D3G250-FF41-05

EC centrifugal fan

forward-curved, dual-intake

with housing (without flange)

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ErP2015 EXCEEDS THE NORM

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
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1500
Power consumption	W	1000
Current draw	A	1.7
Min. back pressure	Pa	100
Min. back pressure	inH2O	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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	48	36.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.8	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.59
09 Air flow q_v	m^3/h	1805
09 Pressure increase p_{fs}	Pa	515
10 Speed (rpm) n	min^{-1}	1660
11 Specific ratio*		1.01

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-108913

ebmpapst

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Technical description

Weight	11 kg
Fan size	250 mm
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	F4-1
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 - Integrated PID controller - Motor current limitation - PFC, passive - Soft start - Control input 0-10 VDC/PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - 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	CE

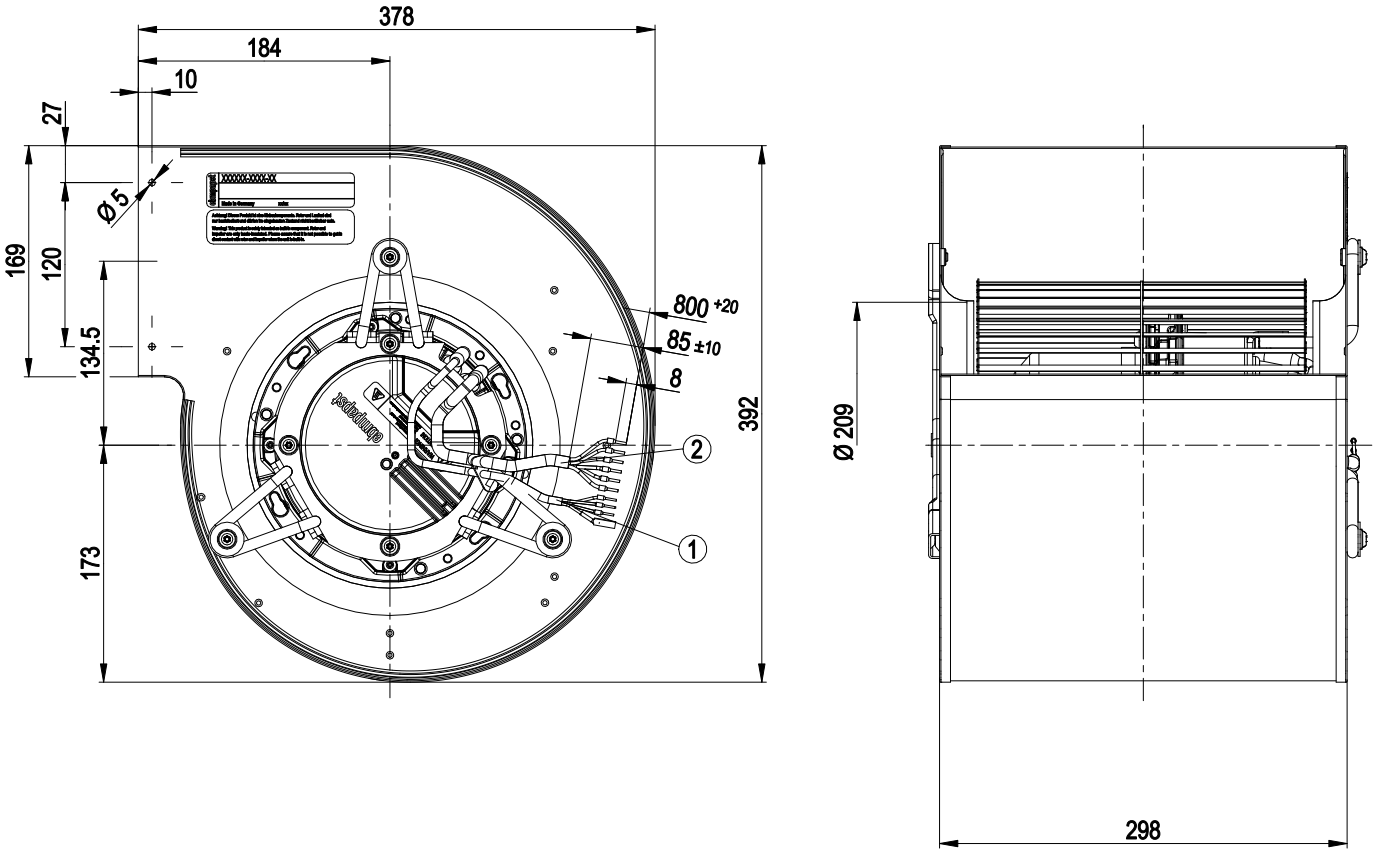
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Product drawing



1	Cable PVC AWG22, 3x crimped ferrules
2	Cable PVC AWG18, 6x crimped ferrules

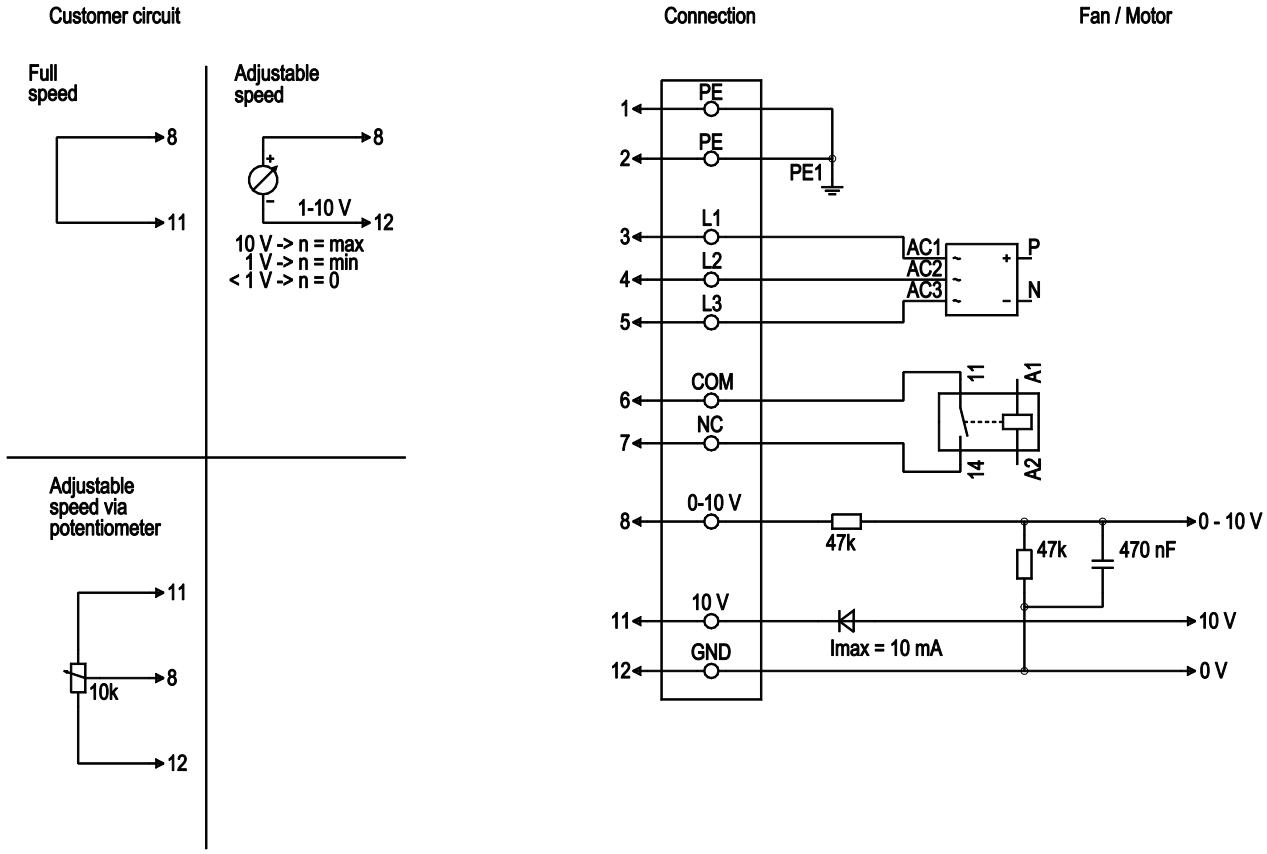
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3, 4, 5	L1, L2, L3	black	Power supply 50 / 60 Hz
1	6	COM	white 1	Floating status contact, break for failure (2A, max. 250 VAC, min. 10 mA, AC1)
1	7	NC	white 2	Floating status 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, power supply for external devices (e.g. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

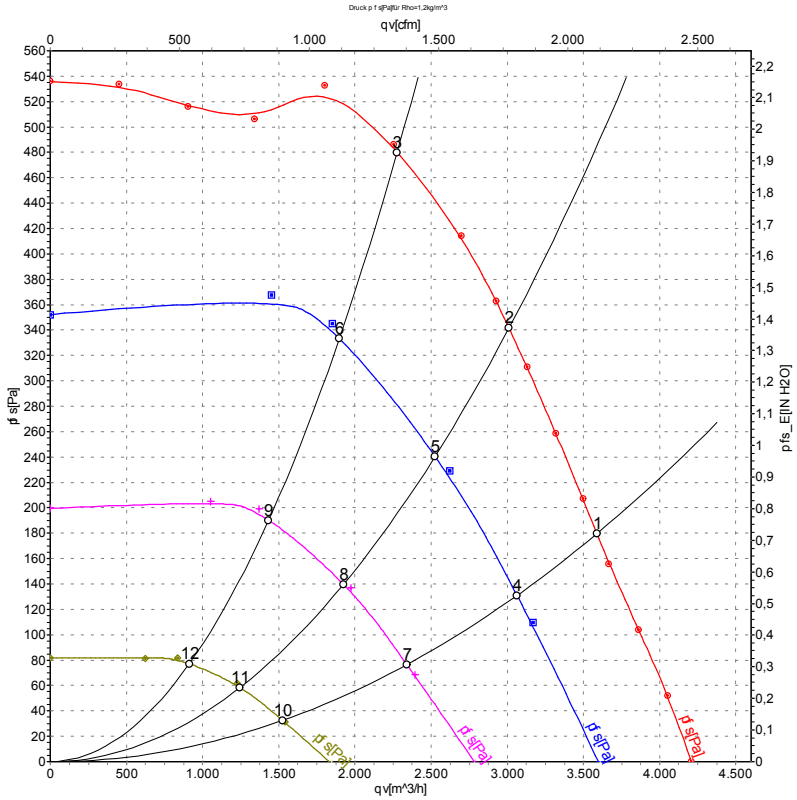
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Curves: Air performance 50 Hz



Measurement: LU-108913-1
Measurement: LU-109037-1
Measurement: LU-109038-1
Measurement: LU-109039-1

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}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	400	50	1500	1000	1.70	78	86	88	3590	180	2110	0.72
2	400	50	1565	883	1.41	75	83	85	3010	340	1770	1.36
3	400	50	1630	708	1.16	73	81	82	2275	480	1340	1.93
4	400	50	1280	603	1.02	73	82	83	3065	132	1805	0.53
5	400	50	1315	507	0.90	70	79	81	2525	244	1485	0.98
6	400	50	1360	402	0.76	68	76	78	1895	338	1115	1.36
7	400	50	985	288	0.58	67	76	77	2340	77	1380	0.31
8	400	50	1010	242	0.50	64	72	73	1925	142	1135	0.57
9	400	50	1035	187	0.40	60	69	71	1435	193	845	0.77
10	400	50	650	92	0.24	56	64	65	1525	33	900	0.13
11	400	50	655	81	0.21	52	61	62	1245	60	730	0.24
12	400	50	665	66	0.19	48	58	59	910	78	535	0.31

U = Power supply · 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
LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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