

D3G146-HQ13-04

# EC centrifugal fan

forward curved, dual inlet  
with housing (large flange)



## ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.ebmpapst.com

www.ebmpapst.com

Limited partnership · Headquarters Mulfingen  
County court Stuttgart · HRA 590344

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



## Nominal data

Type	D3G146-HQ13-04	
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 <sup>-1</sup>	2400
Power input	W	230
Current draw	A	1.8
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
Closed-loop speed control	Integrated
Specific ratio*	1,00

\* Specific ratio =  $1 + p_{sf} / 100\,000$

	Actual	Request 2013	Request 2015
Overall efficiency $\eta_e$	47,9	25,5	32,5
Efficiency grade N	59,4	37	44
Power input $P_e$	kW	0,15	
Air flow $q_v$	m <sup>3</sup> /h	505	
Pressure increase Total $p_{sf}$	Pa	453	
Speed n	min <sup>-1</sup>	2715	

Data established at point of optimum efficiency



# EC centrifugal fan

forward curved, dual inlet  
with housing (large flange)

## Technical features

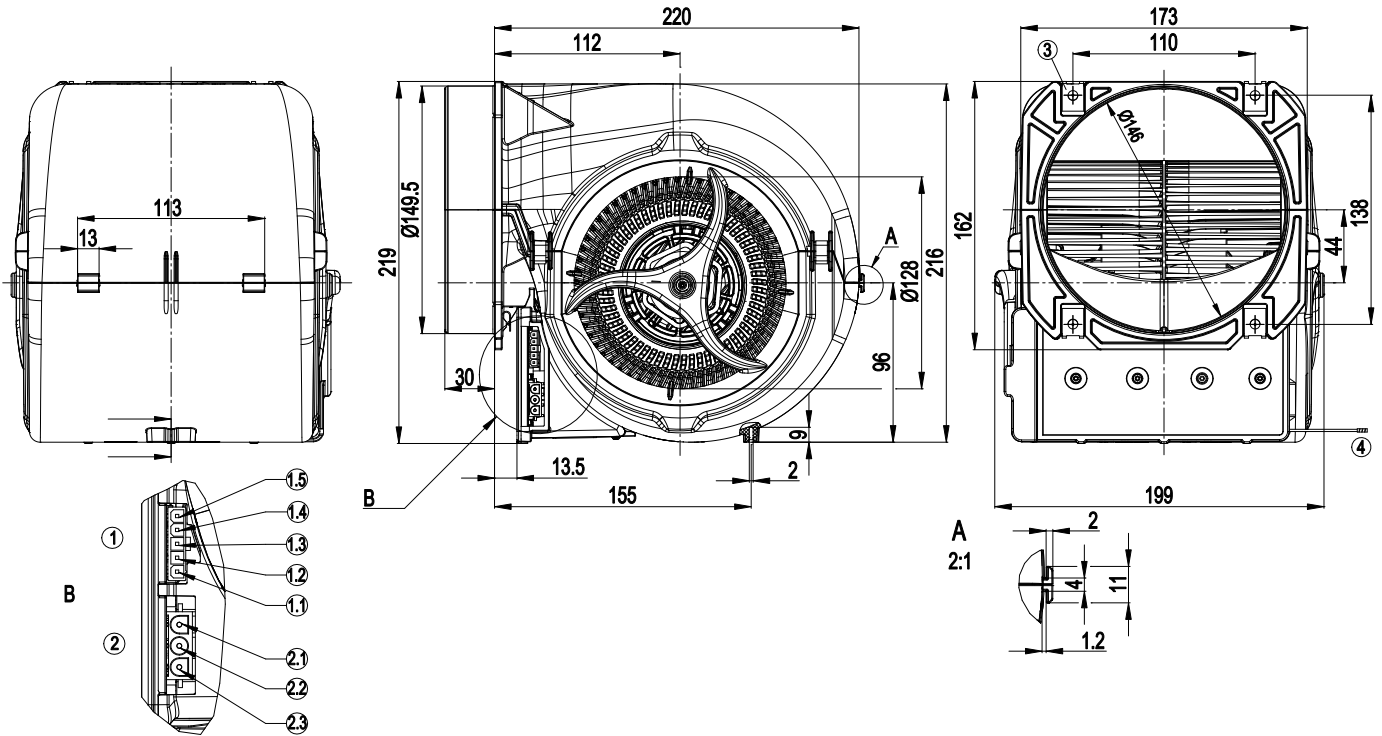
<b>Mass</b>	2.4 kg
<b>Size</b>	146 mm
<b>Surface of rotor</b>	Galvanised
<b>Material of electronics housing</b>	PP plastic, black
<b>Material of impeller</b>	PP plastic, white
<b>Housing material</b>	PP plastic, black
<b>Motor suspension</b>	Motor anti-vibration mounted on both sides
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	Motor IP54
<b>Insulation class</b>	"F"
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Any
<b>Condensate discharge holes</b>	None, open rotor
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 1.1 mA</li> <li>- Tach output</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Over-temperature protected motor</li> </ul>
<b>Leakage current</b>	<= 3.5 mA
<b>Electrical leads</b>	With plug; Via terminal box
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Cable exit</b>	Variable
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1; CE



# EC centrifugal fan

forward curved, dual inlet  
with housing (large flange)

## Product drawing



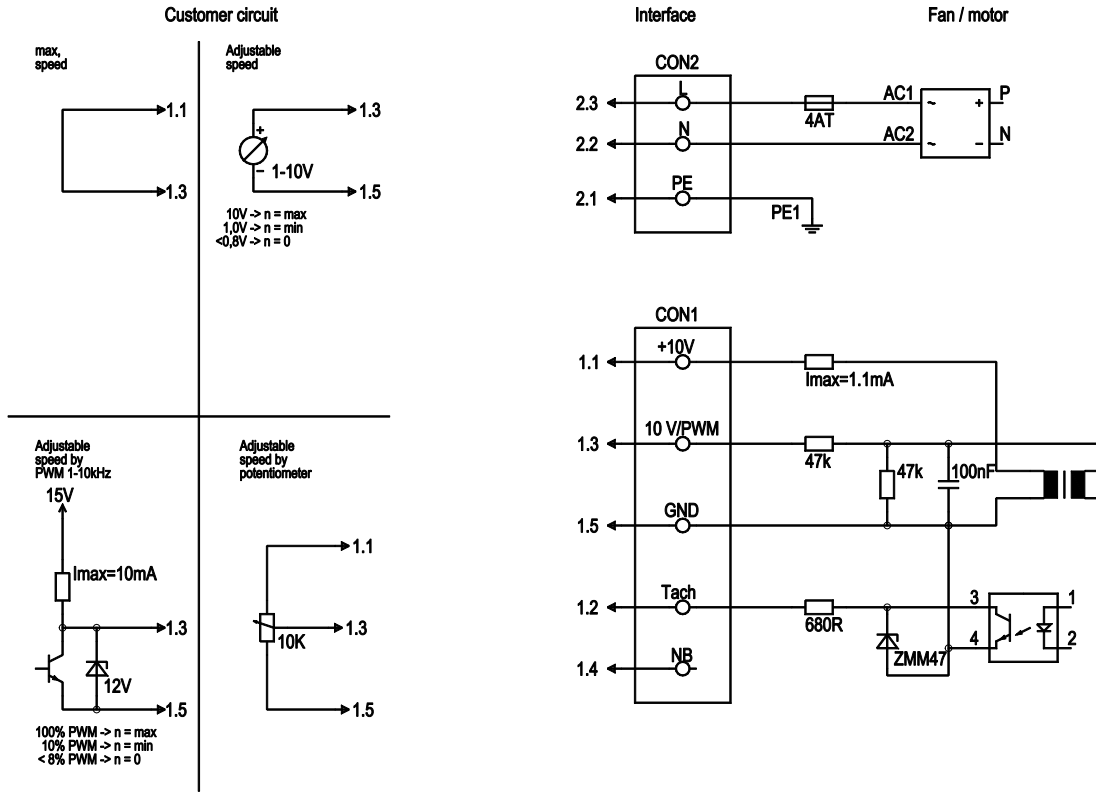
1	Strip Molex Mini-Fit 39-30-3055, pluggable with connector housing Molex 39-01-4050
1.1	10V
1.2	Tach
1.3	0-10V lin. / PWM
1.4	Not assigned
1.5	GND
2	Pin socket AMP Mate-N-Lok 1-350943-0, pluggable with connector housing AMP 350766-4
2.1	PE
2.2	N
2.3	L
3	4 x sheet metal nut for thread EN ISO 1478-ST4.8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



# EC centrifugal fan

forward curved, dual inlet  
with housing (large flange)

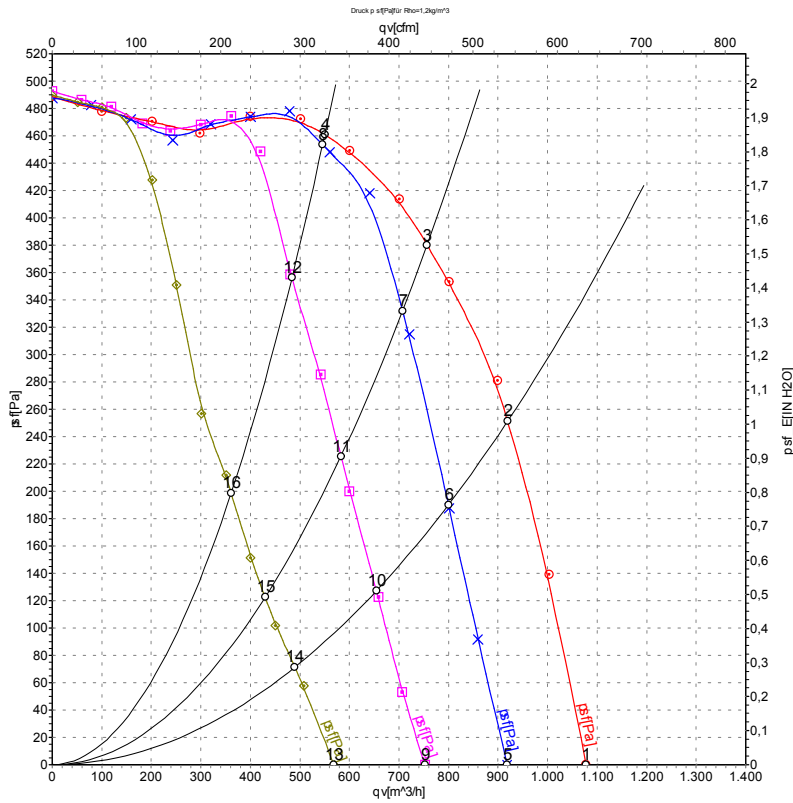
## Connection screen



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	Tacho	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



## Charts: Air flow 50 Hz



Measurement: LU-134808  
Measurement: LU-132420  
Measurement: LU-132422  
Measurement: LU-132424

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: L<sub>WA</sub> measured as per ISO 13347 /  
L<sub>pA</sub> 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 <sub>e</sub>	I	qv	P <sub>sf</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	230	50	1790	189	1.47	1080	0
2	230	50	2400	230	1.80	920	250
3	230	50	2535	206	1.61	755	380
4	230	50	2705	164	1.30	550	460
5	230	50	1535	118	0.97	920	0
6	230	50	2040	154	1.21	800	191
7	230	50	2395	175	1.38	705	333
8	230	50	2695	169	1.33	545	454
9	230	50	1265	66	0.57	750	0
10	230	50	1675	85	0.71	655	128
11	230	50	1975	98	0.82	585	225
12	230	50	2380	118	0.96	485	354
13	230	50	970	29	0.27	570	0
14	230	50	1275	38	0.34	490	72
15	230	50	1490	43	0.37	430	122
16	230	50	1800	52	0.44	360	199

