D3G160-LV05-31

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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Nominal data

Type	**D3G160-LV05-31**
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 (rpm)	min^{-1}	1650
Power input	W	170
Current draw	A	0.8
Min. back pressure	Pa	150
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 η_{es}	%	42.9	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		54.1	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.17
09 Air flow q_v	m^3/h	705
09 Pressure increase p_{fs}	Pa	336
10 Speed (rpm) n	min^{-1}	2130
11 Specific ratio*		1.00

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

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

LU-168513

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Technical features

Mass	3.4 kg
Size	160 mm
Material of electronics housing	PP plastic
Material of impeller	Sheet steel, galvanised
Housing material	PP plastic
Motor suspension	Motor mounted vibration-free on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	Motor IP 00, electronics IP 20
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F0
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
Cooling bore / aperture	On rotor and stator sides
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Motor current limit - PFC, active - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected motor
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
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

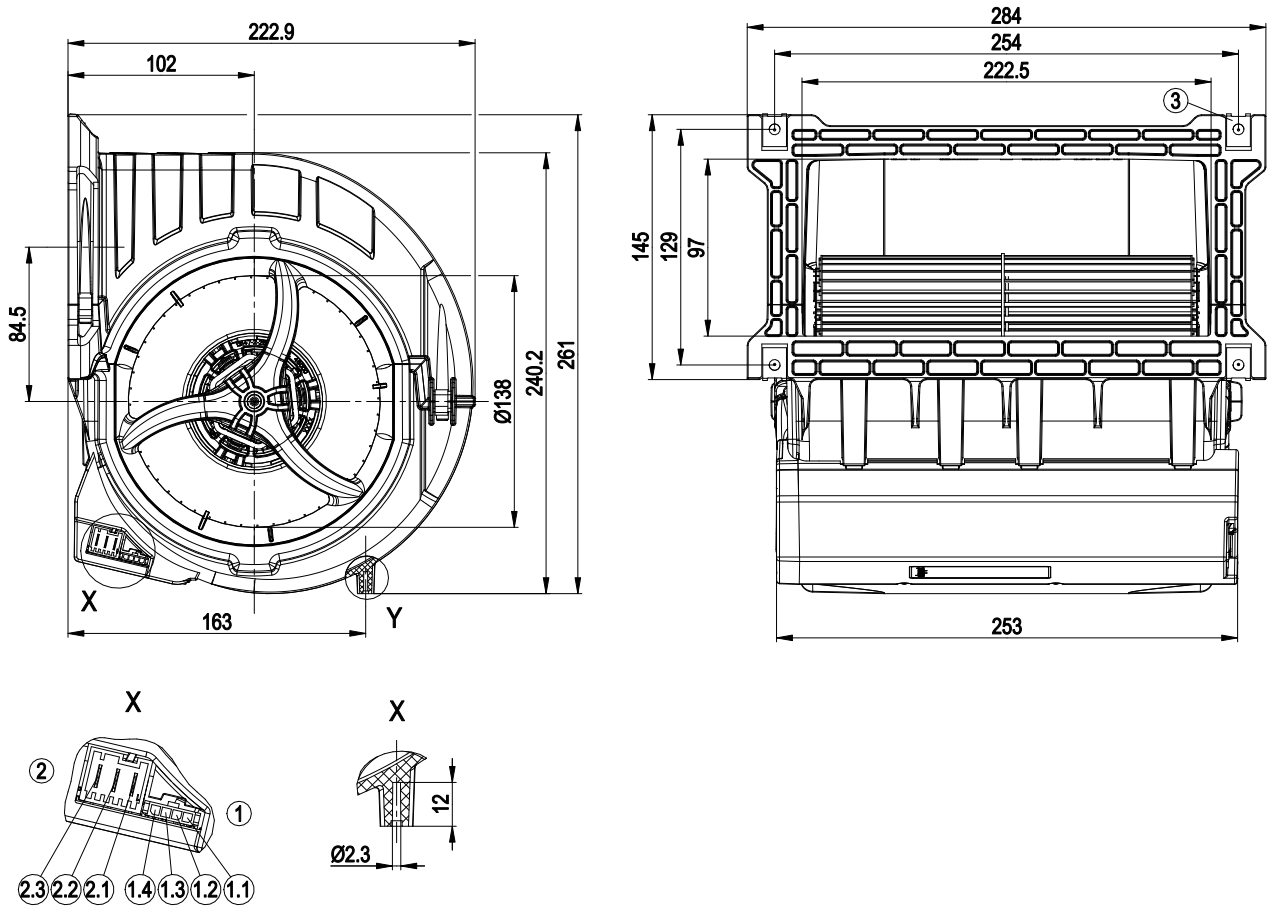
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Product drawing



1	Strip Molex 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)

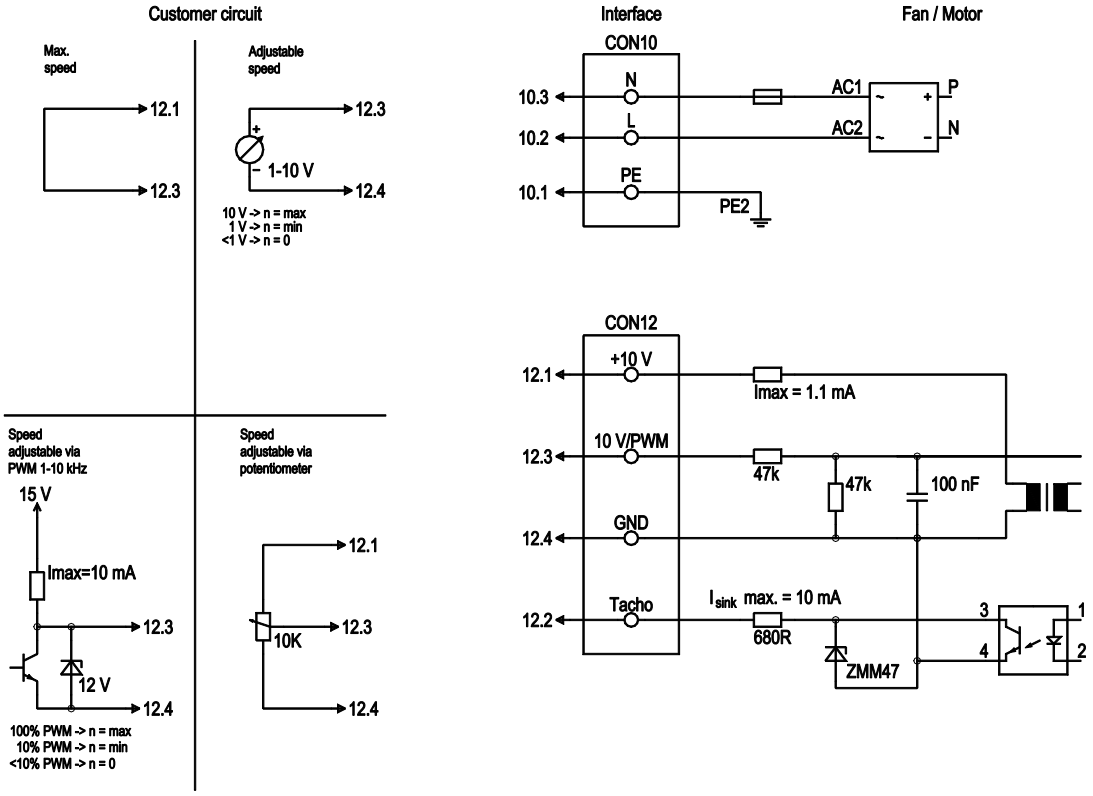
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Connection screen



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 or 330 VDC, see type plate for voltage range
CON10	10.3	N	blue	Neutral conductor
CON12	12.1	10 V / max. 1,1 mA	red	Voltage output 10 V, 1.1 mA, electrically isolated, not short-circuit-proof
CON12	12.2	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA
CON12	12.3	0-10 V	yellow	Control input 0-10 V or PWM, electrically isolated
CON12	12.4	GND	blue	GND connection of control interface

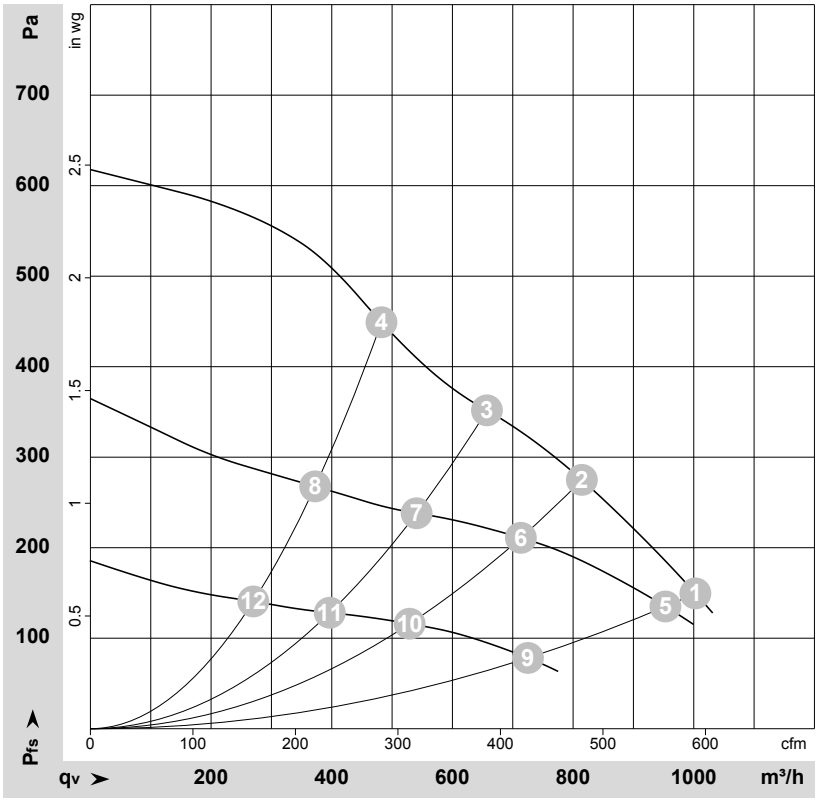
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168513-1

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}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	1650	170	0.80	59	71	1005	150	590	0.60
2	230	50	1955	170	0.80	59	71	815	275	480	1.10
3	230	50	2185	170	0.80	61	72	655	350	385	1.41
4	230	50	2450	170	0.80	63	75	480	450	285	1.81
5	230	50	1550	144	0.68			955	135	560	0.54
6	230	50	1705	115	0.57			715	211	420	0.85
7	230	50	1805	97	0.49			540	238	320	0.96
8	230	50	1895	81	0.44			370	268	220	1.08
9	230	50	1185	62	0.37			725	79	425	0.32
10	230	50	1275	49	0.33			530	116	310	0.47
11	230	50	1330	41	0.30			395	128	235	0.51
12	230	50	1380	34	0.28			270	141	160	0.57

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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