D3G160-LV13-06

EC centrifugal fan

forward-curved, dual-intake

with housing (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
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**D3G160-LV13-06**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1660
Power consumption	W	170
Current draw	A	1.3
Min. back pressure	Pa	150
Min. back pressure	inH2O	0.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	42.4	32.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.8	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	705
09 Pressure increase p_{fs}	Pa	309
10 Speed (rpm) n	min^{-1}	2060
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

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

LU-159429

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Technical description

Weight	3.5 kg
Fan size	160 mm
Terminal box material	PP plastic
Impeller material	Sheet steel, galvanized
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	Motor IP54, electronics IP20
Insulation class	"F"
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Fault output (open collector) - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

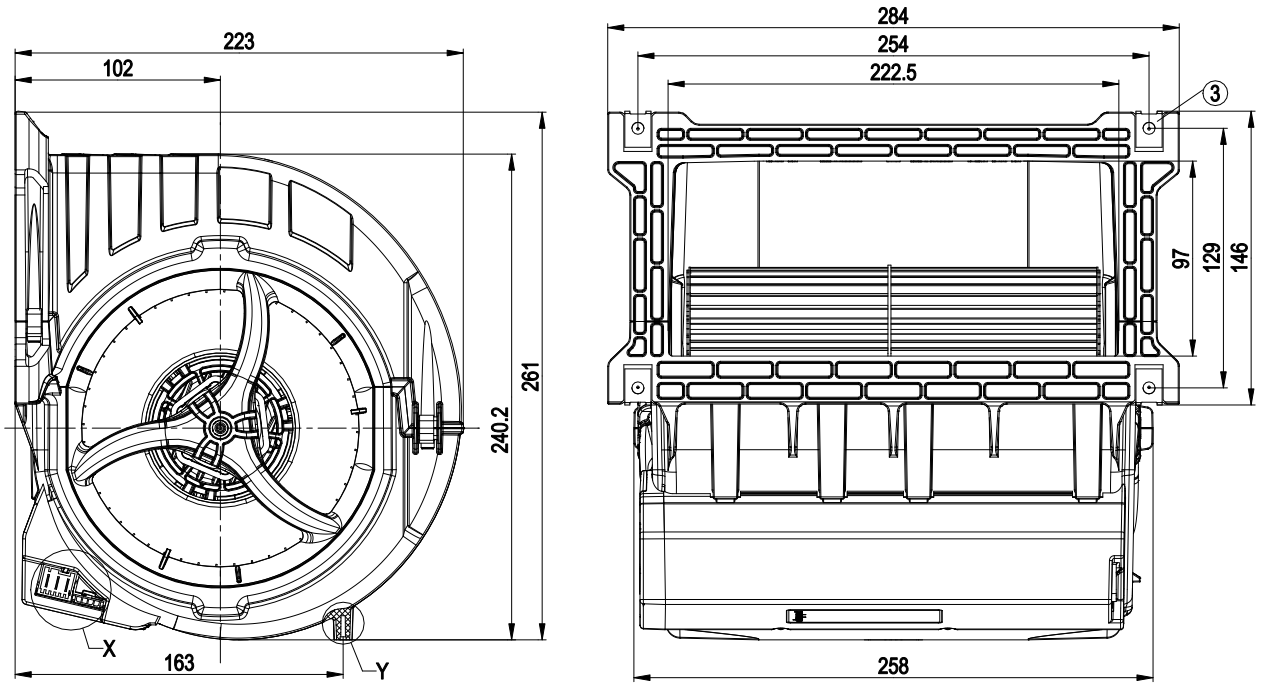
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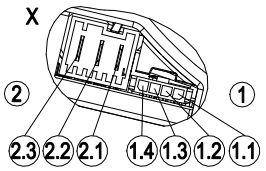
EC centrifugal fan

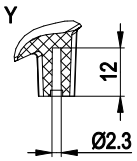
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Product drawing







1	Header Molex Micro Fit 3.0 04365 00400 (pluggable with 04364 50400)
1.1	+10 V (red)
1.2	Fan good / fan bad (white)
1.3	0-10 V PWM (yellow)
1.4	GND (blue)
2	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 material thickness of attachment)

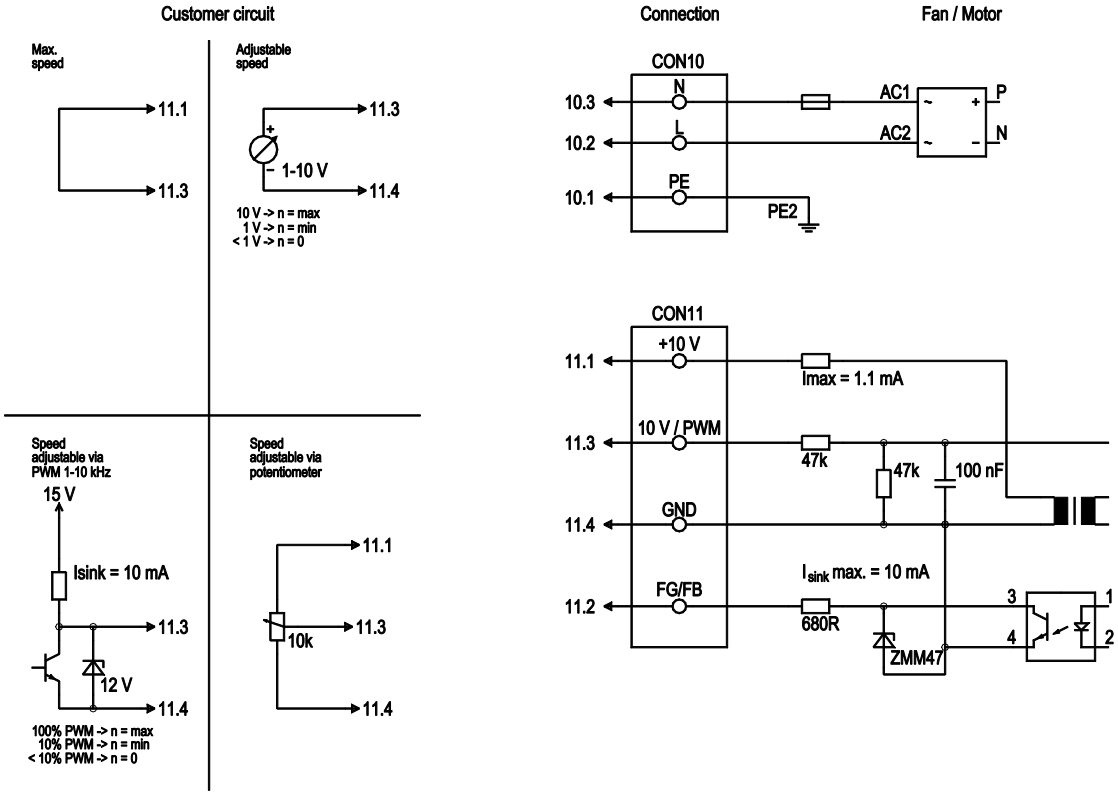
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
CON10	10.1	PE	green/yellow	Protective earth
CON10	10.2	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate 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	FG/FB	white	Fan good / fan bad: open collector, fan good = low, 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

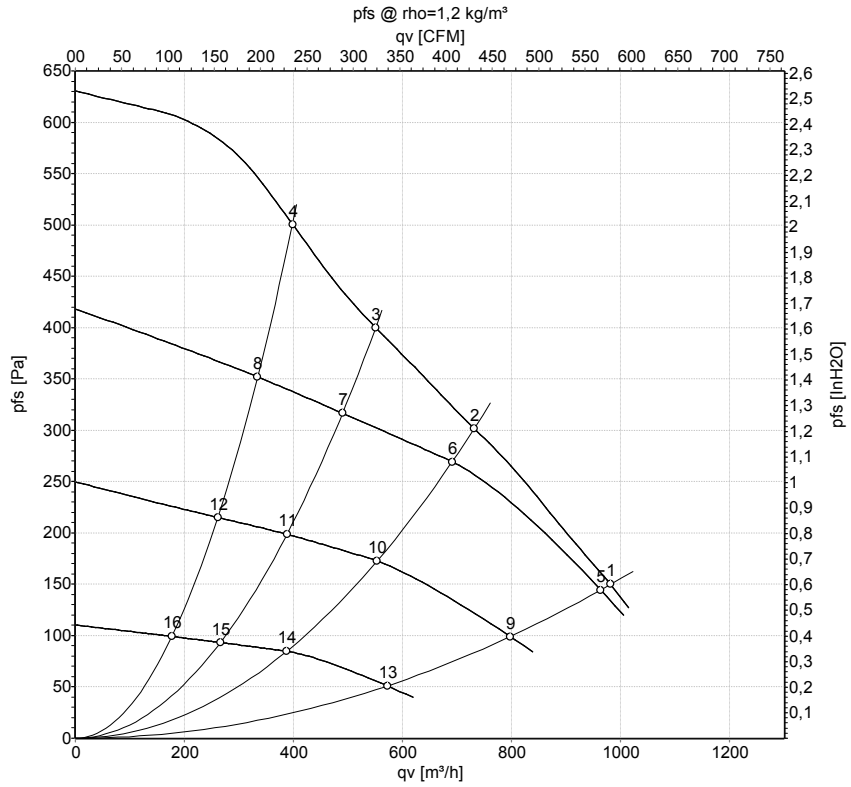
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Curves: Air performance 50 Hz



Measurement: LU-159429-1
Measurement: LU-141250-1
Measurement: LU-141251-1
Measurement: LU-141252-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	f	n	P_{ed}	I	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	1660	170	1.30	980	150	575	0.60
2	230	50	2010	170	1.30	730	300	430	1.20
3	230	50	2290	170	1.30	550	400	325	1.61
4	230	50	2535	170	1.30	400	500	235	2.01
5	230	50	1620	154	1.25	965	154	565	0.62
6	230	50	1880	130	1.06	690	269	405	1.08
7	230	50	2010	109	0.89	490	317	290	1.27
8	230	50	2135	90	0.74	335	352	195	1.41
9	230	50	1345	83	0.72	795	104	470	0.42
10	230	50	1495	62	0.54	555	173	325	0.69
11	230	50	1585	51	0.44	390	200	230	0.80
12	230	50	1665	41	0.36	260	215	155	0.86
13	230	50	970	29	0.28	570	54	335	0.22
14	230	50	1050	21	0.21	390	85	230	0.34
15	230	50	1085	17	0.18	265	93	155	0.37
16	230	50	1120	14	0.15	175	99	105	0.40

U = Power supply · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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