

S3G800-CA77-41

EC axial fan - HyBlade

sickled blades (S series)

with guard grille for full nozzle

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Nominal data

Type	S3G800-CA77-41	
Motor	M3G112-EA	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min ⁻¹	490
Power input	W	240
Current draw	A	1.1
Max. back pressure	Pa	50
Min. ambient temperature	°C	-25
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

Data in accordance with ecodesign regulation EU 327/2011 (EN 17166)

		Actual	Request 2015
01 Overall efficiency η_{les}	%	41.9	29.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		52.4	40
05 Variable speed drive		Yes	

Data definition with optimum efficiency.

The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

09 Power input P_{ed}	kW	0.21
09 Air flow q_v	m ³ /h	7775
09 Pressure increase p_{is}	Pa	39
10 Speed (rpm) n	min ⁻¹	490
11 Specific ratio*		1.00

* Specific ratio = $1 + p_{fs} / 100\,000 \text{ Pa}$

LU-157602

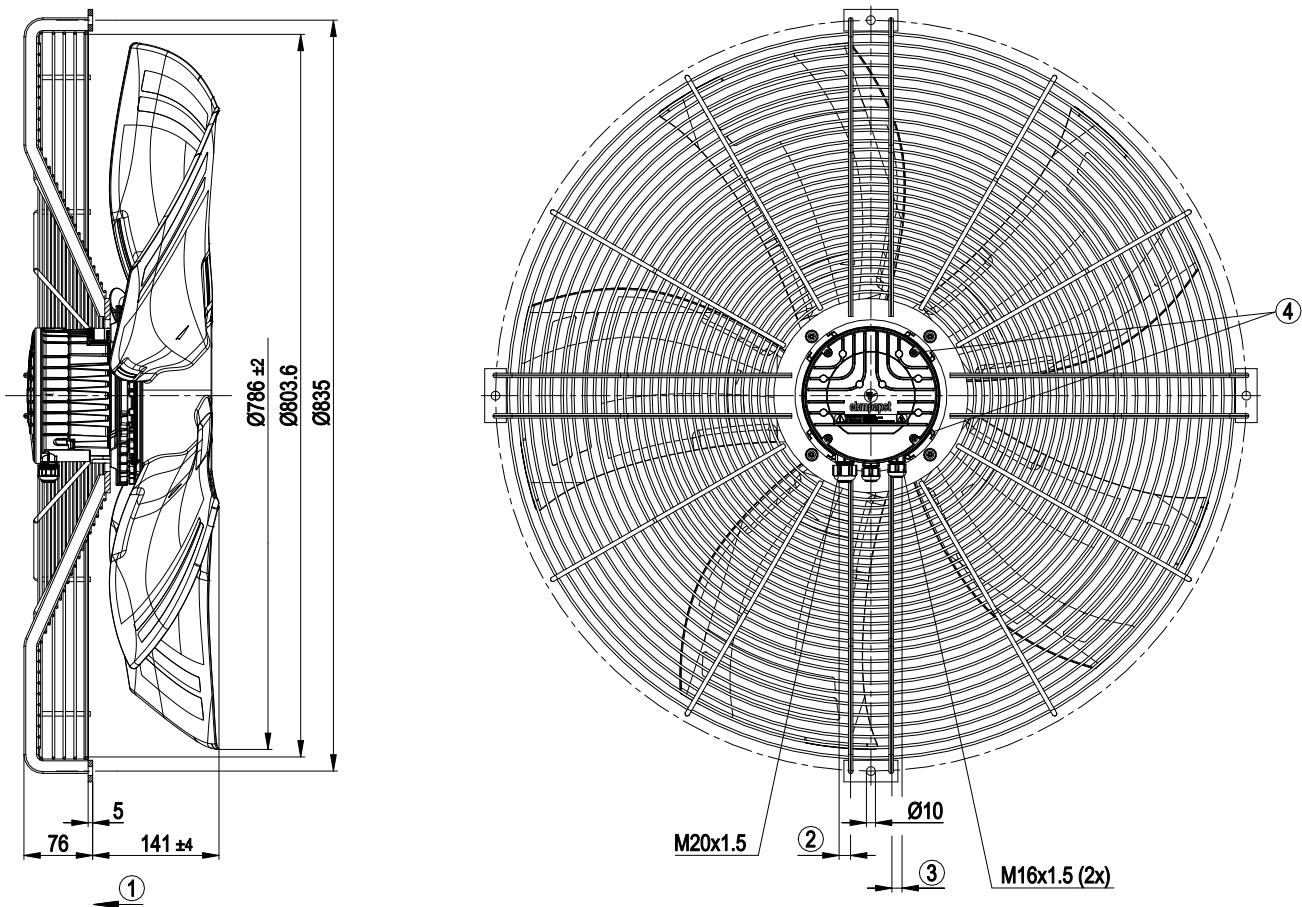
Technical features

Mass	15.3 kg
Size	800 mm
Motor size	112
Surface of rotor	Coated in black
Material of terminal box	PP plastic
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Press-fitted sheet steel blank, sprayed with PP plastic
Material of guard grille	Steel, coated in black plastic (RAL9005)
Number of blades	5
Direction of air flow	V
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP55
Insulation class	"F"
Humidity (F) / environmental protection class (H)	H2
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; rotor on top on request
Condensation drainage holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - 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 harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical connection	Terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CSA C22.2 no. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1
Remark	Standard conformity as per EN 60335-1 in preparation

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Product drawing



1	Direction of air flow "V"
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque 1.8±0.3 Nm (use the provided seal) 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 the provided seal) 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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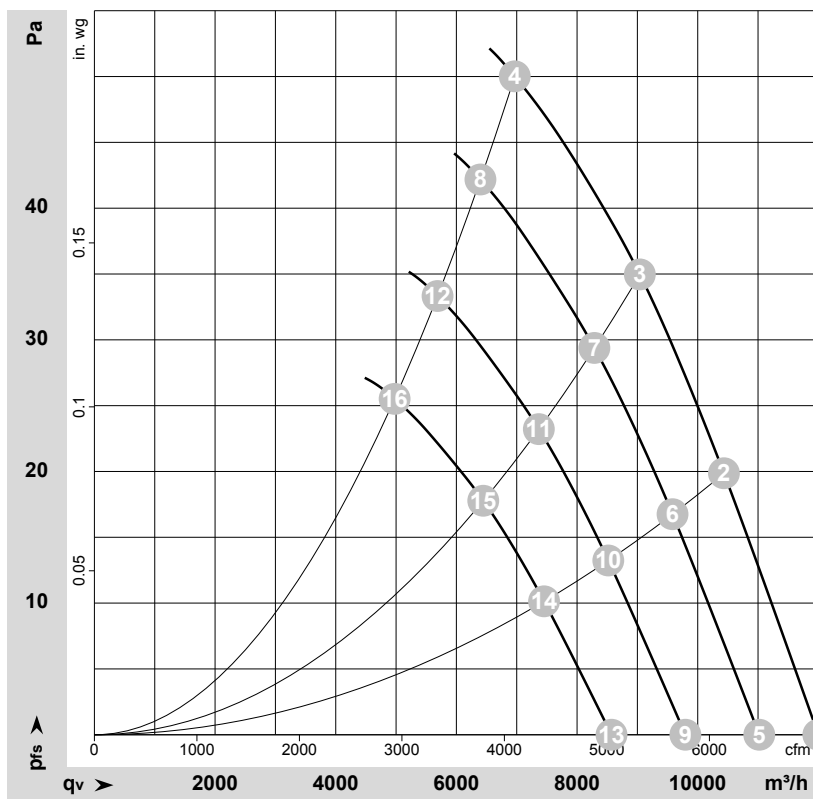
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Connection screen

PE	PE	N		L	NC	COM	GND	RSA	RSB	0-10 V	+10 V
1	2	3	4	5	6	7	8	9	10	11	12

No.	Conn.	Designation	Function / assignment
	1	PE	Protective earth
	2	PE	Protective earth
	3	N	Power supply, neutral conductor
	4	-	not used
	5	L	Power supply, phase
	6	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
	7	COM	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) / min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
	8	GND	Signal ground for control interface, SELV
	9	RSA	RS-485 interface for MODBUS, RSA; SELV
	10	RSB	RS-485 interface for MODBUS, RSB; SELV
	11	0-10 V	Analogue input (set value) SELV, 0-10 V, Ri=100kΩ, parametrisable 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. potentiometer)

Charts: Air flow 50 Hz



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

Measurement: LU-188695-1

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

	Conn.	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	1~	230	50	490	155	0.69	53	59	58	12000	0	7065	0.00
2	1~	230	50	490	190	0.84	51	57	56	10435	20	6140	0.08
3	1~	230	50	490	212	0.93	49	55	54	9040	35	5320	0.14
4	1~	230	50	490	240	1.10	51	59	58	6965	50	4100	0.20
5	1~	230	50	450	120	0.54	51	57	56	11020	0	6485	0.00
6	1~	230	50	450	147	0.65	49	54	54	9585	17	5640	0.07
7	1~	230	50	450	163	0.72	47	53	52	8285	30	4880	0.12
8	1~	230	50	450	183	0.80	49	57	56	6400	42	3765	0.17
9	1~	230	50	400	84	0.38	48	54	53	9795	0	5765	0.00
10	1~	230	50	400	103	0.46	46	51	51	8520	13	5015	0.05
11	1~	230	50	400	114	0.50	44	50	49	7365	23	4335	0.09
12	1~	230	50	400	129	0.56	46	54	53	5685	33	3345	0.13
13	1~	230	50	350	57	0.25	45	51	50	8570	0	5045	0.00
14	1~	230	50	350	69	0.31	42	48	47	7455	10	4385	0.04
15	1~	230	50	350	77	0.34	40	46	45	6445	18	3795	0.07
16	1~	230	50	350	86	0.38	43	50	50	4975	26	2930	0.10

Conn. = Connection · 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 · q_v = Air flow · p_{fs} = Pressure increase