G3G160-CU09-11

EC centrifugal fan

forward curved, single inlet

with housing (flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**G3G160-CU09-11**
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	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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	46.4	25.1	32.1
Efficiency grade N		58.3	37	44
Power input P_{ed}	kW	0.13		
Air flow q_v	m^3/h	350		
Pressure increase p_{fs}	Pa	558		
Speed n	min^{-1}	2730		

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

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Technical features

Size	160 mm
Material of impeller	Plastic PA66, fibreglass-reinforced
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
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage detection
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
Approval	CCC

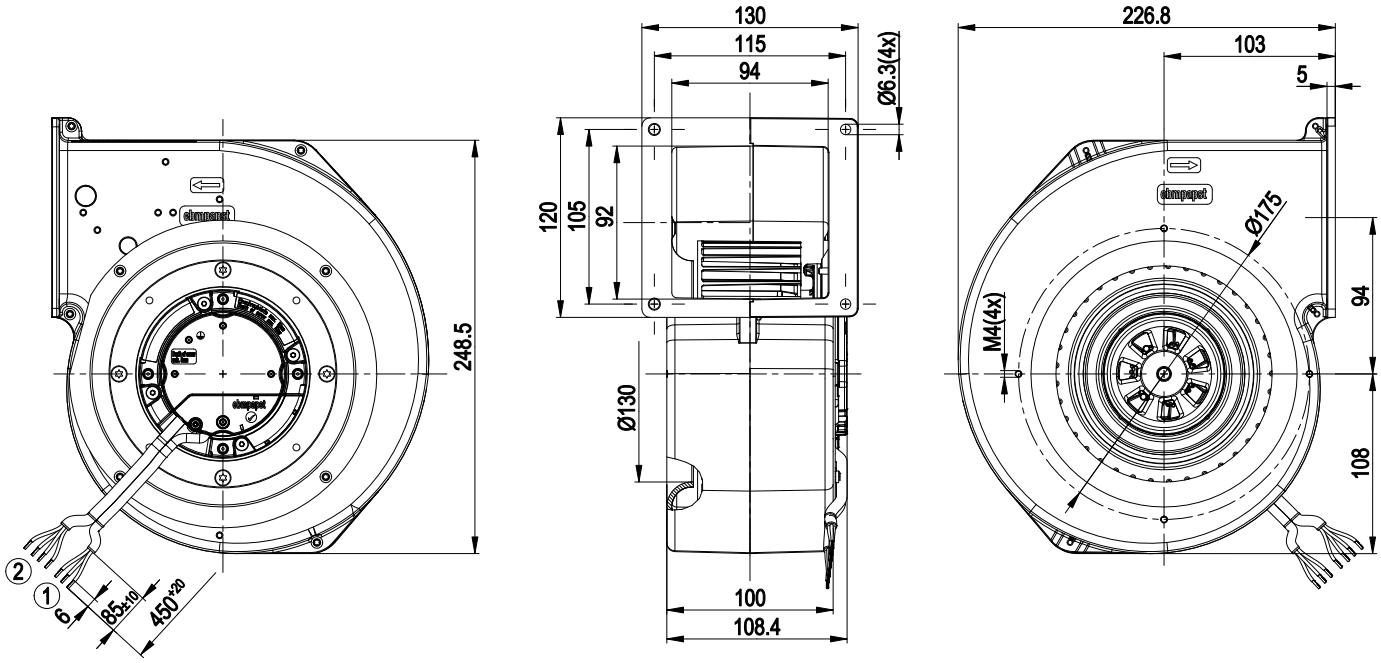
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Product drawing



1	Connection line PVC AWG20, 3x brass lead tips crimped
2	Connection line PVC AWG22, 4 x brass lead tips crimped

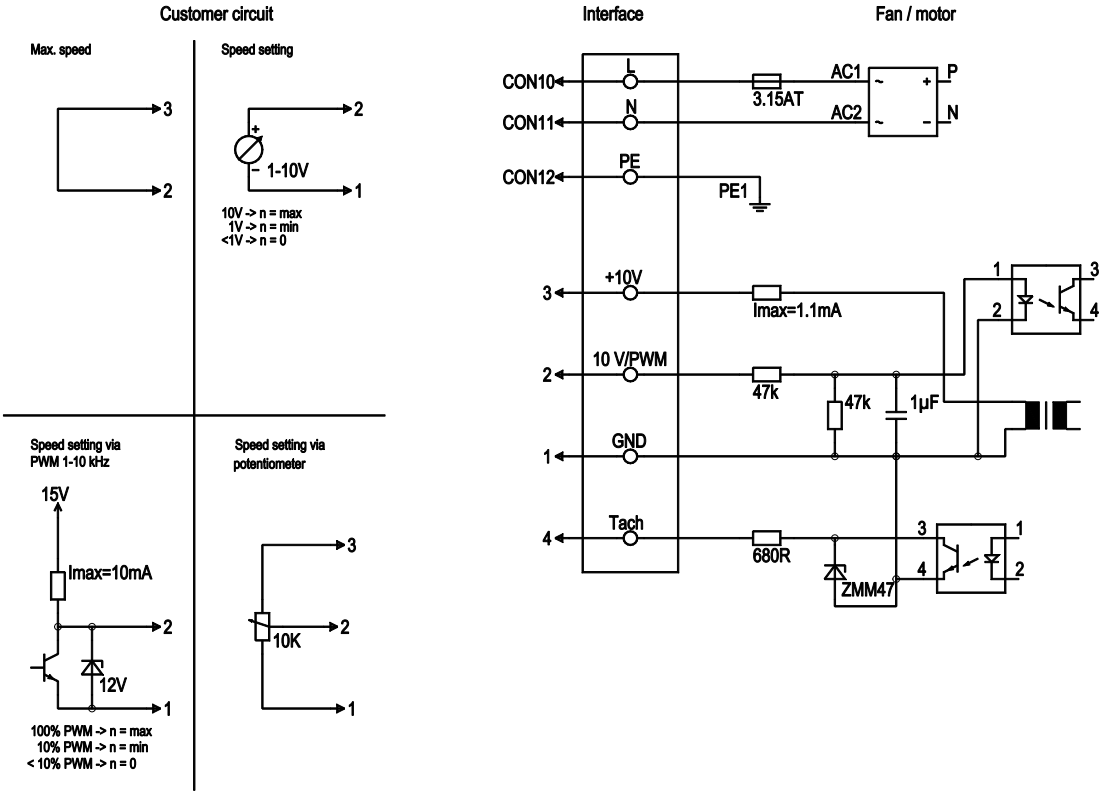
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Connection screen



Line	No.	Signal	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND - Connection for control interface
	2	0- 10V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10V/ 1.1mA, electrically isolated, not short-circuit-proof.
	4	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

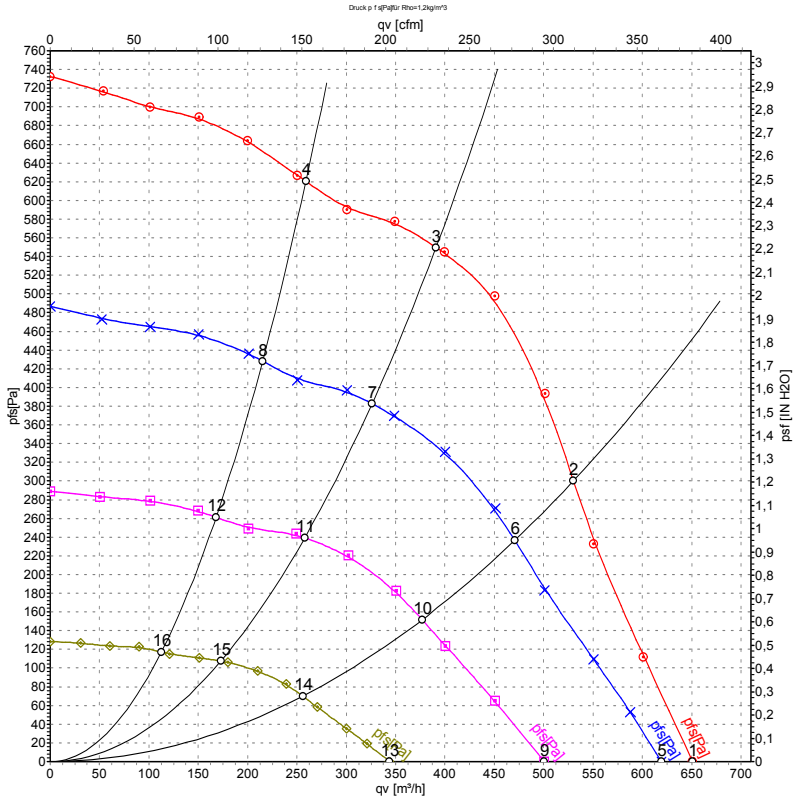
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Charts: Air flow 50 Hz



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

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	2100	170	1.35	650	0
2	230	50	2380	163	1.31	530	300
3	230	50	2680	144	1.18	390	550
4	230	50	2815	112	0.91	260	620
5	230	50	1985	144	1.17	620	0
6	230	50	2125	114	0.94	470	237
7	230	50	2260	86	0.73	325	383
8	230	50	2355	67	0.56	215	428
9	230	50	1625	77	0.64	500	0
10	230	50	1715	61	0.52	375	152
11	230	50	1795	45	0.39	260	240
12	230	50	1850	34	0.30	170	261
13	230	50	1130	27	0.24	345	0
14	230	50	1175	22	0.20	255	70
15	230	50	1220	17	0.16	175	108
16	230	50	1250	14	0.14	115	117

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

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