D3G146-AK09-12

EC centrifugal fan

forward-curved, dual-intake

with housing (flange)

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Nominal data

Type	**D3G146-AK09-12**
Motor	**M3G055-CF**

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}	1250
Power consumption	W	48
Current draw	A	0.43
Min. back pressure	Pa	60
Min. back pressure	in. wg	0.24
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

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Technical description

Weight	2.2 kg
Size	146 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PP plastic
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Mode	S1
Motor bearing	Ball bearing
Technical features	- Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Connector with cable
Motor protection	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

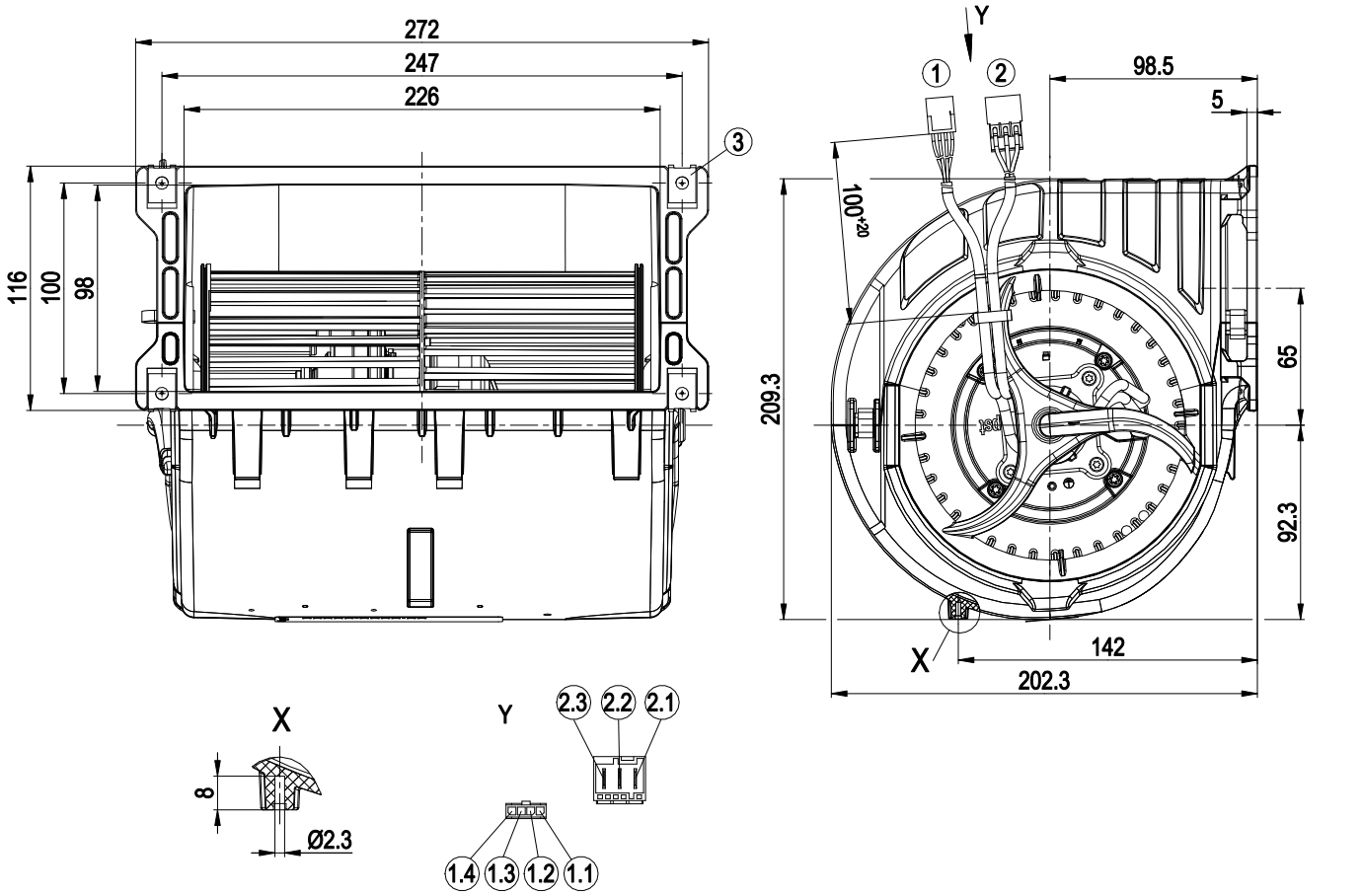
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Product drawing



1	Cable PVC 4x 0.25 mm²
	4-pole connector housing Molex 43640-0411, 4x socket Molex 43031-0004
1.1	+10 V (red)
1.2	Tach (white)
1.3	0-10 V/PWM (yellow)
1.4	GND (blue)
2	Cable PVC 3G 0.5 mm²
	3-pole connector housing Lumberg 3618 03 K01
2.1	PE (green/yellow)
2.2	L (brown)
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)

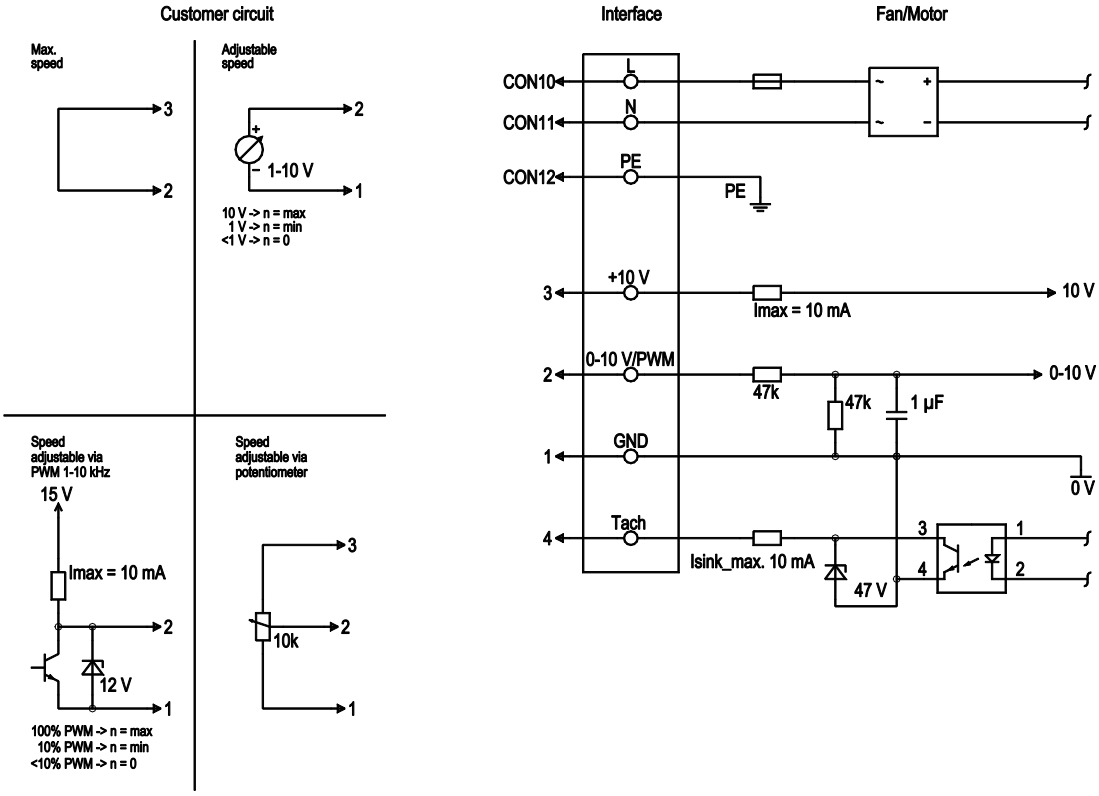
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	brown	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

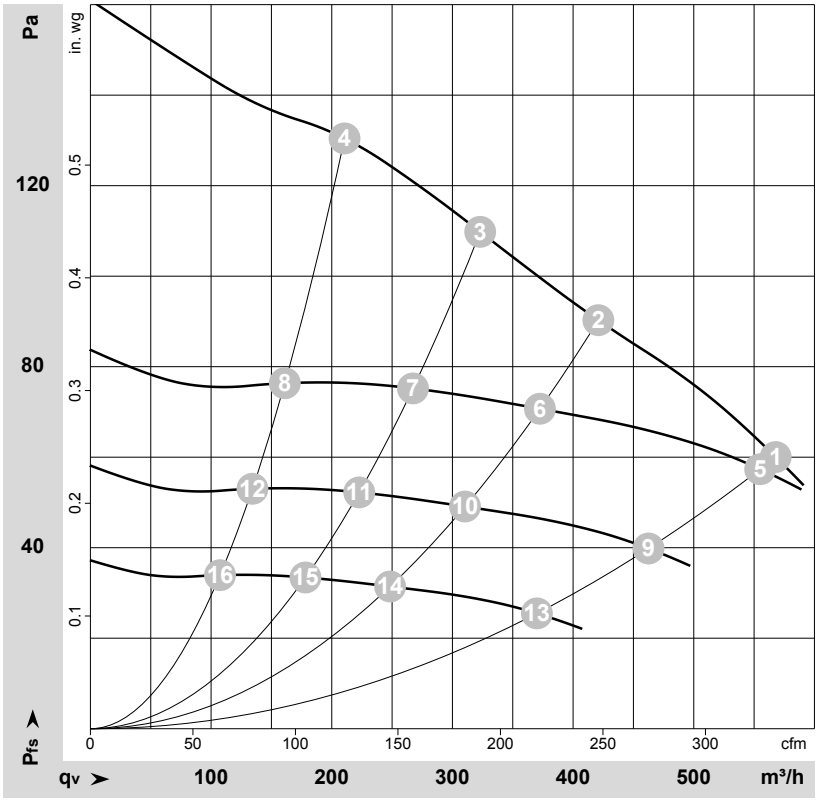
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-184763-1

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	1250	48	0.43	570	60	335	0.24
2	1~	230	50	1355	39	0.36	420	90	250	0.36
3	1~	230	50	1450	33	0.31	325	110	190	0.44
4	1~	230	50	1570	25	0.25	210	130	125	0.52
5	1~	230	50	1200	45	0.40	555	58	325	0.23
6	1~	230	50	1200	27	0.25	375	71	220	0.29
7	1~	230	50	1200	19	0.18	265	75	155	0.30
8	1~	230	50	1200	11	0.11	160	77	95	0.31
9	1~	230	50	1000	26	0.23	465	40	275	0.16
10	1~	230	50	1000	16	0.15	310	49	180	0.20
11	1~	230	50	1000	11	0.10	225	52	130	0.21
12	1~	230	50	1000	7.0	0.06	135	53	80	0.21
13	1~	230	50	800	13	0.12	370	26	220	0.10
14	1~	230	50	800	8.0	0.07	250	31	145	0.12
15	1~	230	50	800	6.0	0.05	180	33	105	0.13
16	1~	230	50	800	3.00	0.03	105	34	65	0.14

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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