K3G250-BB01-I8

EC centrifugal module

backward-curved, single-intake

with support bracket

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Nominal data

Type	**K3G250-BB01-I8**
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}	3520
Power consumption	W	740
Current draw	A	3.2
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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	62.6	50
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		74.6	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.72
09 Air flow q_v	m^3/h	1795
09 Pressure increase p_{fs}	Pa	828
10 Speed (rpm) n	min^{-1}	3435
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-184014

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Technical description

Weight	4.4 kg
Fan size	250 mm
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
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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	With plug
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; CE

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Approval	CCC; C22.2 No.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730; EAC

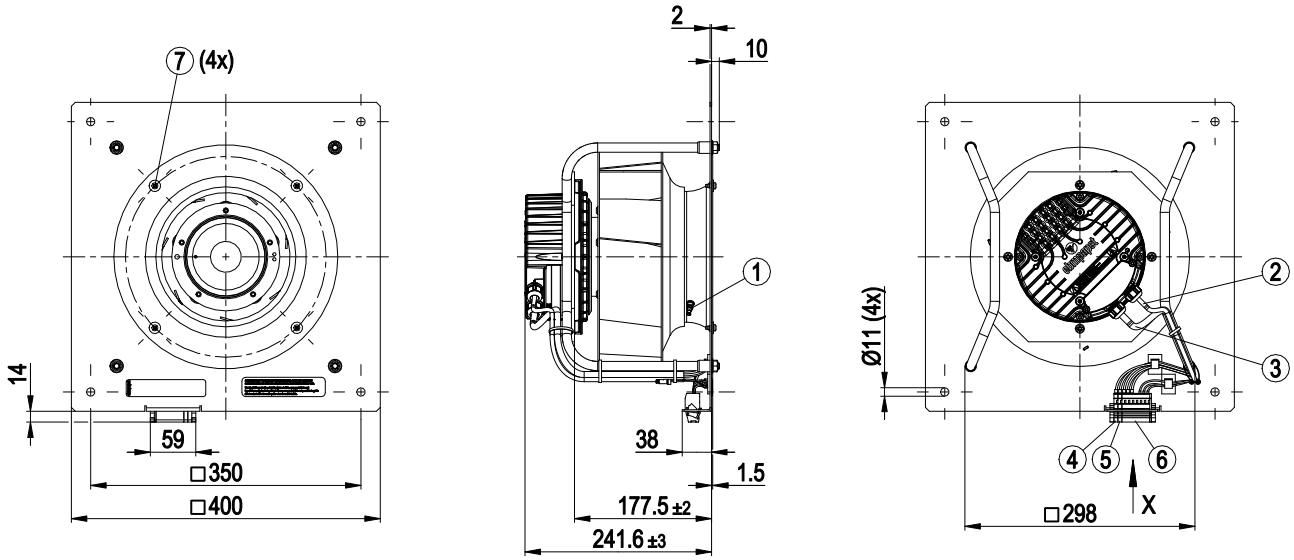
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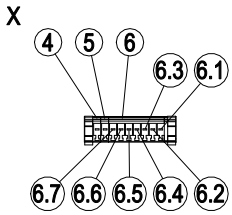
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Product drawing





1	Inlet ring with pressure tap (k-factor: 70)
2	Cable PVC AWG22
3	Cable PVC AWG18
4	PE (green/yellow), connector housing Phoenix CLIPLINE 3042201
5	N (blue), connector housing Phoenix CLIPLINE 3042191
6	7-pole connector housing Phoenix CLIPLINE 3041367
6.1	0-10 V PWM
6.2	GND
6.3	+10 V
6.4	Not used / no function
6.5	NC
6.6	COM
6.7	L
7	Attachment for inlet ring and FlowGrid

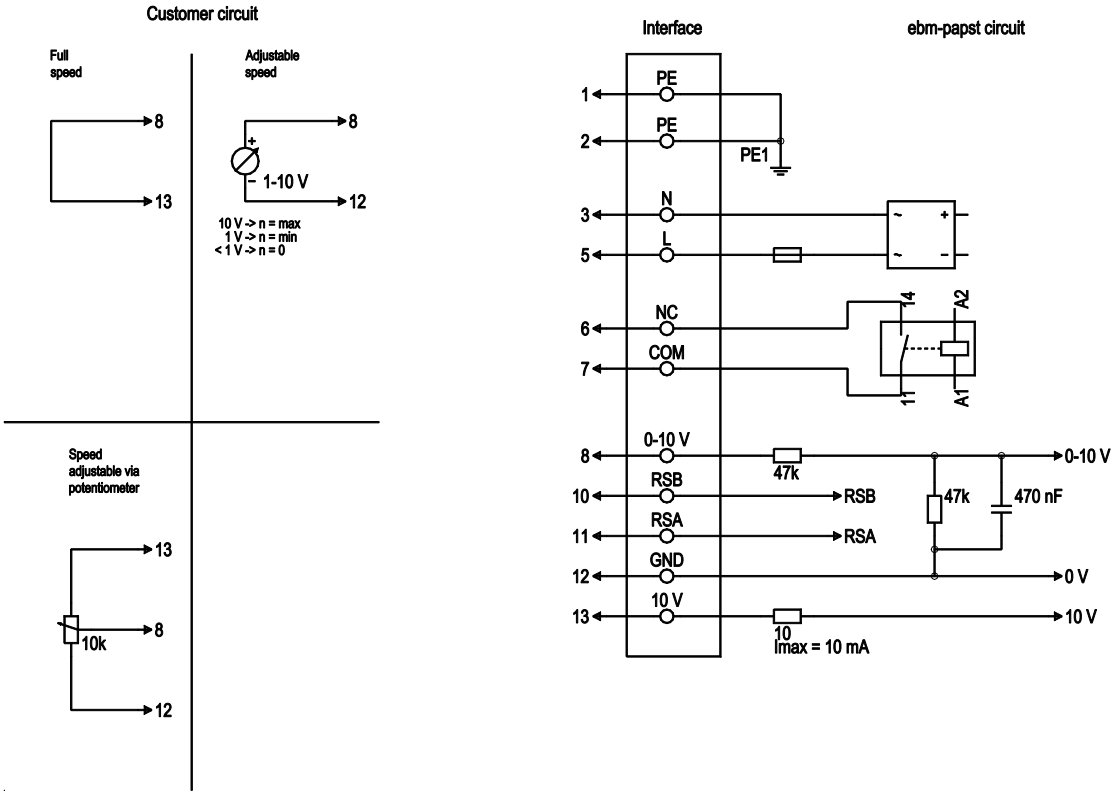
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Connection diagram



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; Ri = 100 kΩ; 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 ±3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)

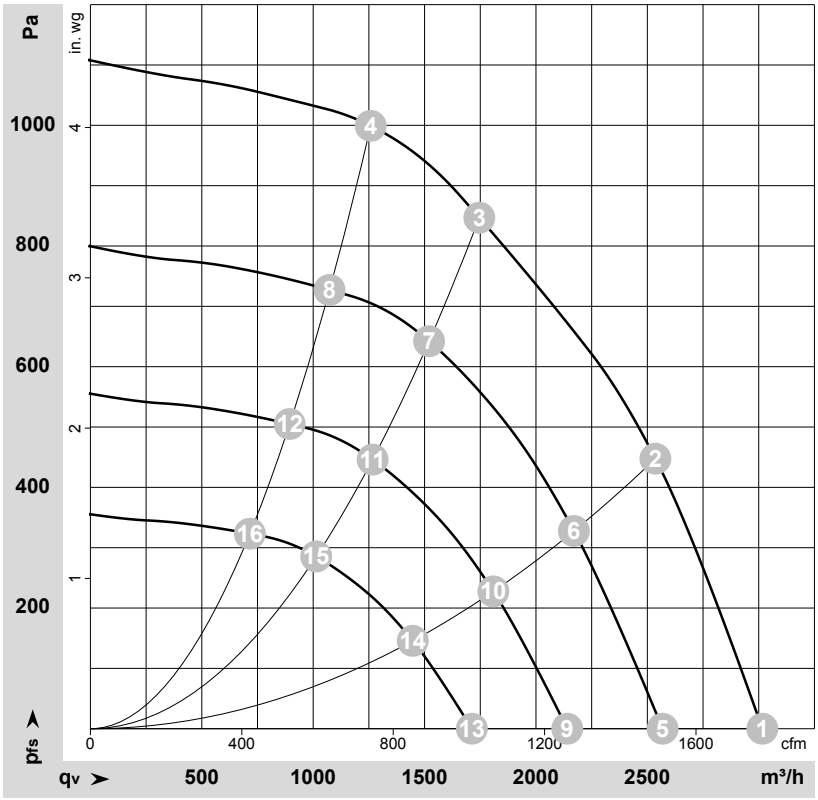
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-184014-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	50	3520	597	2.62	3015	0	1775	0.00
2	1~	230	50	3520	740	3.20	2535	450	1495	1.81
3	1~	230	50	3520	740	3.20	1745	850	1030	3.41
4	1~	230	50	3520	703	3.07	1260	1000	740	4.01
5	1~	230	50	3000	369	1.62	2570	0	1510	0.00
6	1~	230	50	3000	457	2.00	2170	328	1275	1.32
7	1~	230	50	3000	480	2.10	1520	644	895	2.59
8	1~	230	50	3000	436	1.90	1075	727	630	2.92
9	1~	230	50	2500	213	0.94	2140	0	1260	0.00
10	1~	230	50	2500	265	1.16	1810	228	1065	0.92
11	1~	230	50	2500	278	1.21	1265	447	745	1.79
12	1~	230	50	2500	252	1.10	895	505	525	2.03
13	1~	230	50	2000	109	0.48	1710	0	1010	0.00
14	1~	230	50	2000	135	0.59	1445	146	850	0.59
15	1~	230	50	2000	142	0.62	1015	286	595	1.15
16	1~	230	50	2000	129	0.56	715	323	420	1.30

Wired = Wiring · U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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