D3G160-LV13-01

EC centrifugal fan

forward curved, dual inlet

with housing (flange)

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D3G160-LV13-01**
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}	1660
Power input	W	170
Current draw	A	1.3
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

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}	%	42.4	25.6	32.6
Efficiency grade N		53.8	37	44
Power input P_{ed}	kW	0.16		
Air flow q_v	m^3/h	705		
Pressure increase p_{fs}	Pa	309		
Speed n	min^{-1}	2060		

Data definition with optimum efficiency. LU-159429
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	3.5 kg
Size	160 mm
Material of terminal box	PP plastic
Material of impeller	Sheet steel, galvanised
Housing material	PP plastic
Motor suspension	Motor mounted anti-vibration on both sides
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	Motor IP 54, electronic IP 20
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 - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
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
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
Approval	CCC

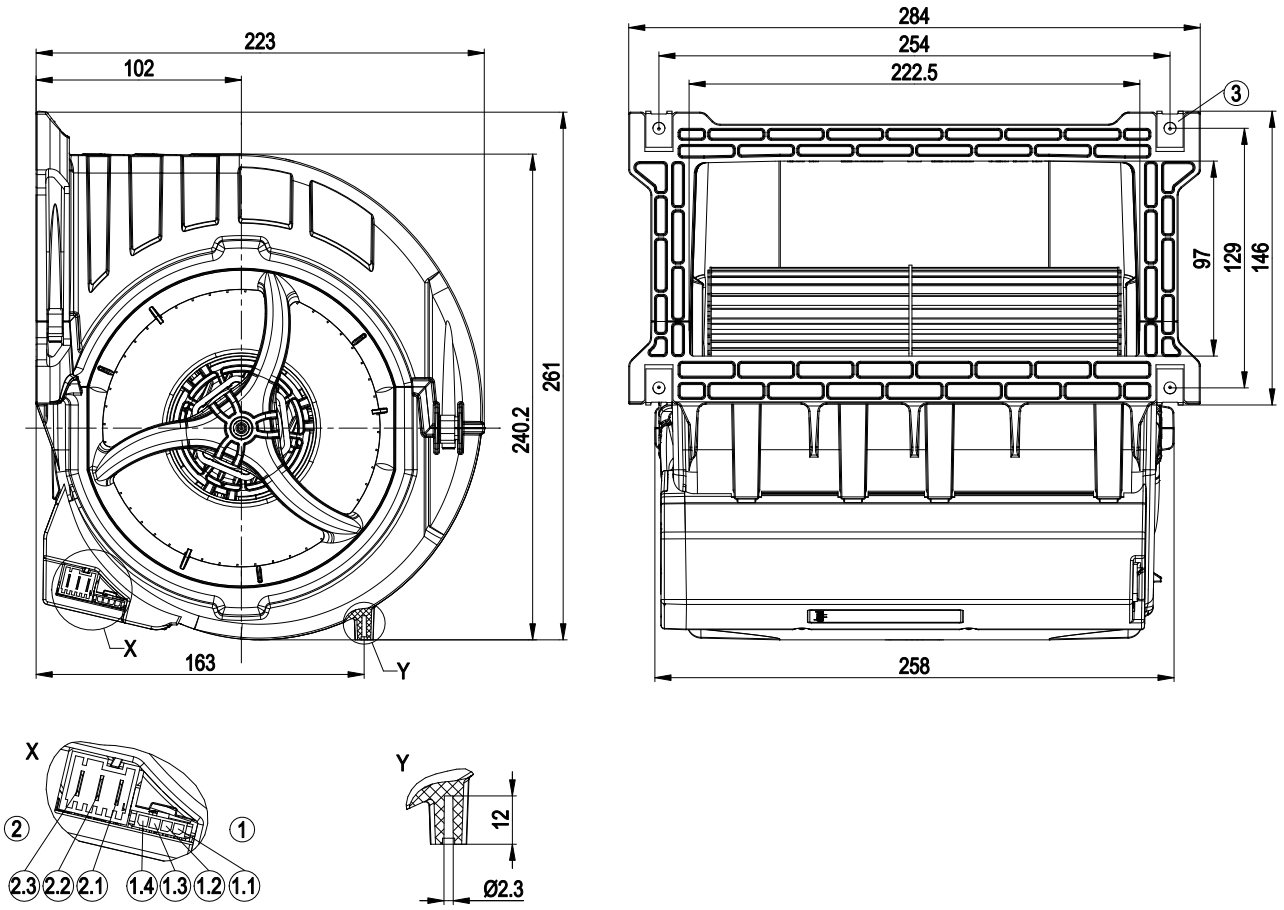
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Product drawing



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

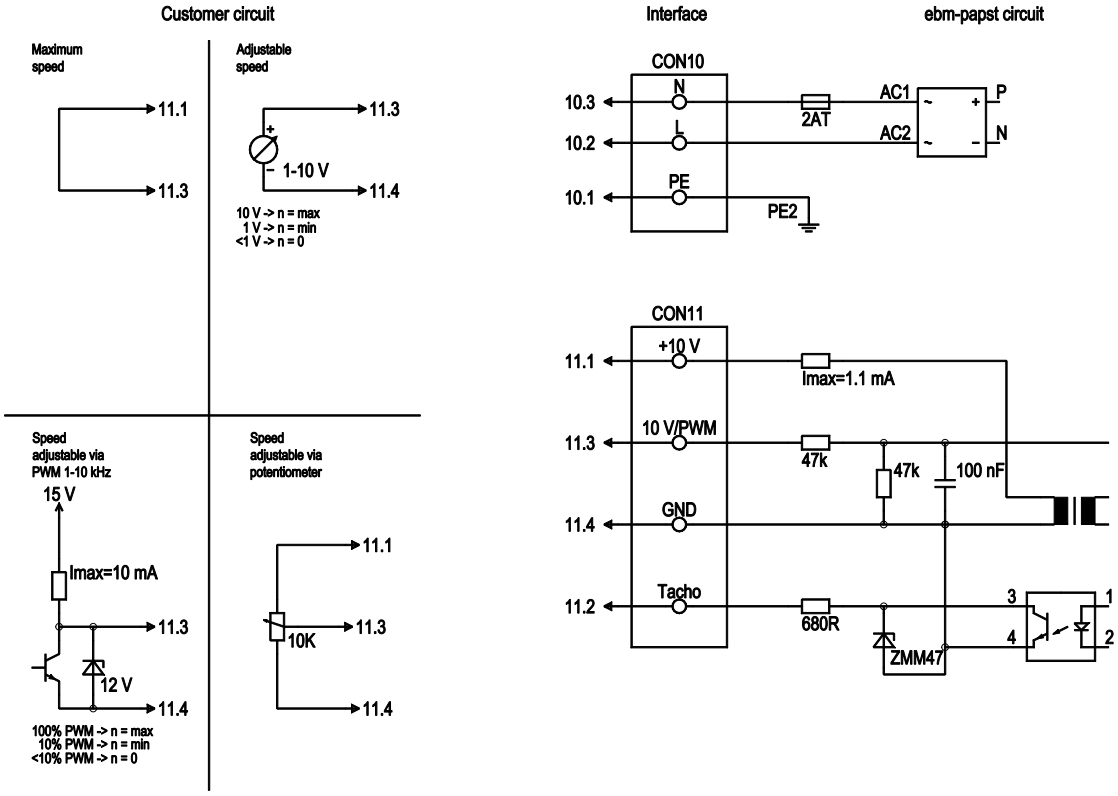
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Connection screen



No.	Conn.	Designation	Colour	Function / assignment
CON10	10.1	PE	green/yellow	Protective earth
CON10	10.2	L	blue	Neutral conductor
CON10	10.3	N	black	Power supply 230 VAC, 50-60 Hz, for voltage range refer to rating plate
CON11	11.1	10 V/max. 1.1 mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, not short-circuit-proof
CON11	11.2	Tach	white	Tach output: open collector, 1 pulses per revolution, electrically isolated
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

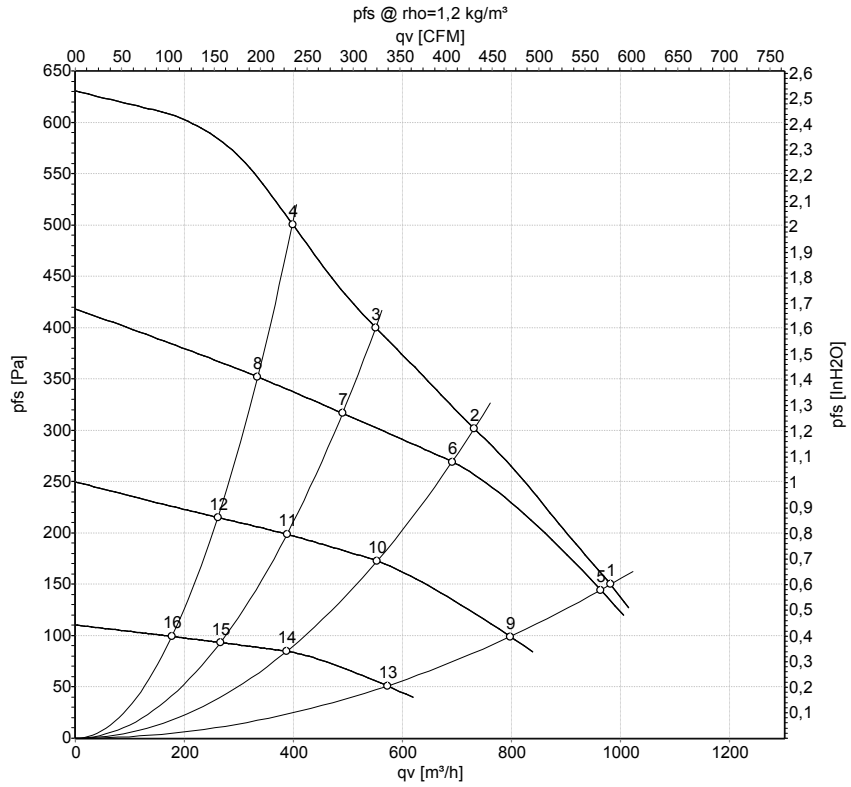
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Charts: Air flow 50 Hz



Measurement: LU-159429
Measurement: LU-141250
Measurement: LU-141251
Measurement: LU-141252

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	1660	170	1.30	980	150
2	230	50	2010	170	1.30	730	300
3	230	50	2290	170	1.30	550	400
4	230	50	2535	170	1.30	400	500
5	230	50	1620	154	1.25	965	154
6	230	50	1880	130	1.06	690	269
7	230	50	2010	109	0.89	490	317
8	230	50	2135	90	0.74	335	352
9	230	50	1345	83	0.72	795	104
10	230	50	1495	62	0.54	555	173
11	230	50	1585	51	0.44	390	200
12	230	50	1665	41	0.36	260	215
13	230	50	970	29	0.28	570	54
14	230	50	1050	21	0.21	390	85
15	230	50	1085	17	0.18	265	93
16	230	50	1120	14	0.15	175	99

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

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