EC centrifugal fan combination

forward-curved, dual-intake

with housing

K3G160-BD02-01 ebmpapst Datasheet
sales@fansco.com
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Nominal data

Type	**K3G160-BD02-01**
Motor	**M3G074-DF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Method of obtaining data		ml/ce
Speed (rpm)	min^{-1}	1150
Power consumption	W	155
Current draw	A	1.25
Min. back pressure	Pa	50
Min. back pressure	inH2O	0.2
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 ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	43.4	32.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		55.1	44
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.14
09 Air flow q_v	m^3/h	1055
09 Pressure increase p_{fs}	Pa	183
10 Speed (rpm) n	min^{-1}	1510
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-154886

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Technical description

Weight	9.9 kg
Fan size	160 mm
Rotor surface	Thick-film passivated
Electronics housing material	PP plastic
Impeller material	Sheet steel, galvanized
Housing material	Sheet steel, galvanized
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"
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 - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - 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	With 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

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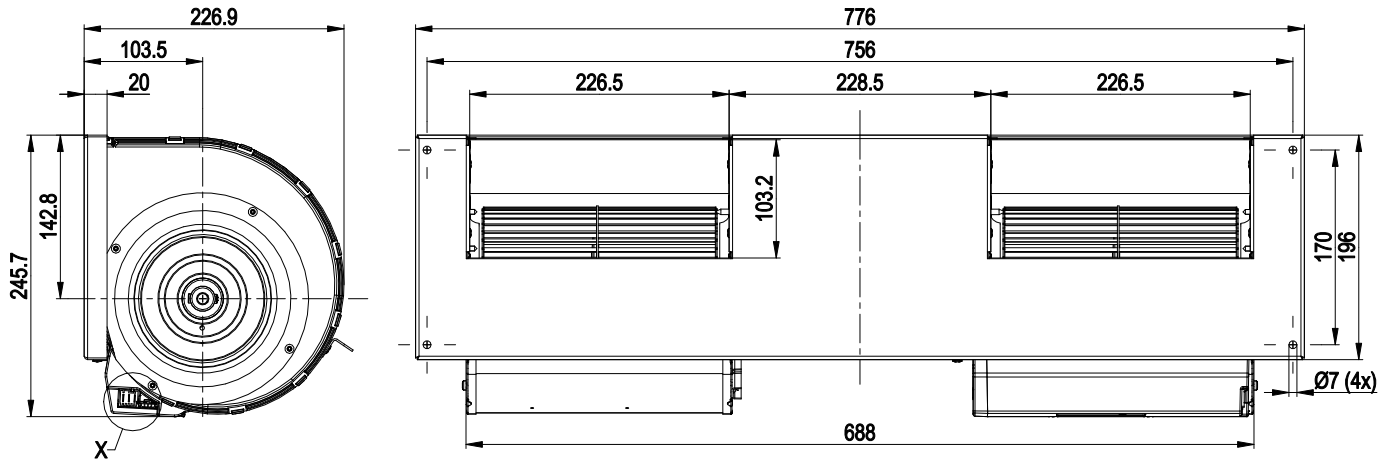
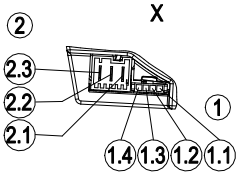
Product drawing





1	Header Molex Micro Fit 3.0 04365 00400 (pluggable with 04364 50400)
1.1	10 V
1.2	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

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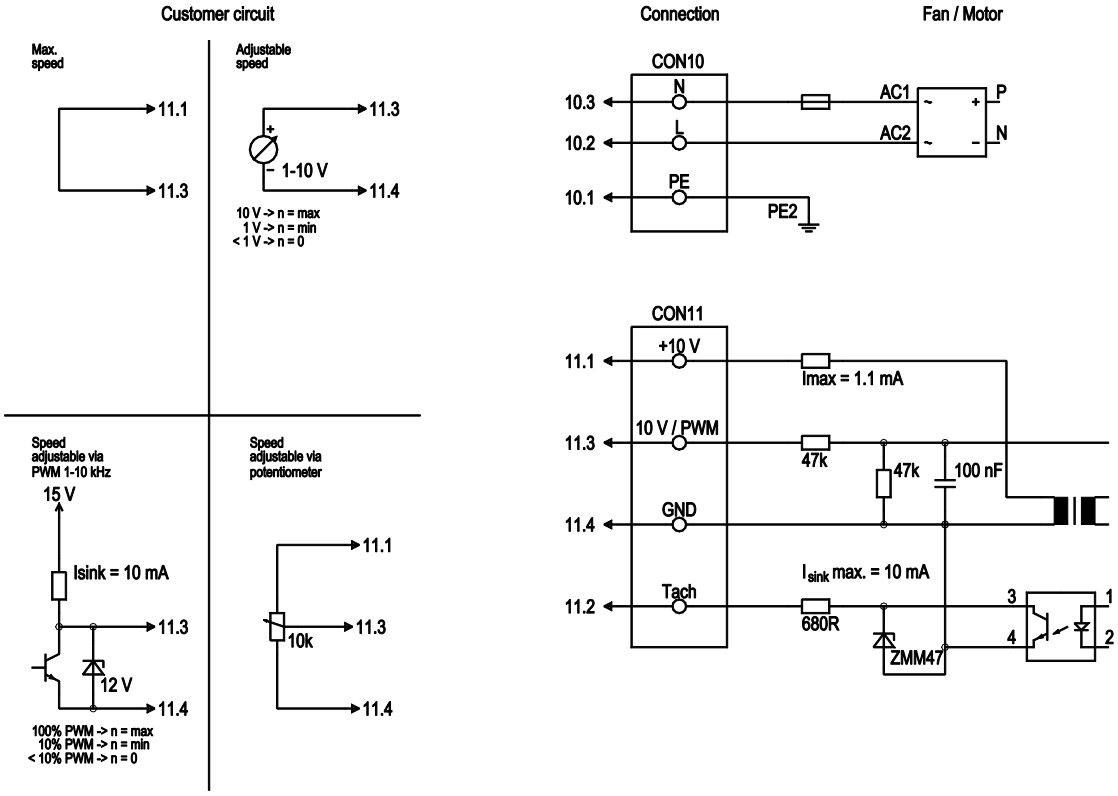
Connection diagram



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	Tach	white	Tach output: Open collector, 1 pulse per revolution, 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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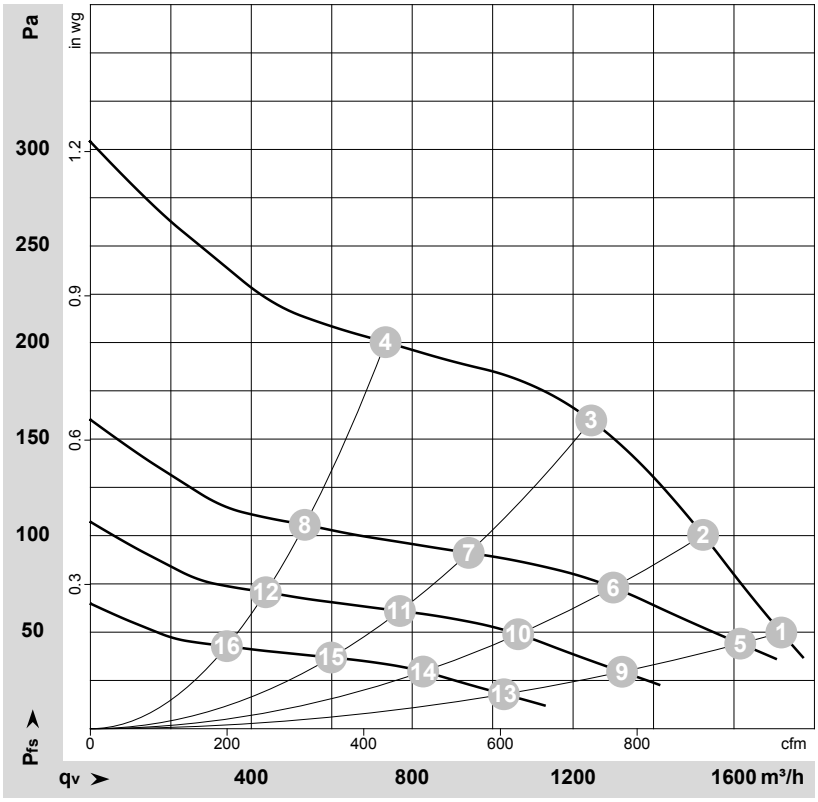
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-154886-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	1150	155	1.25	1720	50	1010	0.20
2	230	50	1285	155	1.25	1525	100	895	0.40
3	230	50	1455	155	1.25	1245	160	735	0.64
4	230	50	1515	111	0.94	735	200	430	0.80
5	230	50	1100	128	1.06	1615	44	950	0.18
6	230	50	1100	95	0.79	1300	74	765	0.30
7	230	50	1100	66	0.55	940	91	555	0.37
8	230	50	1100	42	0.36	535	106	315	0.43
9	230	50	900	70	0.58	1320	29	780	0.12
10	230	50	900	52	0.43	1065	49	625	0.20
11	230	50	900	36	0.30	770	61	455	0.24
12	230	50	900	23	0.20	435	71	255	0.29
13	230	50	700	33	0.27	1030	18	605	0.07
14	230	50	700	24	0.20	825	30	485	0.12
15	230	50	700	17	0.14	600	37	350	0.15
16	230	50	700	11	0.09	340	43	200	0.17

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

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