K3G250-PR17-I3

EC centrifugal fan - RadiPac

backward-curved, single-intake

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Nominal data

Type	**K3G250-PR17-I3**
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}	3450
Power consumption	W	750
Current draw	A	3.3
Min. ambient temperature	°C	-40
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 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	67	50
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		79	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.71
09 Air flow q_v	m^3/h	2110
09 Pressure increase p_{fs}	Pa	749
10 Speed (rpm) n	min^{-1}	3395
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

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

LU-174661

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the 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 description

Weight	8.983 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PP plastic, sheet-metal plate painted black
Support plate material	Sheet steel, galvanized and painted black
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized and painted black
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2+S
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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	Terminal box
Motor protection	Thermal switch auto reset, internally connected
Protection class	I (with customer connection of protective earth)

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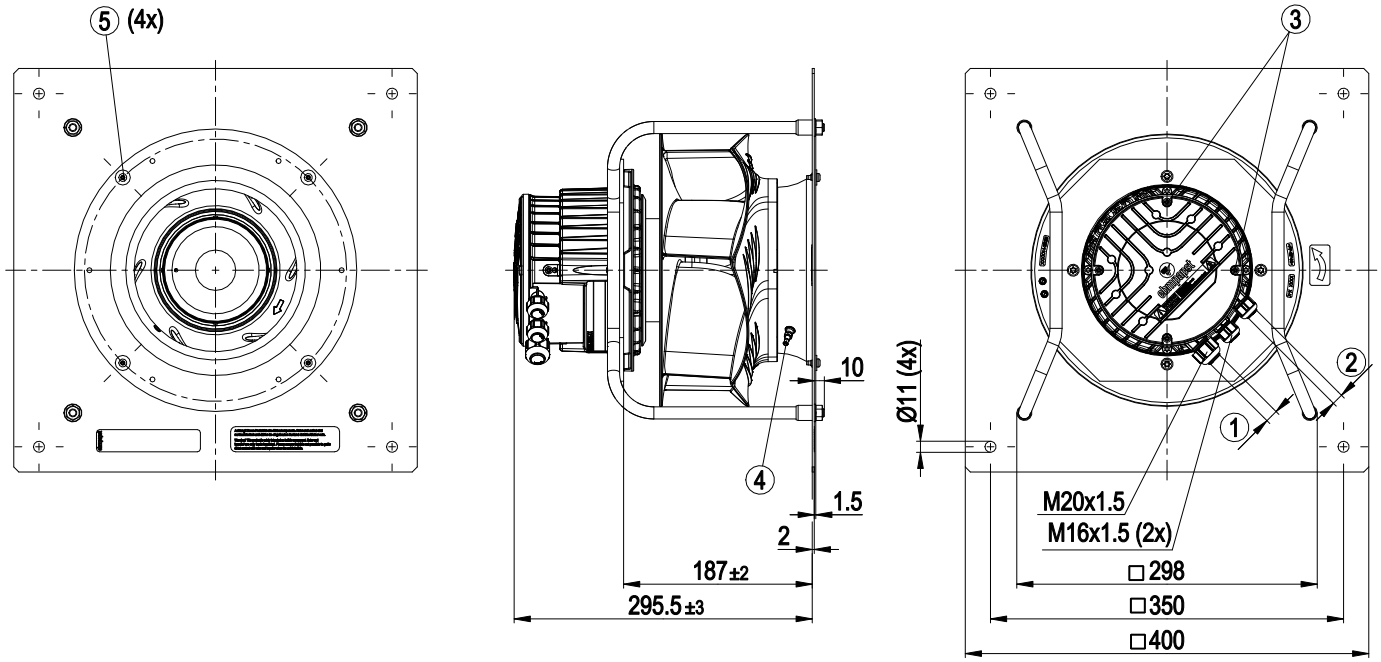
Conformity with standards	EN 61800-5-1; UKCA; CE
Approval	UL 1004-7 + 60730-1; EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1

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Product drawing



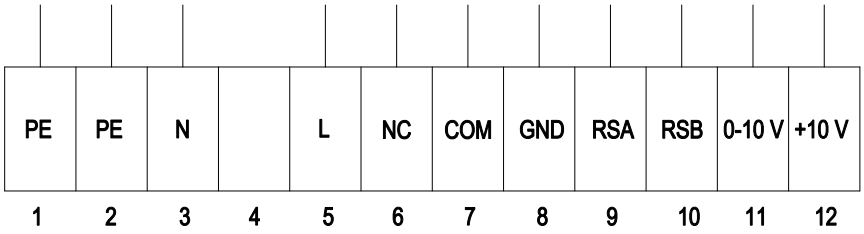
1	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8±0.3 Nm
2	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8±0.3 Nm
3	Tightening torque 1.5 ± 0.2 Nm
4	Inlet ring with pressure tap (k-factor: 76)
5	Attachment for inlet ring and FlowGrid

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Connection diagram



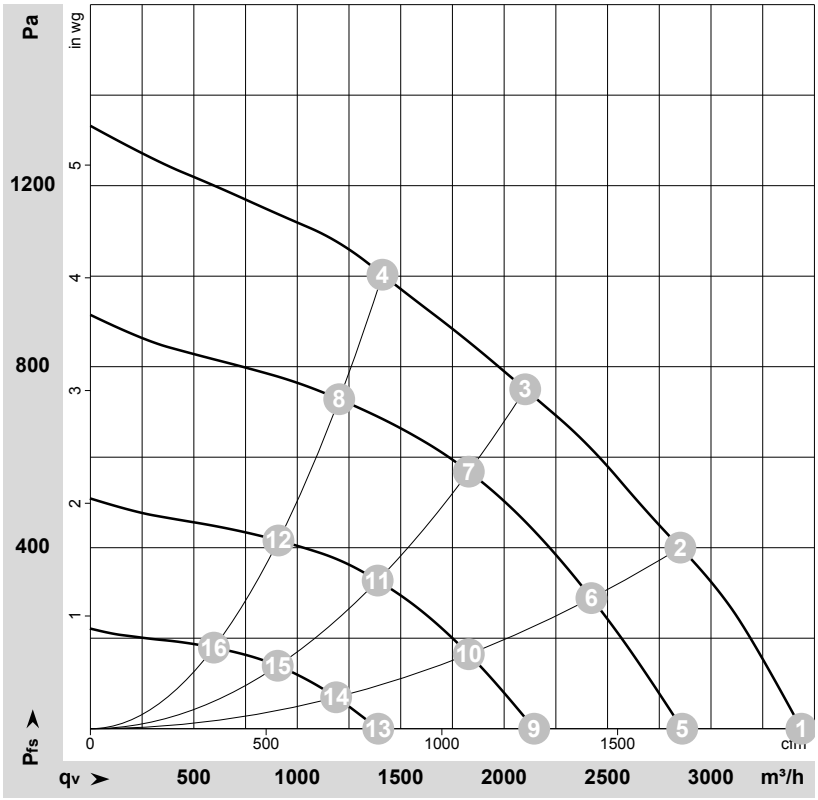
No.	Conn.	Designation	Function/assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	N	Power supply, neutral conductor
	4	-	not used
	5	L	Power supply, phase
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
	7	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; basic insulation on supply side and reinforced insulation on control interface side
	8	GND	Reference ground for control interface, SELV
	9	RSA	RS485 interface for MODBUS, RSA; SELV
	10	RSB	RS485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot)

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174661-1
Date: 2015-09-04
Nozzle: 96350-2-4013

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	3645	627	2.74	80	87	3435	0	2025	0.00
2	230	50	3490	731	3.19	76	82	2850	400	1680	1.61
3	230	50	3450	750	3.30	73	78	2100	750	1235	3.01
4	230	50	3500	720	3.15	76	82	1410	1000	830	4.01
5	230	50	3035	369	1.64	76	83	2860	0	1685	0.00
6	230	50	2975	454	2.01	73	78	2420	289	1425	1.16
7	230	50	2960	477	2.10	71	76	1830	568	1075	2.28
8	230	50	2980	449	1.99	72	77	1205	728	710	2.92
9	230	50	2290	172	0.79	69	76	2145	0	1260	0.00
10	230	50	2260	210	0.95	66	72	1830	166	1075	0.67
11	230	50	2250	225	1.01	64	69	1390	329	820	1.32
12	230	50	2265	211	0.96	65	71	910	416	535	1.67
13	230	50	1510	64	0.37	58	65	1390	0	820	0.00
14	230	50	1490	75	0.41	55	63	1190	70	700	0.28
15	230	50	1485	79	0.42	52	59	905	140	535	0.56
16	230	50	1490	75	0.41	53	59	595	179	350	0.72

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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