W3G400-FC22-51

EC axial fan - HyBlade

sickle-shaped blades (S series)

with square full nozzle

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**W3G400-FC22-51**
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}	1630
Power consumption	W	400
Current draw	A	2.6
Max. back pressure	Pa	160
Max. back pressure	inH2O	0.64
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}	%	39.7	31.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		48.6	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.39
09 Air flow q_v	m^3/h	3605
09 Pressure increase p_{fs}	Pa	142
10 Speed (rpm) n	min^{-1}	1635
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-124564

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Technical description

Weight	9.2 kg
Fan size	400 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
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	"V"
Direction of rotation	Counterclockwise, 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 - PFC, passive - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage 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
Approval	CSA C22.2 No. 77; EAC; UL 2111

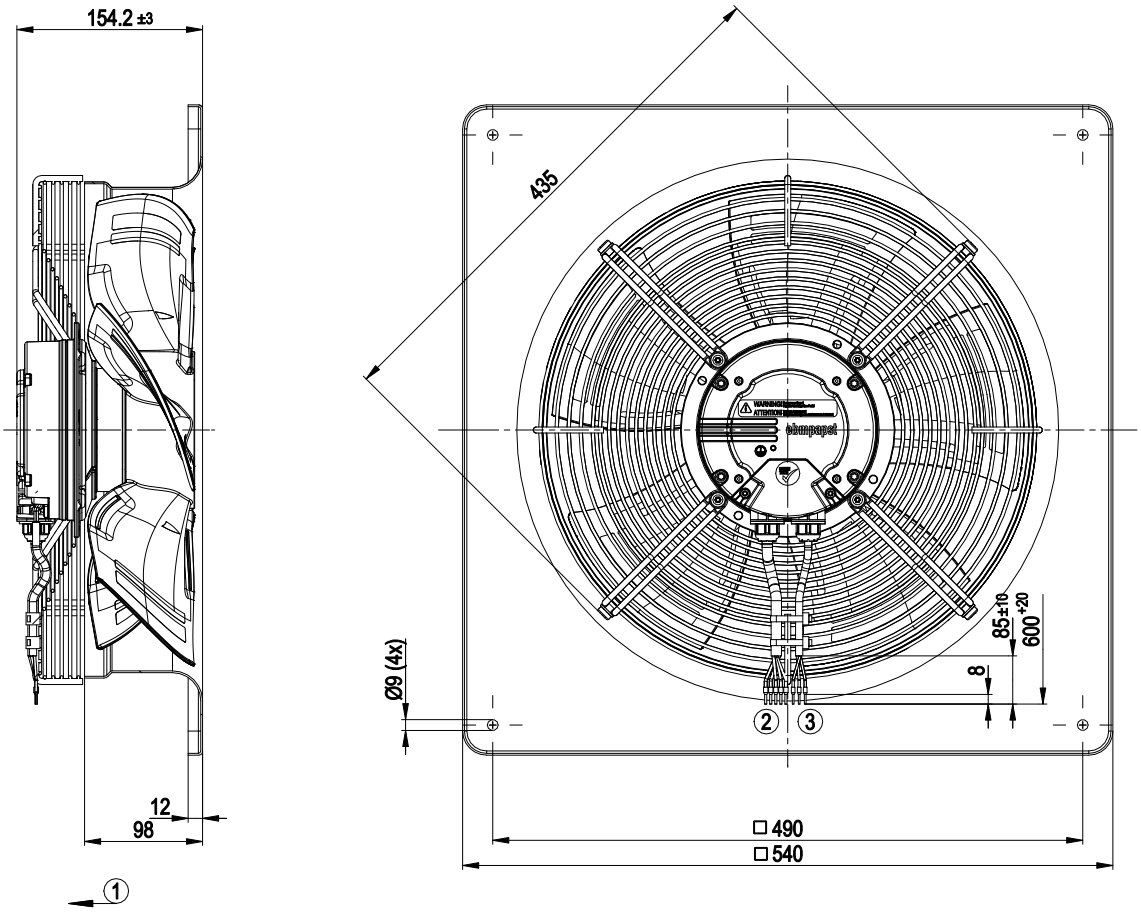
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Product drawing



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

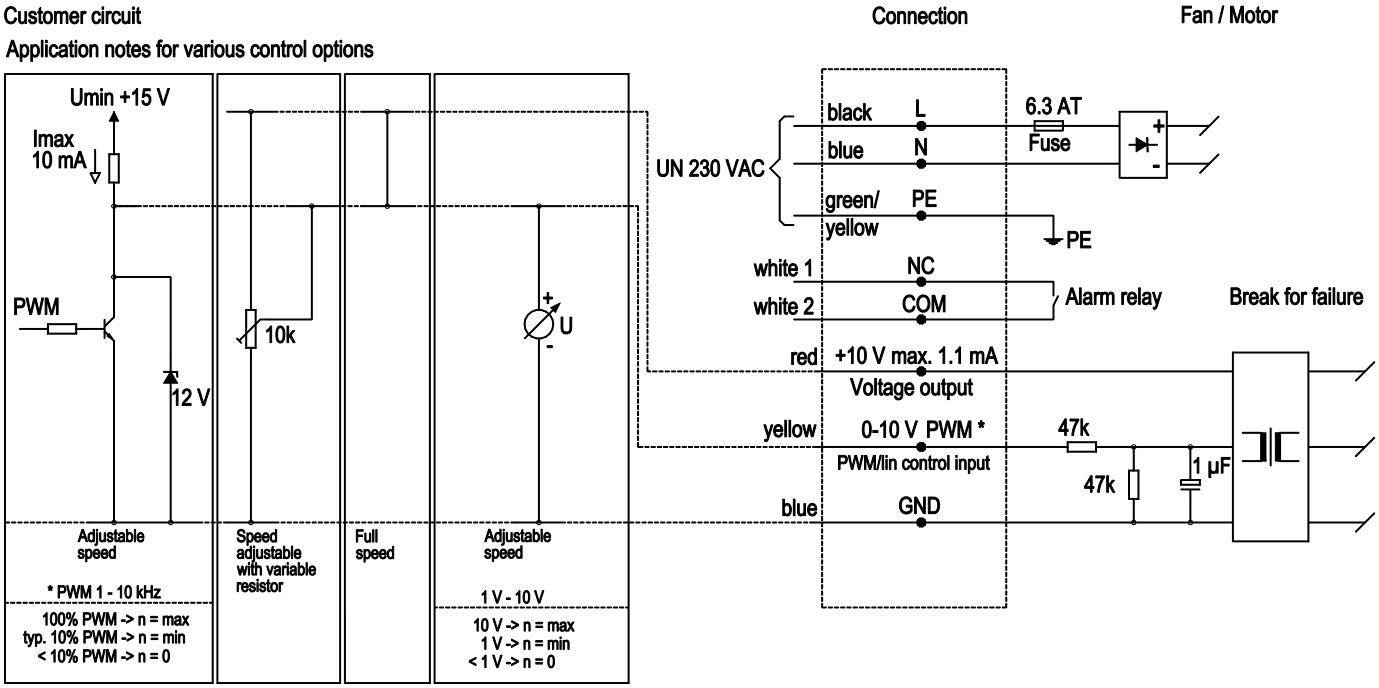
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Connection diagram



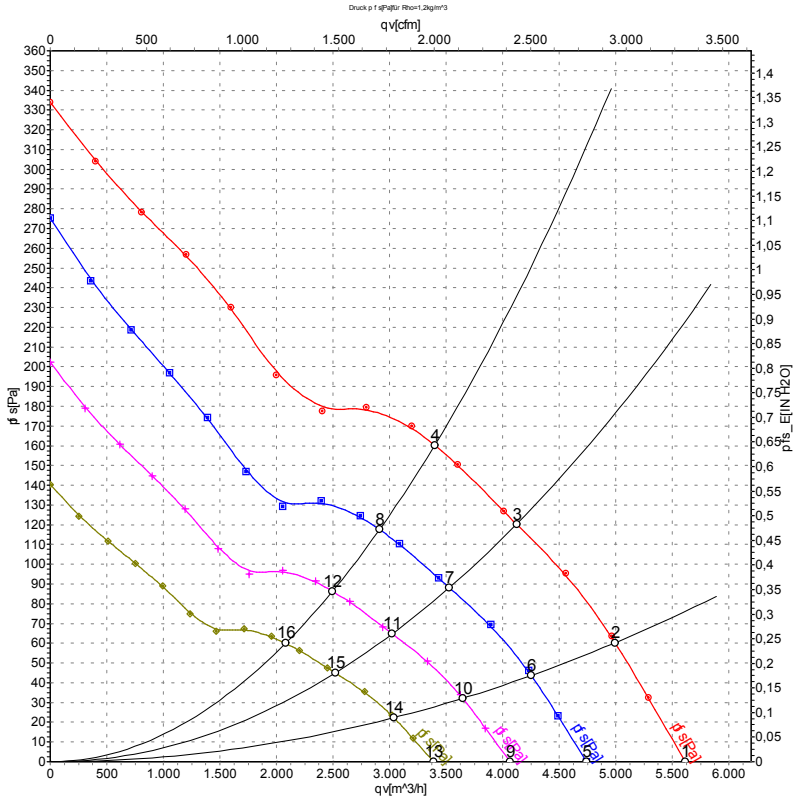
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Curves: Air performance 50 Hz



Measurement: LU-124564-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	1660	350	2.24	71	78	5620	0	3305	0.00
2	230	50	1645	380	2.43	69	76	4995	60	2940	0.24
3	230	50	1635	391	2.50	66	72	4125	120	2430	0.48
4	230	50	1630	400	2.60	67	74	3400	160	2000	0.64
5	230	50	1400	211	1.35	67	74	4745	0	2790	0.00
6	230	50	1400	235	1.50	65	72	4255	44	2505	0.18
7	230	50	1400	245	1.56	63	69	3530	88	2080	0.35
8	230	50	1400	249	1.59	64	71	2915	118	1715	0.47
9	230	50	1200	133	0.85	64	70	4065	0	2395	0.00
10	230	50	1200	148	0.95	62	69	3645	32	2145	0.13
11	230	50	1200	154	0.99	59	66	3025	65	1780	0.26
12	230	50	1200	157	1.00	61	68	2495	86	1470	0.35
13	230	50	1000	77	0.49	60	67	3390	0	1995	0.00
14	230	50	1000	86	0.55	58	65	3040	23	1790	0.09
15	230	50	1000	89	0.57	55	62	2520	45	1485	0.18
16	230	50	1000	91	0.58	57	64	2080	60	1225	0.24

U = Power supply · 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
qv = Air flow · p_{fs} = Pressure increase

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