D3G250-FF41-05

EC centrifugal fan

forward curved, dual inlet

with housing (without flange)

D3G250-FF41-05 ebmpapst Datasheet
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Nominal data

Type	**D3G250-FF41-05**
Motor	**M3G112-GA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min^{-1}	1500
Power input	W	1000
Current draw	A	1.7
Min. back pressure	Pa	180
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

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}		48	29.2	36.2
Efficiency grade N		55.8	37	44
Power input P_{ed}	kW	0.59		
Air flow q_v	m^3/h	1805		
Pressure increase p_{fs}	Pa	515		
Speed n	min^{-1}	1660		

Data established at point of optimum efficiency

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Technical features

Mass	11 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
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 class	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 - Integrated PID controller - Motor current limit - PFC, passive - Soft start - Control input 0-10 VDC / PWM - 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	CE

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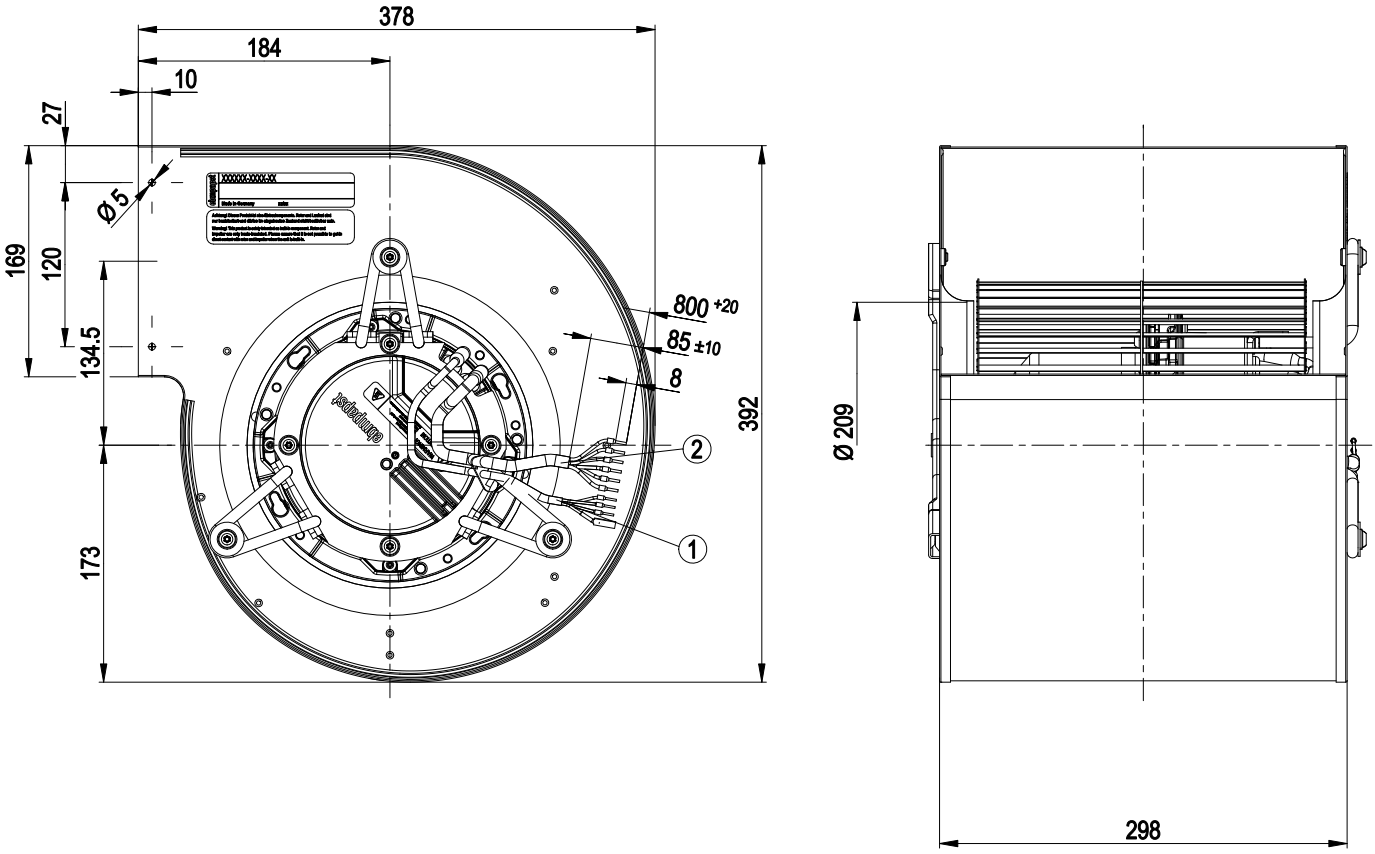
Product drawing



1	Connection line PVC AWG22, 3x crimped core-end sleeves
2	Connection line PVC AWG18, 6x crimped core-end sleeves

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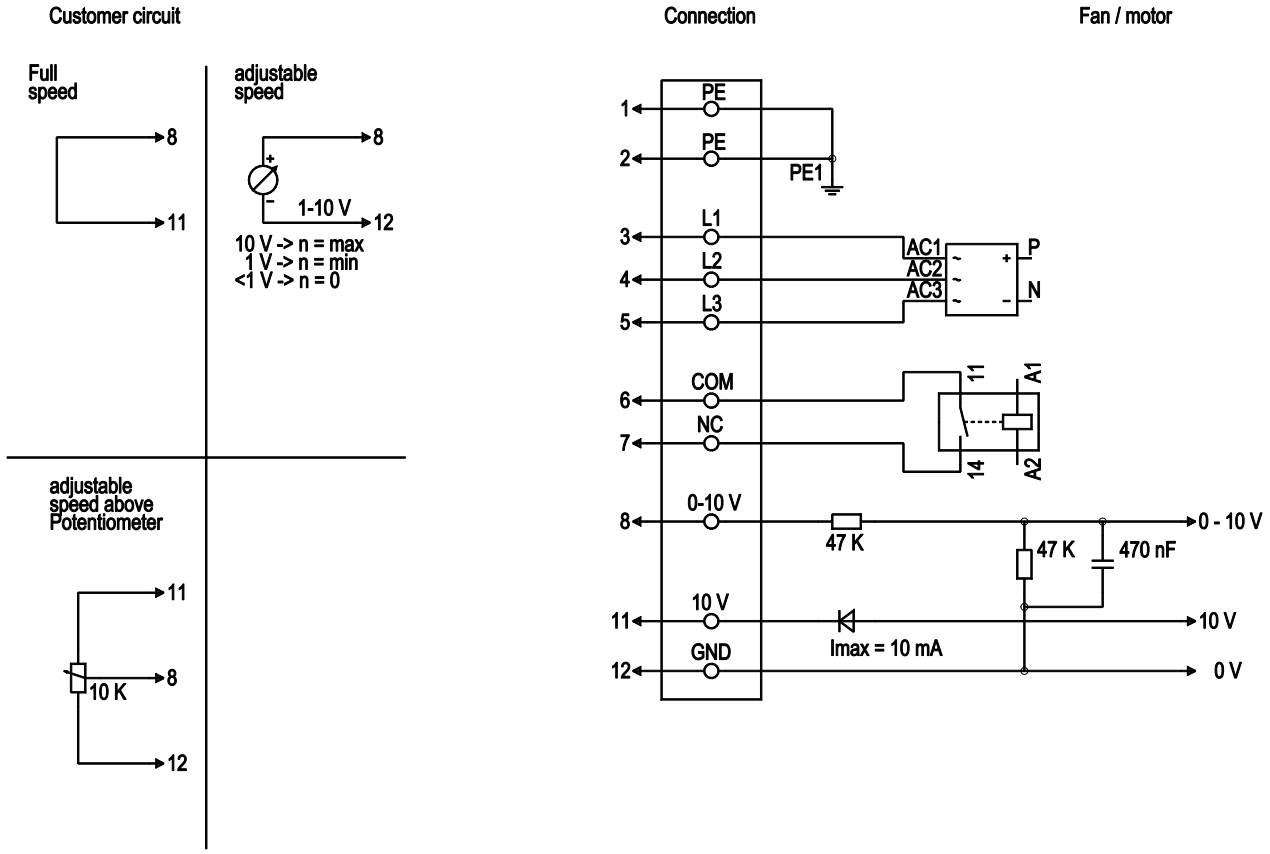
Connection screen



Line	No.	Signal	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Supply voltage 50 / 60 Hz
1	6	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA, AC1)
1	7	NC	white 2	Floating status message contact, break for failure
2	8	0 - 10 V	yellow	Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV
2	11	+ 10 V	red	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

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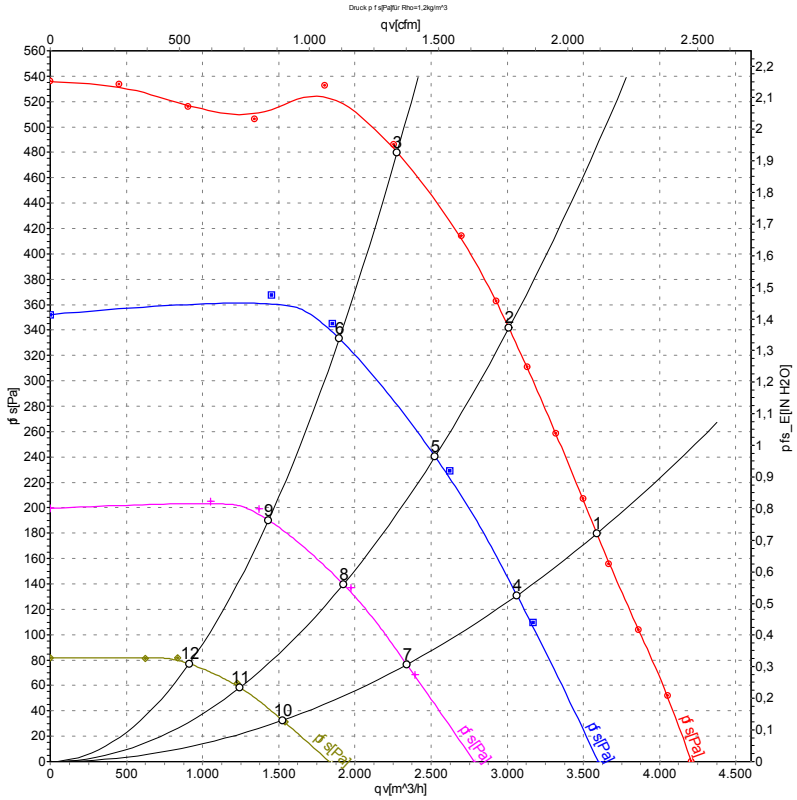
Charts: Air flow 50 Hz



Measurement: LU-108913
Measurement: LU-109037
Measurement: LU-109038
Measurement: LU-109039

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}	LwA_{out}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	400	50	1500	1000	1.70	78	86	88	3590	180
2	400	50	1565	883	1.41	75	83	85	3010	340
3	400	50	1630	708	1.16	73	81	82	2275	480
4	400	50	1280	603	1.02	73	82	83	3065	132
5	400	50	1315	507	0.90	70	79	81	2525	244
6	400	50	1360	402	0.76	68	76	78	1895	338
7	400	50	985	288	0.58	67	76	77	2340	77
8	400	50	1010	242	0.50	64	72	73	1925	142
9	400	50	1035	187	0.40	60	69	71	1435	193
10	400	50	650	92	0.24	56	64	65	1525	33
11	400	50	655	81	0.21	52	61	62	1245	60
12	400	50	665	66	0.19	48	58	59	910	78

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