D3G250-EE51-11

EC centrifugal fan

forward curved, dual inlet

with housing (flange)



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Nominal data

Type	**D3G250-EE51-11**
Motor	**M3G112-EA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1270
Power input	W	680
Current draw	A	3.1
Min. back pressure	Pa	100
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	48.7	34.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		58.1	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.33
09 Air flow q_v	m^3/h	1500
09 Pressure increase p_{fs}	Pa	347
10 Speed (rpm) n	min^{-1}	1395
11 Specific ratio*		1.00

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-163698

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Technical features

Mass	14.7 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminum
Material of impeller	Sheet steel, galvanised
Housing material	Sheet steel, galvanised
Motor suspension	Motor anti-vibration mounted on one side via brackets
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limit - PFC, active - Soft start - Control input 0-10 VDC Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
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	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	EAC

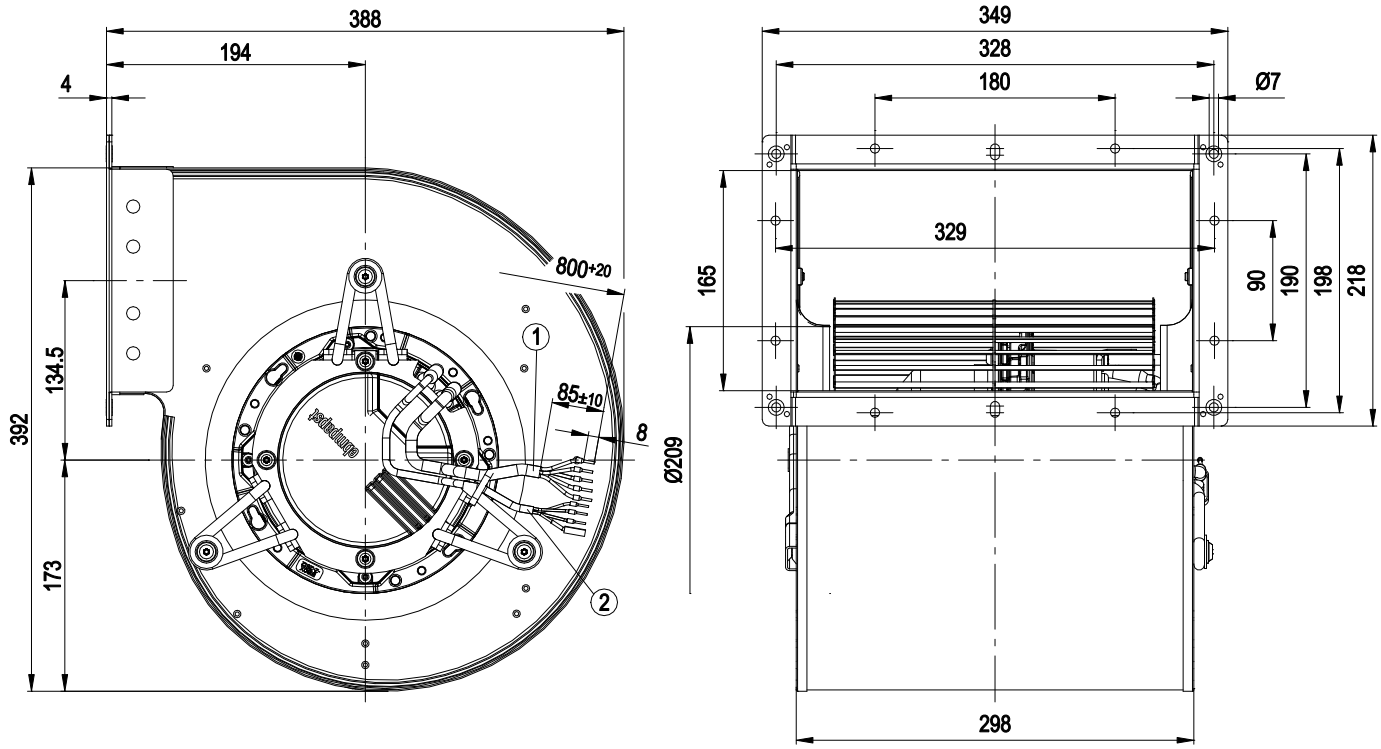
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Product drawing



Cable length from electronics enclosure: 800+20 mm

1	Connection line PVC AWG18, 5x crimped core-end sleeves
2	Connection line PVC AWG22, 3x crimped core-end sleeves

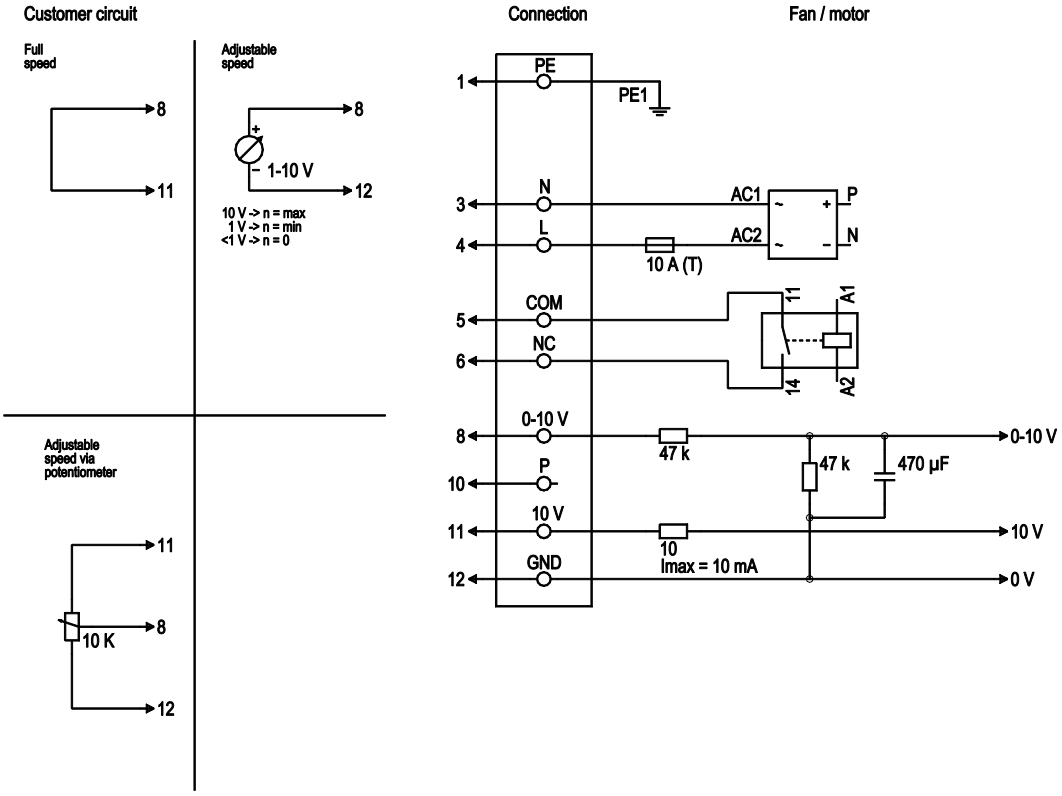
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	PE	green/yellow	Ground wire
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	4	L	black	Supply voltage, phase, 50/60 Hz
1	5	COM	white 1	Floating status message contact, normally closed connection (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 2	Floating status message contact, normally closed connection
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ, SELV
2	10	P	orange	not assigned
2	11	10 VDC	red	Voltage output 10 VDC (+/-3 %), max. 10 mA, supply voltage for external devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

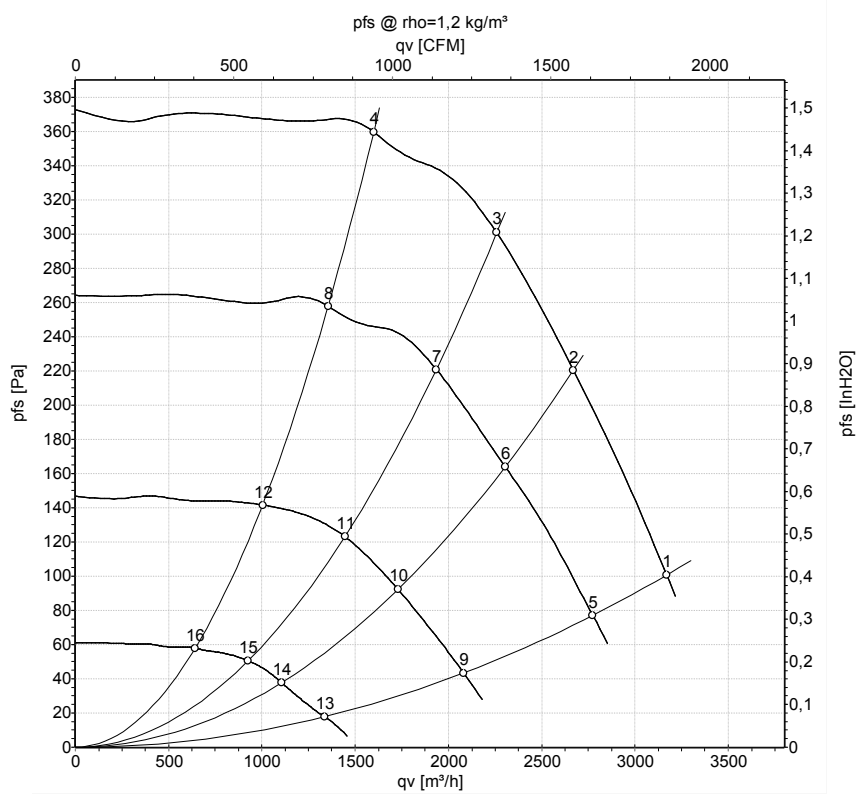
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Charts: Air flow 50 Hz



Measurement: LU-163698-1
Measurement: LU-163755-1
Measurement: LU-163756-1
Measurement: LU-163770-1

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	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	inH2O
1	230	50	1270	680	3.10	67	82	3170	100	1865	0.40
2	230	50	1315	544	2.51	64	79	2670	220	1570	0.88
3	230	50	1345	470	2.20	62	77	2260	300	1330	1.20
4	230	50	1390	353	1.66	59	74	1600	360	940	1.45
5	230	50	1120	428	2.01			2775	77	1630	0.31
6	230	50	1145	360	1.70			2305	164	1355	0.66
7	230	50	1160	306	1.44			1935	221	1140	0.89
8	230	50	1200	229	1.12			1355	258	800	1.04
9	230	50	850	199	0.96			2080	43	1225	0.17
10	230	50	865	164	0.79			1730	92	1020	0.37
11	230	50	880	141	0.68			1445	123	850	0.49
12	230	50	885	108	0.54			1005	142	590	0.57
13	230	50	560	62	0.38			1335	18	785	0.07
14	230	50	565	52	0.33			1105	38	650	0.15
15	230	50	575	49	0.31			925	51	545	0.20
16	230	50	585	43	0.27			640	58	380	0.23

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow p_{fs} = Pressure increase

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