W3G400-CA31-60

EC axial fan

sickle-shaped blades (S series)

Fan housing with guard grille

ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.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	**W3G400-CA31-60**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1600
Power consumption	W	382
Current draw	A	1.7
Max. back pressure	Pa	150
Max. back pressure	in. wg	0.6
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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	34.9	30.9
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		44	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.36
09 Air flow q_v	m^3/h	3280
09 Pressure increase p_{fs}	Pa	125
10 Speed (rpm) n	min^{-1}	1625
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-77870

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Technical description

Weight	9.4 kg
Size	400 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Sheet steel, painted black
Fan housing material	Sheet steel, galvanized and coated with black plastic (RAL 9005)
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	A
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 15 VDC, max. 30 mA - Integrated PID controller - Motor current limitation - PFC, active - RS-485 ebmBUS - Soft start - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE

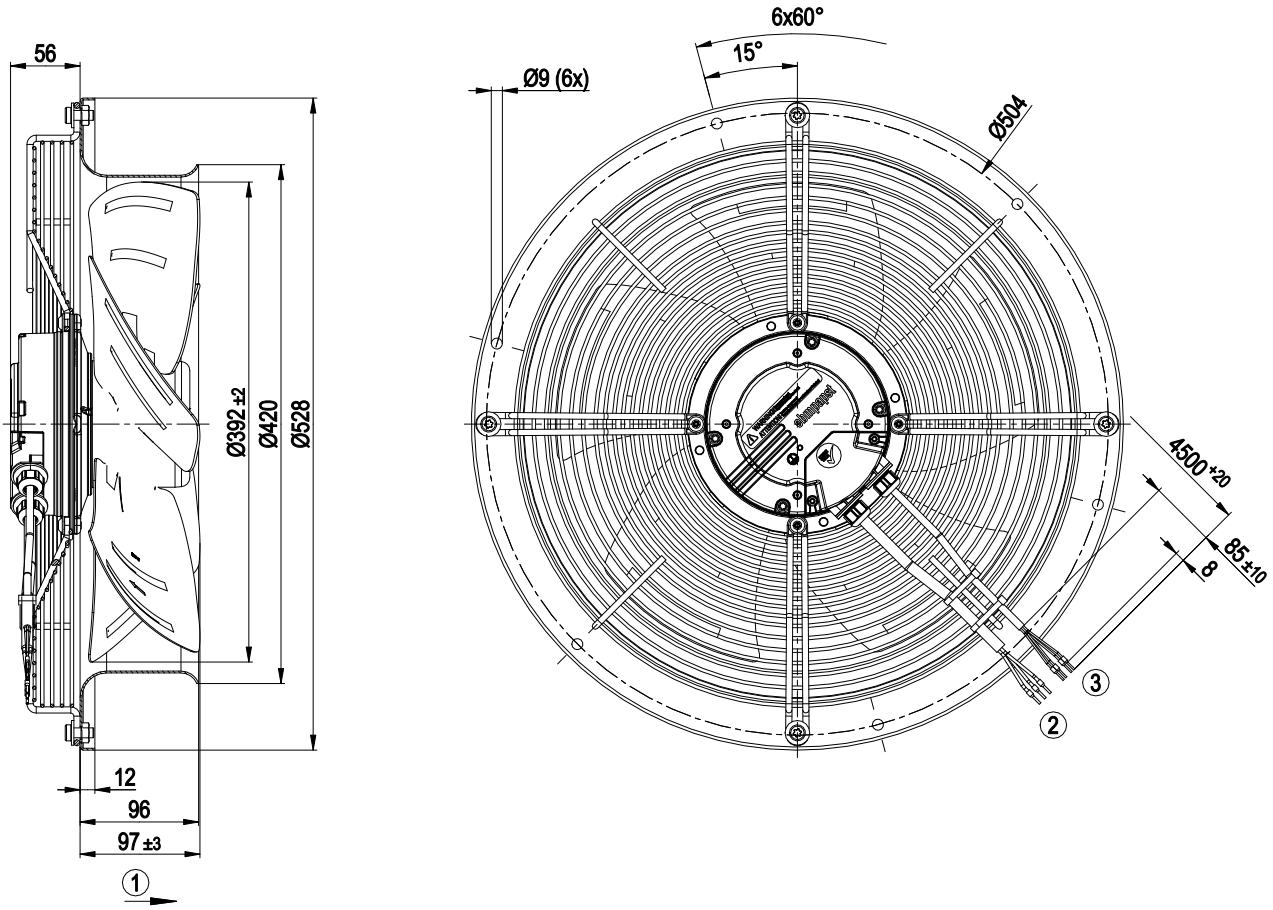
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Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG18
	3x wire-end ferrule
3	Cable PVC AWG22
	4x wire-end ferrule

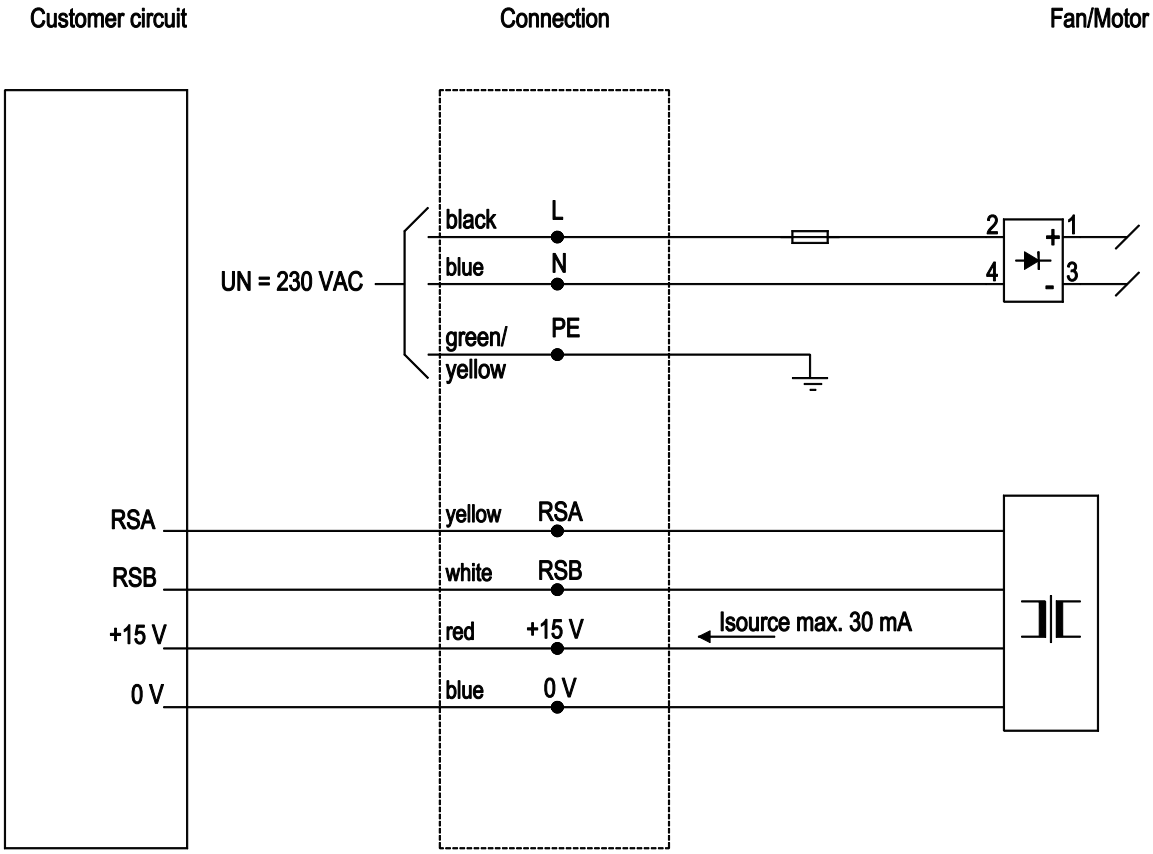
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Connection diagram



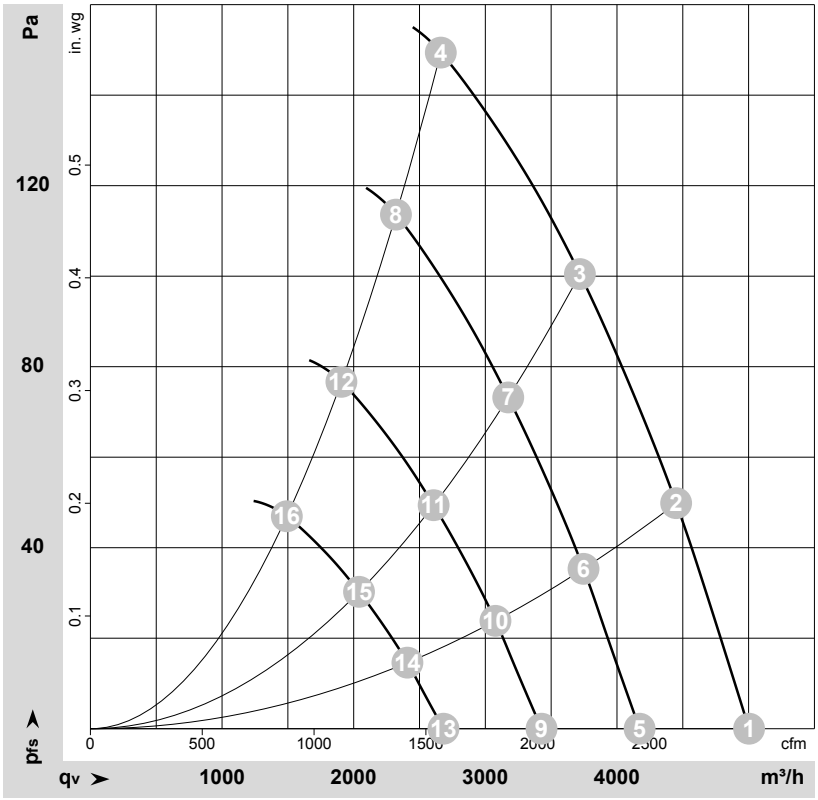
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-77870-1

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	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	1~	230	50	1680	298	1.31	5005	0	2945	0.00
2	1~	230	50	1665	317	1.39	4450	50	2620	0.20
3	1~	230	50	1640	347	1.52	3720	100	2190	0.40
4	1~	230	50	1600	382	1.70	2660	150	1565	0.60
5	1~	230	50	1400	173	0.76	4170	0	2455	0.00
6	1~	230	50	1400	189	0.83	3745	36	2205	0.14
7	1~	230	50	1400	215	0.94	3175	74	1870	0.30
8	1~	230	50	1400	254	1.11	2320	114	1365	0.46
9	1~	230	50	1150	96	0.42	3425	0	2015	0.00
10	1~	230	50	1150	105	0.46	3075	24	1810	0.10
11	1~	230	50	1150	119	0.52	2605	50	1535	0.20
12	1~	230	50	1150	141	0.62	1905	77	1120	0.31
13	1~	230	50	900	46	0.20	2680	0	1580	0.00
14	1~	230	50	900	50	0.22	2410	15	1415	0.06
15	1~	230	50	900	57	0.25	2040	30	1200	0.12
16	1~	230	50	900	67	0.29	1490	47	880	0.19

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

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