K3G310-AY62-25

EC centrifugal module

backward-curved, single-intake

with support bracket

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Nominal data

Type	**K3G310-AY62-25**
Motor	**M3G112-EA**

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}	3220
Power consumption	W	1500
Current draw	A	6.5
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 (EN 17166)

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	58.2	53.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		66.9	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	1.49
09 Air flow q_v	m^3/h	2810
09 Pressure increase p_{fs}	Pa	1037
10 Speed (rpm) n	min^{-1}	3180
11 Specific ratio*		1.01

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-140159

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Technical description

Weight	19.3 kg
Size	310 mm
Motor size	112
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	See product drawing
Condensation drainage holes	On rotor side
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 - Tach output - Input for sensor 0-10 V or 4-20 mA - External 24 V input (parameter setting) - External release input - 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	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; UL 1004-7 + 60730-1; CSA C22.2 No. 77 + CAN/CSA-E60730-1

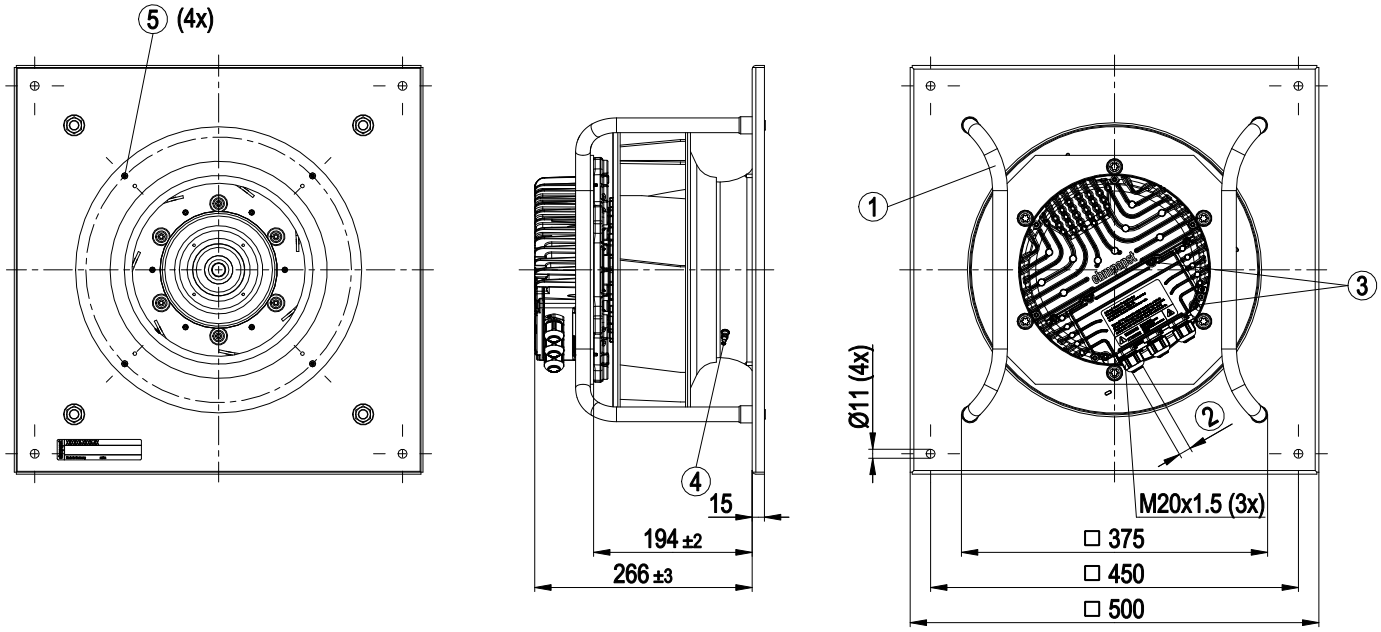
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Product drawing



1	Installed position: shaft horizontal (install support struts only vertically as illustrated) or rotor on bottom; rotor on top on request
2	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
3	Tightening torque 3.5 ± 0.5 Nm
4	Inlet ring with pressure tap (k-factor: 116)
5	Attachment for inlet ring and FlowGrid

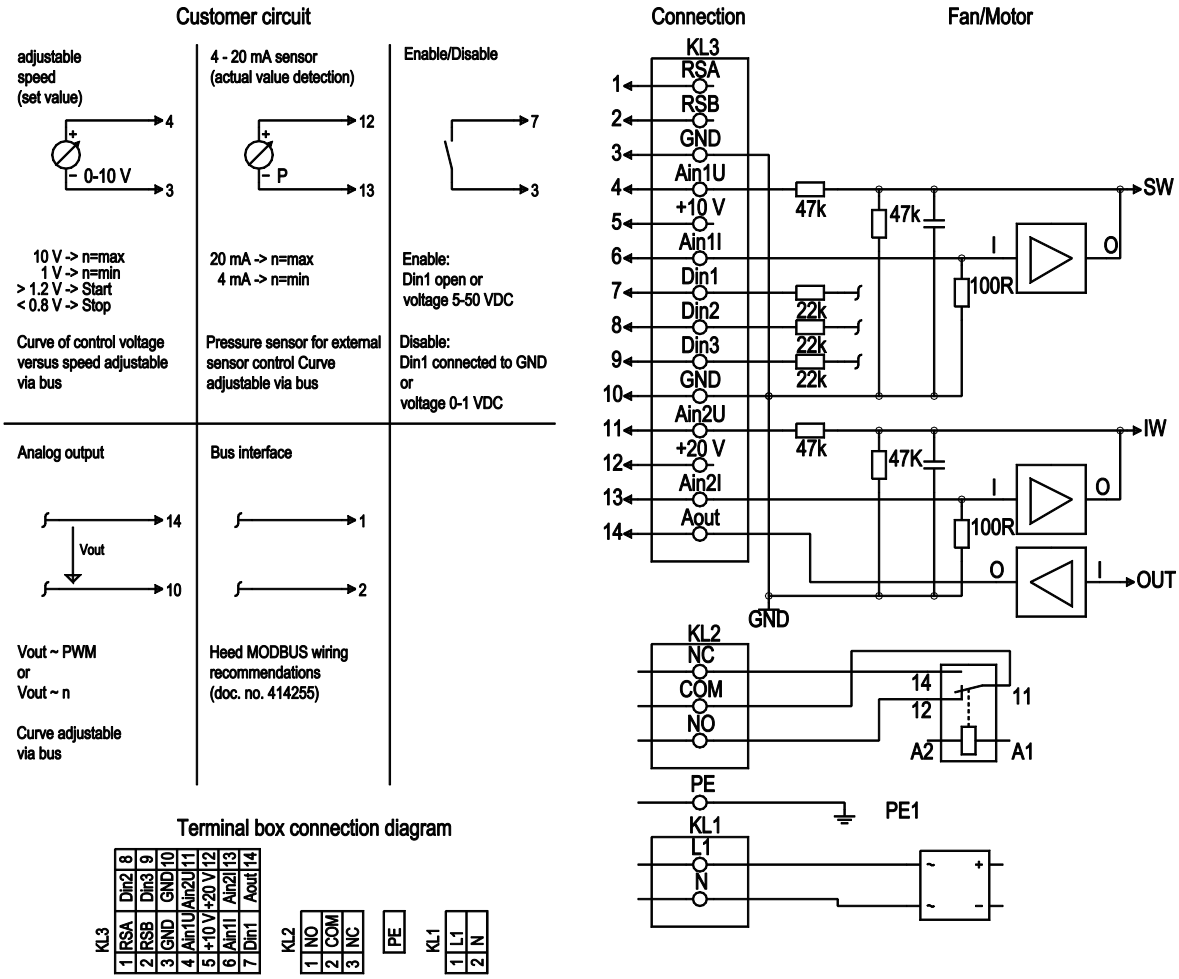
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Connection diagram



No.	Conn.	Designation	Function/assignment
KL1	1, 2	L1/N	Supply connection, power supply; for nominal voltage range see technical data
PE	PE	PE	Ground connection, PE 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, max. 250 VAC/2 A (AC1)/min. 10 mA
KL2	3	NC	Status relay, floating status contact, break for failure
KL3	1	RSA	Bus connection RS485, RSA, MODBUS-RTU; SELV
KL3	2	RSB	Bus connection RS485, RSB, MODBUS-RTU; SELV
KL3	3	GND	Reference ground for control interface, SELV
KL3	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	Ain1 I	Analog input 1, set value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain1 U; SELV
KL3	7	Din1	Digital input 1: enable electronics, enable: pin open or applied voltage 5-50 VDC disable: bridge to GND or applied voltage < 1 VDC reset function: triggers software reset after a level change to < 1 VDC; SELV

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No.	Conn.	Designation	Function/assignment
KL3	8	Din2	Digital input 2: Switching parameter sets 1/2, according to EEPROM setting, the valid or used parameter set can be selected via bus or via digital input DIN2. Parameter set 1: pin open or applied voltage 5-50 VDC Parameter set 2: bridge to GND or applied voltage < 1 VDC; SELV
KL3	9	Din3	Digital input 3: according to EEPROM setting, the integrated controller's direction of action can be selected via bus or digital input Din3; normal: pin open or applied voltage 5-50 VDC inverse: bridge to GND or applied voltage < 1 VDC; SELV
KL3	10	GND	Reference ground for control interface, SELV
KL3	11	Ain2 U	Analog input 2, measured value: 0-10 V, Ri = 100 kΩ, adjustable curve, only usable as alternative to input Ain2 I; SELV
KL3	12	+20 V	Fixed voltage output 20 VDC, +20 V +25/-10%, max. 50 mA, short-circuit-proof, power supply for external devices (e.g. sensors); SELV Alternatively: +24 VDC input for parameterization without line voltage
KL3	13	Ain2 I	Analog input 2, measured value: 4-20 mA, Ri = 100 Ω, adjustable curve, only usable as alternative to input Ain2 U; SELV
KL3	14	Aout	Analog output 0-10 VDC, max. 5 mA, output of current motor modulation level / motor speed adjustable curve; SELV

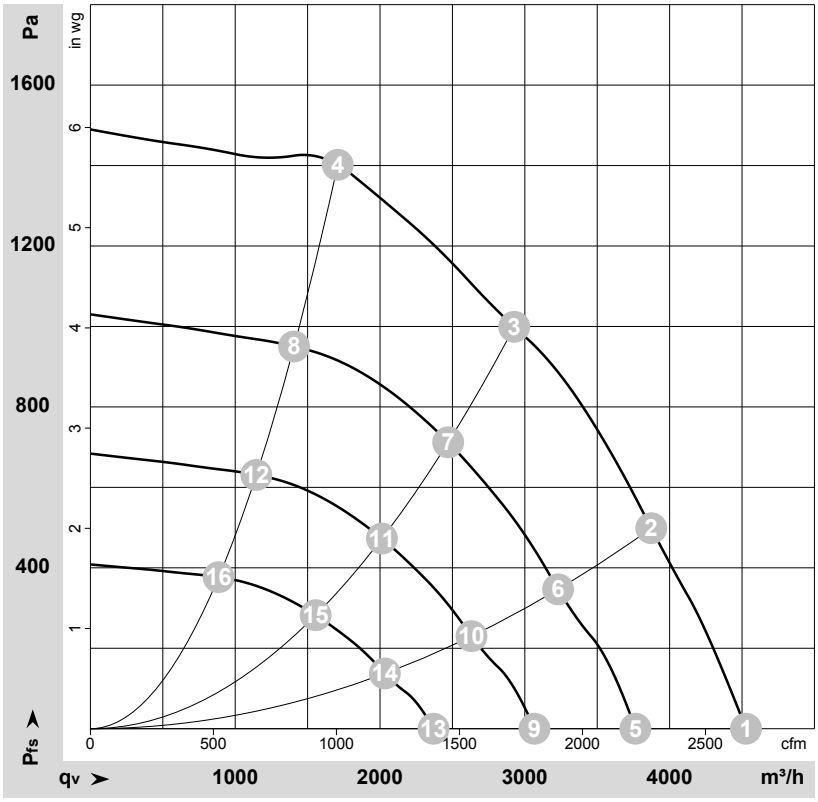
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-140159-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	in. wg
1	230	50	3220	1112	4.89	4525	0	2665	0.00
2	230	50	3220	1364	5.96	3875	500	2280	2.01
3	230	50	3220	1500	6.50	2925	1000	1725	4.01
4	230	50	3220	1490	6.51	1710	1400	1005	5.62
5	230	50	2700	639	2.81	3765	0	2215	0.00
6	230	50	2700	789	3.45	3230	345	1900	1.39
7	230	50	2700	907	3.96	2470	713	1455	2.86
8	230	50	2700	829	3.62	1405	951	830	3.82
9	230	50	2200	346	1.52	3065	0	1805	0.00
10	230	50	2200	427	1.87	2630	229	1550	0.92
11	230	50	2200	491	2.14	2015	473	1185	1.90
12	230	50	2200	449	1.96	1145	631	675	2.53
13	230	50	1700	159	0.70	2370	0	1395	0.00
14	230	50	1700	197	0.86	2035	137	1195	0.55
15	230	50	1700	226	0.99	1555	282	915	1.13
16	230	50	1700	207	0.90	885	377	520	1.51

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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