G3G146-FK07-02

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

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Nominal data

Type	**G3G146-FK07-02**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2320
Power consumption	W	166
Current draw	A	1.3
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	47.2	32.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		59	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.13
09 Air flow q_v	m^3/h	350
09 Pressure increase p_{fs}	Pa	569
10 Speed (rpm) n	min^{-1}	3065
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

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

LU-138752

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	3.02 kg
Size	146 mm
Motor size	55
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
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	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Hybrid bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Power limit - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for motor
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE; UKCA
Approval	CCC

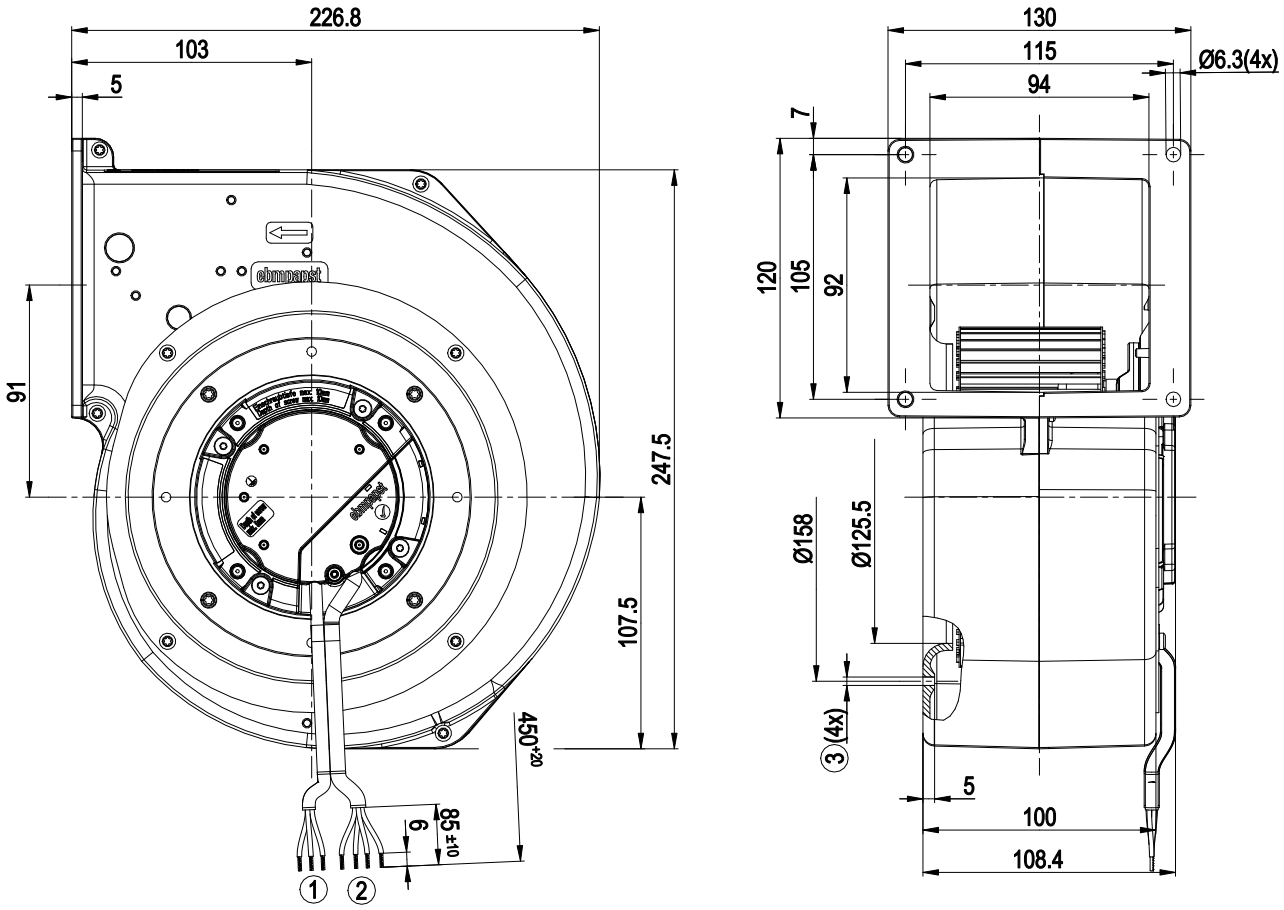
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Product drawing



1	Cable PVC 3x AWG20
	3x splice
2	Cable PVC 4x AWG22
	4x splice
3	For self-tapping M4 screws

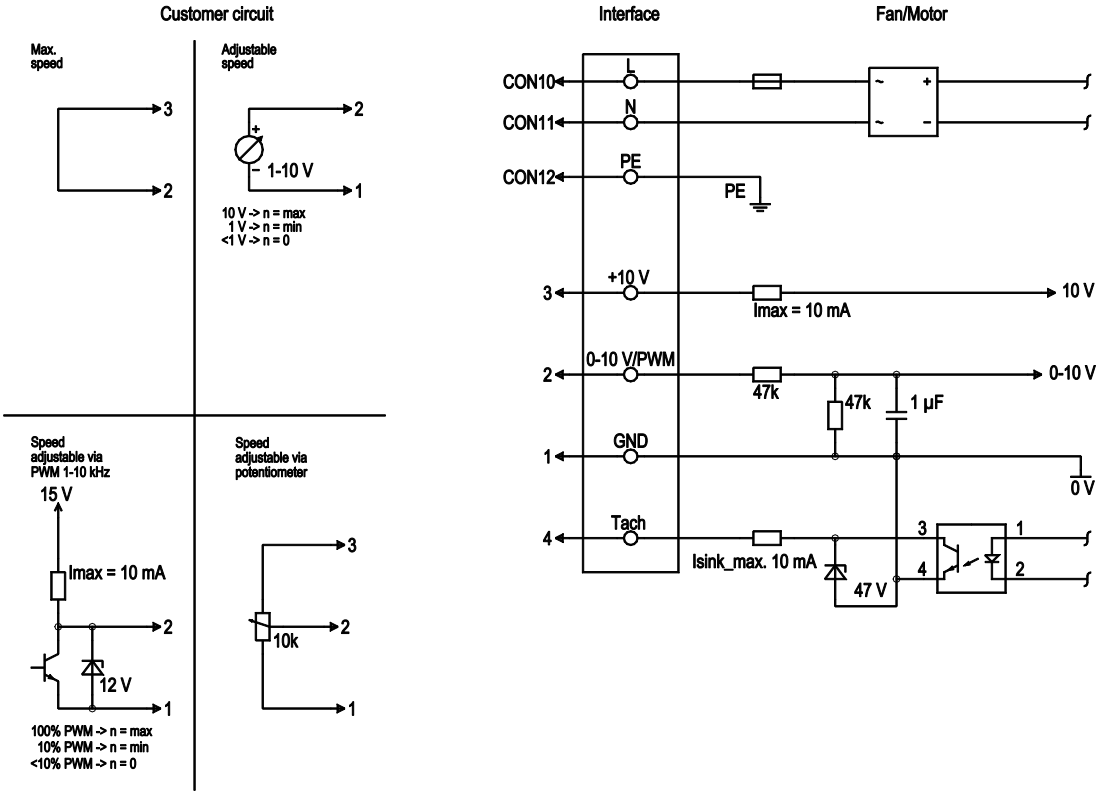
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

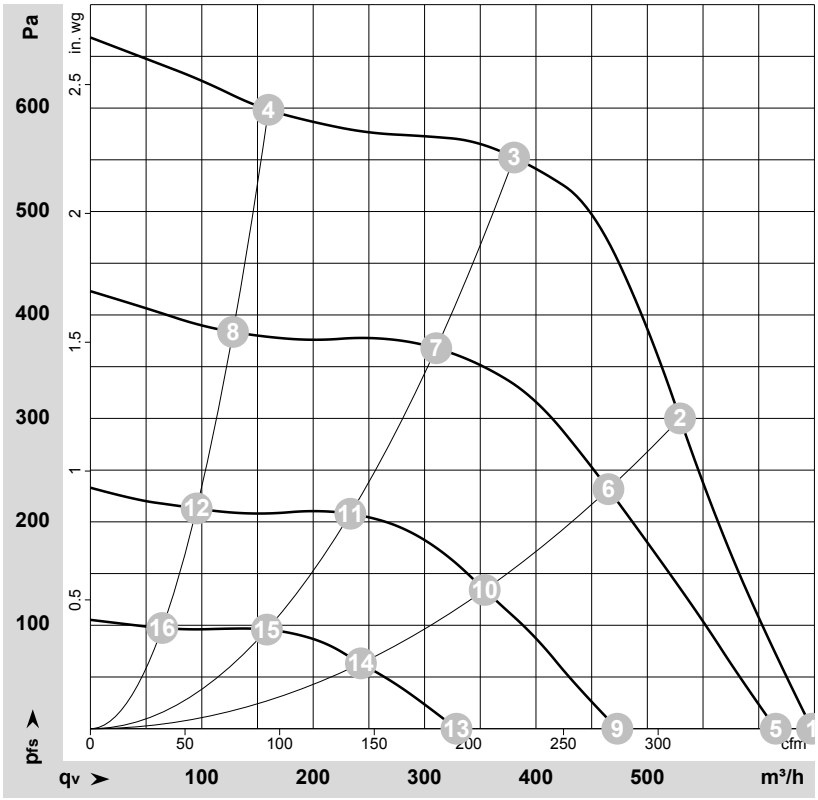
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-138752-1
Measurement: LU-138757-1
Measurement: LU-138758-1
Measurement: LU-138759-1

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	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	2320	166	1.30	70	76	650	0	380	0.00
2	1~	230	50	2660	166	1.30	69	75	530	300	310	1.20
3	1~	230	50	3035	147	1.05	68	75	380	550	225	2.21
4	1~	230	50	3250	89	0.64	68	75	160	600	95	2.41
5	1~	230	50	2215	147	1.03			615	0	360	0.00
6	1~	230	50	2360	114	0.81			465	232	275	0.93
7	1~	230	50	2495	82	0.58			310	368	180	1.48
8	1~	230	50	2620	51	0.37			130	384	75	1.54
9	1~	230	50	1725	70	0.49			475	0	280	0.00
10	1~	230	50	1815	54	0.39			355	134	210	0.54
11	1~	230	50	1895	39	0.29			235	208	135	0.84
12	1~	230	50	1975	25	0.19			95	213	55	0.86
13	1~	230	50	1210	26	0.20			330	0	195	0.00
14	1~	230	50	1255	21	0.17			245	63	145	0.25
15	1~	230	50	1300	16	0.13			160	96	95	0.39
16	1~	230	50	1350	11	0.10			65	97	40	0.39

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

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