D3G318-AA35-01

EC centrifugal fan

forward curved, dual inlet

with housing (large flange)

D3G318-AA35-01 ebmpapst Datasheet
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Nominal data

Type	**D3G318-AA35-01**
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	1.8
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 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}		56	29.1	36.1
Efficiency grade N		63.9	37	44
Power input P_{ed}	kW	0.56		
Air flow q_v	m^3/h	2625		
Pressure increase p_{fs}	Pa	396		
Speed n	min^{-1}	1065		

Data established at point of optimum efficiency

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Technical features

Mass	21.4 kg
Size	318 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)

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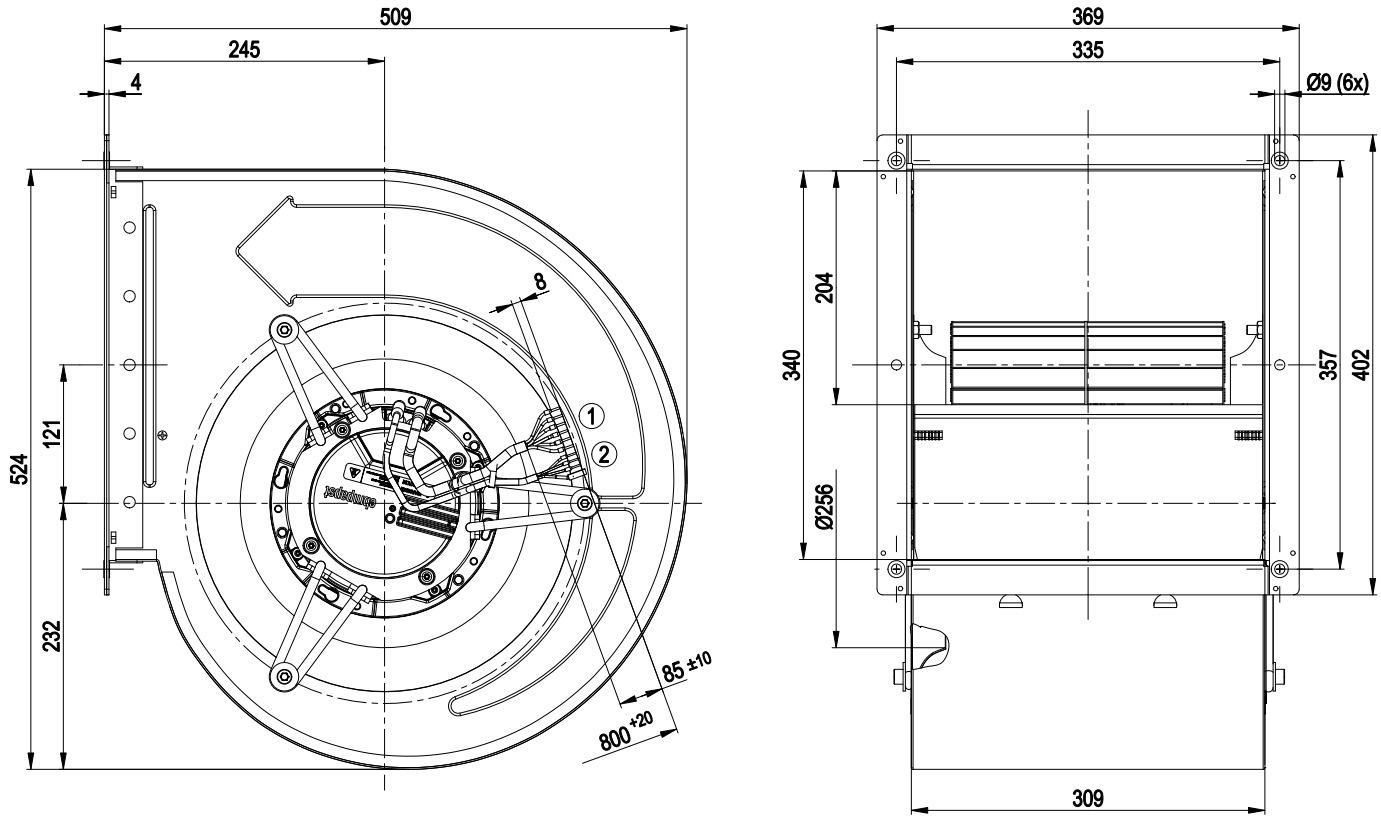
Product drawing



Cable length from electronics enclosure: 800+20 mm

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

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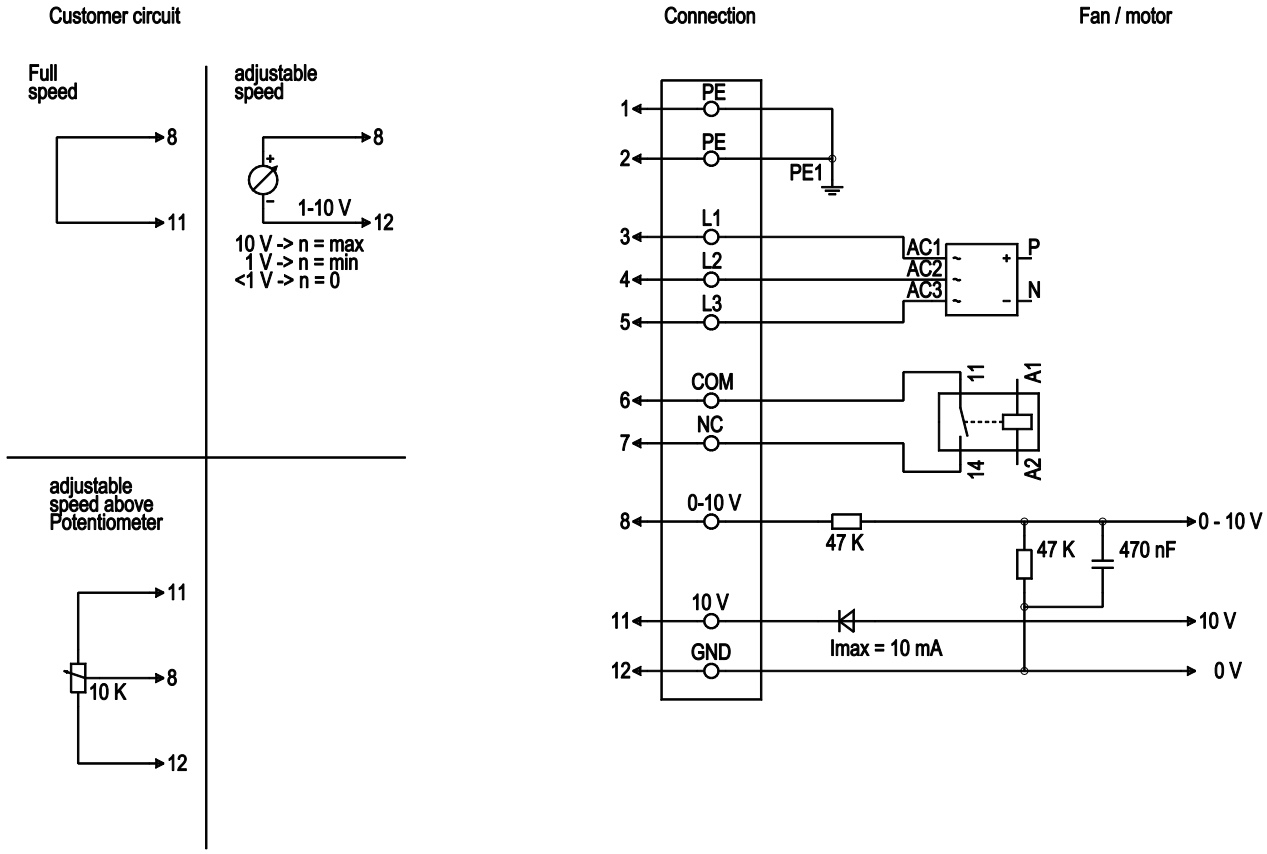
Connection screen



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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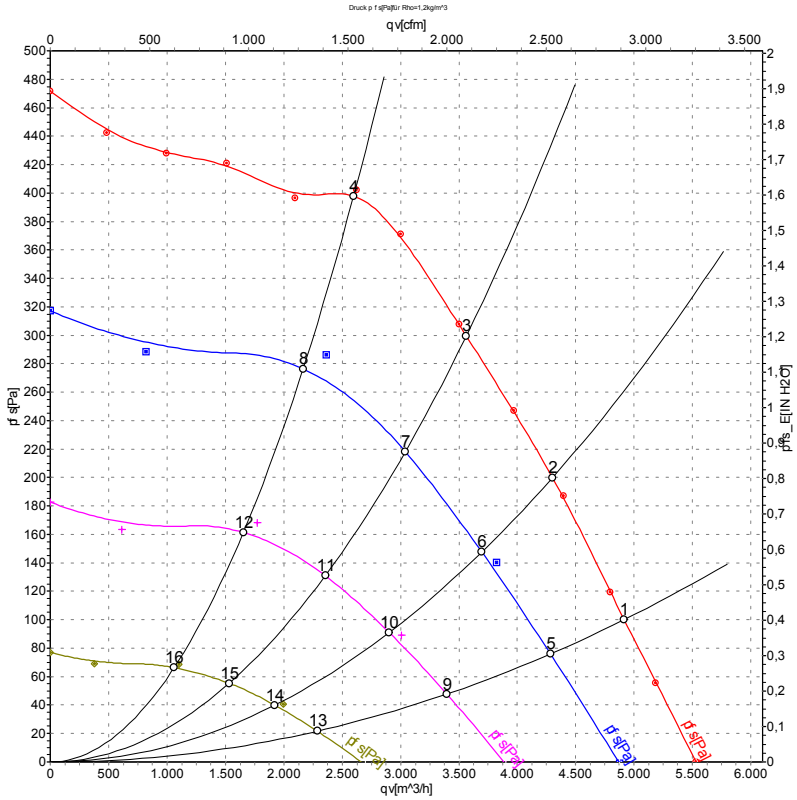
Charts: Air flow 50 Hz



Measurement: LU-107498
Measurement: LU-107615
Measurement: LU-107614
Measurement: LU-107613

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	1.80	75	83	85	4915	100
2	400	50	935	877	1.43	72	81	83	4300	200
3	400	50	990	737	1.22	70	78	79	3565	300
4	400	50	1065	566	0.99	67	75	78	2595	402
5	400	50	775	635	1.08	71	79	81	4285	78
6	400	50	815	541	0.95	68	77	78	3695	153
7	400	50	855	450	0.83	65	74	76	3040	218
8	400	50	905	332	0.65	62	71	73	2165	286
9	400	50	620	323	0.64	65	73	76	3395	50
10	400	50	645	271	0.55	62	71	73	2905	96
11	400	50	670	220	0.46	59	68	70	2355	131
12	400	50	695	157	0.35	56	64	66	1655	168
13	400	50	420	105	0.26	54	62	63	2285	23
14	400	50	430	86	0.23	51	59	60	1925	43
15	400	50	440	72	0.20	47	56	57	1530	55
16	400	50	455	55	0.18	44	53	53	1060	69

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