

EC centrifugal fan combination

forward-curved, dual-intake

with housing


ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.fansco.com

www.fansco.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

Nominal data

Type	K3G146-AE03-02	
Motor	M3G074-DF	
Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	1120
Power consumption	W	170
Current draw	A	0.8
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
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}	%	40.6	32.8
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		51.8	44
05 Variable speed drive		Yes	

Data obtained at optimum efficiency level.

The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m³/h	1400
09 Pressure increase p_{fs}	Pa	154
10 Speed (rpm) n	min ⁻¹	1710
11 Specific ratio*		1.00

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-168492



Technical description

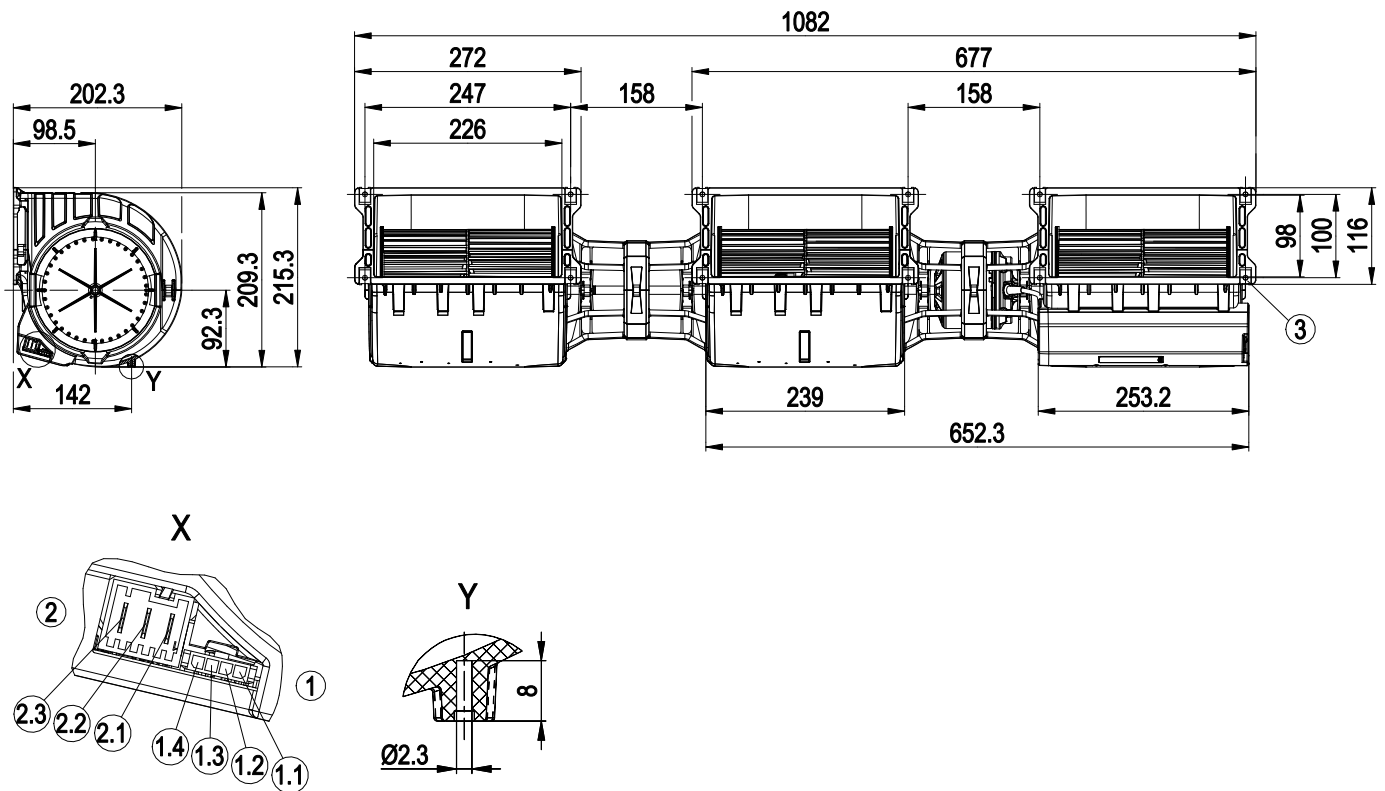
Weight	5.8 kg
Size	146 mm
Motor size	74
Rotor surface	Galvanized
Electronics housing material	PP plastic
Impeller material	PP plastic
Housing material	PP plastic
Motor suspension	Motor vibration-damped on both sides
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP44, electronics IP20; installation- and position-dependent
Insulation class	"B"
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. 10 mA - Tach output - Motor current limitation - PFC, active - 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 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	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	UL 507; CSA C22.2 No. 113

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Product drawing



1	Header Molex Micro Fit 3.0 043650 0400 (pluggable with 043645 0400)
1.1	10 V
1.2	Tach
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	12x sheet metal nut for thread EN ISO 1478-ST4.8 (min. screw length 14.5 mm plus thickness of mounting material)

The fan unit must be mounted on the discharge flange on a flat and stable surface. Otherwise noise may result.

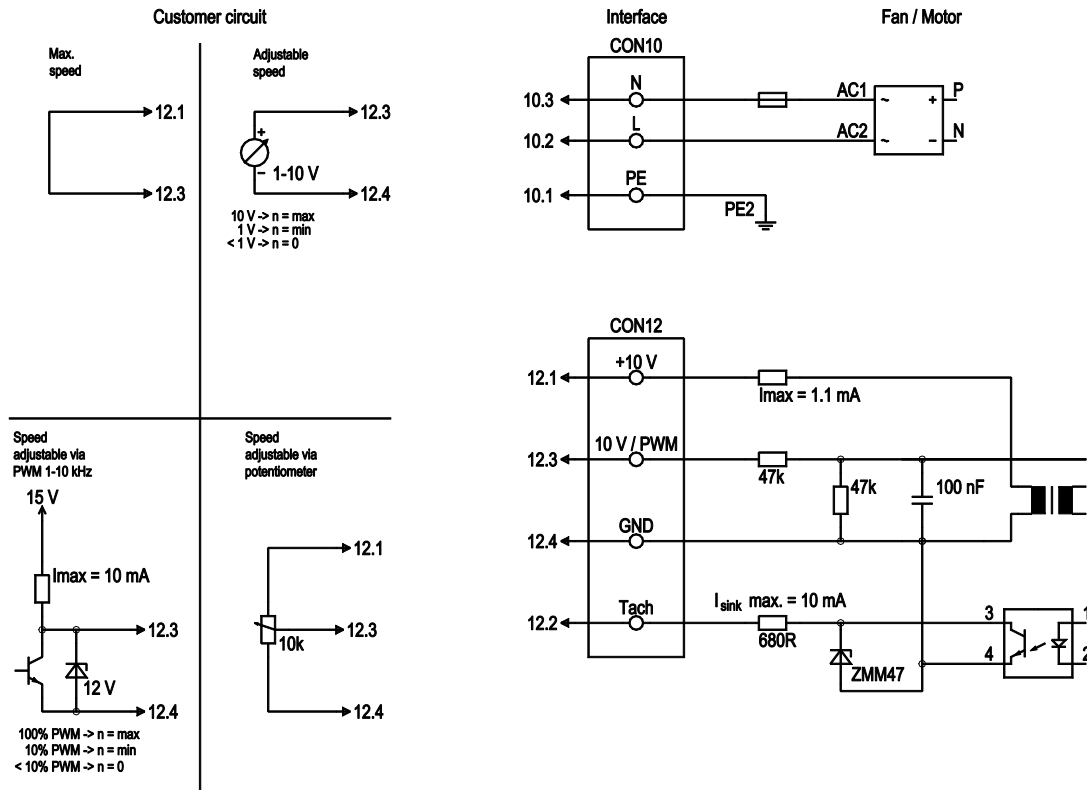


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Connection diagram



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 or 330 VDC, see nameplate 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, I _{sink 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

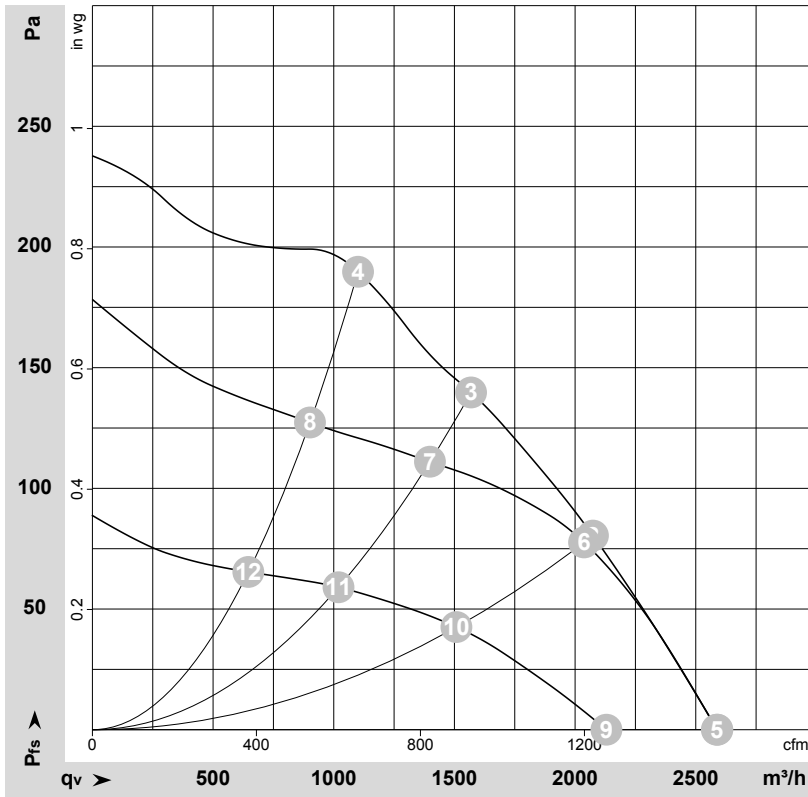


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Curves: Air performance 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-168492-1

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	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	230	50	1120	170	0.80	59	69	2590	0	1525	0.00
2	230	50	1370	170	0.80	57	67	2075	80	1220	0.32
3	230	50	1635	170	0.80	58	68	1570	140	925	0.56
4	230	50	1880	164	0.76	59	69	1100	190	650	0.76
5	230	50	1120	170	0.80			2590	0	1525	0.00
6	230	50	1350	161	0.75			2035	78	1200	0.31
7	230	50	1455	124	0.60			1400	111	825	0.45
8	230	50	1540	94	0.48			900	127	530	0.51
9	230	50	925	97	0.50			2130	0	1255	0.00
10	230	50	1005	70	0.40			1510	43	890	0.17
11	230	50	1060	52	0.34			1020	59	600	0.24
12	230	50	1105	40	0.30			645	65	380	0.26

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

