D3G318-BB35-01

EC centrifugal fan

forward curved, dual inlet

with housing (large flange)



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D3G318-BB35-01**	
Motor	**M3G112-GA**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min^{-1}	880
Power input	W	1000
Current draw	A	1.7
Min. back pressure	Pa	150
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*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		52.5	29.7	36.7
Efficiency grade N		59.8	37	44
Power input P_{ed}	kW	0.69		
Air flow q_v	m^3/h	3505		
Pressure increase p_{fs}	Pa	343		
Speed n	min^{-1}	1010		

Data established at point of optimum efficiency

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Technical features

Mass	22.4 kg
Size	318 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 mounted with anti-vibration on both sides
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 - Tach output - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2
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

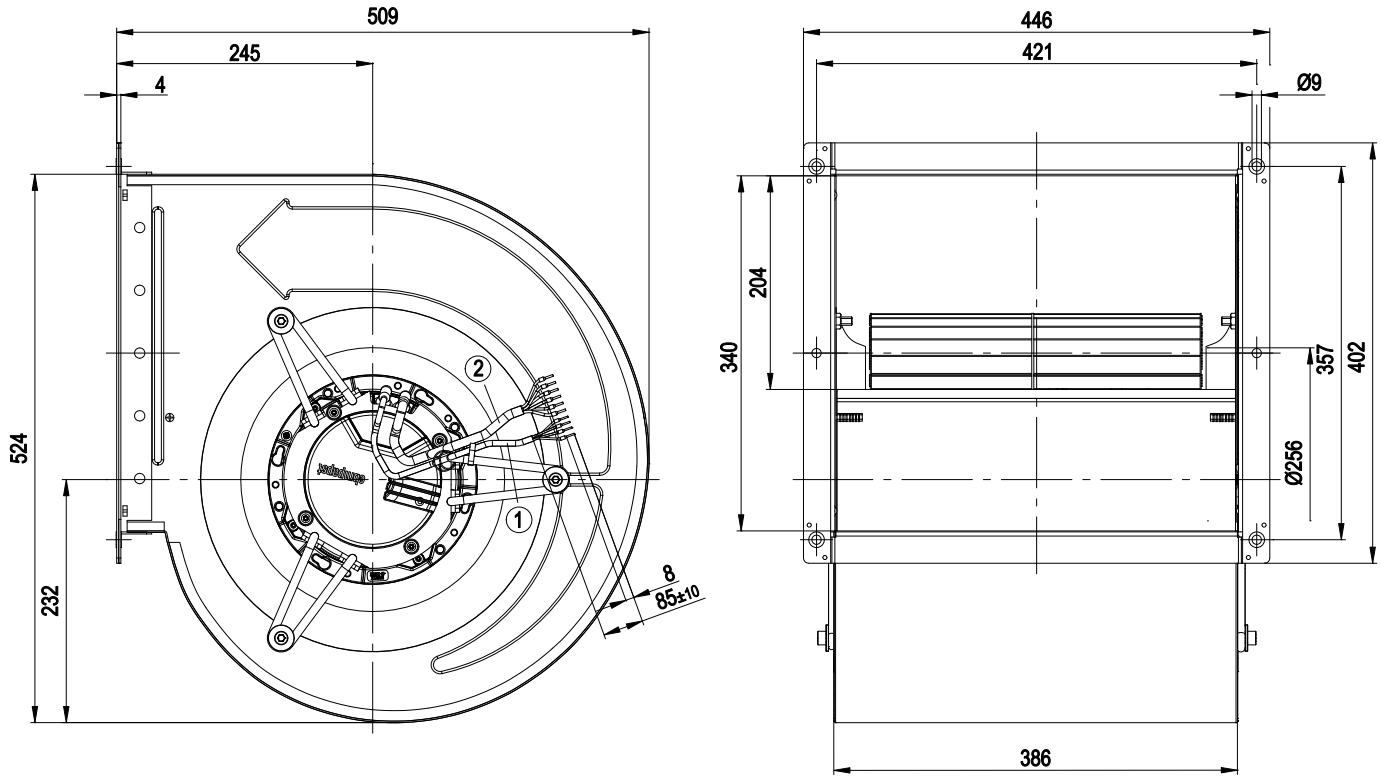
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Product drawing



Cable length from electronics enclosure: 800+20 mm

1	Connection line PVC AWG22, 4 x crimped core-end sleeve
2	Connection line PVC AWG18, 6x crimped core-end sleeves

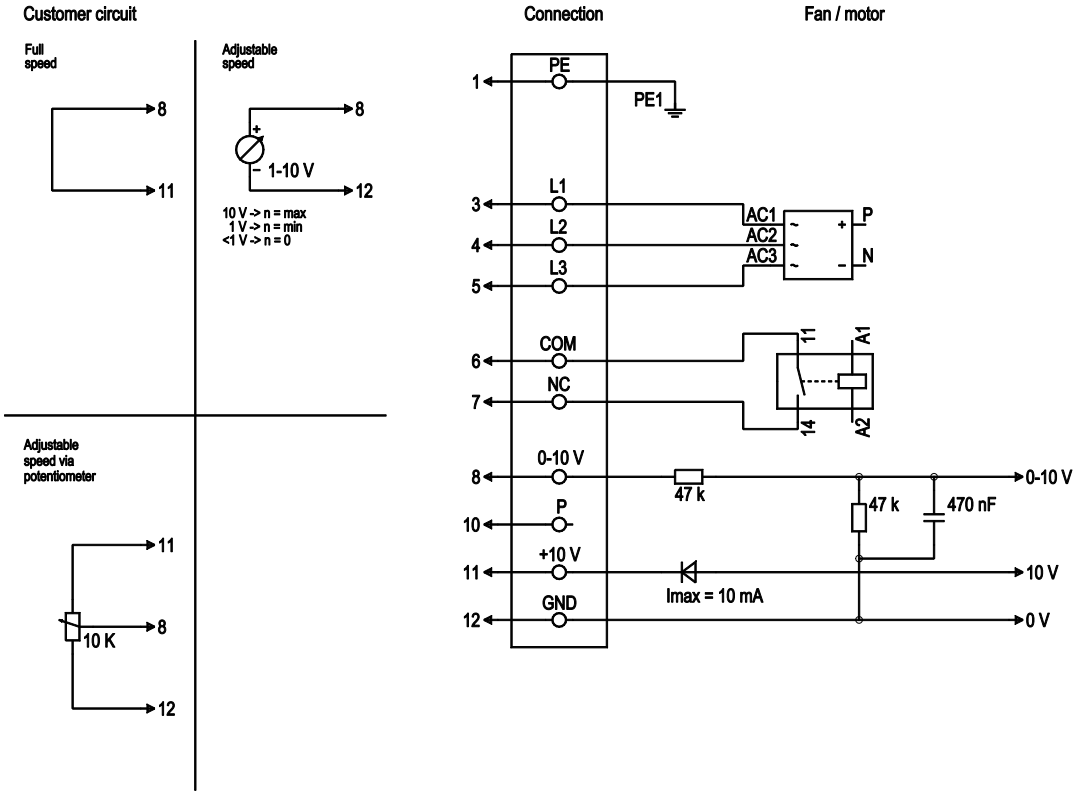
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Connection screen



Line	No.	Signal	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

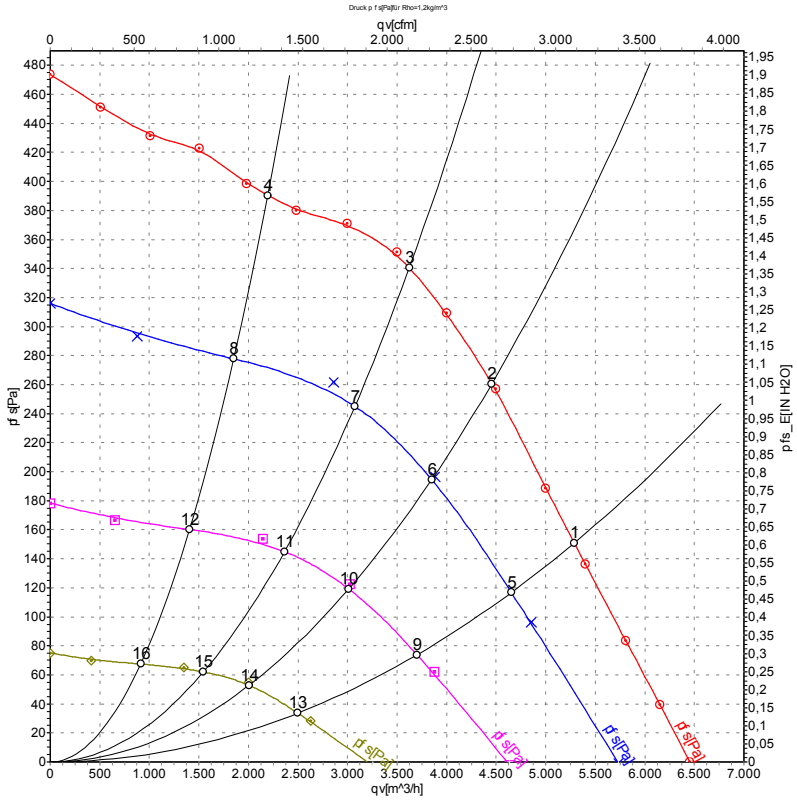
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Charts: Air flow 50 Hz



Measurement: LU-107484
Measurement: LU-107618
Measurement: LU-107617
Measurement: LU-107616

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	880	1000	1.70	72	80	83	5290	150
2	400	50	945	852	1.39	69	78	80	4455	260
3	400	50	1000	717	1.20	67	76	79	3625	340
4	400	50	1105	525	0.96	67	75	79	2195	390
5	400	50	770	642	1.10	68	77	79	4655	117
6	400	50	820	528	0.96	65	73	76	3850	199
7	400	50	860	437	0.82	62	71	73	3075	248
8	400	50	915	301	0.60	61	70	73	1855	278
9	400	50	615	327	0.65	62	71	73	3700	75
10	400	50	645	261	0.53	58	67	69	3015	123
11	400	50	670	209	0.44	56	65	68	2365	146
12	400	50	700	143	0.32	54	62	66	1405	160
13	400	50	420	108	0.26	51	60	61	2500	34
14	400	50	430	86	0.23	47	56	57	2005	55
15	400	50	440	71	0.20	44	53	54	1545	62
16	400	50	455	53	0.17	42	51	53	915	68

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

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