

EC axial fan

sickle-shaped blades (S series)
with support ring, for barn ventilation

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	S3G630-DQ37-35	
Motor	M3G112-GA	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	1000
Power consumption	W	720
Current draw	A	3.2
Max. back pressure	Pa	140
Max. back pressure	in. wg	0.56
Min. ambient temperature	°C	-25
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

		Actual	Req. 2015		
01 Overall efficiency η_{es}	%	44.1	32.7	09 Power consumption P_{ed}	kW
02 Measurement category		A		09 Air flow q_v	m ³ /h
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa
04 Efficiency grade N		51.4	40	10 Speed (rpm) n	min ⁻¹
05 Variable speed drive		Yes		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 = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-116825



Technical description

Weight	11.9 kg
Fan size	630 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Blade material	Press-fitted, painted sheet steel blank, sprayed with PP plastic
Support ring material	Steel, coated with black plastic (RAL 9005)
Number of blades	5
Airflow direction	"A"
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+
Ambient temperature note	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at temperatures below -25°C (e.g. refrigeration applications) we recommend our 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 top; rotor on bottom on request
Condensation drainage holes	On stator side
Mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Operation and alarm display - Selection of direction of rotation left/right - Input for sensor 0-10 V or 4-20 mA - External 24 V input (parameter setting) - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - 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 circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Thermal overload protector (TOP) internally connected

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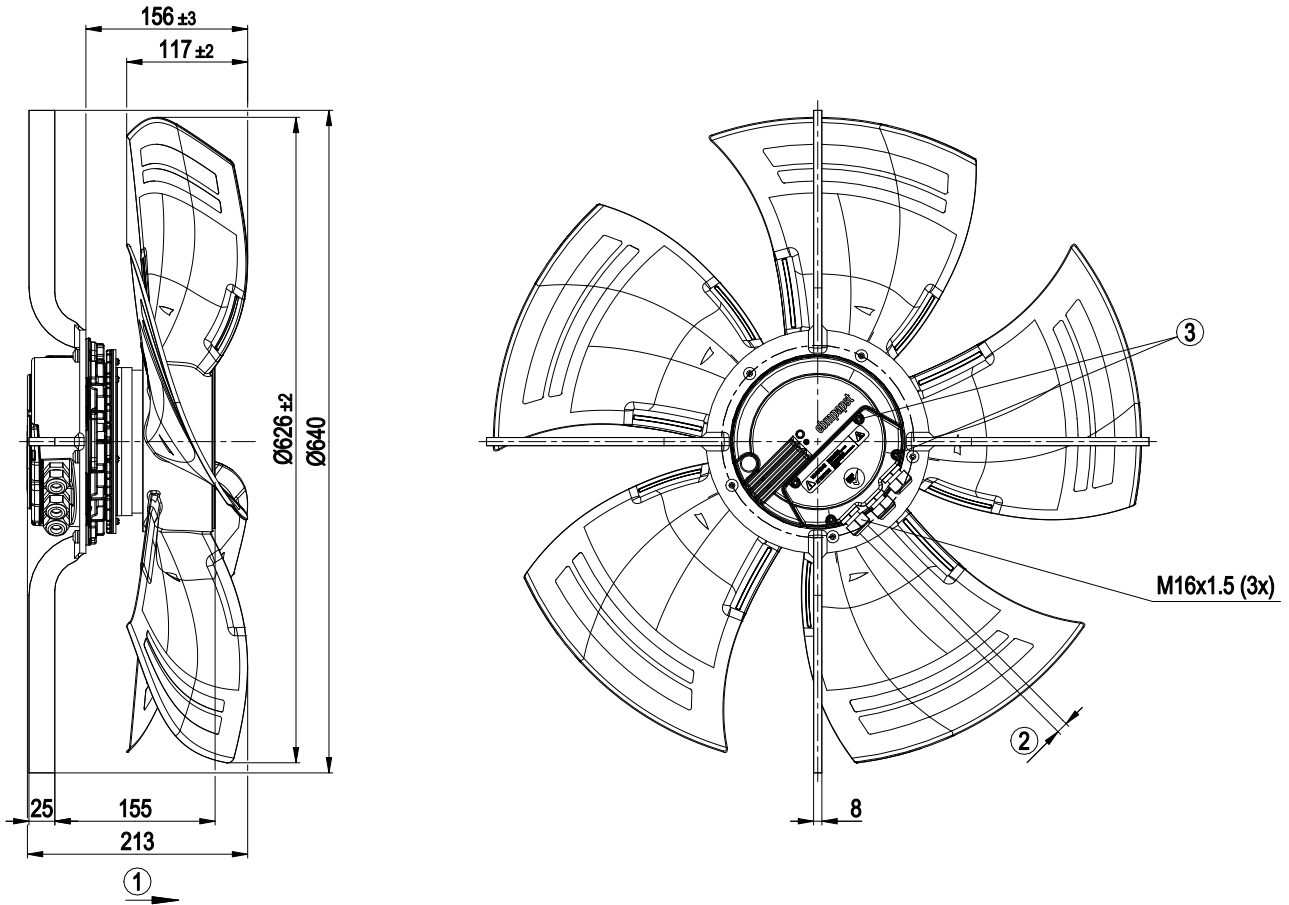
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC



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Product drawing



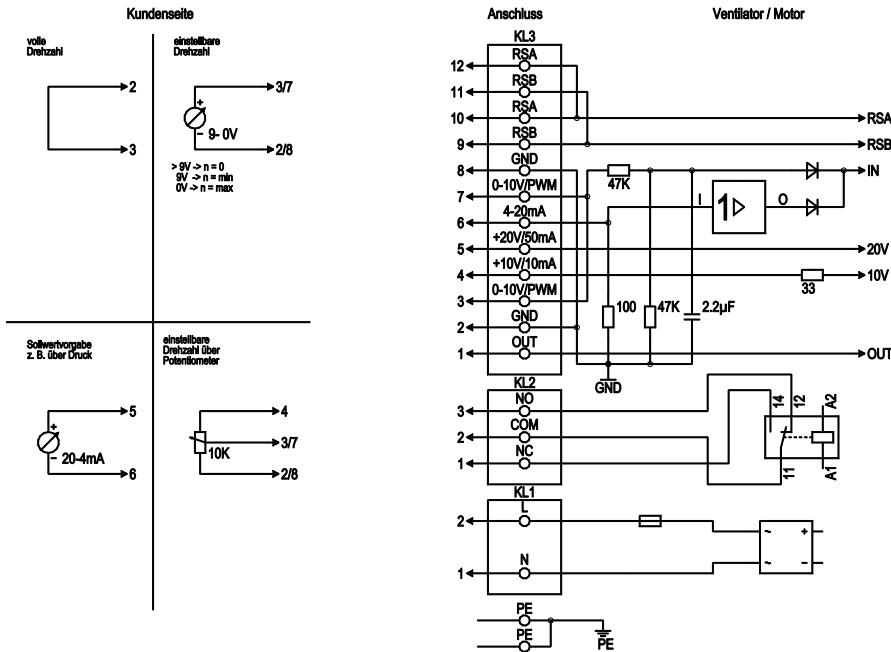
1	Direction of air flow "A"
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 2.5 ± 0.4 Nm
3	Tightening torque 3.5 ± 0.5 Nm



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Connection diagram



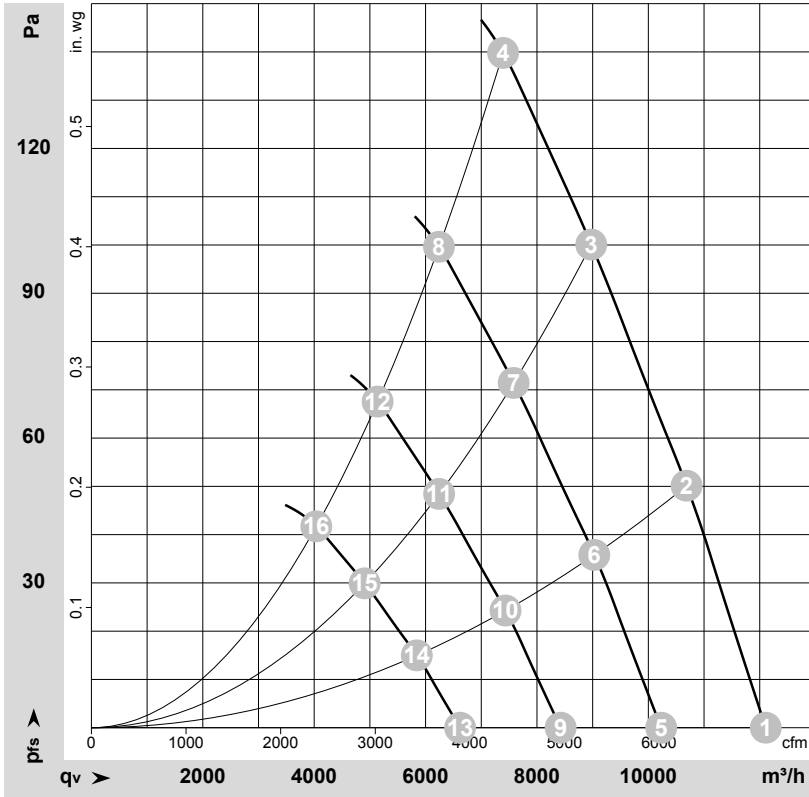
No.	Conn.	Designation	Function/assignment
PE	-	PE	Protective earth terminal
KL1	1, 2	N, L	Power supply 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	Floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV output of current motor modulation level: 1 V corresponds to 10% modulation level. 10 V corresponds to 100% modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Use control / current sensor value input 10-0 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA power supply for external devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / current sensor value input 20-4 mA, impedance 100 Ω only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for MODBUS, RSB
KL3	10, 12	RSA	RS485 interface for MODBUS, RSA



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Curves: Air performance 50 Hz



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

Measurement: LU-116825-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	1~	230	50	1000	462	2.11	65	71	71	12110	0	7125	0.00
2	1~	230	50	1000	562	2.55	61	68	67	10685	50	6290	0.20
3	1~	230	50	1000	657	2.96	63	69	68	8975	100	5280	0.40
4	1~	230	50	1000	720	3.20	65	71	71	7390	140	4350	0.56
5	1~	230	50	850	279	1.27	61	67	67	10230	0	6020	0.00
6	1~	230	50	850	339	1.54	57	64	63	9030	36	5315	0.14
7	1~	230	50	850	396	1.78	58	65	64	7580	72	4465	0.29
8	1~	230	50	850	436	1.95	60	67	67	6240	100	3675	0.40
9	1~	230	50	700	156	0.71	56	62	62	8425	0	4960	0.00
10	1~	230	50	700	189	0.86	52	59	58	7435	24	4375	0.10
11	1~	230	50	700	221	1.00	54	60	59	6245	49	3675	0.20
12	1~	230	50	700	243	1.09	55	62	62	5140	68	3025	0.27
13	1~	230	50	550	75	0.35	50	56	56	6620	0	3895	0.00
14	1~	230	50	550	92	0.42	46	53	52	5845	15	3440	0.06
15	1~	230	50	550	107	0.48	47	54	53	4905	30	2890	0.12
16	1~	230	50	550	118	0.53	49	56	56	4040	42	2375	0.17

Wired = Wiring · 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

