D3G146-HQ13-10

EC centrifugal fan

forward curved, dual inlet

with housing (large flange)

D3G146-HQ13-10 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D3G146-HQ13-10**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min^{-1}	2320
Power input	W	227
Current draw	A	1.75
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+50

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}		47.9	26	33
Efficiency grade N		58.9	37	44
Power input P_{ed}	kW	0.18		
Air flow q_v	m^3/h	645		
Pressure increase p_{fs}	Pa	447		
Speed n	min^{-1}	2595		

Data established at point of optimum efficiency

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Technical features

Mass	2.4 kg
Size	146 mm
Surface of rotor	Galvanised
Material of electronics housing	PP plastic, black
Material of impeller	Sheet steel, hot-galvanised
Housing material	PP plastic, black
Motor suspension	Motor anti-vibration mounted on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	Motor IP54
Insulation class	"F"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	STK; Via terminal box
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 60335-1; CE

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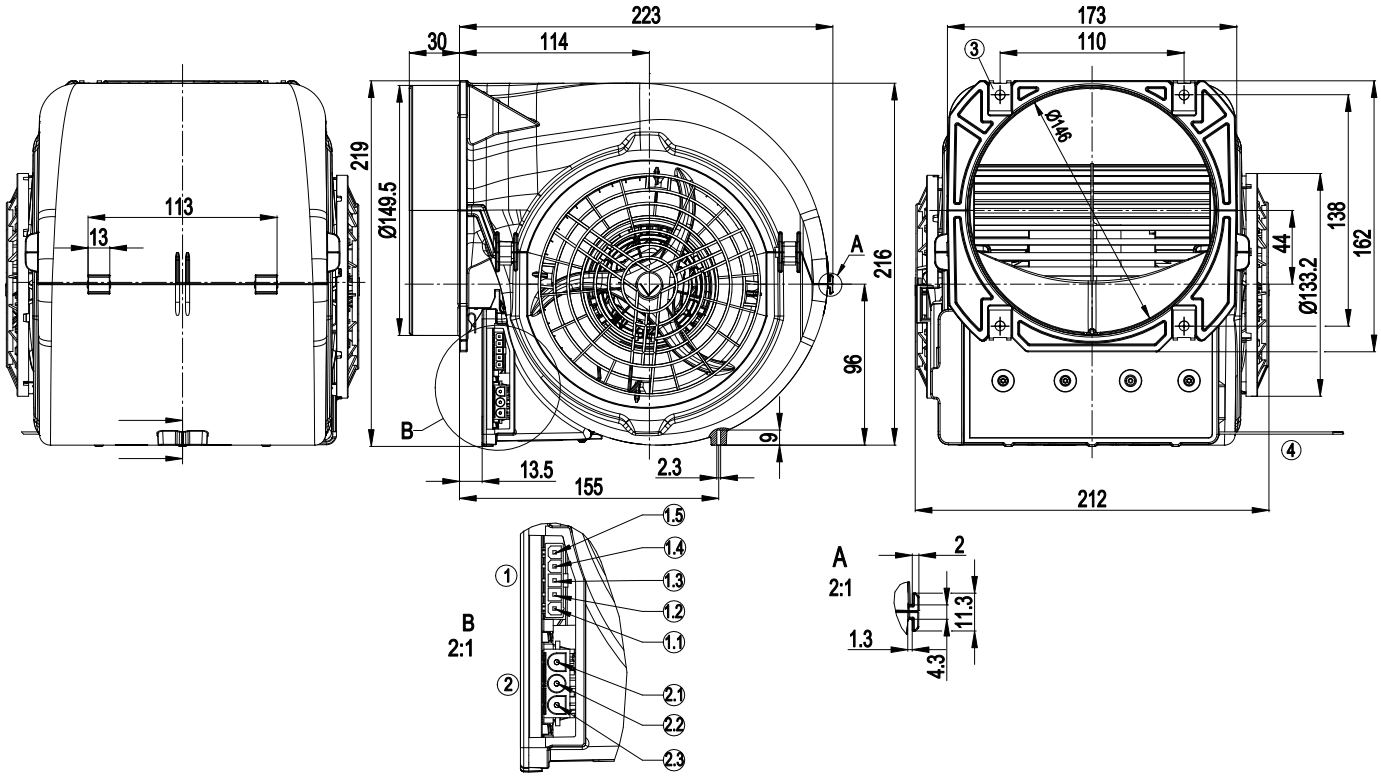
Product drawing



1	Strip Molex Mini-Fit 39-30-3055, pluggable with connector housing Molex 39-01-4050
1.1	10V
1.2	Tach
1.3	0-10V lin. / PWM
1.4	Not assigned
1.5	GND
2	Pin socket AMP Mate-N-Lok 1-350943-0, pluggable with connector housing AMP 350766-4
2.1	PE
2.2	N
2.3	L
3	4 x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material)
4	EMC earth, 1 x brass lead tip crimped

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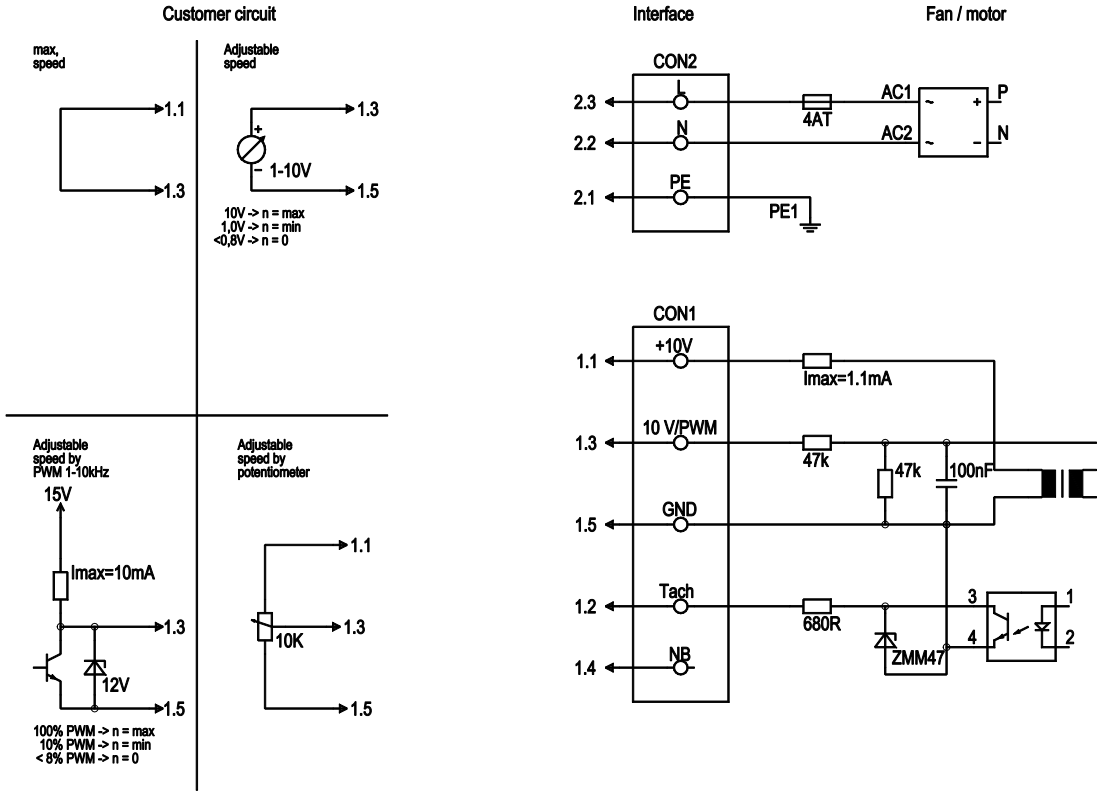
Connection screen



No.	Pin	Signal	Function / assignment
CON1	1.1	10 V/max. 1.1 mA	Voltage output 10 V/ 1.1 mA, electrically isolated
CON1	1.2	Tach	Tach output: open collector, 1 pulse per revolution, electrically isolated
CON1	1.3	0-10 V PWM	Control input 0 - 10 V or PWM, electrically isolated
CON1	1.4	NB	Not assigned
CON1	1.5	GND	GND - Connection for control interface
CON2	2.1	PE	Protective earth
CON2	2.2	N	Neutral conductor
CON2	2.3	L	Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate

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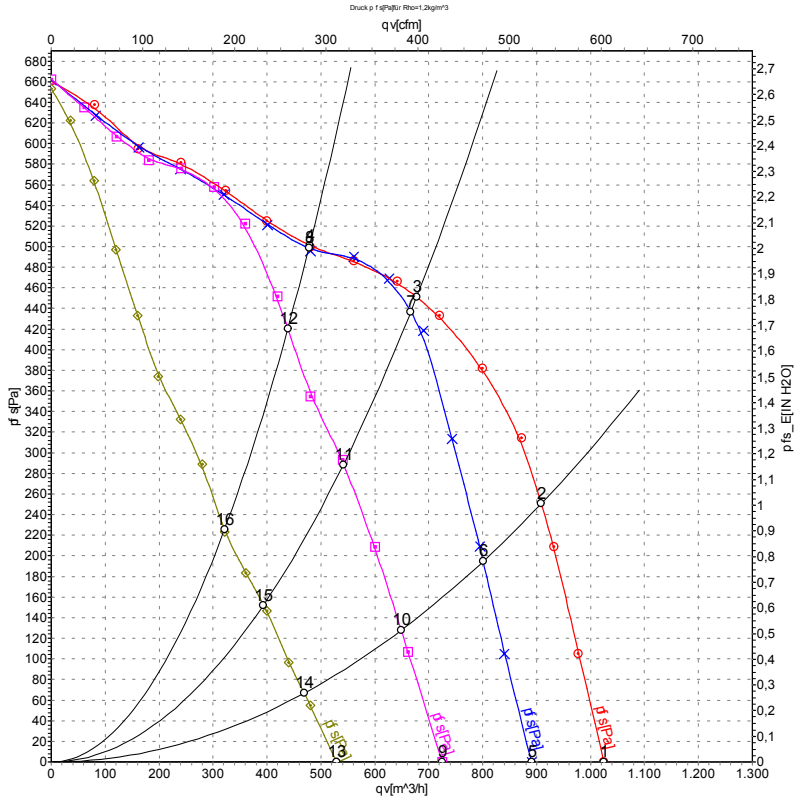
Charts: Air flow 50 Hz



Measurement: LU-133567
Measurement: LU-133570
Measurement: LU-133571
Measurement: LU-133572

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	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	1800	187	1.44	1025	0
2	230	50	2220	230	1.75	910	250
3	230	50	2555	195	1.50	675	450
4	230	50	2760	160	1.27	480	500
5	230	50	1570	120	0.98	890	0
6	230	50	1955	151	1.20	800	196
7	230	50	2520	188	1.46	665	438
8	230	50	2750	160	1.27	480	497
9	230	50	1275	64	0.57	725	0
10	230	50	1585	80	0.67	650	128
11	230	50	2065	99	0.83	540	291
12	230	50	2530	121	0.99	440	421
13	230	50	945	28	0.27	530	0
14	230	50	1170	33	0.31	470	67
15	230	50	1520	43	0.38	395	153
16	230	50	1845	50	0.44	320	223

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase