W3G800-CH03-80

EC axial fan

sickled blades (S series)

with full round nozzle

W3G800-CH03-80 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**W3G800-CH03-80**
Motor	**M3G150-IF**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Type of data definition		fa
Speed	min^{-1}	980
Power input	W	1400
Current draw	A	2.2
Max. back pressure	Pa	220
Max. ambient temperature	°C	60

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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	45.7	31.6	35.6
Efficiency grade N		50.1	36	40
Power input P_{ed}	kW	2.03		
Air flow q_v	m^3/h	16870		
Pressure increase p_{fs}	Pa	187		
Speed n	min^{-1}	990		

Data definition with optimum efficiency. LU-109794
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	49.5 kg
Size	800 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Die-cast aluminium, coated in black
Material of wall ring	Sheet steel, pre-galvanised and plastic-coated in white aluminium (RAL 9006)
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Number of blades	5
Blade angle	0
Direction of air flow	"A"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity class	F5
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	On the stator side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- PFC, passive - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Alarm relay - Integrated PID controller - Input for sensor 0-10 V or 4-20 mA - Output for slave 0-10 V - RS485 ebmBUS - Line undervoltage detection - Motor current limit - Soft start - Line undervoltage / phase failure detection - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
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	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; EN 50216-12; CE
Approval	EAC; VDE

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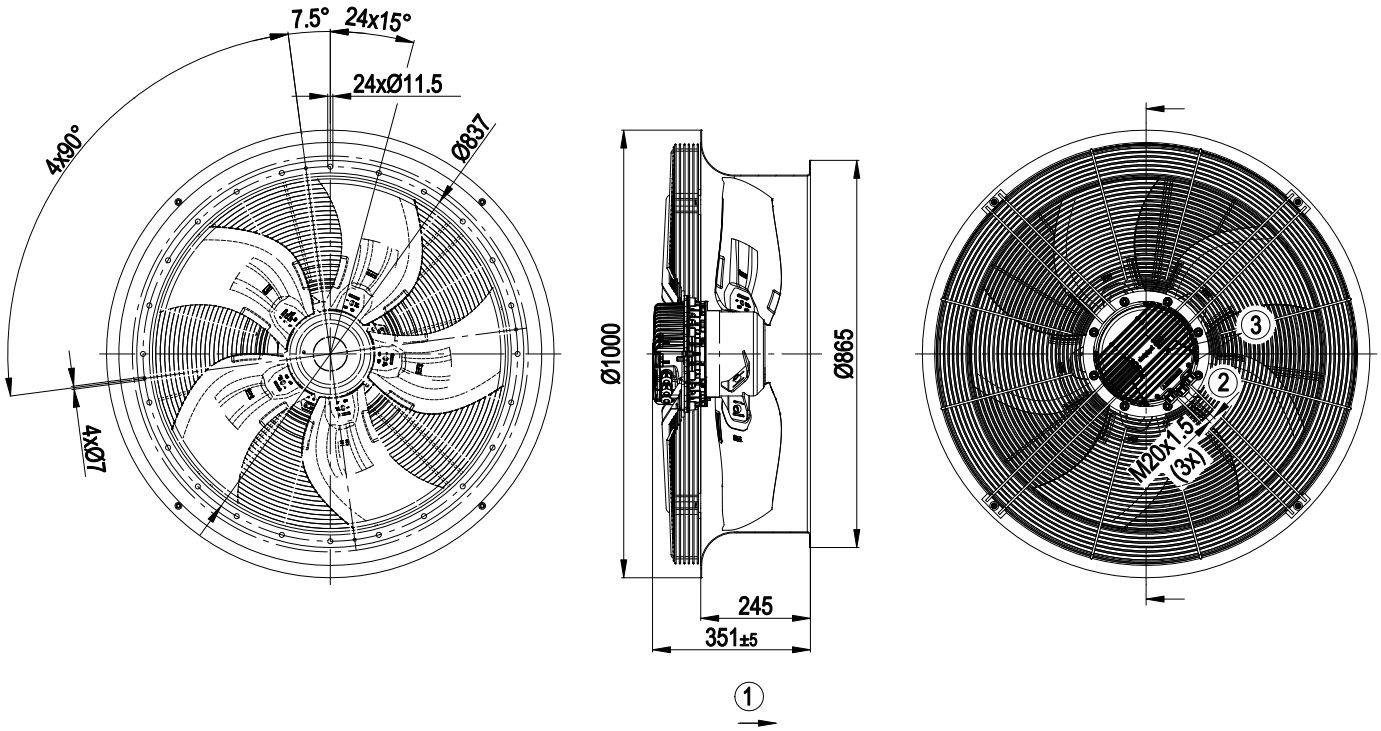
Product drawing



1	Direction of air flow "A"
2	Cable diameter: min. 5 mm, max. 13 mm, tightening torque: 4±0.4 Nm
3	Tightening torque 3.5±0.5 Nm

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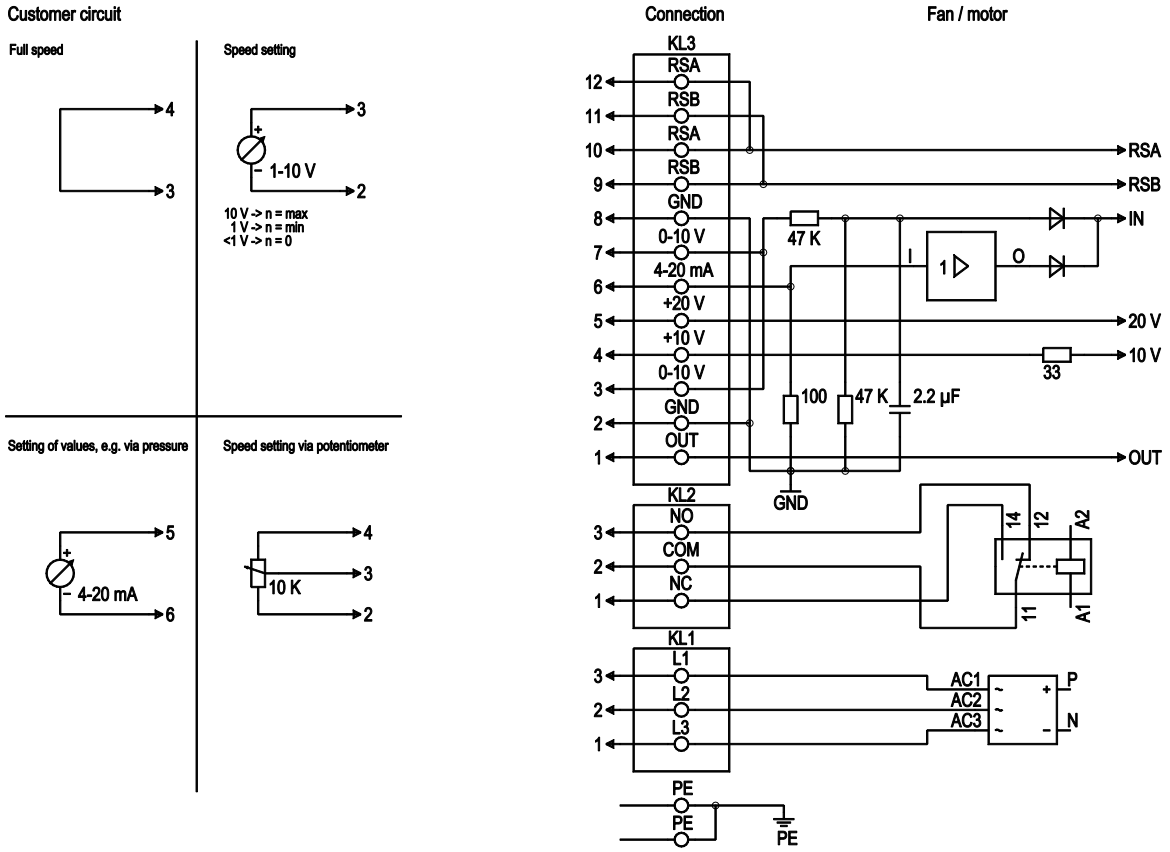
Connection screen



No.	Conn.	Designation	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2, 3	L1, L2, L3	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, normally closed connection
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open connection
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of the current level control coefficient: 1 V equates to 10 % level control coefficient. 10 V equate to 100 % level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (+/-3 %), max. 10 mA, supply voltage for ext. devices (e.g. potentiometers), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25 %/-10 %), max. 50 mA, supply voltage for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual value input 4-20 mA, impedance 100 Ω, only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBus, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBus, RSA, SELV

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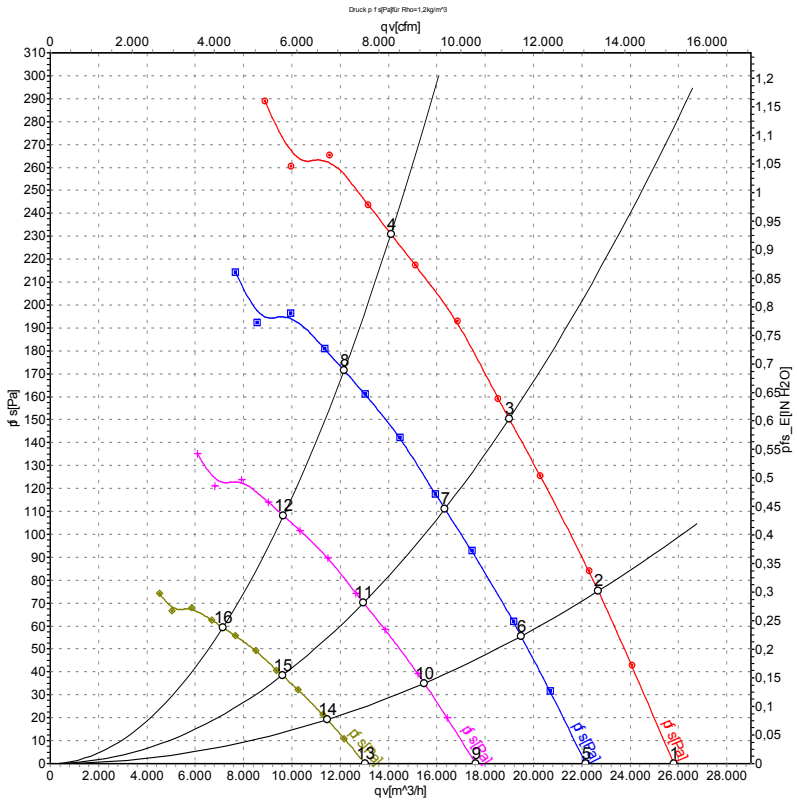
Charts: Air flow 50 Hz



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}	LwA_{out}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	400	50	980	1400	2.20	70	76	76	25800	0
2	400	50	980	1687	2.56	69	75	74	22680	75
3	400	50	980	1925	2.93	70	76	75	18990	150
4	400	50	980	2210	3.40	76	83	83	14110	230
5	400	50	850	903	1.37	67	73	73	22170	0
6	400	50	850	1071	1.62	66	72	71	19490	56
7	400	50	850	1223	1.86	67	73	72	16330	111
8	400	50	850	1442	2.19	73	80	79	12160	172
9	400	50	675	452	0.69	62	68	68	17600	0
10	400	50	675	536	0.81	61	67	66	15480	35
11	400	50	675	613	0.93	62	68	67	12970	70
12	400	50	675	722	1.10	68	75	74	9655	108
13	400	50	500	184	0.28	55	61	61	13040	0
14	400	50	500	218	0.33	54	60	59	11470	19
15	400	50	500	249	0.38	56	62	61	9605	38
16	400	50	500	294	0.45	61	68	68	7150	59

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
qv = Air flow · p_{fs} = Pressure increase

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