G3G160-CZ09-20

EC centrifugal fan

forward-curved, single-intake

with housing (flange)

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**G3G160-CZ09-20**
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}	2000
Power consumption	W	165
Current draw	A	1.3
Min. back pressure	Pa	0
Min. back pressure	in. wg	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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	46.8	32.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		58.6	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}	2760
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-138657

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Technical description

Weight	3.8 kg
Size	160 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	Sheet steel, galvanized
Housing material	Die-cast aluminum
Direction of rotation	Counterclockwise, 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. 10 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 0.25 mA
Electrical hookup	Connector with cable
Motor protection	Electronic motor protection
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

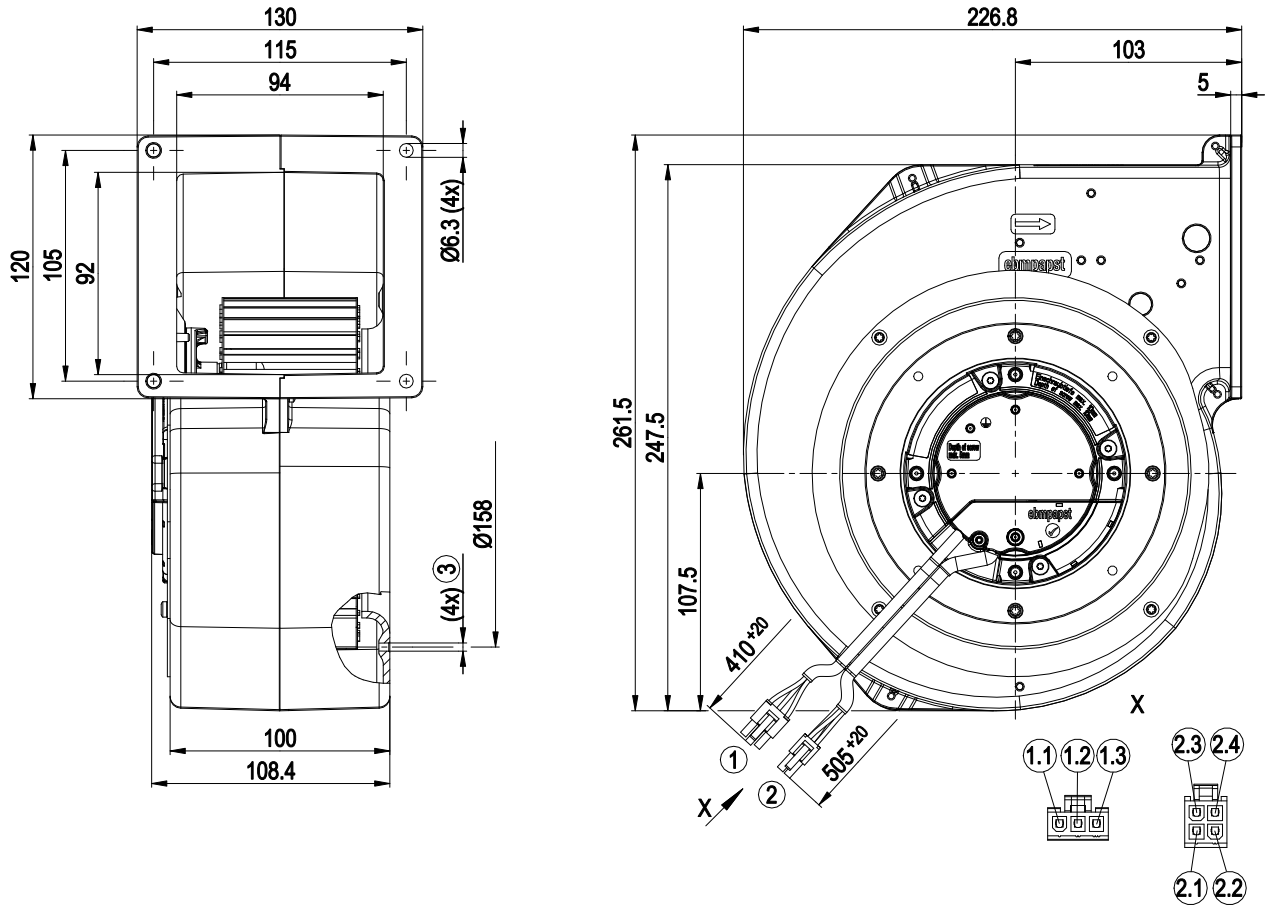
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Product drawing



1	Cable PVC AWG20
	3-pole connector housing Molex 50-29-1662, 3x socket Molex 39-00-0038
1.1	L (black)
1.2	PE (green/yellow)
1.3	N (blue)
2	Cable PVC AWG20
	4-pole connector housing Molex 46992-0410, 4x socket Molex 39-00-0059
2.1	GND (blue)
2.2	0-10 V/PWM (yellow)
2.3	Tach (white)
2.4	+10 V (red)
3	For self-tapping M4 screws

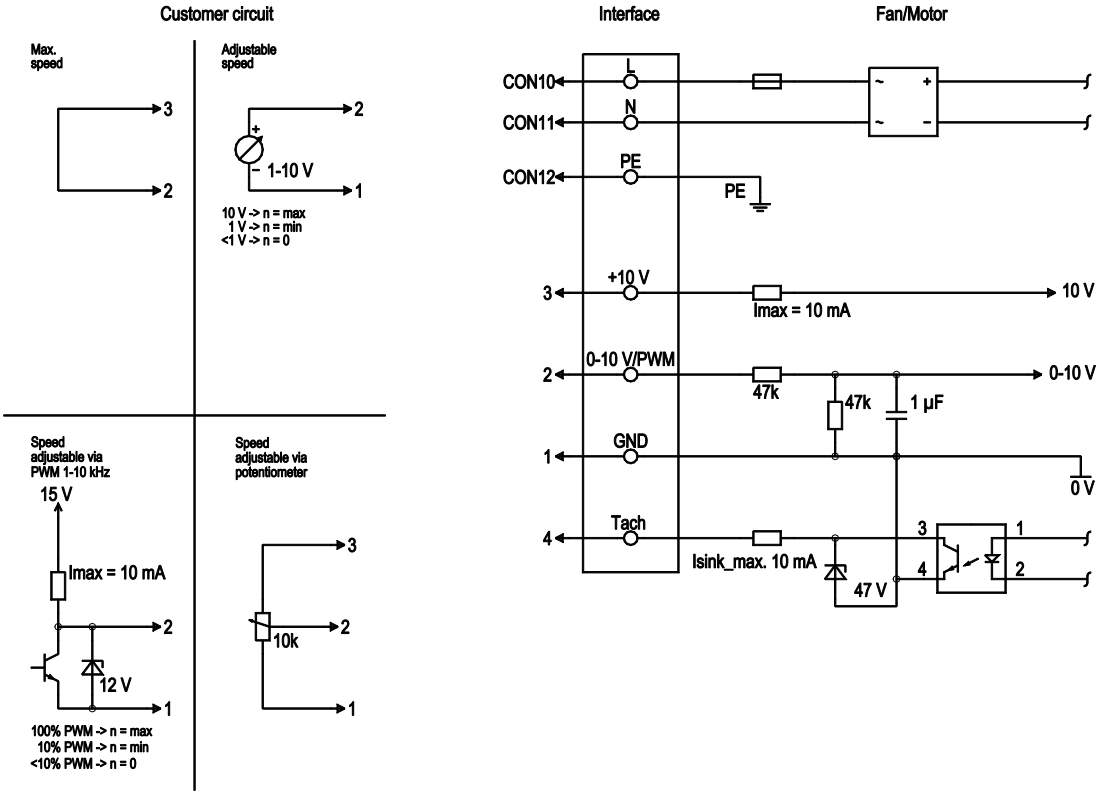
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Connection diagram



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

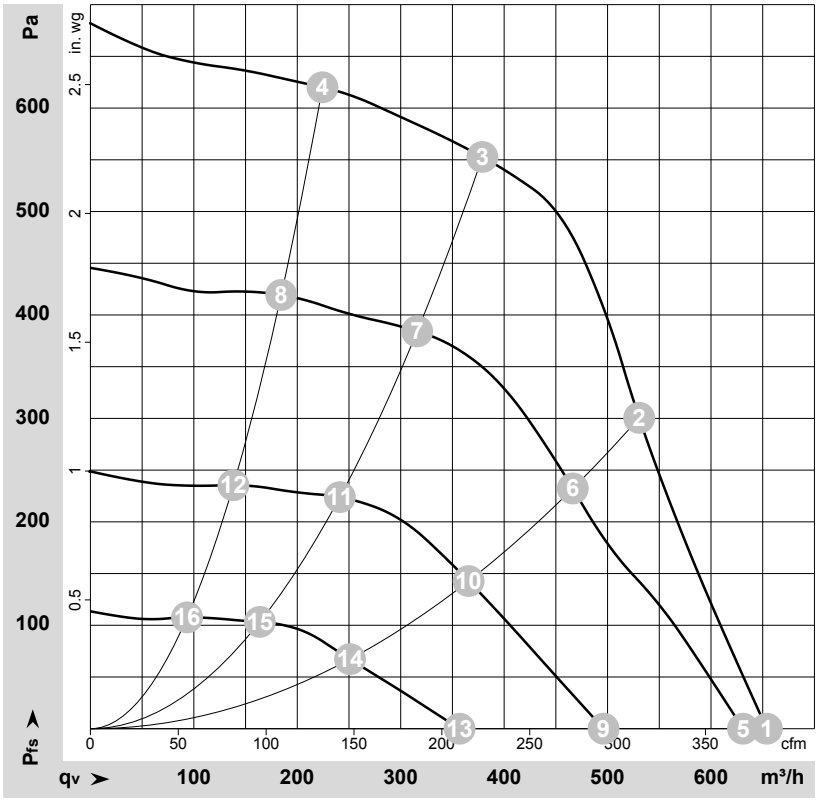
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-138657-1
Measurement: LU-138670-1
Measurement: LU-138672-1
Measurement: LU-138673-1

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	2000	165	1.30	69	76	655	0	385	0.00
2	1~	230	50	2380	165	1.30	69	75	530	300	315	1.20
3	1~	230	50	2710	145	1.16	68	75	380	550	225	2.21
4	1~	230	50	2900	103	0.89	70	76	225	620	130	2.49
5	1~	230	50	1925	154	1.24			630	0	370	0.00
6	1~	230	50	2115	116	0.98			465	232	275	0.93
7	1~	230	50	2270	85	0.74			315	384	185	1.54
8	1~	230	50	2405	60	0.55			185	420	110	1.69
9	1~	230	50	1535	76	0.65			495	0	290	0.00
10	1~	230	50	1665	57	0.51			365	143	215	0.57
11	1~	230	50	1765	40	0.35			240	225	140	0.90
12	1~	230	50	1830	30	0.26			140	236	80	0.95
13	1~	230	50	1105	29	0.30			355	0	210	0.00
14	1~	230	50	1160	21	0.21			250	67	150	0.27
15	1~	230	50	1210	16	0.16			165	103	95	0.41
16	1~	230	50	1250	13	0.13			95	108	55	0.43

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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