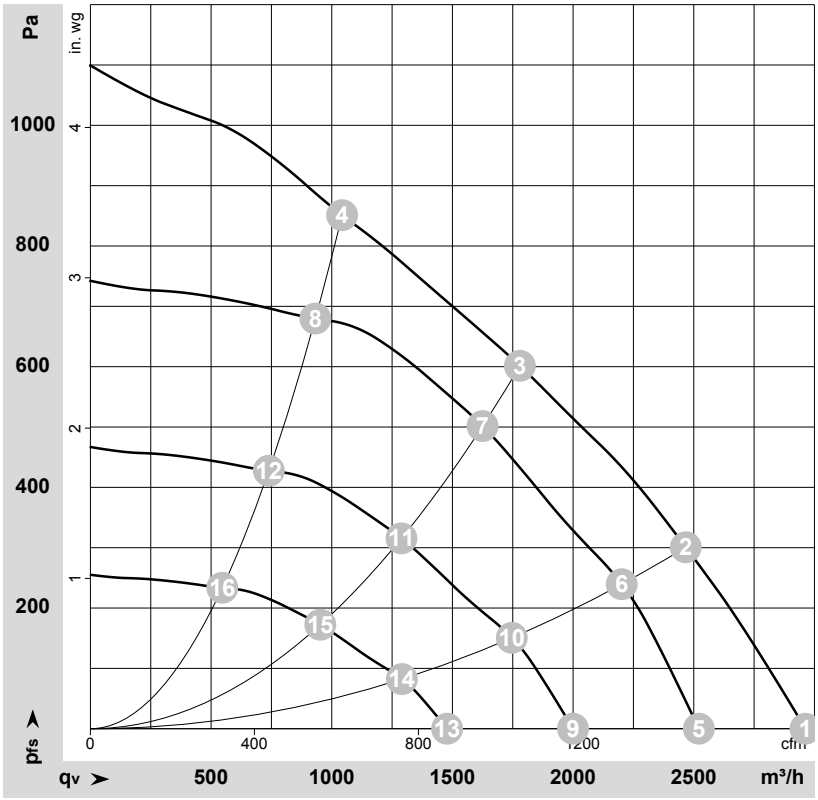
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-156289-1

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

	Wired	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	1~	230	50	3410	481	2.11	77	84	89	2965	0	1745	0.00
2	1~	230	50	3240	500	2.20	72	79	86	2465	300	1450	1.20
3	1~	230	50	3170	500	2.20	67	75	81	1780	600	1045	2.41
4	1~	230	50	3245	500	2.20	73	81	87	1045	850	615	3.41
5	1~	230	50	2900	296	1.30	73	80	85	2520	0	1485	0.00
6	1~	230	50	2900	363	1.59	69	76	83	2200	245	1295	0.98
7	1~	230	50	2900	387	1.70	64	72	79	1625	503	955	2.02
8	1~	230	50	2900	362	1.59	71	79	85	930	679	550	2.73
9	1~	230	50	2300	148	0.65	67	74	79	2000	0	1175	0.00
10	1~	230	50	2300	181	0.79	63	71	77	1745	154	1030	0.62
11	1~	230	50	2300	193	0.85	58	66	73	1290	317	760	1.27
12	1~	230	50	2300	181	0.79	65	73	80	740	427	435	1.71
13	1~	230	50	1700	60	0.26	59	67	72	1480	0	870	0.00
14	1~	230	50	1700	73	0.32	55	63	70	1290	84	760	0.34
15	1~	230	50	1700	78	0.34	51	59	65	955	173	560	0.69
16	1~	230	50	1700	73	0.32	57	66	72	545	233	320	0.94

Wired = Wiring · 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 LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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