S3G910-CU22-09

Güntner AG & Co. KG

VT03064U.1

EC axial fan

sickle-shaped blades (S series)

with guard grille for full nozzle

S3G910-CU22-09 ebmpapst Datasheet
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Nominal data

Type	**S3G910-CU22-09**	
Motor	**M3G150-IF**	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	910
Power consumption	W	1880
Current draw	A	2.9
Max. back pressure	Pa	70
Max. back pressure	inH2O	0.28
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	70

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	35.7
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		49.1	40
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	2.06
09 Air flow q_v	m^3/h	19665
09 Pressure increase p_{fs}	Pa	160
10 Speed (rpm) n	min^{-1}	890
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-118474

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Technical description

Weight	37.2 kg
Fan size	910 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Die-cast aluminum
Guard grille material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Blade pitch	0°
Airflow direction	"V"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
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
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Bus terminating resistor 120 Ohm - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 MODBUS-RTU - 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 / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
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	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; EAC; C22.2 No.77 + CAN/CSA-E60730-1

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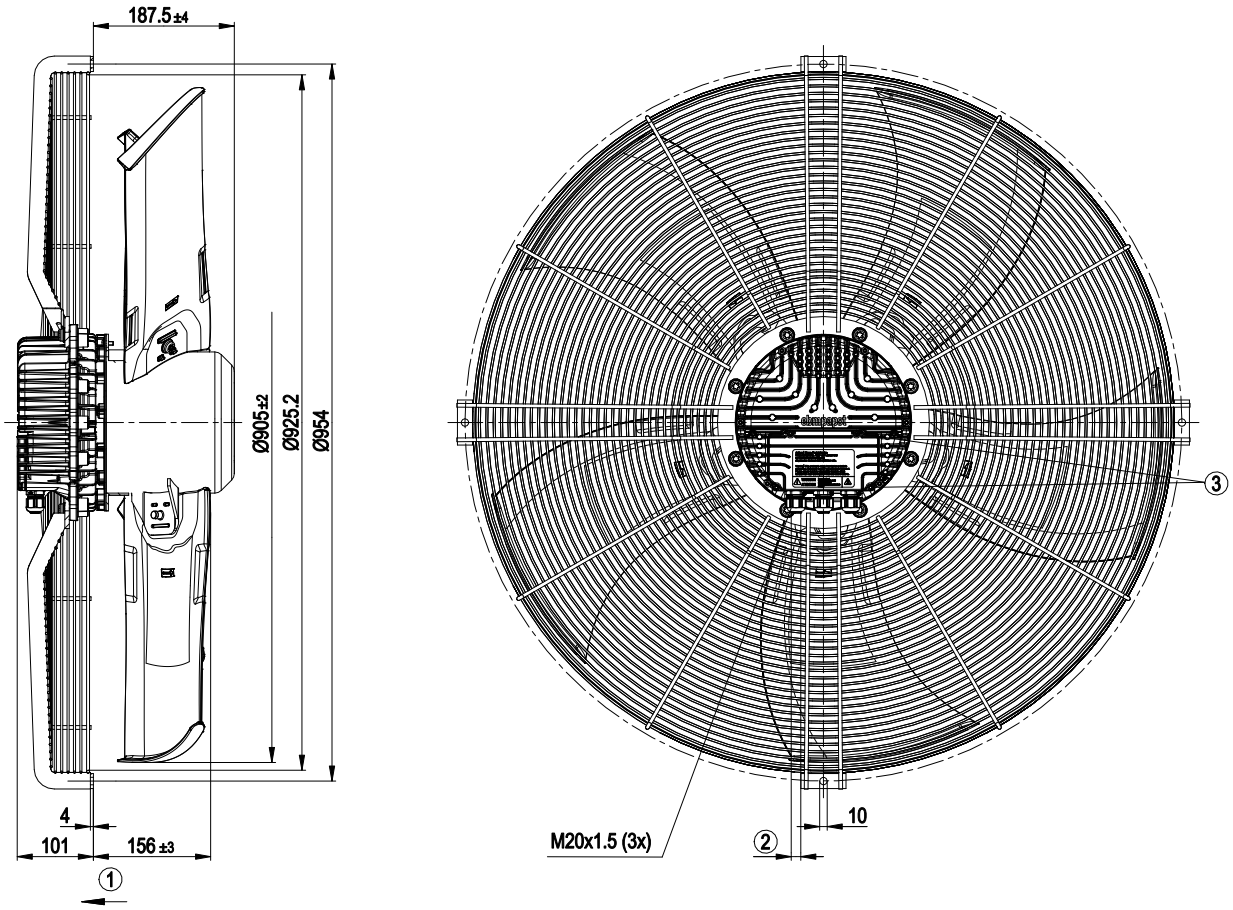
Product drawing



1	Direction of air flow "V"
2	Cable diameter min. 4 mm; max. 10 mm; tightening torque 4±0.6 Nm
3	Tightening torque 3.5±0.5 Nm

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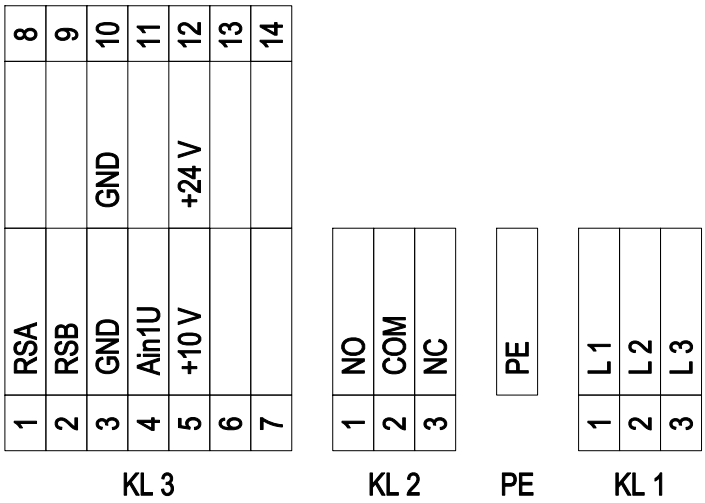
Connection diagram



No.	Conn.	Designation	Function/assignment
KL 1	1, 2, 3	L1, L2, L3	Supply connection, power supply; for nominal voltage range see technical data
PE		PE	Ground connection
KL2	1	NO	Status relay, floating status contact, make for failure
KL2	2	COM	Status relay, floating status contact, changeover contact, common connection, contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL 2	3	NC	Status relay, floating status contact, break for failure
KL 3	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL 3	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL 3	3	GND	Reference ground for control interface; SELV
KL 3	4	Ain1 U	Analog input 1, set value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain1 I; SELV
KL3	5	+10 V	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof power supply for external devices (e.g. pot); SELV
KL3	6		not used
KL3	7		not used
KL3	8		not used
KL3	9		not used
KL 3	10	GND	Reference ground for control interface; SELV
KL 3	11		not used
KL 3	12	+24 V	Parameter-setting input 24 VDC, external feed +24 VDC for setting parameters
KL 3	13		not used
KL3	14		not used

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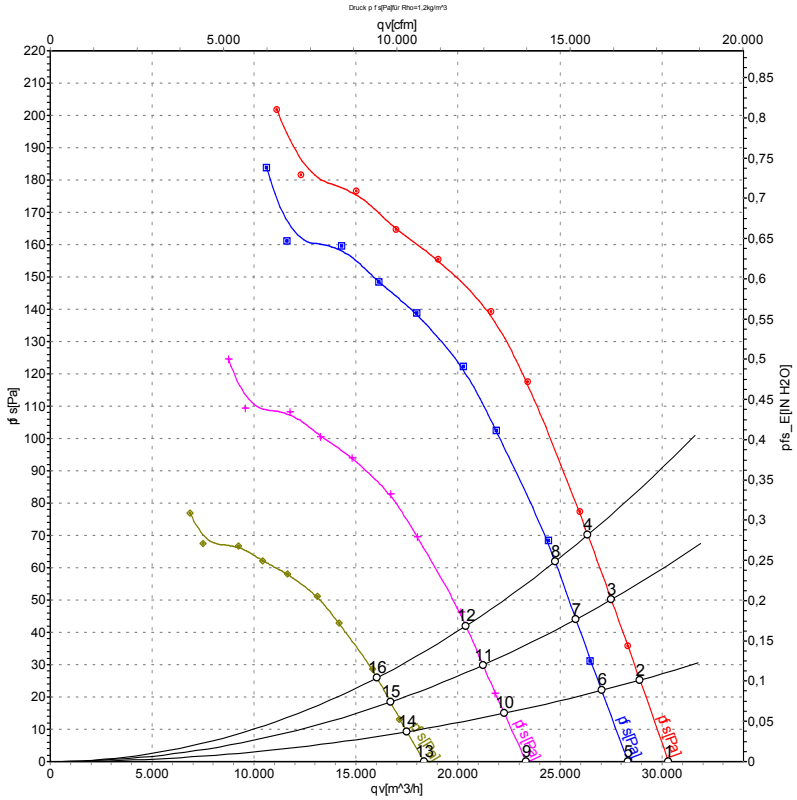
Curves: Air performance 50 Hz



Measurement: LU-115712-1

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}	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	inH2O
1	400	50	910	1621	2.47	72	80	81	30320	0	17845	0.00
2	400	50	910	1717	2.60	72	80	81	28920	25	17020	0.10
3	400	50	910	1800	2.72	72	79	80	27520	50	16200	0.20
4	400	50	910	1880	2.90	72	79	80	26370	70	15520	0.28
5	400	50	850	1324	2.02	71	78	79	28340	0	16680	0.00
6	400	50	850	1400	2.12	71	78	79	27040	22	15915	0.09
7	400	50	850	1479	2.24	71	78	79	25780	44	15175	0.18
8	400	50	850	1547	2.35	71	78	79	24760	63	14575	0.25
9	400	50	700	740	1.13	67	74	75	23340	0	13735	0.00
10	400	50	700	782	1.19	66	74	75	22270	15	13110	0.06
11	400	50	700	826	1.25	66	74	75	21230	30	12495	0.12
12	400	50	700	864	1.31	66	74	75	20390	42	12000	0.17
13	400	50	550	359	0.55	61	69	70	18340	0	10795	0.00
14	400	50	550	379	0.57	61	69	70	17500	9	10300	0.04
15	400	50	550	401	0.61	61	68	69	16680	18	9815	0.07
16	400	50	550	419	0.64	61	68	69	16020	26	9430	0.10

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