EC axial fan

sickle-shaped blades (S series)

Fan housing with guard grille

W3G400-DA22-72 ebmpapst Datasheet
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www.fansco.com

Nominal data

Type	**W3G400-DA22-72**
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}	1650
Power consumption	W	420
Current draw	A	2.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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}	%	44.8	31.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		53.6	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.4
09 Air flow q_v	m^3/h	3265
09 Pressure increase p_{fs}	Pa	181
10 Speed (rpm) n	min^{-1}	1630
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-71911

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Technical description

Weight	9.8 kg
Fan size	400 mm
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, galvanized and 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	F3-1
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 10 VDC, max. 1.1 mA - Alarm relay - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/motor - Line undervoltage detection - Control interface with SELV potential safely disconnected from the mains
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
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
Approval	CSA C22.2 No. 77; UL 2111

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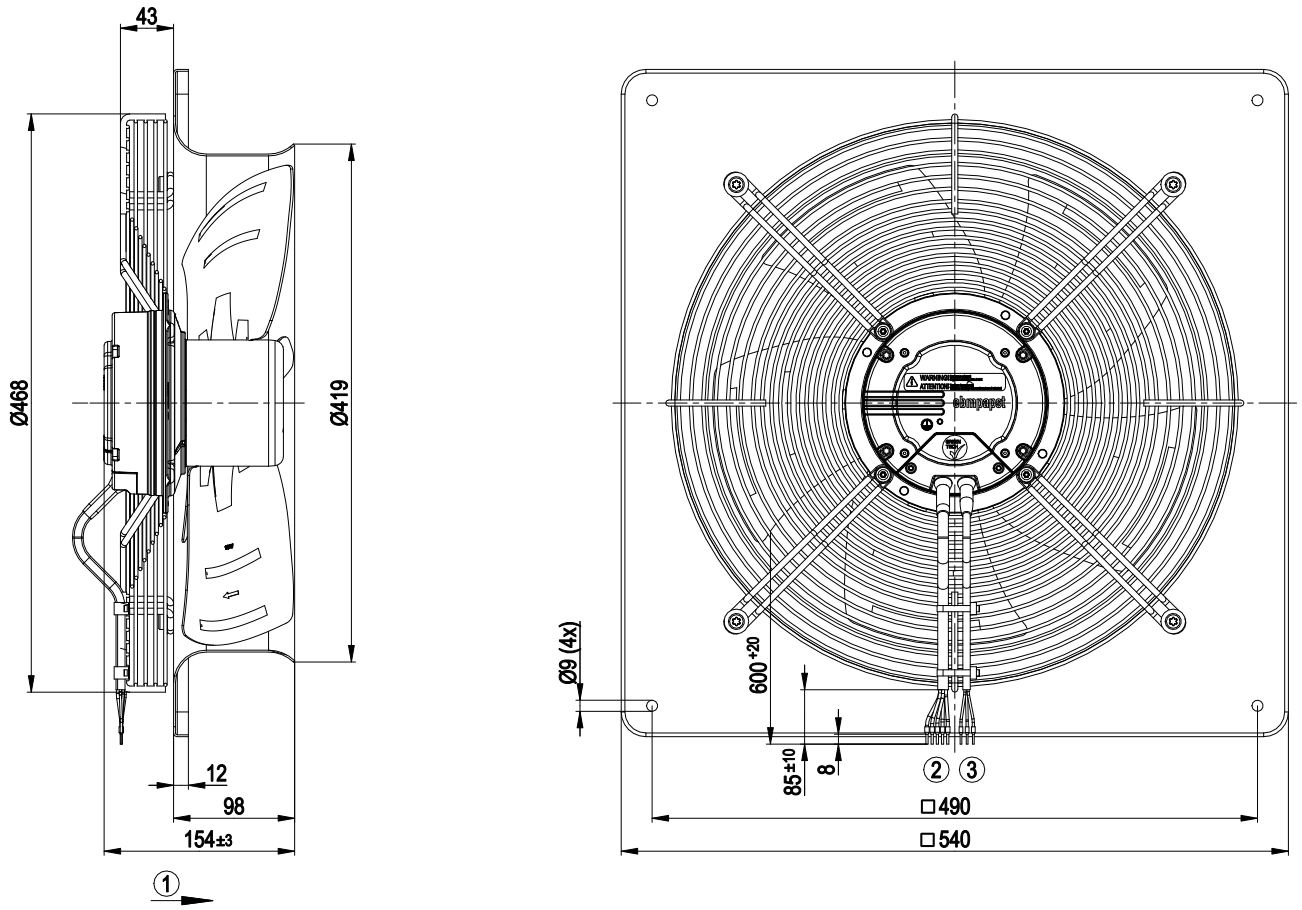
Product drawing



1	Direction of air flow "A"
2	Cable PVC AWG18, 5x crimped ferrules
3	Cable PVC AWG22, 3x crimped ferrules

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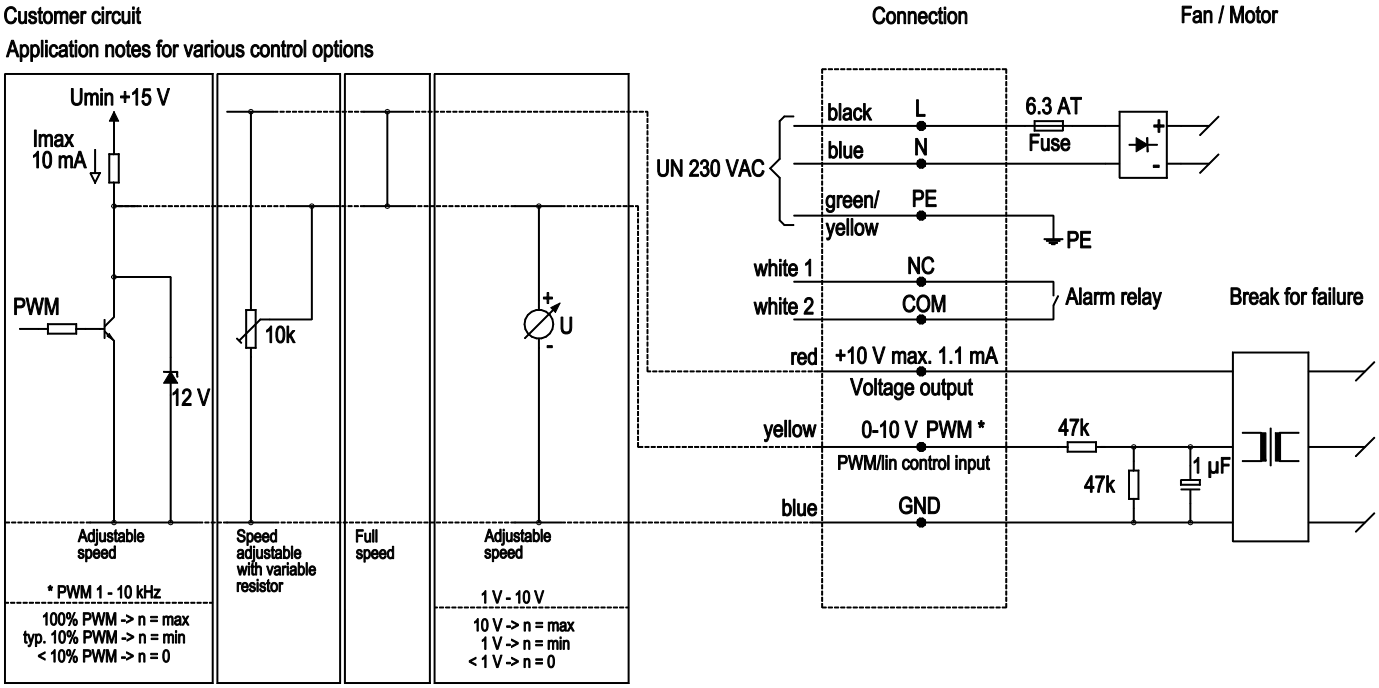
Connection diagram



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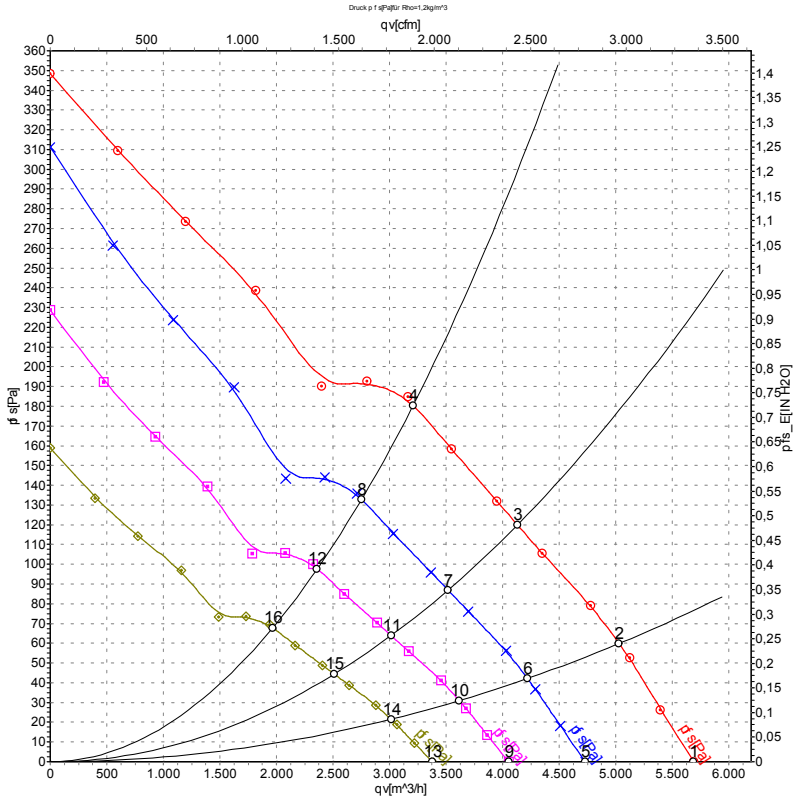
Curves: Air performance 50 Hz



Measurement: LU-63198-1

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	1685	341	2.08	5690	0	3350	0.00
2	230	50	1670	369	2.24	5030	60	2960	0.24
3	230	50	1645	379	2.31	4130	120	2430	0.48
4	230	50	1630	410	2.60	3210	180	1890	0.72
5	230	50	1400	196	1.20	4730	0	2785	0.00
6	230	50	1400	218	1.32	4220	42	2485	0.17
7	230	50	1400	234	1.43	3520	87	2070	0.35
8	230	50	1400	246	1.49	2755	134	1620	0.54
9	230	50	1200	123	0.75	4055	0	2385	0.00
10	230	50	1200	137	0.83	3620	31	2130	0.12
11	230	50	1200	148	0.90	3015	64	1775	0.26
12	230	50	1200	155	0.94	2360	98	1390	0.39
13	230	50	1000	71	0.44	3380	0	1990	0.00
14	230	50	1000	79	0.48	3015	22	1775	0.09
15	230	50	1000	85	0.52	2515	44	1480	0.18
16	230	50	1000	90	0.54	1965	68	1160	0.27

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