D3G250-EF41-01

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

D3G250-EF41-01 ebmpapst Datasheet
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Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**D3G250-EF41-01**
Motor	**M3G112-GA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	1500
Power input	W	1000
Current draw	A	1.7
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 in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{es}	%	48.1	36.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.9	44
05 Variable speed drive		Yes	

09 Power input 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 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-108913

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Technical features

Mass	15.8 kg
Size	250 mm
Motor size	112
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminum
Material of impeller	Sheet steel, hot-galvanised
Housing material	Sheet steel, hot-galvanised
Motor suspension	Motor anti-vibration mounted on one side via brackets
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP54
Insulation class	"B"
Humidity (F) / environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal
Condensation drainage holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- PFC, passive - Control input 0-10 VDC / PWM - Output 10 VDC, max. 10 mA - Alarm relay - Line undervoltage / phase failure detection - Motor current limit - Over-temperature protected electronics / motor - Soft start
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 61000-6-3 (household 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
Approval	CCC; EAC

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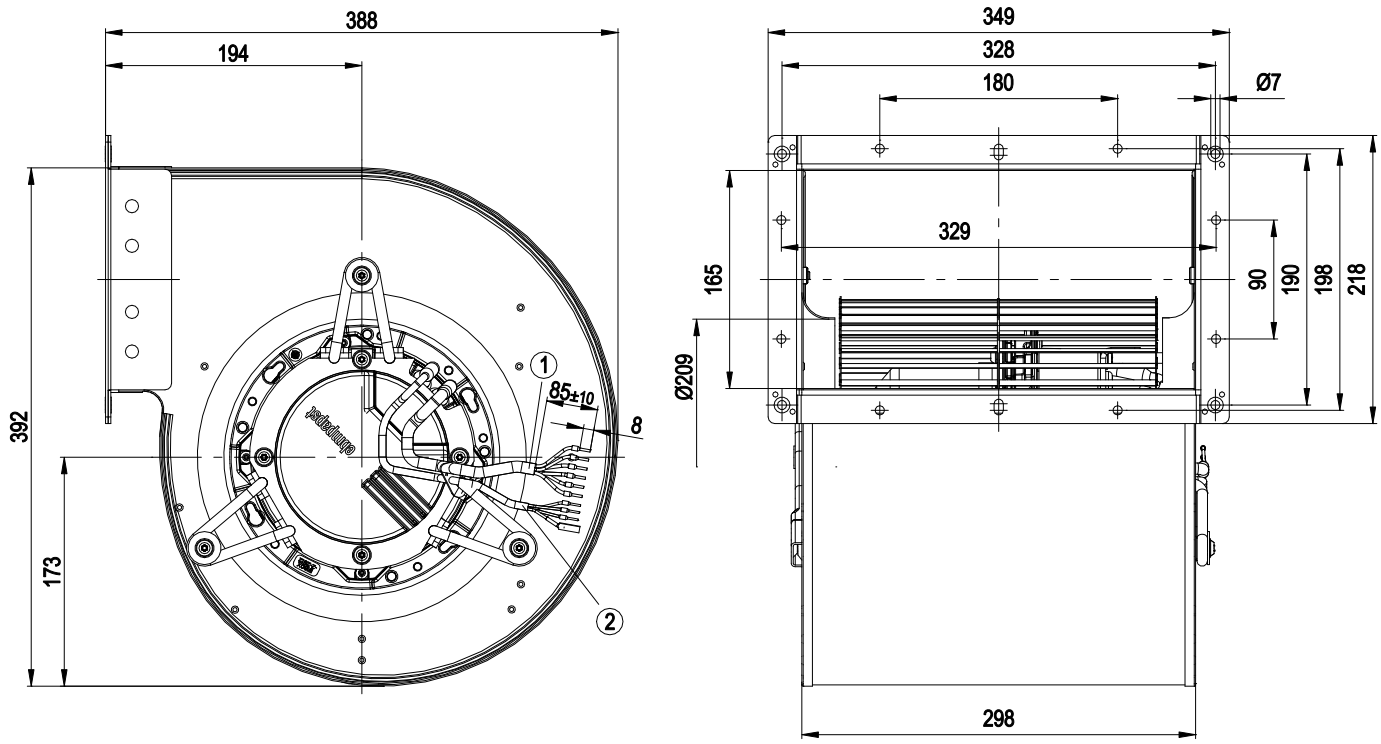
Product drawing



Cable length from electronics enclosure: 800+20 mm

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

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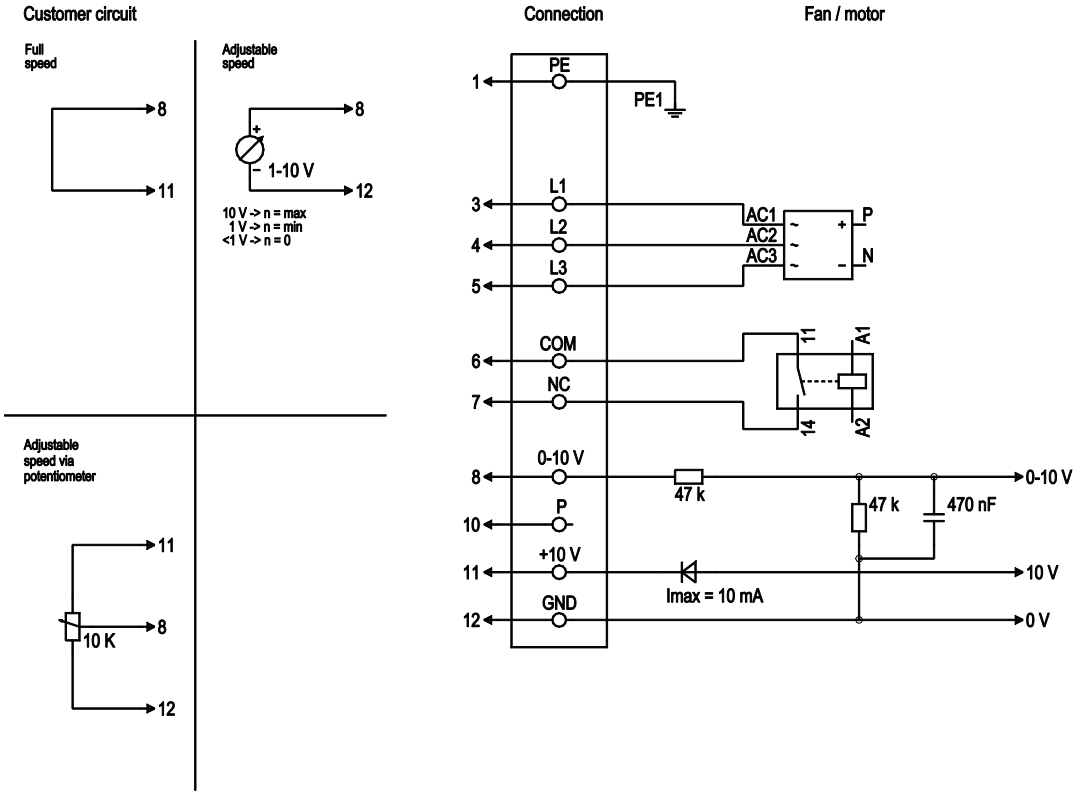
Connection screen



No.	Conn.	Designation	Colour	Function / assignment
1	1	PE	green/yellow	Ground wire
1	3	L1	black	Supply voltage, 50/60 Hz
1	4	L2	black	Supply voltage, 50/60 Hz
1	5	L3	black	Supply voltage, 50/60 Hz
1	6	COM	white 1	Floating status message contact, normally closed connection (2 A, max. 250 VAC, min. 10 mA, AC1)
1	7	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	Do not use
2	11	+10 V	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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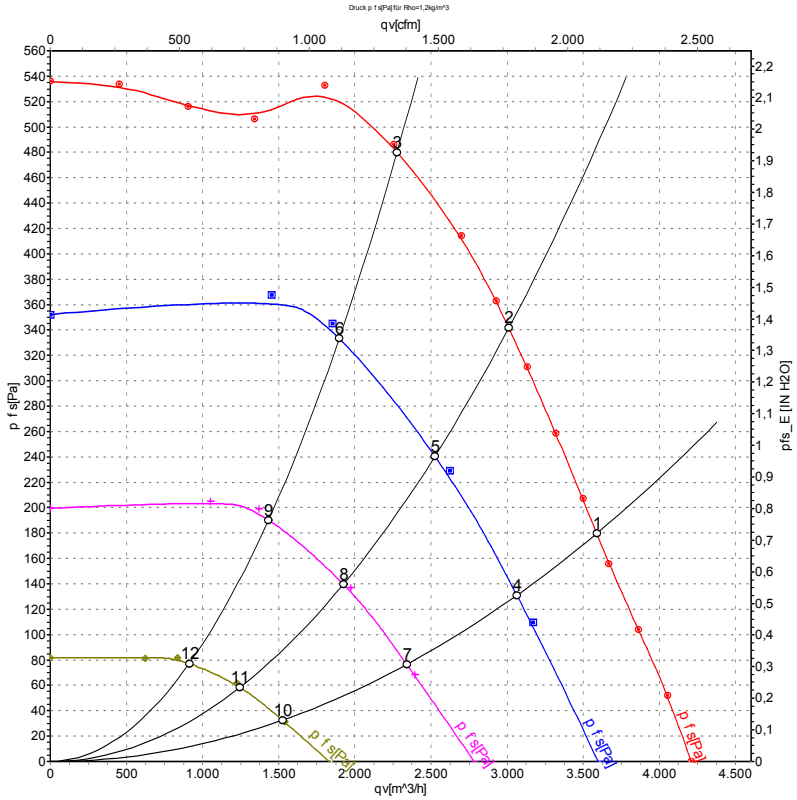
Charts: Air flow 50 Hz



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

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}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
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 = 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 · LwA_{out} = Sound power level outlet side
q_V = Air flow · p_{fs} = Pressure increase

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