D3G146-LV13-39

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)



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Nominal data

Type	**D3G146-LV13-39**
Motor	**M3G055-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	1550
Power consumption	W	167
Current draw	A	1.3
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
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 Commission Regulation (EU) 327/2011

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.8	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		46	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.17
09 Air flow q_v	m^3/h	605
09 Pressure increase p_{fs}	Pa	312
10 Speed (rpm) n	min^{-1}	2405
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-185070

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Technical description

Weight	2.7 kg
Size	146 mm
Motor size	55
Rotor surface	Galvanized
Electronics housing 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 IP00, electronics IP20
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
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
Cooling hole/opening	On rotor and stator sides
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Tach output - Power limiter - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	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

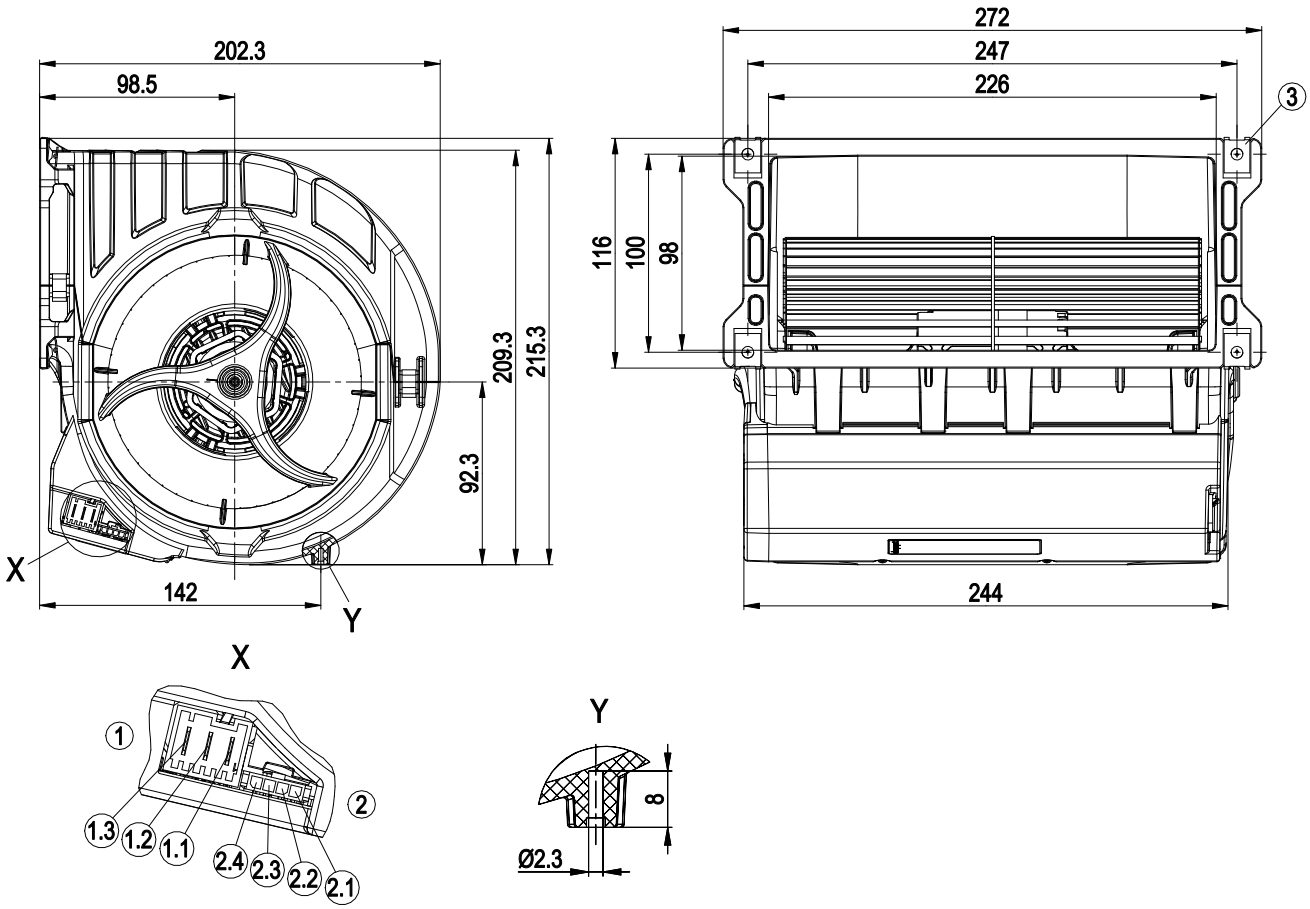
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Product drawing



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

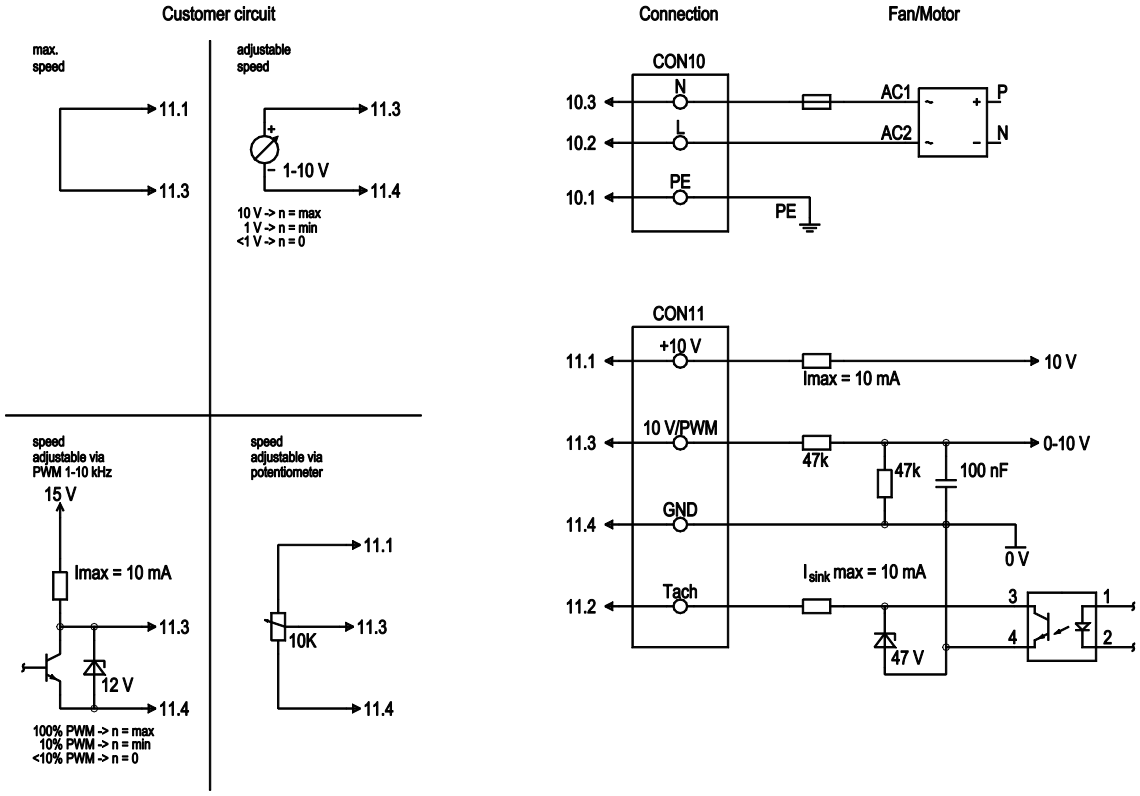
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
CON10	10.2	L	black	Supply connection, power supply, phase, voltage range see nameplate, 50/60 Hz
CON10	10.3	N	blue	Supply connection, power supply, neutral conductor, voltage range see nameplate, 50/60 Hz
CON10	10.1	PE	green/yellow	Ground connection
CON11	11.3	0-10 V / PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
CON11	11.2	Tacho	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
CON11	11.1	+10 V	red	Fixed voltage output 10 VDC +/-3%, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometers), SELV
CON11	11.4	GND	blue	Reference ground for control interface, SELV

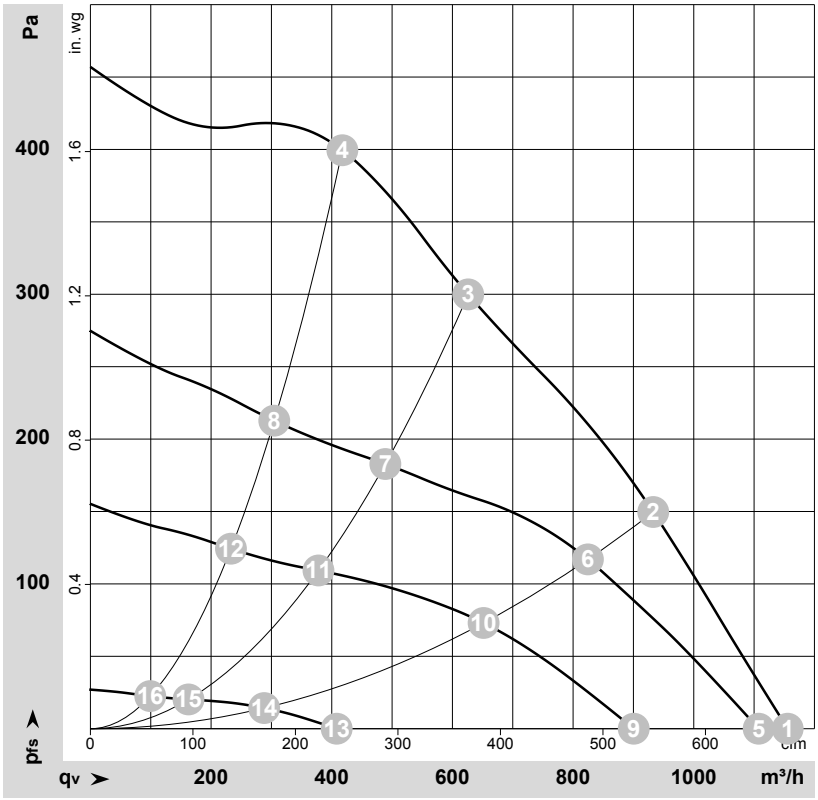
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-185070-1

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

	Wired	U	f	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	50	1550	167	1.30	1155	0	680	0.00
2	1~	230	50	1870	167	1.30	935	150	550	0.60
3	1~	230	50	2360	167	1.30	625	300	370	1.20
4	1~	230	50	2675	164	1.25	420	400	245	1.61
5	1~	230	50	1460	152	1.18	1110	0	650	0.00
6	1~	230	50	1665	118	0.93	825	117	485	0.47
7	1~	230	50	1865	84	0.68	490	183	290	0.73
8	1~	230	50	1970	67	0.55	305	212	180	0.85
9	1~	230	50	1200	79	0.64	900	0	530	0.00
10	1~	230	50	1330	59	0.49	650	73	385	0.29
11	1~	230	50	1460	41	0.35	380	109	220	0.44
12	1~	230	50	1515	33	0.28	235	124	135	0.50
13	1~	230	50	580	11	0.11	410	0	240	0.00
14	1~	230	50	610	8.0	0.09	290	14	170	0.06
15	1~	230	50	640	7.0	0.08	165	20	95	0.08
16	1~	230	50	660	6.0	0.07	100	23	60	0.09

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

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