D3G250-EE51-11

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Amtsgericht (court of registration) Stuttgart · HRB 590142

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
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1270
Power consumption	W	680
Current draw	A	3.1
Min. back pressure	Pa	100
Min. back pressure	in. wg	0.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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

		Actual	Req. 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 consumption 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 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-163698

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Technical description

Weight	14.7 kg
Size	250 mm
Motor size	112
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
Motor suspension	Motor mounted on brackets for one-sided vibration damping
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	Shaft horizontal
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limitation - PFC, active - Soft start - Control input 0-10 VDC - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC

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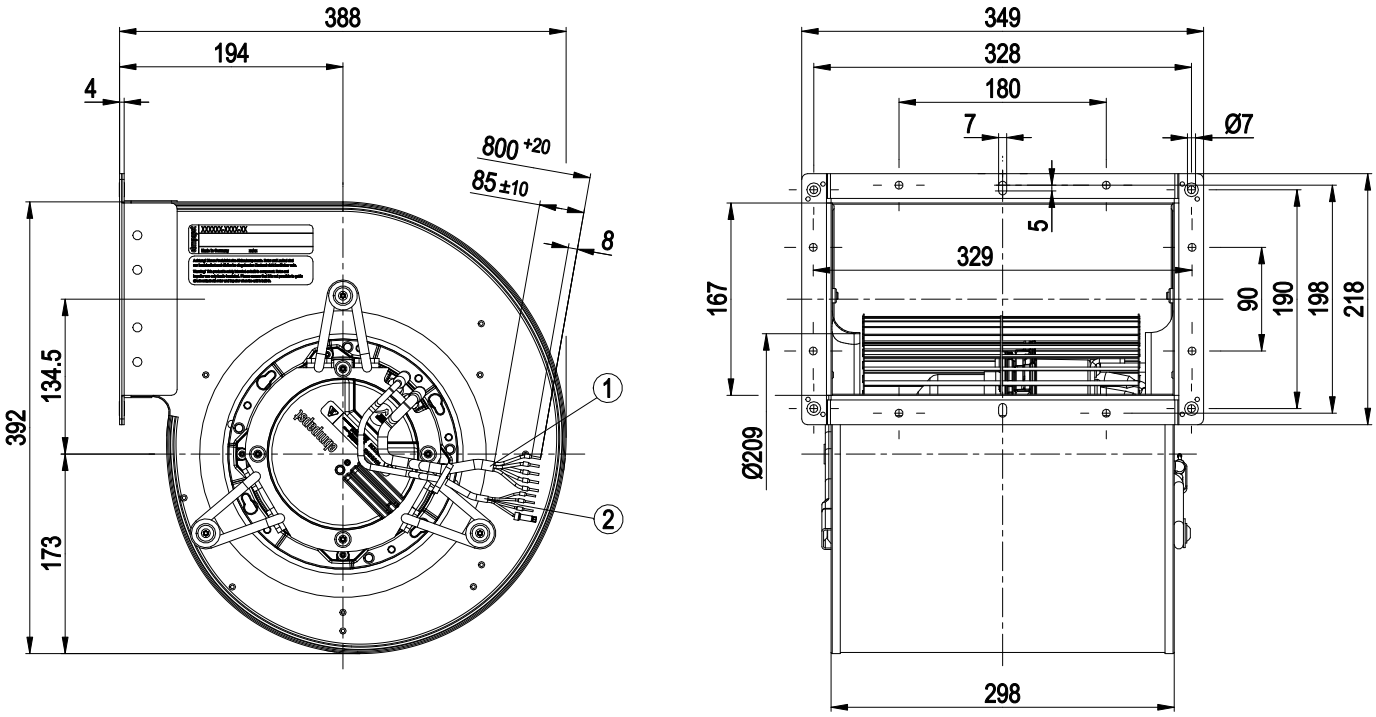
Product drawing



Cable length measured from electronics housing: 800+20 mm

1	Cable PVC AWG18, 5x crimped ferrules
2	Cable PVC AWG22, 3x ferrules 1x end connector crimped

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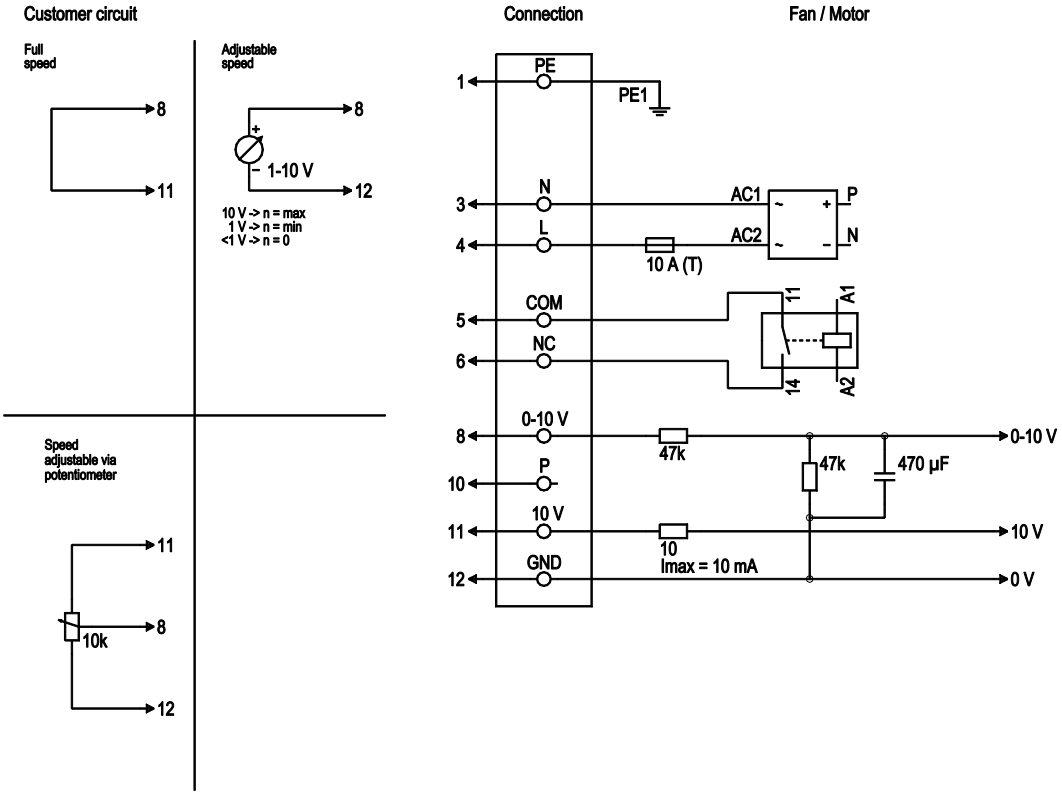
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	4	L	black	Power supply, phase, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	6	NC	white 2	Floating status contact, break for failure
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ, SELV
2	10	P	orange	not used
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference ground for control interface, SELV

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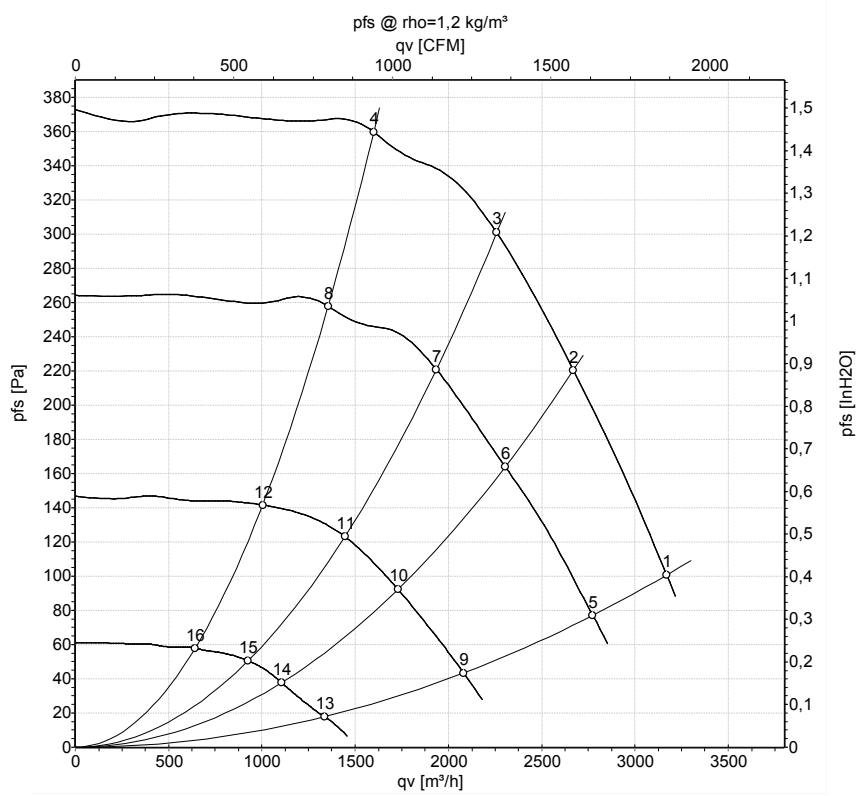
Curves: Air performance 50 Hz



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

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

	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	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 = 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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