K3G146-AD03-07

EC centrifugal fan combination

forward-curved

with housing

K3G146-AD03-07 ebmpapst Datasheet
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Nominal data

Type	**K3G146-AD03-07**
Motor	**M3G074-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}	1450
Power consumption	W	170
Current draw	A	1.35
Min. back pressure	Pa	70
Min. back pressure	in. wg	0.28
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	39.8	32.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.5	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	905
09 Pressure increase p_{fs}	Pa	196
10 Speed (rpm) n	min^{-1}	1915
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-192878

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Technical description

Weight	4.08 kg
Size	146 mm
Motor size	74
Rotor surface	Galvanized
Electronics housing material	PP plastic
Impeller material	PP plastic
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP44, electronics IP20; installation- and position-dependent
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H0+
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 the mains - 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	Plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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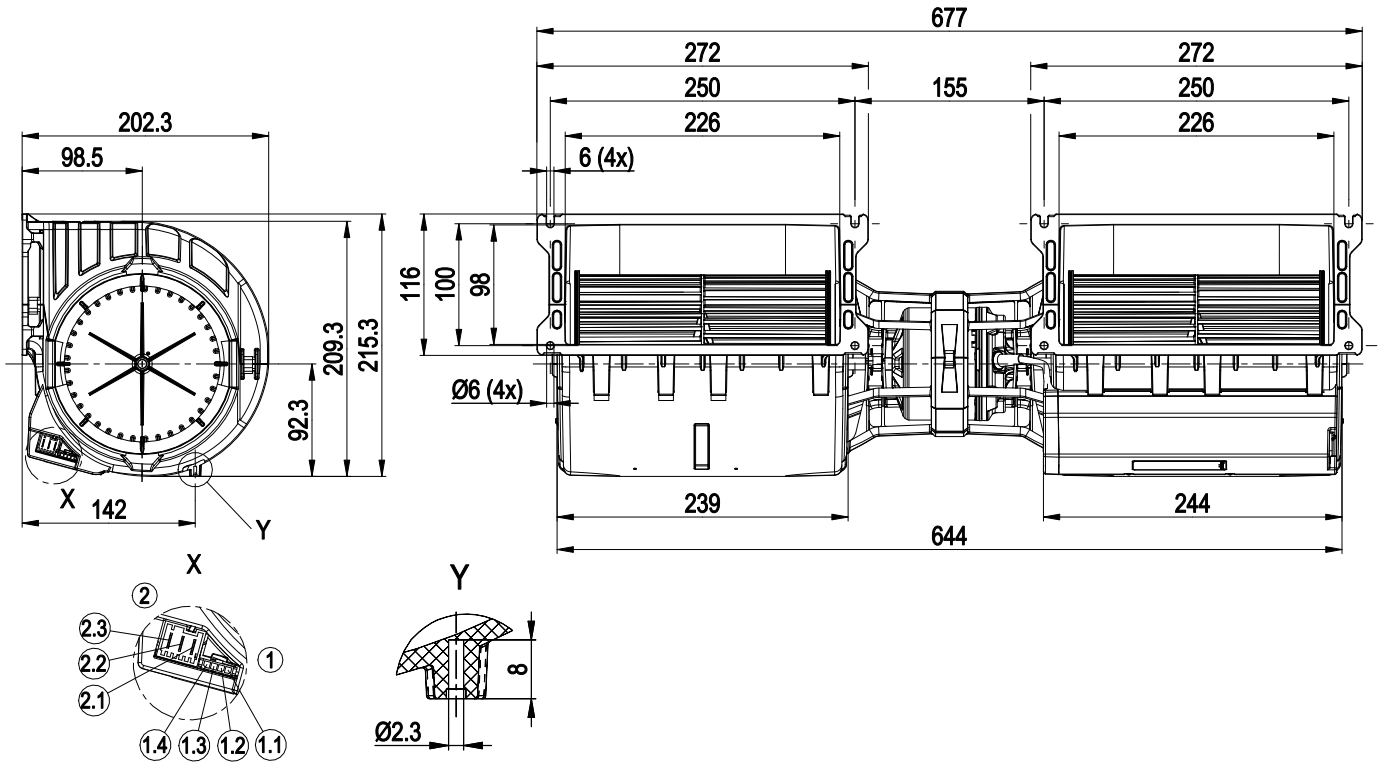
Product drawing



1	Header Molex Micro Fit 3.0 04365 00400 (pluggable with 04364 50400)
1.1	10 V
1.2	Fan good / fan bad
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

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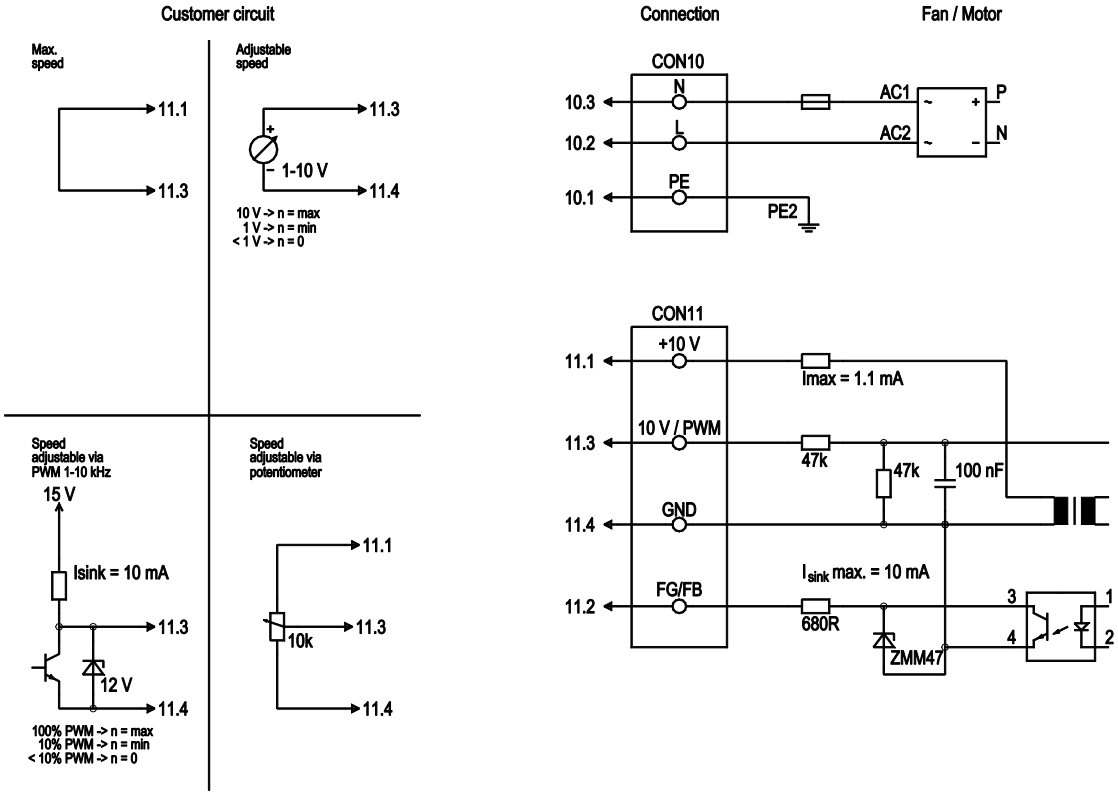
Connection diagram



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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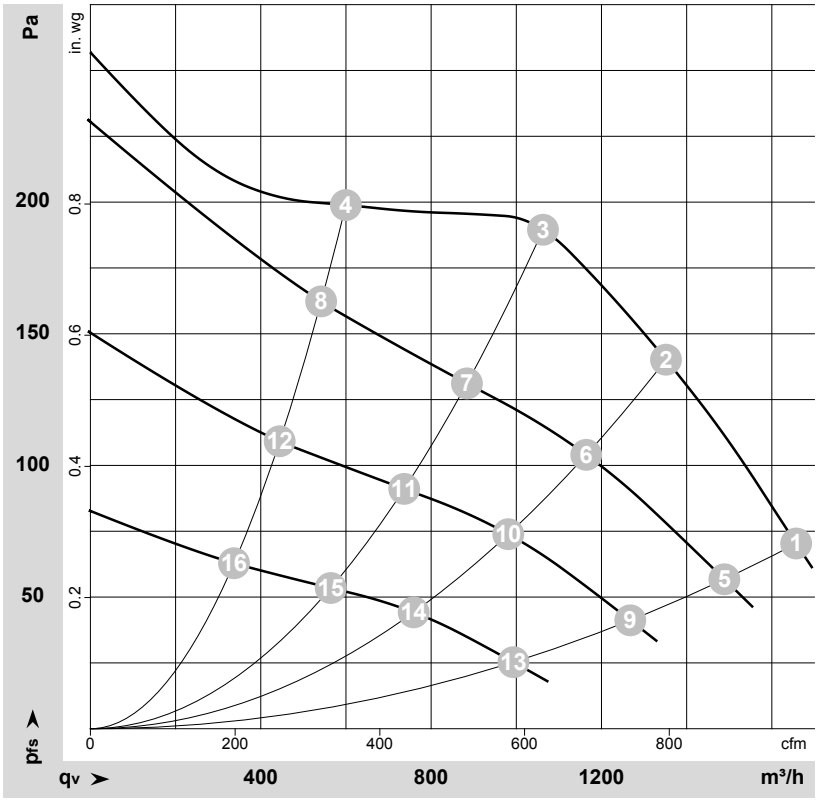
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-192878-1
Measurement: LU-194138-1
Measurement: LU-194139-1
Measurement: LU-194140-1

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	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	in. wg
1	1~	230	50	1450	170	1.35	57	68	1655	70	975	0.28
2	1~	230	50	1705	170	1.35	57	68	1350	140	795	0.56
3	1~	230	50	1900	165	1.33	58	69	1065	190	625	0.76
4	1~	230	50	1900	97	0.81	57	67	600	200	355	0.80
5	1~	230	50	1295	136	1.09	55	66	1490	57	875	0.23
6	1~	230	50	1445	107	0.87	53	63	1165	106	685	0.43
7	1~	230	50	1555	89	0.74	54	64	885	131	520	0.53
8	1~	230	50	1695	68	0.57	53	64	540	162	320	0.65
9	1~	230	50	1105	80	0.67	51	61	1270	42	745	0.17
10	1~	230	50	1220	63	0.53	48	59	980	76	575	0.31
11	1~	230	50	1295	52	0.45	48	59	735	91	435	0.37
12	1~	230	50	1390	38	0.34	48	59	445	109	260	0.44
13	1~	230	50	860	39	0.35	46	56	995	26	585	0.10
14	1~	230	50	935	30	0.27	42	52	760	45	445	0.18
15	1~	230	50	980	24	0.23	41	52	565	53	330	0.21
16	1~	230	50	1040	18	0.17	41	51	335	63	200	0.25

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase