

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.fansco.com

www.fansco.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-PR04-H3	
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 <sup>-1</sup>	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 (prEN 17166)**

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	67.8	48.5	09 Power consumption $P_{ed}$	kW	0.51
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	1800
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	635
04 Efficiency grade N		81.3	62	10 Speed (rpm) n	min <sup>-1</sup>	3065
05 Variable speed drive		Yes		11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$ 

LU-174531

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 ebmpapst. 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).

## Technical description

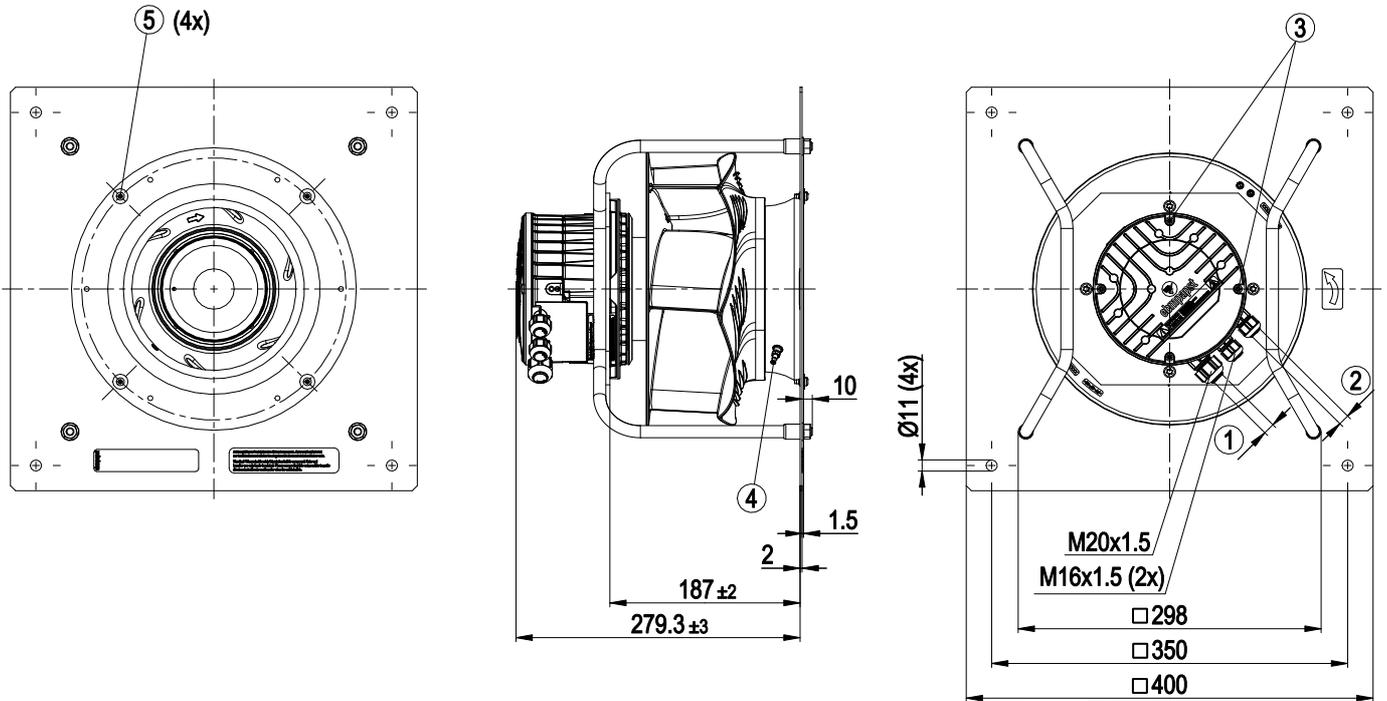
Weight	8.583 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PP plastic, sheet-metal plate painted black
Support plate material	Sheet steel, galvanized and painted black
Support bracket 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
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	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Power limiter</li> <li>- Motor current limitation</li> <li>- PFC, active</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
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)
Conformity with standards	EN 61800-5-1; CE; UKCA
Approval	UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1
Comment	Conformity with EN 60335-1 in preparation

# EC centrifugal module - RadiPac

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## Product drawing



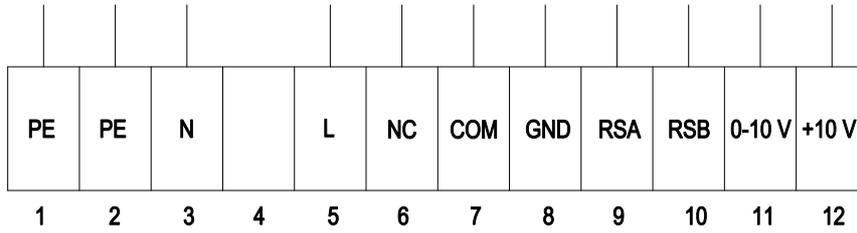
1	Cable diameter min. 8 mm, max. 12 mm, tightening torque $1.8 \pm 0.3$ Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque $1.8 \pm 0.3$ Nm
2	Cable diameter min. 6 mm, max. 10 mm, tightening torque $1.8 \pm 0.3$ Nm (use must be made of seal provided) Cable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

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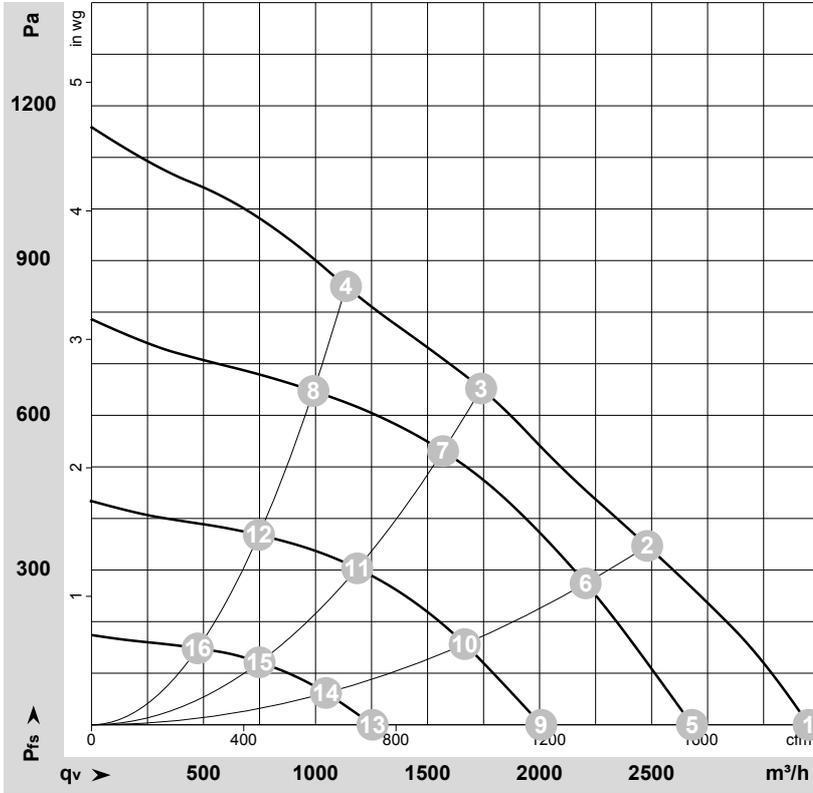
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## Connection diagram



No.	Conn.	Designation	Function/assignment
1	PE	PE	Protective earth
2	PE	PE	Protective earth
3	N	N	Power supply, neutral conductor
4	-	-	not used
5	L	L	Power supply, phase
6	NC	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	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	GND	Reference ground for control interface, SELV
9	RSA	RSA	RS485 interface for MODBUS, RSA; SELV
10	RSB	RSB	RS485 interface for MODBUS, RSB; SELV
11	0-10 V	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
12	+10 V	+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)

## Curves: Air performance 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-174531-1  
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 ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /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<sub>ed</sub> = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase