EC centrifugal fan

forward curved, single inlet

with housing (flange)

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**G3G160-CU09-17**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2100
Power input	W	170
Current draw	A	1.35
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	46.4	32.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		58.3	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.13
09 Air flow q_v	m^3/h	350
09 Pressure increase p_{fs}	Pa	558
10 Speed (rpm) n	min^{-1}	2730
11 Specific ratio*		1.01

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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

LU-139319

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Technical features

Mass	3 kg
Size	160 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic, antistatic
Housing material	Die-cast aluminium
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearings made of stainless steel
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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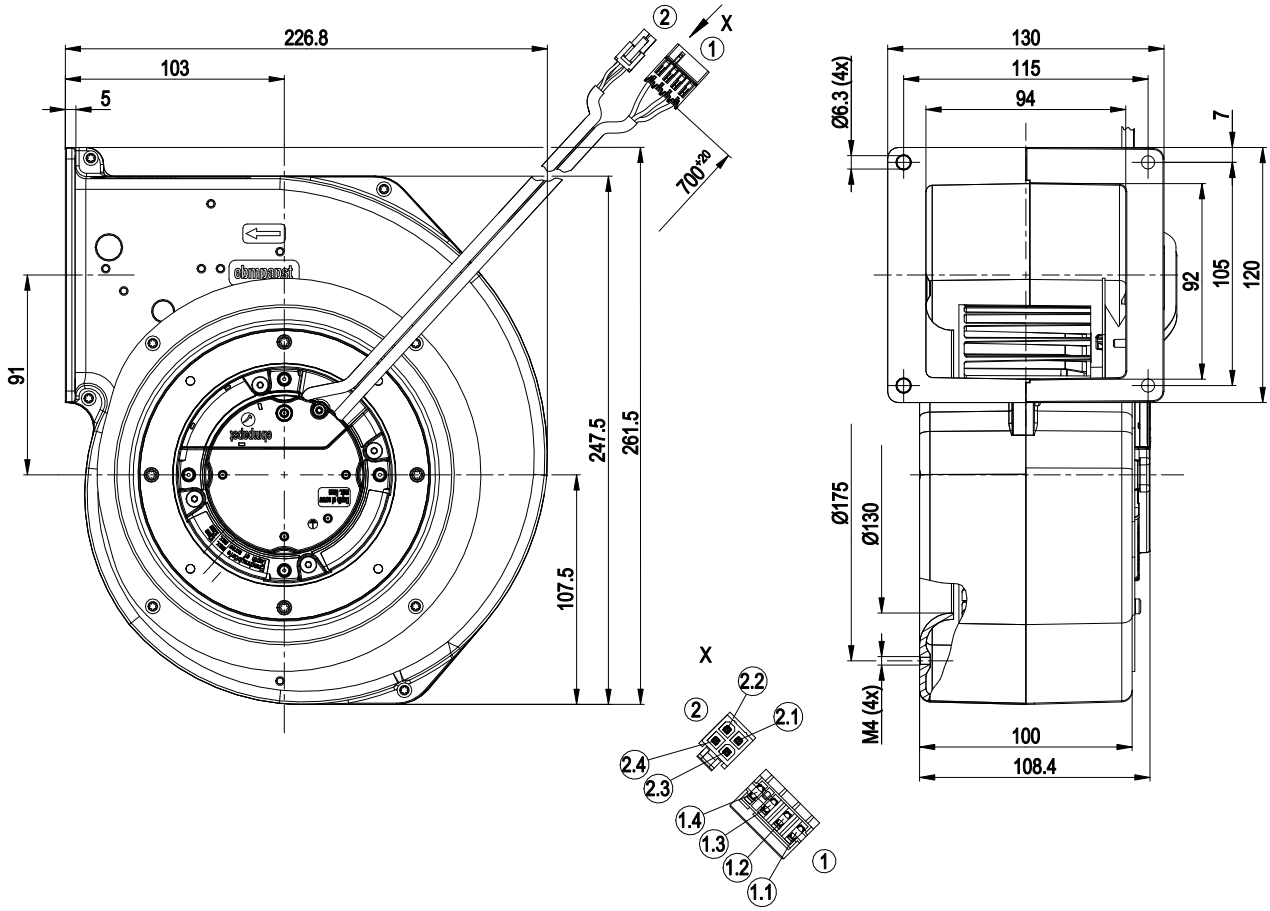
Product drawing



1	Connection line PVC AWG20, connector housing 4-pole Stocko MFMP 9590-04-AA05-000-960
1.1	L (black)
1.2	N (blue)
1.3	not used
1.4	PE (green/yellow)
2	Connection line PVC AWG22, connector housing 4-pole Molex 50-30-4461, 4x female connector Molex 39-00-0059
2.1	GND (blue)
2.2	0-10 V PWM (yellow)
2.3	Tach (white)
2.4	+10 V (red)

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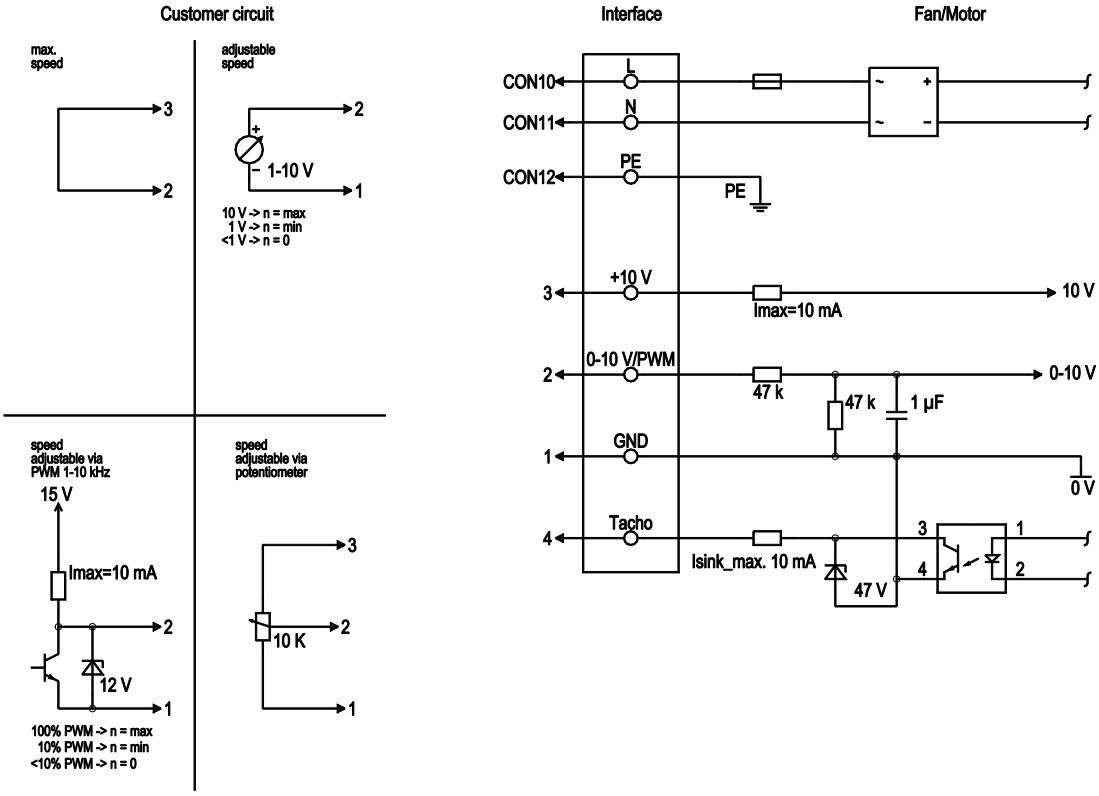
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Speed monitoring 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. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV

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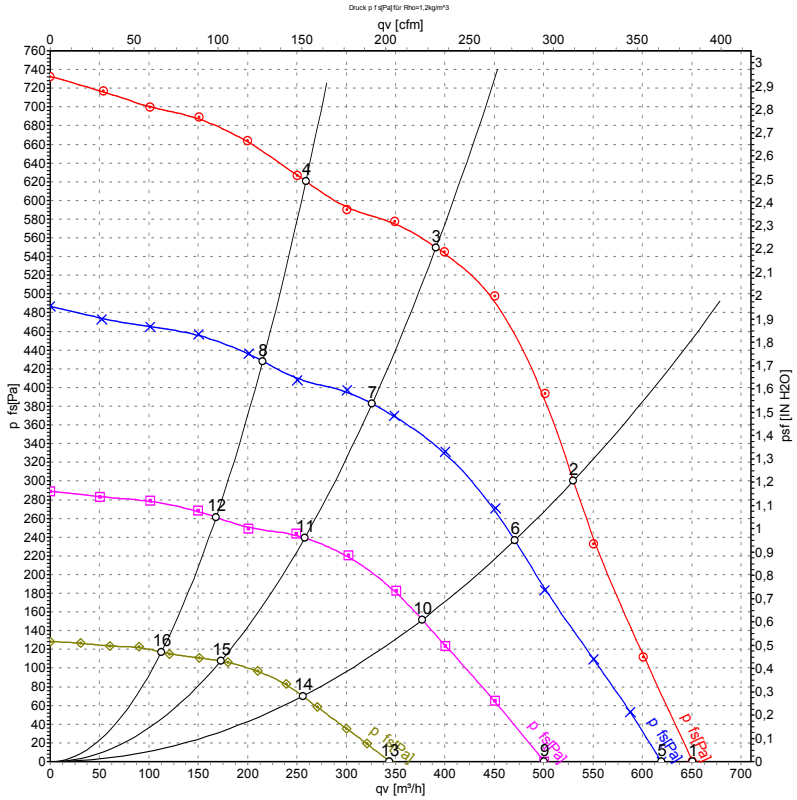
Charts: Air flow 50 Hz



Measurement: LU-139319-1
Measurement: LU-139320-1
Measurement: LU-139321-1
Measurement: LU-139322-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	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	inH2O
1	230	50	2100	170	1.35	650	0	385	0.00
2	230	50	2380	163	1.31	530	300	310	1.20
3	230	50	2680	144	1.18	390	550	230	2.21
4	230	50	2815	112	0.91	260	620	150	2.49
5	230	50	1985	144	1.17	620	0	365	0.00
6	230	50	2125	114	0.94	470	237	275	0.95
7	230	50	2260	86	0.73	325	383	190	1.54
8	230	50	2355	67	0.56	215	428	125	1.72
9	230	50	1625	77	0.64	500	0	295	0.00
10	230	50	1715	61	0.52	375	152	220	0.61
11	230	50	1795	45	0.39	260	240	150	0.96
12	230	50	1850	34	0.30	170	261	100	1.05
13	230	50	1130	27	0.24	345	0	200	0.00
14	230	50	1175	22	0.20	255	70	150	0.28
15	230	50	1220	17	0.16	175	108	100	0.43
16	230	50	1250	14	0.14	115	117	65	0.47

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase