

K3G310-FB01-01 ebmpapst Datasheet

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Nominal data

Type	K3G310-FB01-01	
Motor	M3G074-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	2350
Power consumption	W	450
Current draw	A	2.0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	68.5	47.9	09 Power consumption P_{ed}	kW	0.45
02 Measurement category		A		09 Air flow q_v	m ³ /h	2405
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	420
04 Efficiency grade N		82.6	62	10 Speed (rpm) n	min ⁻¹	2345
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-210369

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).



Technical description

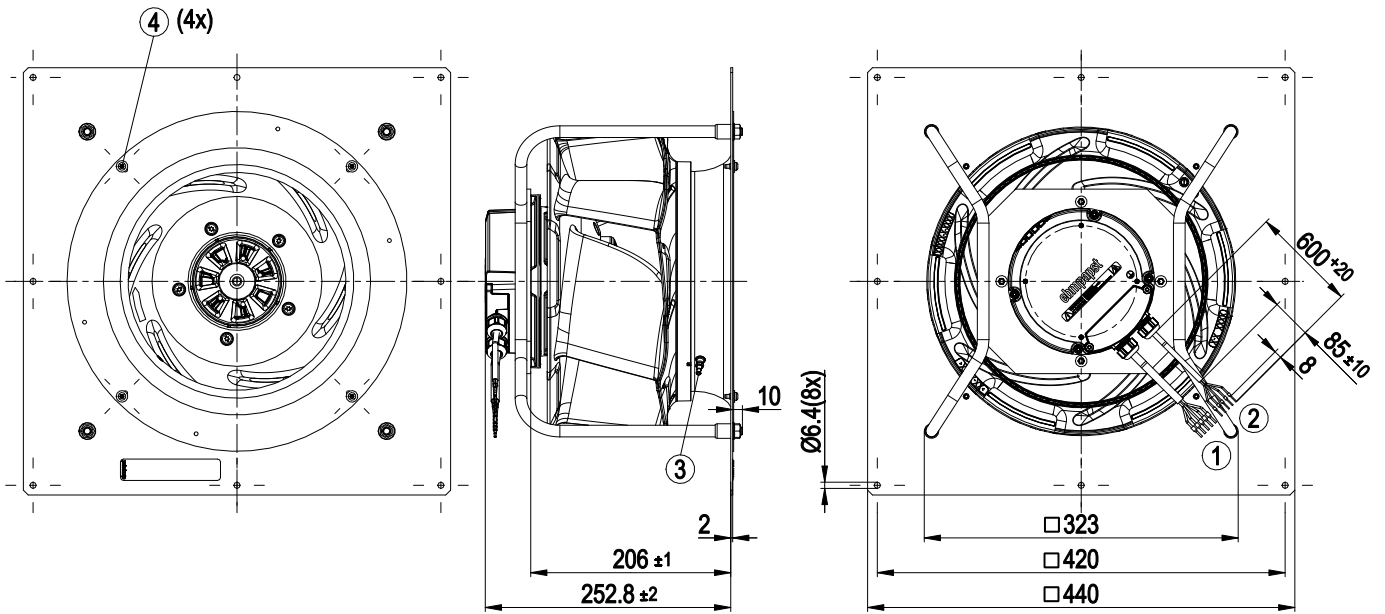
Weight	8.68 kg
Size	310 mm
Motor size	74
Rotor surface	Thick-film passivated
Impeller material	PP plastic
Housing material	Stainless steel
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection 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
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - 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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; CE
Approval	EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

EC centrifugal module - RadiCal

backward-curved, single-intake

with support bracket

Product drawing



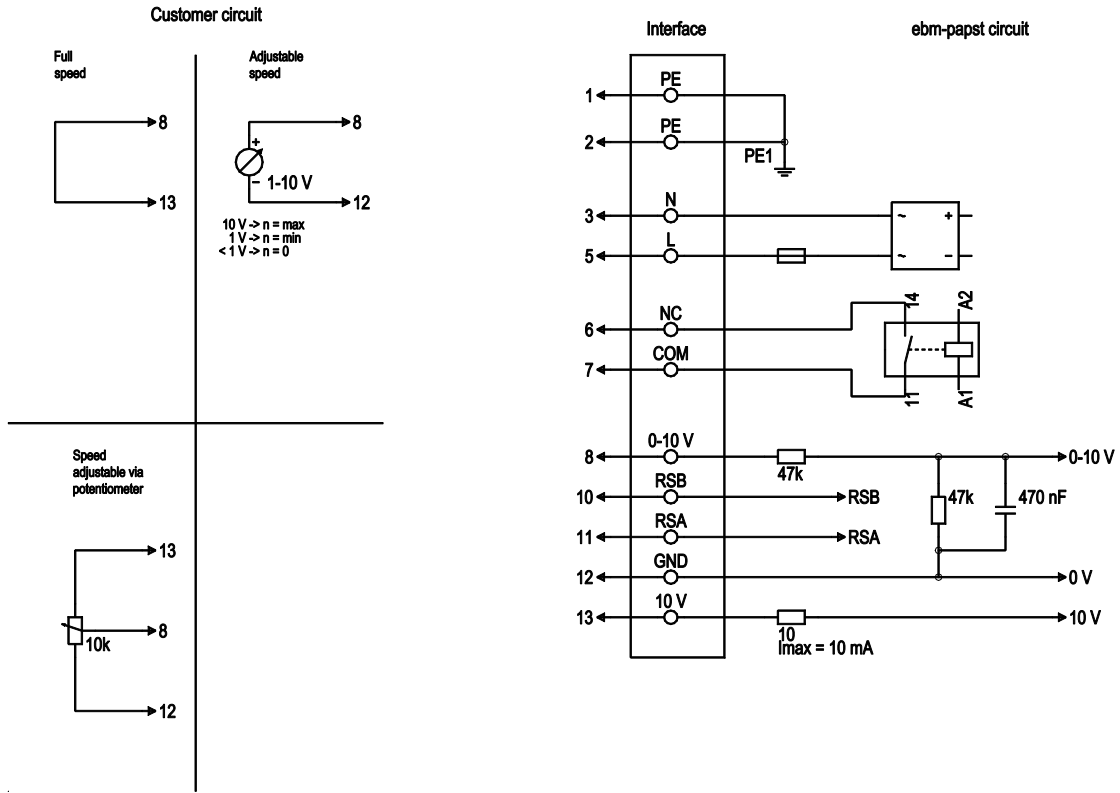
1	Cable PVC AWG18 5x wire-end ferrule
2	Cable PVC AWG22 5x wire-end ferrule
3	Inlet ring with pressure tap (k-factor: 128)
4	Attachment for inlet ring and FlowGrid



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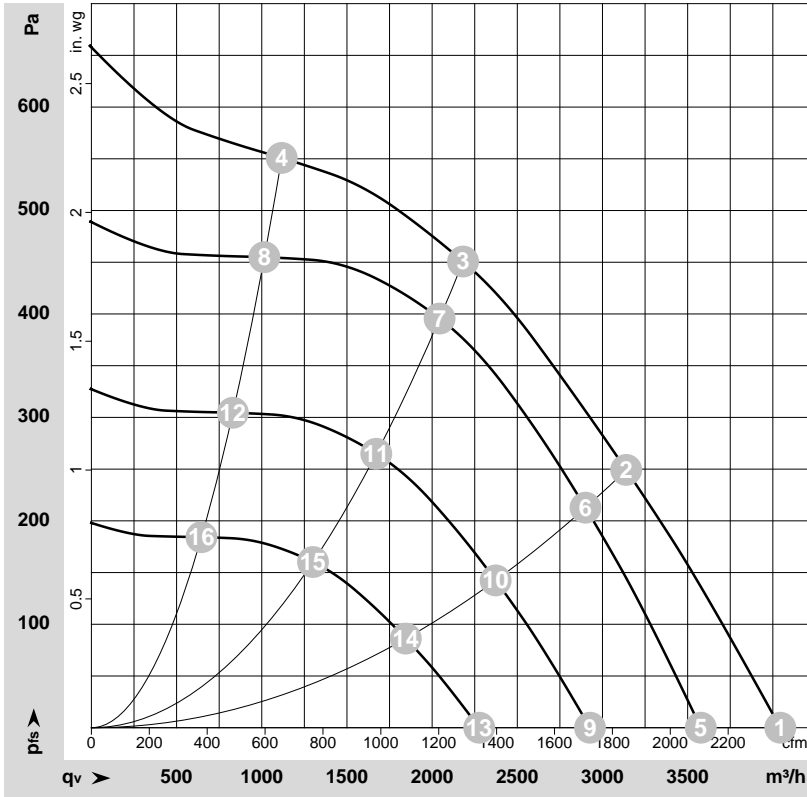
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; $R_i = 100\text{ k}\Omega$; adjustable curve
2	10	RSB	brown	RS485 interface for MODBUS, RSB
2	11	RSA	white	RS485 interface for MODBUS, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, +10 V $\pm 3\%$; 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-210369-1

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

	Wired	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	1~	230	50	2485	351	1.55	74	80	4045	0	2380	0.00
2	1~	230	50	2380	441	1.93	68	75	3140	250	1850	1.00
3	1~	230	50	2350	450	2.00	66	73	2180	450	1285	1.81
4	1~	230	50	2420	409	1.79	69	76	1115	550	655	2.21
5	1~	230	50	2200	243	1.07	71	77	3575	0	2105	0.00
6	1~	230	50	2200	348	1.53	66	73	2900	213	1705	0.86
7	1~	230	50	2200	372	1.63	64	71	2045	396	1205	1.59
8	1~	230	50	2200	307	1.35	66	74	1015	455	595	1.83
9	1~	230	50	1800	133	0.59	66	72	2925	0	1725	0.00
10	1~	230	50	1800	191	0.84	61	68	2375	143	1395	0.57
11	1~	230	50	1800	204	0.89	59	66	1670	265	985	1.06
12	1~	230	50	1800	168	0.74	61	69	830	305	490	1.22
13	1~	230	50	1400	63	0.28	60	66	2275	0	1340	0.00
14	1~	230	50	1400	90	0.39	55	61	1845	86	1085	0.35
15	1~	230	50	1400	96	0.42	53	60	1300	160	765	0.64
16	1~	230	50	1400	79	0.35	55	62	645	184	380	0.74

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
 q_v = Air flow · P_{fs} = Pressure increase

