

D3G146-LV13-30

# EC centrifugal fan

forward curved, dual inlet  
with housing (flange)



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## Nominal data

Type	D3G146-LV13-30	
Motor	M3G055-DF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min <sup>-1</sup>	1550
Power input	W	167
Current draw	A	1.3
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

		Actual	Request 2015		
01 Overall efficiency $\eta_{es}$	%	35.8	32.6	09 Power input $P_{ed}$	kW
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa
04 Efficiency grade N		47.2	44	10 Speed (rpm) n	min <sup>-1</sup>
05 Variable speed drive		Yes		11 Specific ratio <sup>*</sup>	
					1.00

Data definition with optimum efficiency.  
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

<sup>\*</sup> Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

LU-162427



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## Technical features

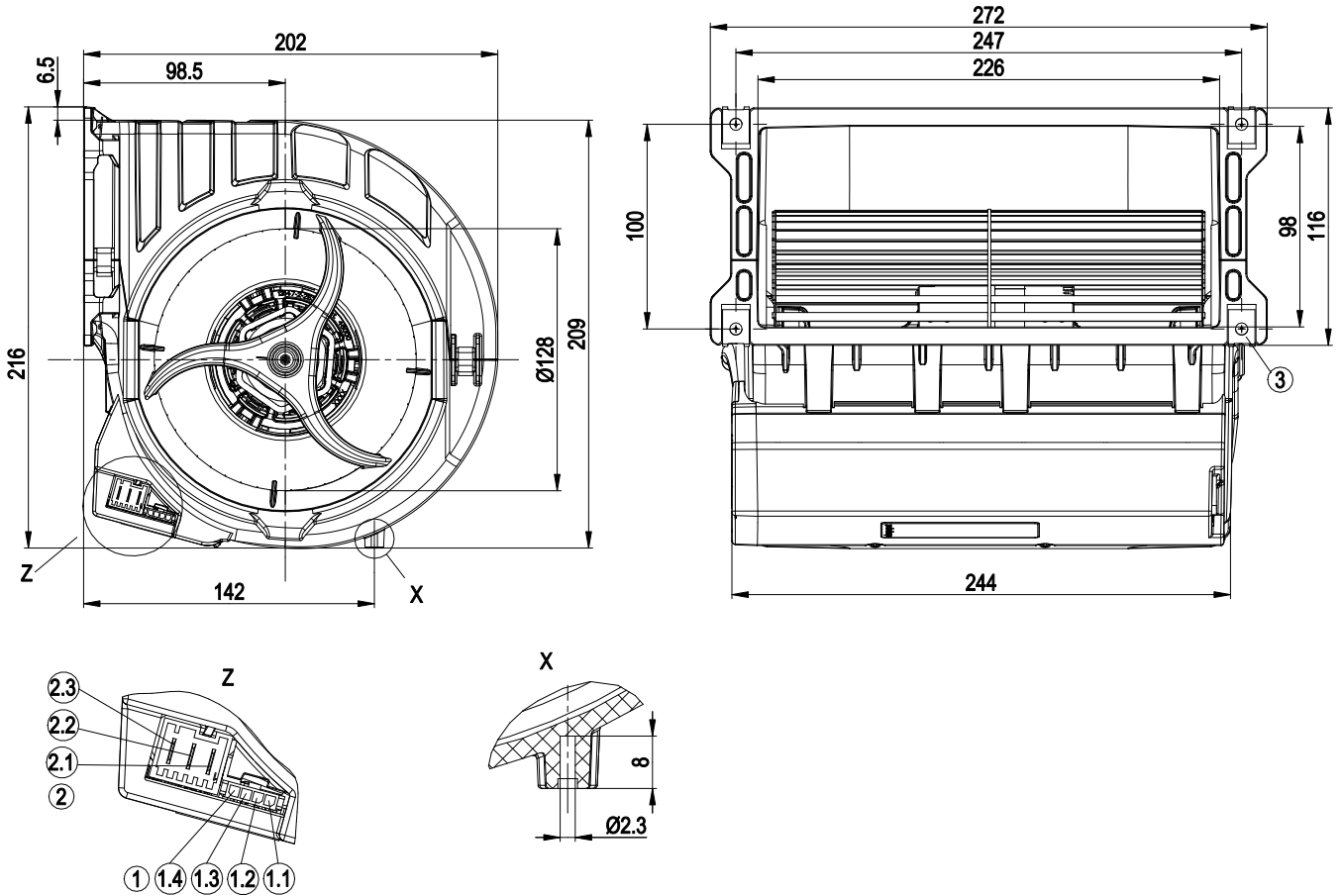
<b>Mass</b>	2.9 kg
<b>Size</b>	146 mm
<b>Surface of rotor</b>	Galvanised
<b>Material of electronics housing</b>	PP plastic
<b>Material of impeller</b>	Sheet steel, galvanised
<b>Housing material</b>	PP plastic
<b>Motor suspension</b>	Motor mounted anti-vibration on both sides
<b>Direction of rotation</b>	Counter-clockwise, seen on rotor
<b>Type of protection</b>	Motor IP 00, electronics IP 20
<b>Insulation class</b>	"F"
<b>Humidity (F)/environmental protection class (H)</b>	F0
<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>Cooling bore / aperture</b>	On rotor and stator sides
<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>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected motor</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	Acc. to EN 61000-6-4 (industrial environment)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical leads</b>	With plug
<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



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## Product drawing



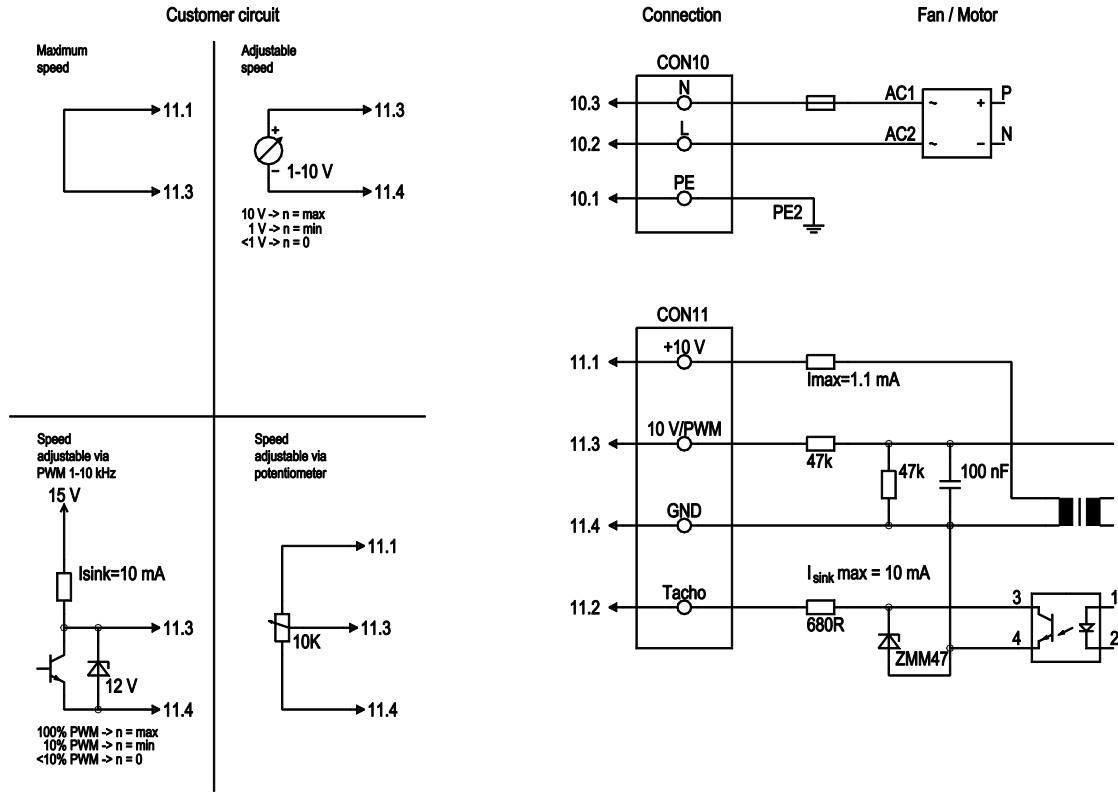
1	Strip Molex Micro Fit 3.0 04365 00400 (pluggable with 04364 50400)
1.1	10 V
1.2	Tacho
1.3	0-10 V lin. / PWM
1.4	GND
2	Connector Lumberg 3642 03 K01 (pluggable with 3626 03 K01)
2.1	PE
2.2	L
2.3	N
3	4x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material)



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## Connection screen



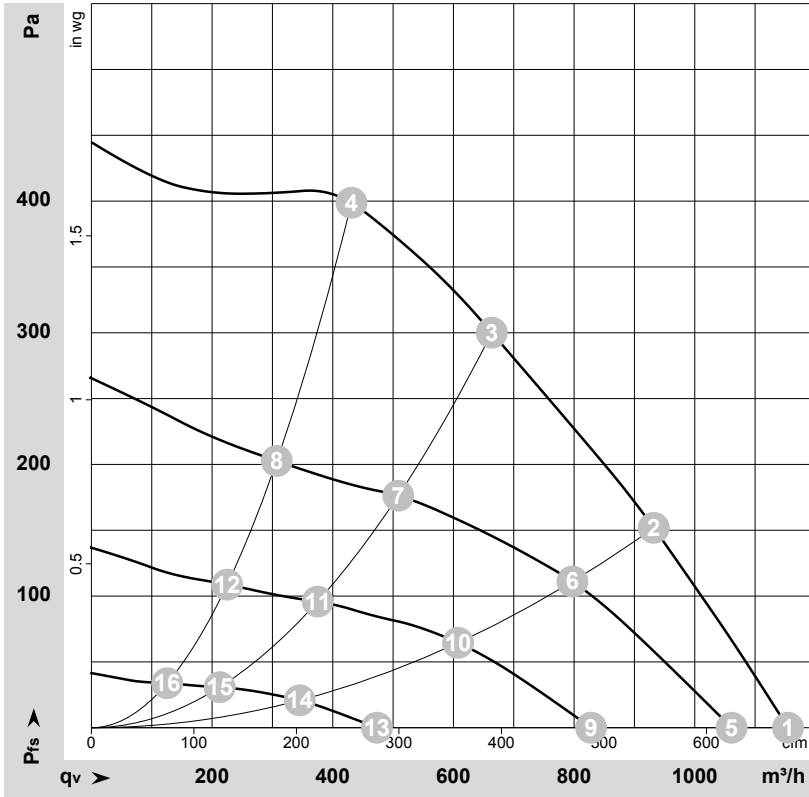
No.	Conn.	Designation	Colour	Function / assignment
CON10	10.1	PE	green/yellow	Protective earth
CON10	10.2	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
CON10	10.3	N	blue	Neutral conductor
CON11	11.1	10 V/max. 1.1 mA	red	Voltage output 10 V, 1.1 mA, electrically isolated, not short-circuit-proof
CON11	11.2	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA
CON11	11.3	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
CON11	11.4	GND	blue	GND connection for control interface



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## Charts: Air flow 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-153304-1  
Measurement: LU-129107-1  
Measurement: LU-129113-1  
Measurement: LU-129114-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m <sup>3</sup> /h	Pa	cfm	inH2O
1	230	50	1550	167	1.30	61	74	1155	0	680	0.00
2	230	50	1905	167	1.30	60	72	930	150	550	0.60
3	230	50	2350	167	1.30	62	74	665	300	390	1.20
4	230	50	2675	157	1.25	65	76	430	400	255	1.61
5	230	50	1470	145	1.14			1060	0	625	0.00
6	230	50	1660	110	0.89			795	112	470	0.45
7	230	50	1825	78	0.64			510	177	300	0.71
8	230	50	1935	61	0.51			305	203	180	0.81
9	230	50	1140	63	0.54			830	0	485	0.00
10	230	50	1260	49	0.43			610	65	360	0.26
11	230	50	1345	34	0.30			375	96	220	0.39
12	230	50	1405	27	0.26			225	109	130	0.44
13	230	50	685	16	0.16			475	0	280	0.00
14	230	50	730	12	0.12			345	21	205	0.08
15	230	50	770	9.0	0.11			215	31	125	0.12
16	230	50	800	8.0	0.09			125	34	75	0.14

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · q<sub>v</sub> = Air flow  
P<sub>fs</sub> = Pressure increase

