

S3G800-AT22-16

Emerson

EC axial fan - HyBlade

sickled blades (S series)
with guard grille for short nozzle

S3G800-AT22-16 ebmpapst Datasheet
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Nominal data

Type	S3G800-AT22-16	
Motor	M3G150-GF	
Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min ⁻¹	925
Power input	W	1800
Current draw	A	5.7
Max. back pressure	Pa	180
Min. ambient temperature	°C	-40
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations



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Technical features

Mass	34.5 kg
Size	800 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Aluminium sheet insert, sprayed with PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Blade angle	0°
Direction of air flow	"V"
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Shaft horizontal or rotor on bottom
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - External 24 V input (programming) - External release input - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; C22.2 Nr.77 + CAN/CSA-E60730-1



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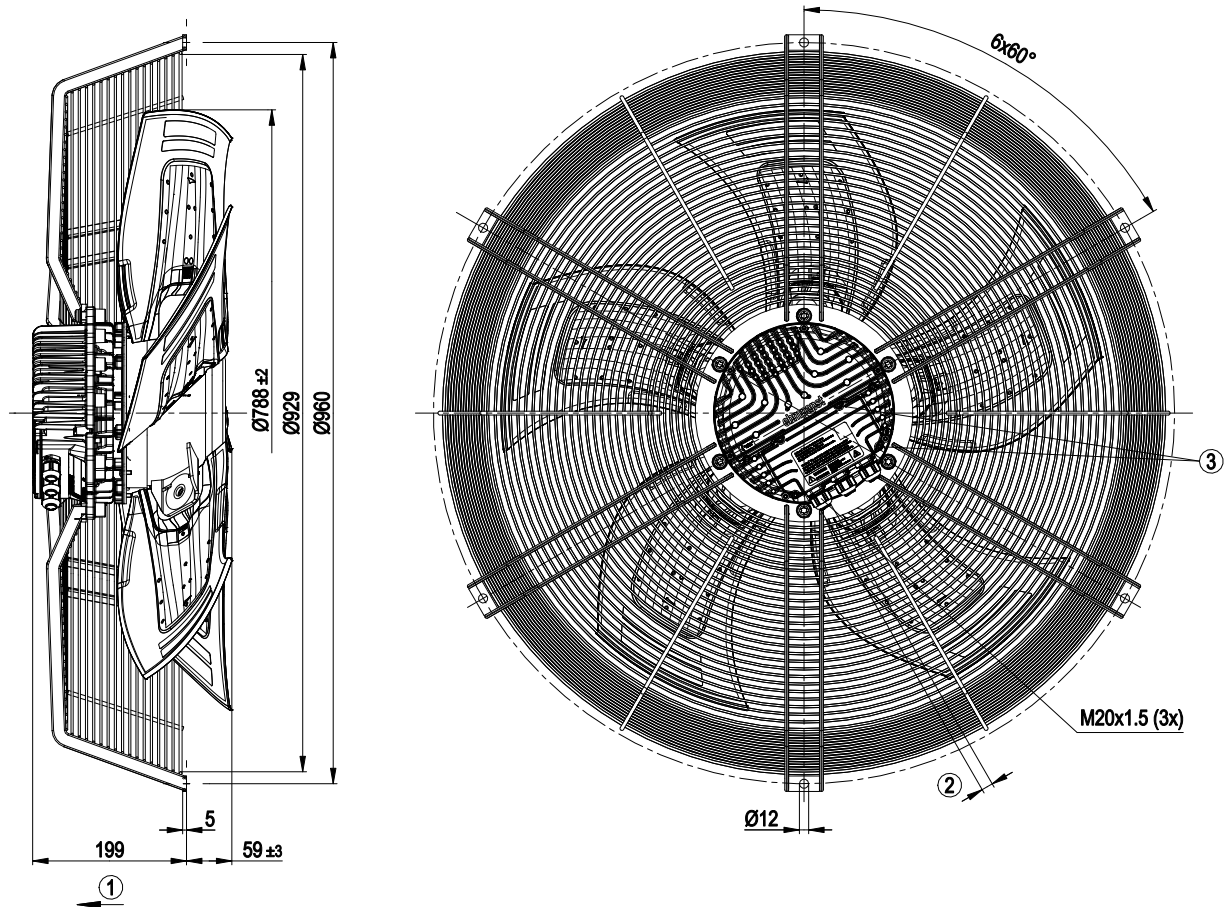
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Product drawing



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 screen

8	Din 2	RSA	1
9	Din 3	RSB	2
10	GND	GND	3
11	Ain 2 U	Ain 1 U	4
12	+ 20 V	+ 10 V	5
13	Ain 2 I	Ain 1 I	6
14	Aout	Din 1	7

KL 3

1	NO
2	COM
3	NC

KL 2

PE

PE

1	L1
2	L2
3	L3

KL 1

No.	Conn.	Designation	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact; normally open; close with error
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / max. 2 A (AC1) / min. 10 mA
KL2	3	NC	Status relay, floating status contact; break with error
KL 3	1	RSA	Bus connection RS-485, RSA, MODBUS RTU; SELV
KL 3	2	RSB	Bus connection RS-485, RSB, MODBUS RTU; SELV
KL 3	3 / 10	GND	Signal ground for control interface; SELV
KL 3	4	Ain1 U	Analogue input 1, set value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain1; SELV
KL 3	5	+ 10 V	Fixed voltage output 10 VDC, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. potentiometer), SELV
KL 3	6	Ain1 I	Analogue input 1, set value: 4-20 mA; Ri = 100 Ω, parametrisable curve, only usable as alternative to input Ain1 U; SELV
KL 3	7	Din1	Digital input 1: enabling of electronics, enabling: open pin or applied voltage 5-50 VDC disabling: bridge to GND or applied voltage <1 VDC reset function: triggers software reset after a level change to <1 VDC; SELV
KL 3	8	Din2	Digital input 2: parameter set switch 1/2, according to EEPROM setting, the valid/used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: open pin or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage <1 VDC; SELV
KL 3	9	Din3	Digital input 3: controller function of integrated controller, according to EEPROM setting, the controller function of the integrated controller is normally/inversely selectable per bus or per digital input normal: open pin or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage <1 VDC; SELV
KL 3	11	Ain2 U	Analogue input 2, actual value: 0-10 V, Ri = 100 kΩ, parametrisable curve, only usable as alternative to input Ain2; SELV
KL 3	12	+ 20 V	Fixed voltage output 20 VDC, +20 V ±5/-10%, max. 50 mA, short-circuit-proof, power supply for external devices (e.g. sensors); SELV

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KL 3	13	Ain2 I	Analogue input 2, actual value: 4-20 mA, $R_i = 100\ \Omega$, parametrisable curve, only usable as alternative to input Ain2 U; SELV
KL 3	14	Aout	Analogue output 0-10 VDC, max. 5 mA, output of the current motor level control coefficient / motor speed parametrisable curve; SELV

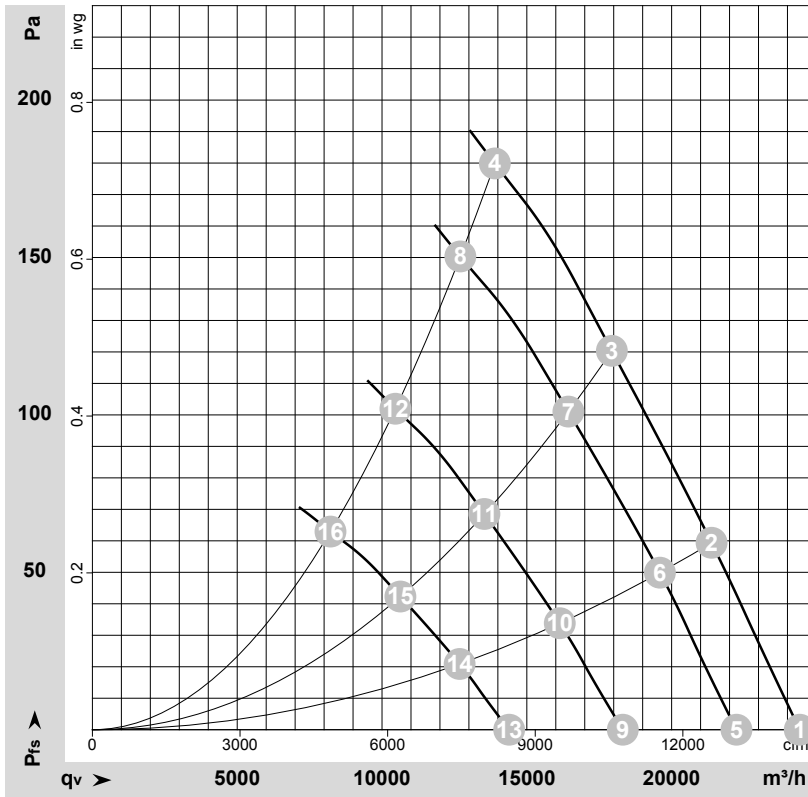


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Charts: Air flow 50 Hz



$$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$$

Measurement: LU-134954-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P _{ed}	I	LpA _{in}	LwA _{in}	LwA _{out}	qv	P _{fs}	qv	P _{fs}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m ³ /h	Pa	CFM	inH ₂ O
1	200	50	925	1232	4.31	66	73	73	24425	0	14375	0.00
2	200	50	925	1425	4.95	65	72	72	21380	60	12585	0.24
3	200	50	925	1622	5.56	66	74	73	17935	120	10555	0.48
4	200	50	925	1800	5.70	71	79	77	13895	180	8180	0.72
5	200	50	850	930	3.25	63	71	71	22240	0	13090	0.00
6	200	50	850	1098	3.81	63	70	69	19595	50	11535	0.20
7	200	50	850	1248	4.28	64	71	71	16435	101	9675	0.41
8	200	50	850	1386	4.73	69	76	75	12705	150	7475	0.60
9	200	50	700	519	1.82	59	66	66	18315	0	10780	0.00
10	200	50	700	613	2.13	58	65	64	16140	34	9500	0.14
11	200	50	700	697	2.39	59	67	66	13535	69	7965	0.28
12	200	50	700	774	2.64	64	71	70	10460	102	6160	0.41
13	200	50	550	252	0.88	52	60	60	14390	0	8470	0.00
14	200	50	550	297	1.03	52	59	58	12680	21	7465	0.08
15	200	50	550	338	1.16	53	60	60	10635	42	6260	0.17
16	200	50	550	375	1.28	58	65	64	8220	63	4840	0.25

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · LwA_{out} = Sound power level outlet side
 qv = Air flow · p_{fs} = Pressure increase

