K3G146-AD03-02

EC centrifugal fan combination

forward curved

with housing

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Nominal data

Type	**K3G146-AD03-02**
Motor	**M3G074-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}	1280
Power input	W	170
Current draw	A	0.8
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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}	%	40.6	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.8	44
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.17
09 Air flow q_v	m^3/h	1205
09 Pressure increase p_{fs}	Pa	187
10 Speed (rpm) n	min^{-1}	1885
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

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Technical features

Mass	4.2 kg
Size	146 mm
Surface of rotor	Galvanised
Material of electronics housing	PP plastic
Material of impeller	PP plastic
Housing material	PP plastic
Motor suspension	Motor mounted anti-vibration on both sides
Direction of rotation	Clockwise, seen on rotor
Type of protection	Motor IP 44, electronic IP 20; Depending on installation and position
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. 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
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household 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	Lateral
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

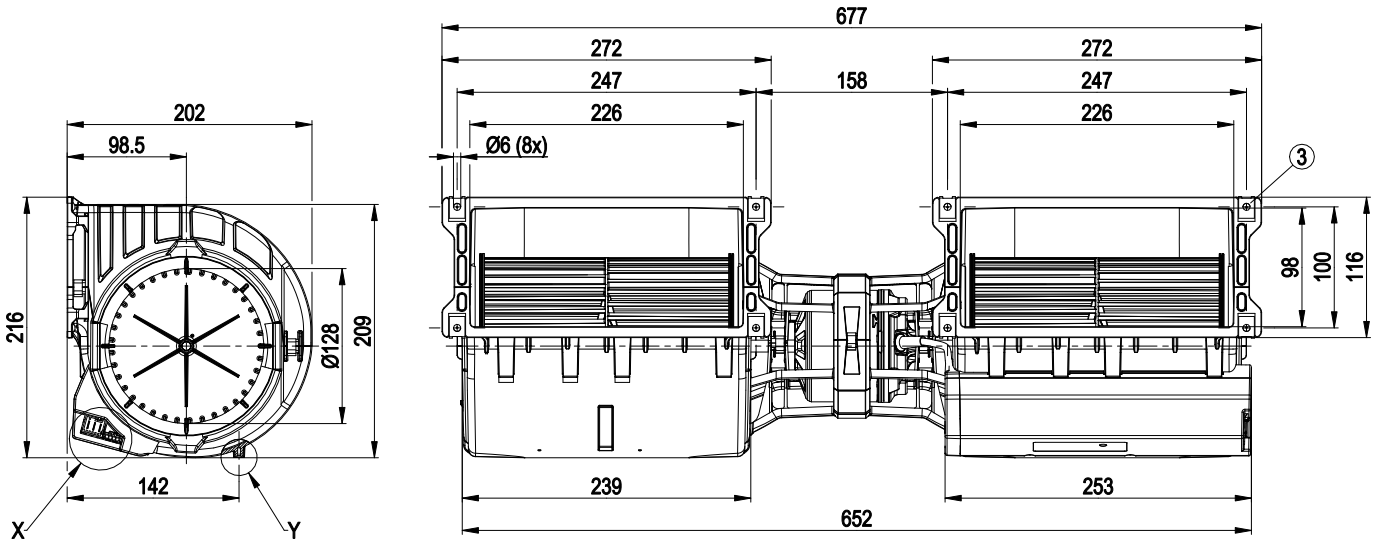
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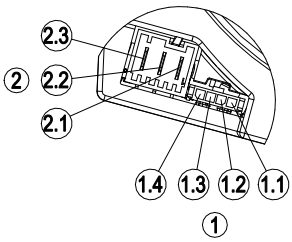
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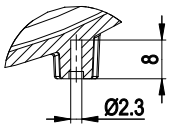
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Product drawing







1	Strip Molex Micro Fit 3.0 043650 0400 (pluggable with 043645 0400)
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	8x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material)

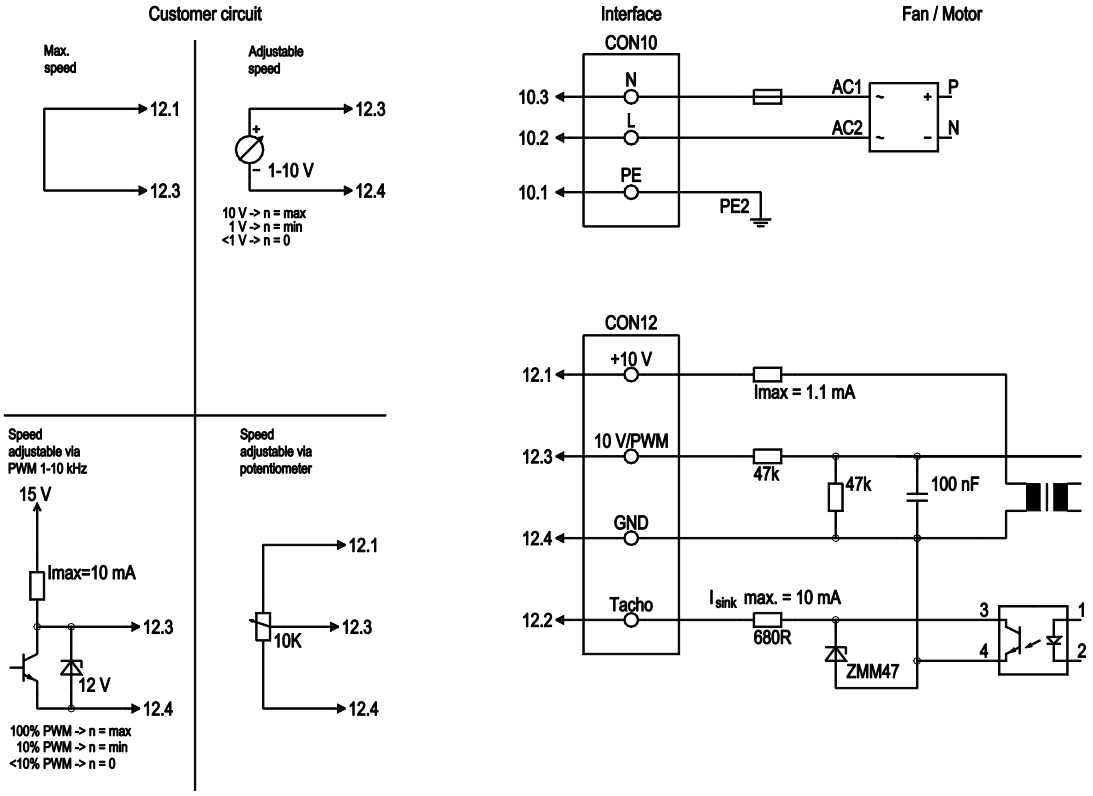
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Connection screen



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

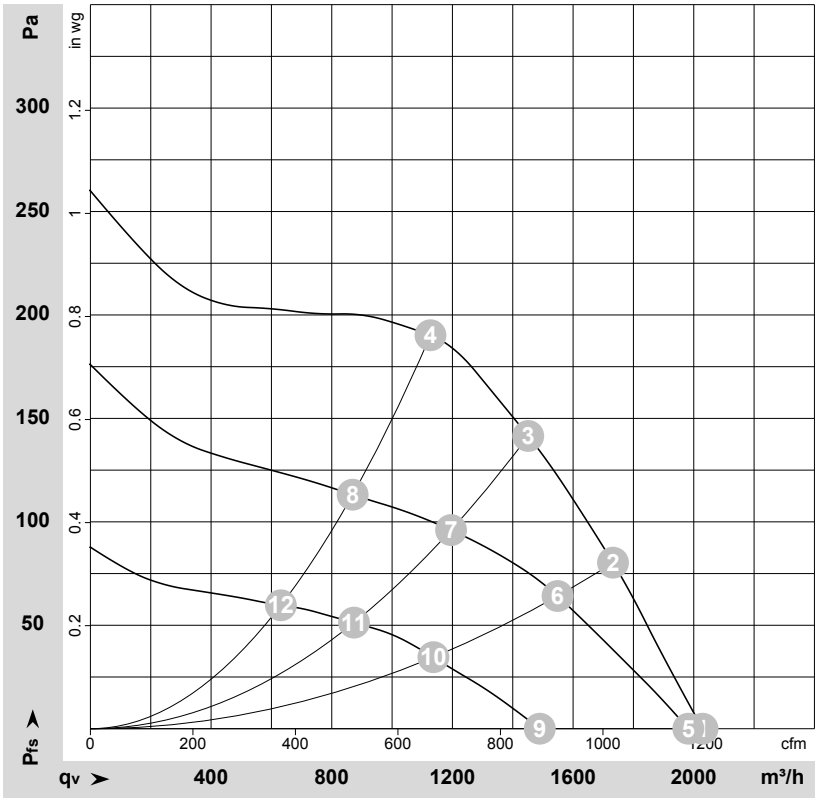
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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-168220-1

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	1280	170	0.80	60	70	2030	0	1195	0.00
2	230	50	1495	170	0.80	59	69	1730	80	1020	0.32
3	230	50	1700	170	0.79	58	68	1450	140	855	0.56
4	230	50	1900	168	0.78	59	69	1125	190	665	0.76
5	230	50	1255	161	0.75			1980	0	1165	0.00
6	230	50	1345	126	0.61			1550	64	910	0.26
7	230	50	1410	101	0.51			1195	96	705	0.39
8	230	50	1465	80	0.43			870	113	510	0.45
9	230	50	955	72	0.40			1490	0	875	0.00
10	230	50	1005	55	0.35			1135	35	670	0.14
11	230	50	1040	44	0.31			875	51	515	0.20
12	230	50	1070	36	0.29			630	60	370	0.24

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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