W3G450-SL07-M3

EC axial panel fan - HyBlade

sickle-shaped blades (S series)

Fan housing with guide vanes

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	**W3G450-SL07-M3**
Motor	**M3G084-FA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	1300
Power consumption	W	330
Current draw	A	0.53
Max. back pressure	Pa	100
Max. back pressure	in. wg	0.4
Min. ambient temperature	°C	-40
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 Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	37.8	30.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		47.2	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.32
09 Air flow q_v	m^3/h	4025
09 Pressure increase p_{fs}	Pa	100
10 Speed (rpm) n	min^{-1}	1300
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-212514

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.

The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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Technical description

Weight	10.4 kg
Size	450 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Support ring material	Steel, coated with black plastic (RAL 9005)
Fan housing material	PP plastic
Material guide vanes	PP plastic
Number of blades	5
Airflow direction	V
Direction of rotation	Counterclockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	H2
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
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; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - Soft start - EEPROM write cycles: 100,000 maximum - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
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	Connector with cable
Motor protection	Thermal switch auto reset, internally connected
With cable	Variable

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Protection class	I (with customer connection of protective earth)
Conformity with standards	CE
Approval	UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC

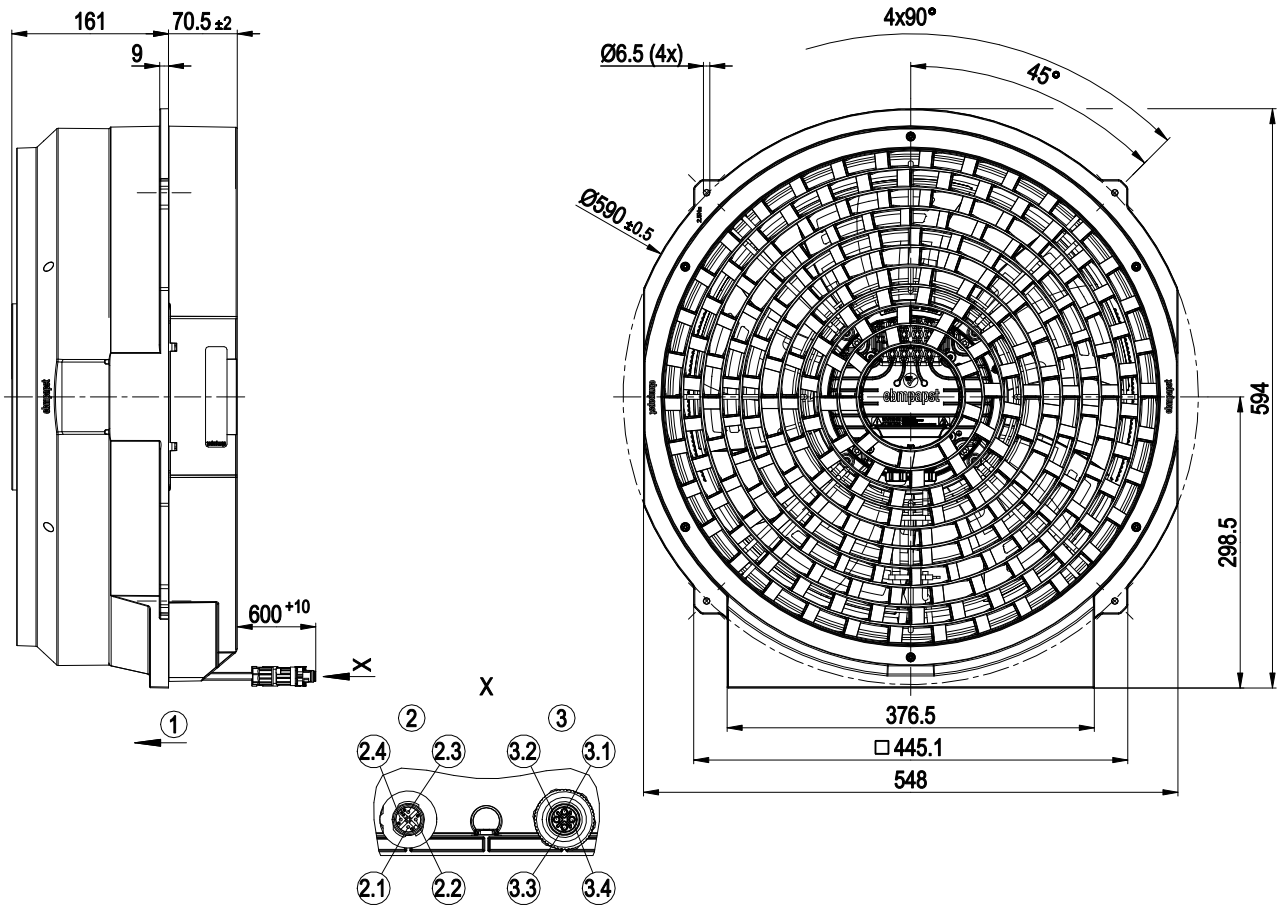
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Product drawing



1	Airflow direction "V"
2	Cable PVC AWG22
	4-pole connector Phoenix 1424657
2.1	+10 V
2.2	0-10 V
2.3	GND
2.4	not used
3	Cable PVC AWG18
	4-pole connector Phoenix 1404641
3.1	L1
3.2	L2
3.3	L3
3.4	PE

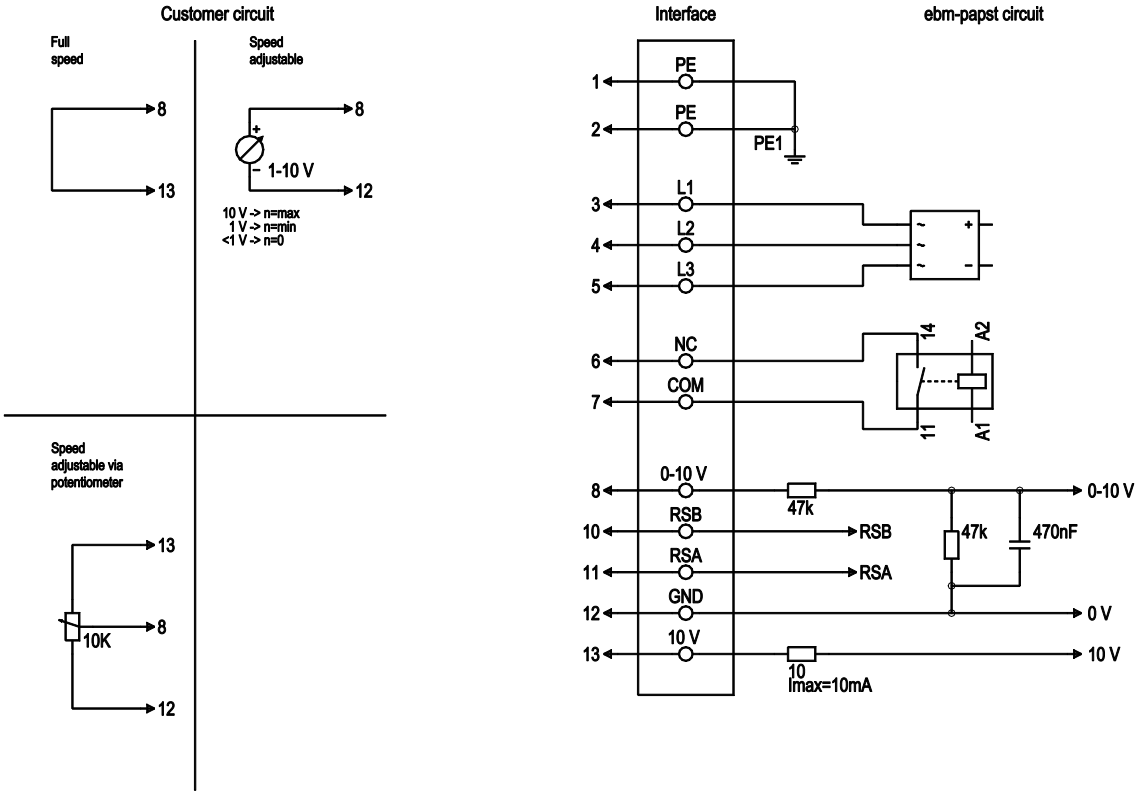
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	L1	black 1	Power supply
1	4	L2	black 2	Power supply
1	5	L3	black 3	Power supply
1	6	NC	-	not brought out via wire
1	7	COM	-	not brought out via wire
2	8	0-10V	yellow	Analog input (set value), 0-10 V, Ri=100 kΩ, adjustable curve, SELV
2	10	RSB	-	not brought out via wire
2	11	RSA	-	not brought out via wire
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, + 10 V +/-3 %, max. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer); SELV fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

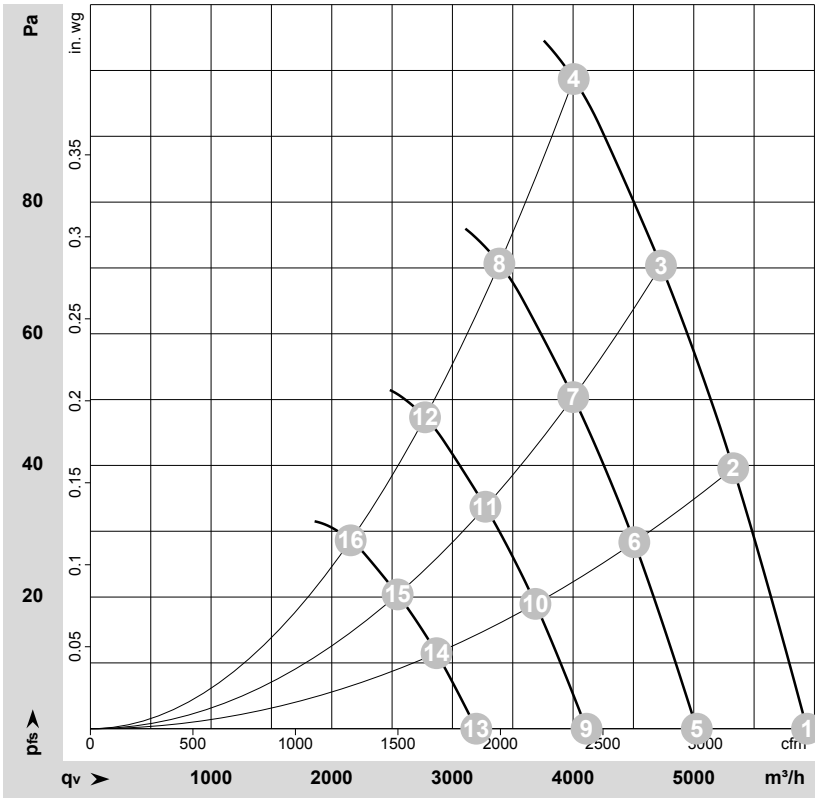
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-212514-1
Date: 2020-11-18
Housing: 45022-2-2922

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	3~	400	50	1300	267	0.44	71	78	5940	0	3495	0.00
2	3~	400	50	1300	298	0.48	68	75	5325	40	3135	0.16
3	3~	400	50	1300	314	0.51	67	74	4730	70	2785	0.28
4	3~	400	50	1300	330	0.53	68	75	4005	100	2355	0.40
5	3~	400	50	1100	162	0.27	67	74	5025	0	2960	0.00
6	3~	400	50	1100	180	0.29	64	71	4505	29	2655	0.12
7	3~	400	50	1100	190	0.31	63	70	4000	50	2355	0.20
8	3~	400	50	1100	199	0.32	63	71	3390	71	1995	0.29
9	3~	400	50	900	89	0.15	61	69	4110	0	2420	0.00
10	3~	400	50	900	99	0.16	59	66	3690	19	2170	0.08
11	3~	400	50	900	104	0.17	58	65	3275	34	1925	0.14
12	3~	400	50	900	109	0.18	58	66	2775	48	1630	0.19
13	3~	400	50	700	42	0.07	55	63	3200	0	1880	0.00
14	3~	400	50	700	46	0.08	52	59	2870	12	1690	0.05
15	3~	400	50	700	49	0.08	52	59	2545	20	1500	0.08
16	3~	400	50	700	51	0.08	52	59	2155	29	1270	0.12

Wired = Wiring · U = Voltage · 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
q_V = Air flow · p_{fs} = Pressure increase

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