S3G910-CG94-08

EC axial fan - HyBlade

sickle-shaped blades (S series)

with guard grille for full nozzle

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Nominal data

Type	**S3G910-CG94-08**
Motor	**M3G112-IA**

Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		cs
Speed (rpm)	min^{-1}	760
Power consumption	W	980
Current draw	A	1.6
Max. back pressure	Pa	95
Max. back pressure	in. wg	0.38
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	50

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}	%	43	33.6
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		49.4	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.97
09 Air flow q_v	m^3/h	14915
09 Pressure increase p_{fs}	Pa	94
10 Speed (rpm) n	min^{-1}	725
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-191981

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Technical description

Weight	19.1 kg
Size	910 mm
Motor size	112
Rotor surface	Painted black
Terminal box material	PP plastic
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted sheet steel blank, sprayed with PP plastic
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	V
Direction of rotation	Clockwise, 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
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	Terminal box
Motor protection	Thermal overload protector (TOP) internally connected
Protection class	I (with customer connection of protective earth)

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Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1
Comment	Conformity with standard EN 60335-1 on request

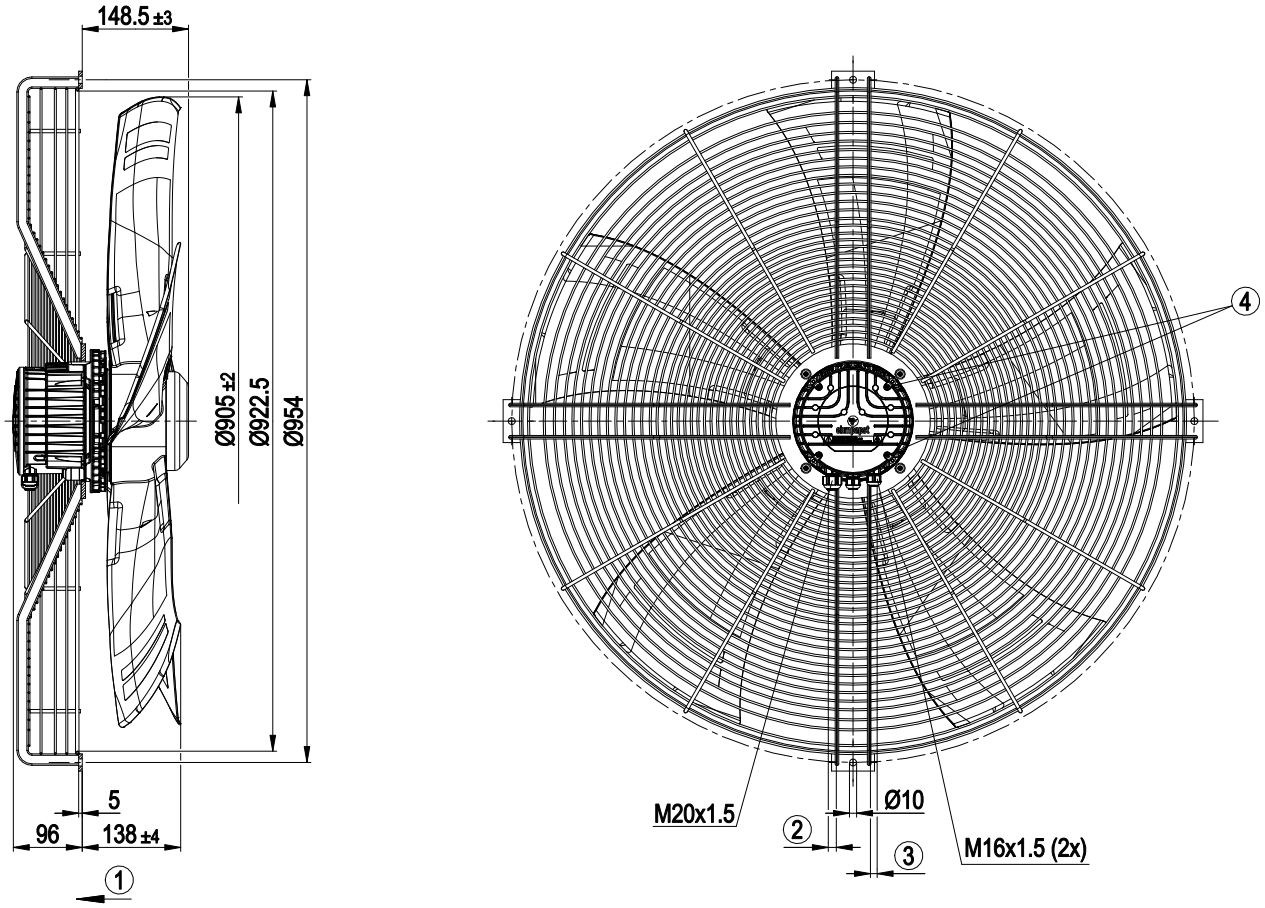
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Product drawing



1	Airflow direction "V"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque 1.8±0.3 Nm
3	Cable diameter min. 6 mm, max. 10 mm, tightening torque 1.8±0.3 Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque 1.8±0.3 Nm
4	Tightening torque 1.5 ± 0.2 Nm

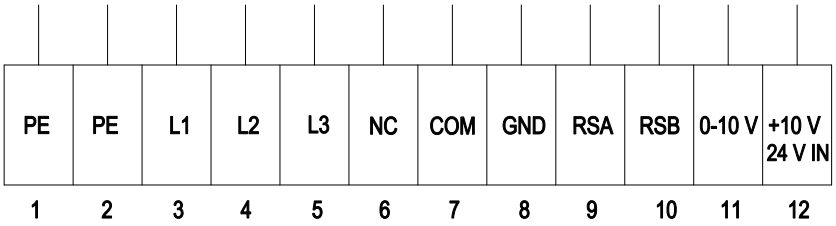
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Connection diagram



No.	Conn.	Designation	Function/assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	L1	Power supply
	4	L2	Power supply
	5	L3	Power supply
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
	7	COM	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
	8	GND	Reference ground for control interface, SELV
	9	RSA	RS485 interface for MODBUS, RSA; SELV
	10	RSB	RS485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
	12	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

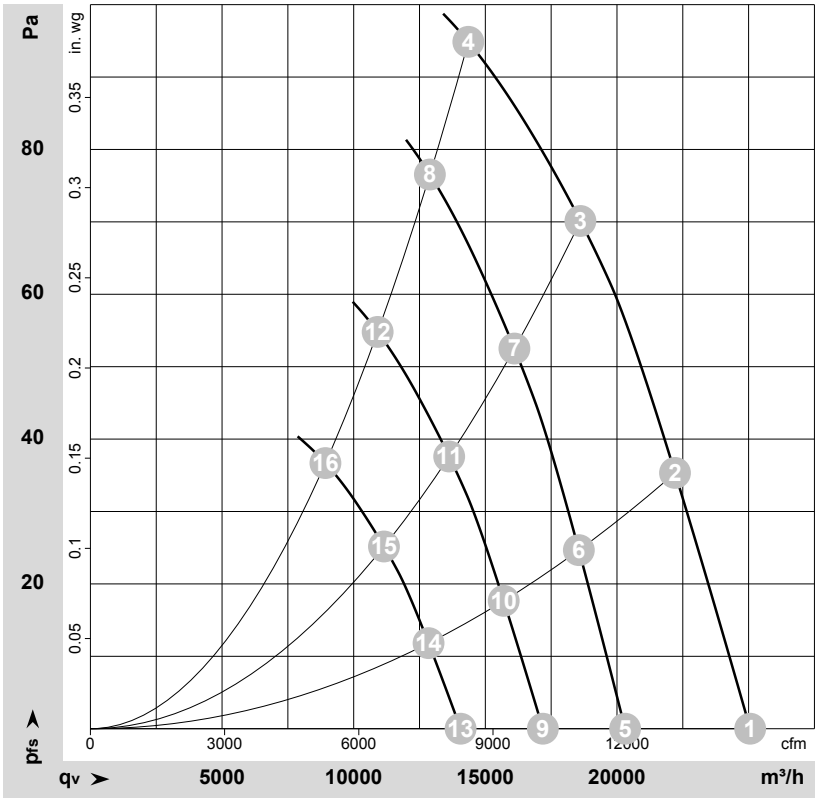
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-191981-1

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	LpA_{in}	LwA_{in}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	3~	400	50	800	899	1.40	66	73	74	25060	0	14750	0.00
2	3~	400	50	780	957	1.48	63	71	72	22205	35	13070	0.14
3	3~	400	50	750	980	1.60	62	69	70	18610	70	10955	0.28
4	3~	400	50	730	980	1.60	66	73	74	14355	95	8450	0.38
5	3~	400	50	650	479	0.74	61	68	69	20310	0	11955	0.00
6	3~	400	50	650	557	0.86	59	66	67	18550	25	10920	0.10
7	3~	400	50	650	634	0.98	58	65	66	16105	53	9480	0.21
8	3~	400	50	650	709	1.10	63	70	71	12895	77	7590	0.31
9	3~	400	50	550	290	0.45	56	64	65	17185	0	10115	0.00
10	3~	400	50	550	337	0.52	55	62	63	15700	18	9240	0.07
11	3~	400	50	550	384	0.59	54	61	62	13625	38	8020	0.15
12	3~	400	50	550	430	0.66	59	66	67	10910	55	6420	0.22
13	3~	400	50	450	159	0.25	51	59	59	14060	0	8275	0.00
14	3~	400	50	450	185	0.29	50	57	58	12845	12	7560	0.05
15	3~	400	50	450	210	0.33	49	56	57	11150	25	6560	0.10
16	3~	400	50	450	235	0.36	54	61	62	8925	37	5255	0.15

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 LwA_{out} = Sound power level outlet side · q_V = Air flow · p_{fs} = Pressure increase

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