

backward-curved, single-intake

with support bracket

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## Nominal data

Type	K3G310-PT08-J2	
Motor	M3G084-GF	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min <sup>-1</sup>	3010
Power consumption	W	1230
Current draw	A	1.9
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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 $\eta_{es}$	%	66.7	52.3	09 Power consumption $P_{ed}$	kW	1.18
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	3635
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	729
04 Efficiency grade N		76.4	62	10 Speed (rpm) n	min <sup>-1</sup>	3010
05 Variable speed drive		Yes		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 =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-176006



## Technical description

<b>Weight</b>	15.5 kg
<b>Size</b>	310 mm
<b>Motor size</b>	84
<b>Rotor surface</b>	Painted black
<b>Terminal box material</b>	PP plastic
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	Sheet aluminum
<b>Support plate material</b>	Sheet steel, galvanized
<b>Support bracket material</b>	Steel, painted black
<b>Inlet nozzle material</b>	Sheet steel, galvanized
<b>Number of blades</b>	5
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H1
<b>Ambient temperature note</b>	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.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	Shaft horizontal or rotor on bottom; rotor on top on request
<b>Condensation drainage holes</b>	On rotor side
<b>Mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- External 24 V input (parameter setting)</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Motor current limitation</li> <li>- PFC, passive</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- EEPROM write cycles: 100,000 maximum</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>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) internally connected

K3G310-PT08-J2

## EC centrifugal module - RadiPac

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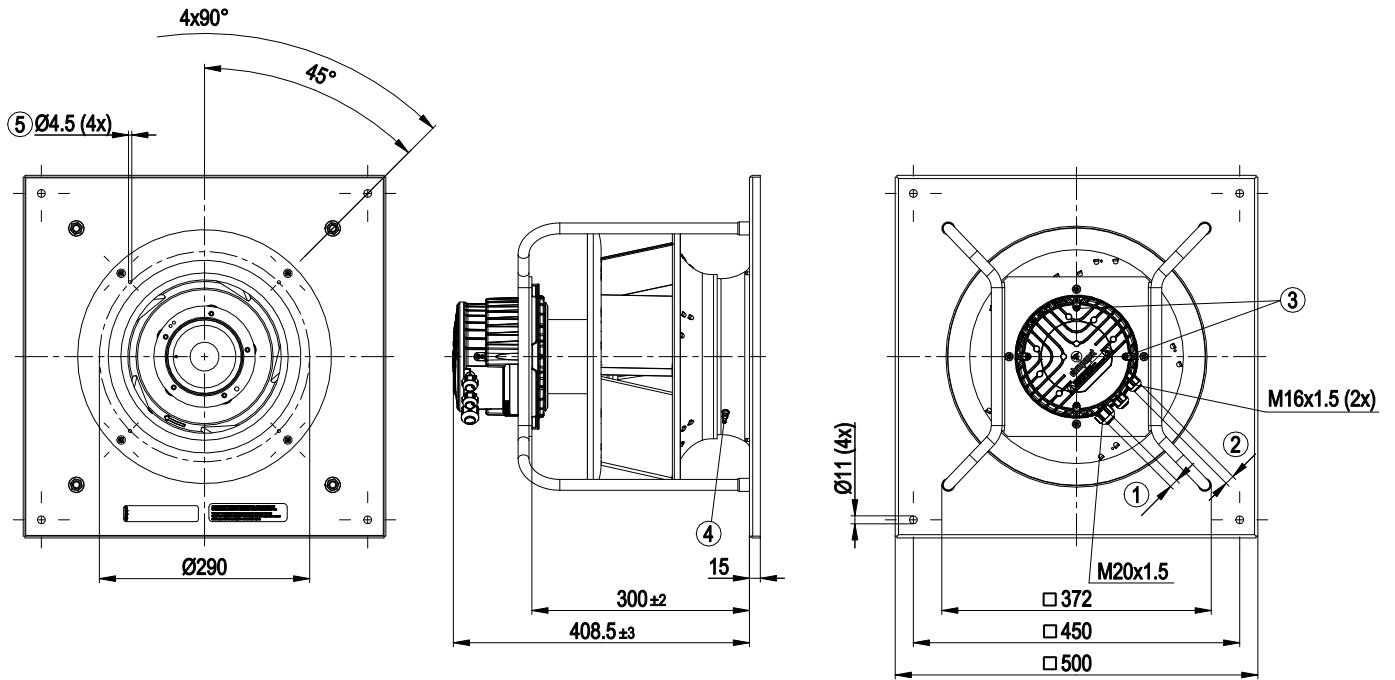
<b>Protection class</b>	I (with customer connection of protective earth)
<b>Conformity with standards</b>	EN 61800-5-1; CE
<b>Approval</b>	CCC; CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1
<b>Comment</b>	Conformity with EN 60335-1 in preparation



# EC centrifugal module - RadiPac

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## Product drawing



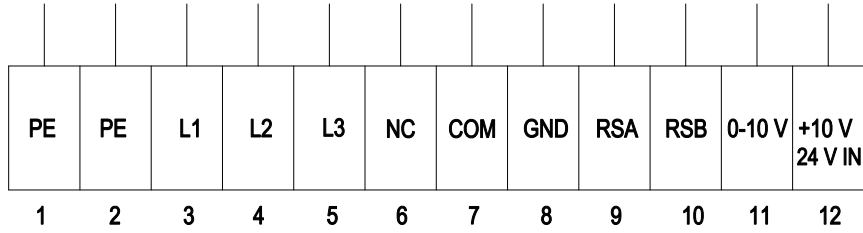
1	Cable diameter min. 8 mm, max. 12 mm, tightening torque $1.8 \pm 0.3$ Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque $1.8 \pm 0.3$ Nm
2	Cable diameter min. 6 mm, max. 10 mm, tightening torque $1.8 \pm 0.3$ Nm (use must be made of seal provided) Cable 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: 116)
5	Mounting holes for FlowGrid

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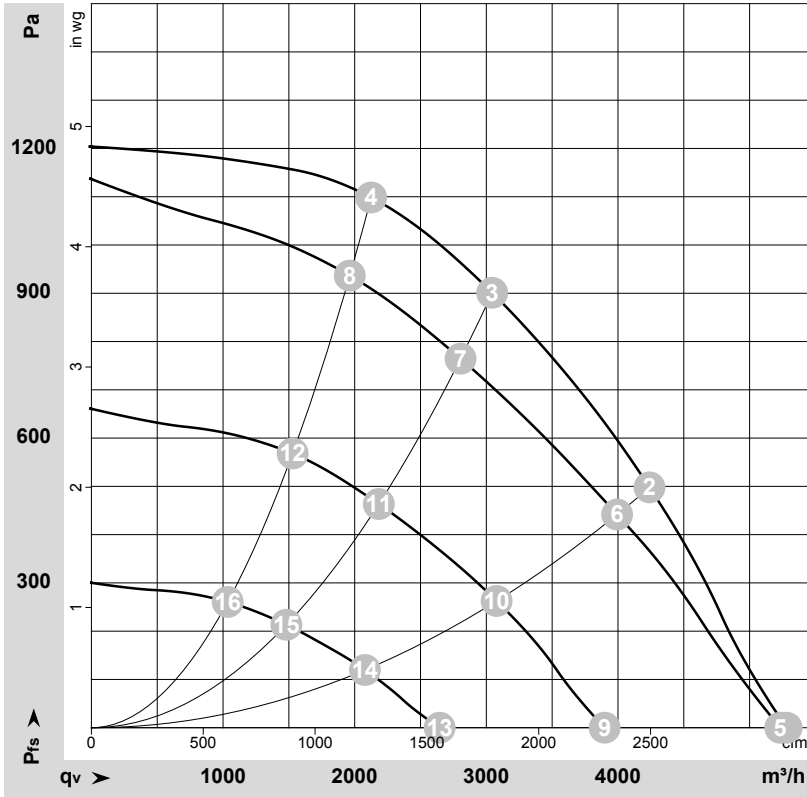
## Connection diagram



No.	Conn.	Designation	Function/assignment
1	PE	PE	Protective earth
2	PE	PE	Protective earth
3	L1	L1	Power supply
4	L2	L2	Power supply
5	L3	L3	Power supply
6	NC	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
7	COM	COM	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic 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); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply



## Curves: Air performance 50 Hz



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

Measurement: LU-176006-1

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>	LwA <sub>out</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)	dB(A)	m <sup>3</sup> /h	Pa	cfm	in. wg
1	400	50	3010	673	1.06	84	92	94	5280	0	3110	0.00
2	400	50	3010	1050	1.61	75	84	87	4240	500	2495	2.01
3	400	50	3010	1230	1.90	69	78	82	3045	900	1790	3.61
4	400	50	3010	1189	1.82	77	85	87	2125	1100	1250	4.42
5	400	50	2995	642	1.01	84	92	94	5230	0	3080	0.00
6	400	50	2835	880	1.36	74	82	85	3995	442	2350	1.77
7	400	50	2775	972	1.50	68	76	79	2805	767	1650	3.08
8	400	50	2795	941	1.45	74	81	85	1965	937	1155	3.76
9	400	50	2250	296	0.54	77	85	86	3900	0	2295	0.00
10	400	50	2190	423	0.71	67	76	78	3080	263	1810	1.06
11	400	50	2165	472	0.78	62	70	74	2185	465	1285	1.87
12	400	50	2175	456	0.75	69	75	77	1530	568	900	2.28
13	400	50	1530	114	0.30	67	76	77	2645	0	1555	0.00
14	400	50	1485	153	0.35	58	66	70	2080	120	1225	0.48
15	400	50	1475	167	0.37	53	61	66	1480	214	870	0.86
16	400	50	1475	164	0.37	57	65	68	1035	261	610	1.05

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  
LwA<sub>out</sub> = Sound power level outlet side · q<sub>v</sub> = Air flow · P<sub>fs</sub> = Pressure increase