K3G250-AK20-68

EC centrifugal module

backward-curved, single-intake

with support plate

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G250-AK20-68**
Motor	**M3G084-FA**

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}	3280
Power consumption	W	415
Current draw	A	1.8
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	47.4	47.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		62	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.41
09 Air flow q_v	m^3/h	1050
09 Pressure increase p_{fs}	Pa	586
10 Speed (rpm) n	min^{-1}	3225
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

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Technical description

Weight	6 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Support plate material	Sheet aluminum
Spacer material	Aluminum
Inlet nozzle material	Sheet aluminum
Guard grille material	Steel, coated with white-aluminum plastic (RAL 9006)
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
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 top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limitation - PFC, active - 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
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	With plug
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1

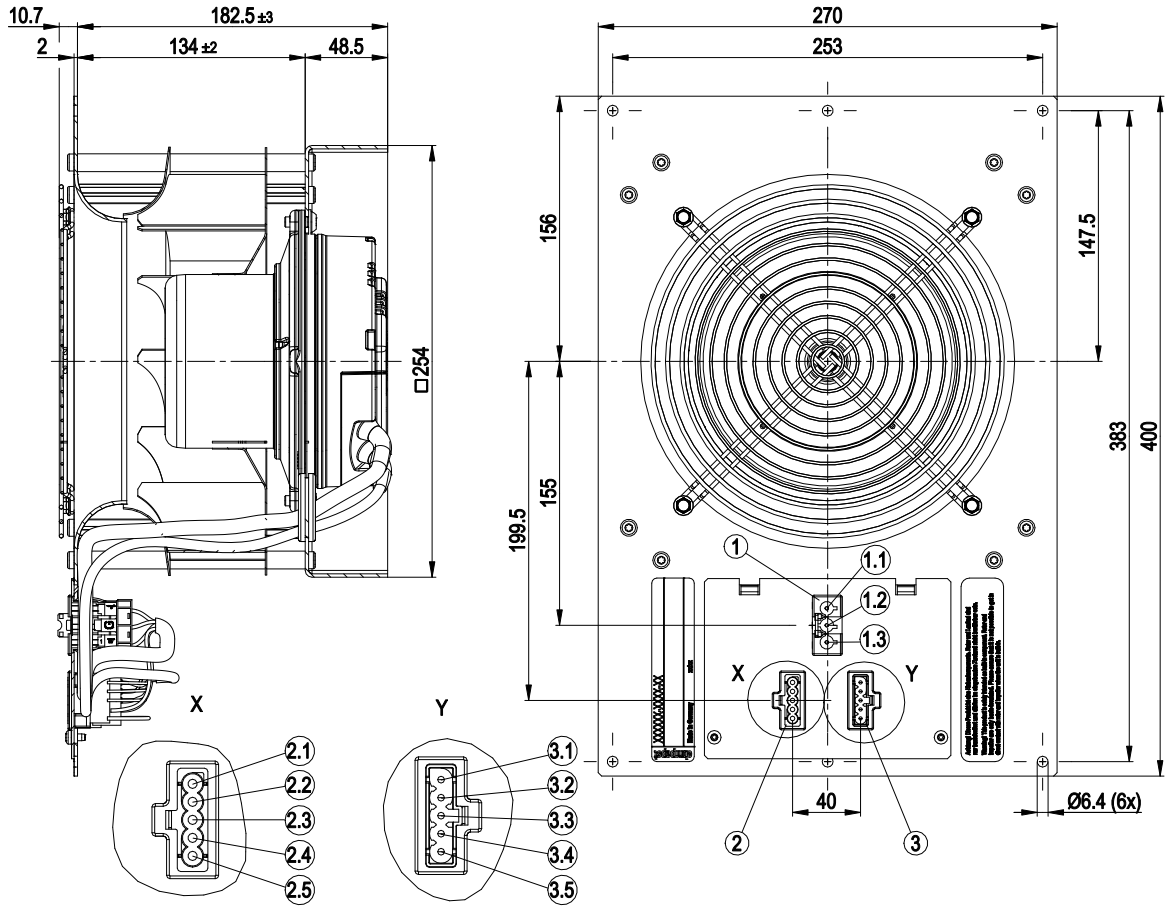
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Product drawing



1	Connector housing 3-pole GST18/3 Wieland 92.032.9058.1
1.1	N
1.2	PE
1.3	L
2	Connector housing socket part 5-pole GST15i5 Wieland 91.951.9353.0
2.1	+10 V
2.2	0-10 V
2.3	GND
2.4	NC (S1)
2.5	COM` (S2)
3	Connector housing plug part 5-pole GST15i5 Wieland 91.952.9353.0
3.1	+10 V
3.2	0-10 V
3.3	GND
3.4	NC` (S1)
3.5	COM` (S2)

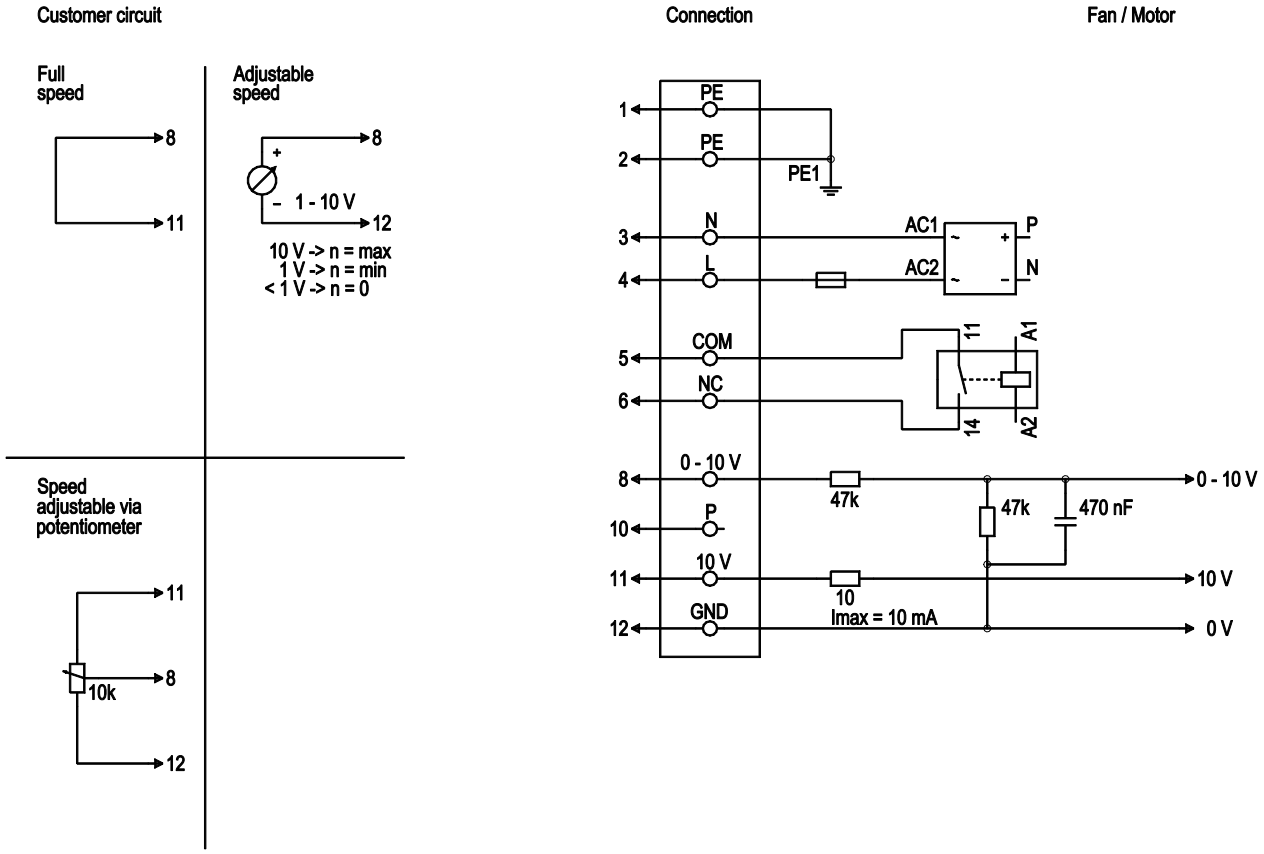
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Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, see nameplate for voltage range, 50/60 Hz
1	4	L	black	Power supply, phase, see nameplate for voltage range, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA)
1	6	NC	white 2	Floating status contact, break for failure
2	8	0 -10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kOhm, SELV
2	10	P	orange	not used
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

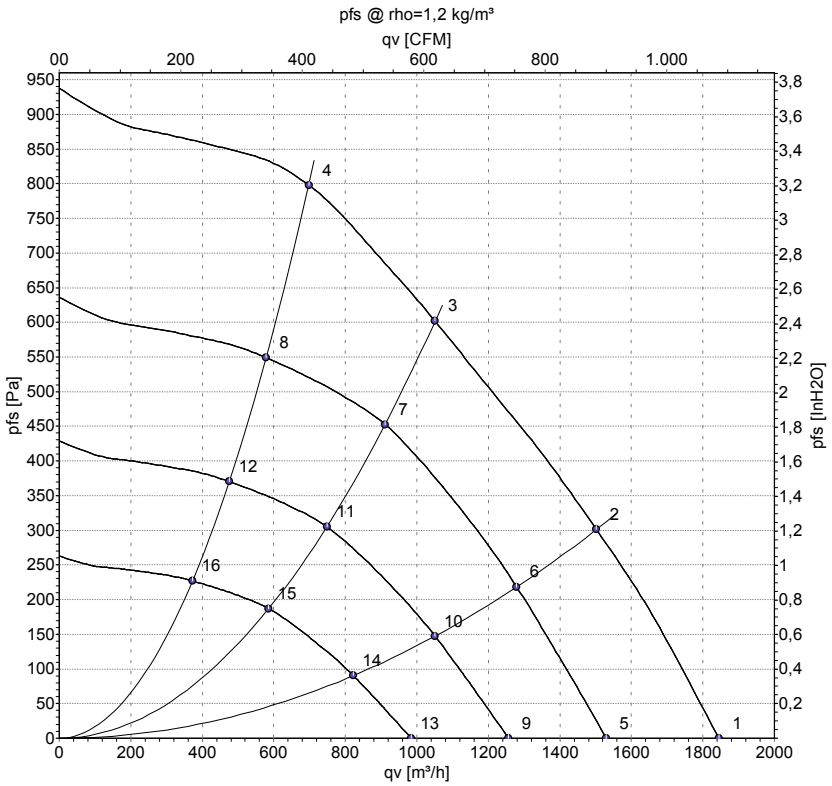
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Curves: Air performance 50 Hz



Measurement: LU-156308-1

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}	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	230	50	3370	375	1.64	82	89	1845	0	1085	0.00
2	230	50	3290	415	1.80	77	85	1500	300	885	1.20
3	230	50	3280	415	1.80	73	81	1050	600	620	2.41
4	230	50	3370	399	1.75	76	84	700	800	410	3.21
5	230	50	2800	214	0.94	77	85	1530	0	900	0.00
6	230	50	2800	258	1.13	73	81	1280	219	755	0.88
7	230	50	2800	274	1.20	70	77	910	456	535	1.83
8	230	50	2800	227	1.00	72	79	580	549	340	2.20
9	230	50	2300	119	0.52	72	80	1255	0	740	0.00
10	230	50	2300	143	0.63	68	76	1050	148	620	0.59
11	230	50	2300	152	0.66	65	72	750	308	440	1.24
12	230	50	2300	126	0.55	67	74	475	370	280	1.49
13	230	50	1800	57	0.25	66	73	985	0	580	0.00
14	230	50	1800	69	0.30	62	69	820	91	485	0.37
15	230	50	1800	73	0.32	59	66	585	188	345	0.75
16	230	50	1800	60	0.27	61	68	370	227	220	0.91

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
qv = Air flow · p_{fs} = Pressure increase

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