K3G250-AK20-64

EC centrifugal module

backward-curved, single-intake

with support plate

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**K3G250-AK20-64**
Motor	**M3G084-DF**

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}	3100
Power consumption	W	370
Current draw	A	1.8 (200V)
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	945
09 Pressure increase p_{fs}	Pa	672
10 Speed (rpm) n	min^{-1}	3355
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-68961

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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, galvanized and 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	F0
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Rotor on top
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display with LED - Integrated PID controller - LON / RS485 with DCI function - Motor current limitation - PFC, active - Soft start - Control interface with SELV potential safely disconnected from supply - 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	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; CE
Approval	CCC; UL 2111; CSA C22.2 No. 77

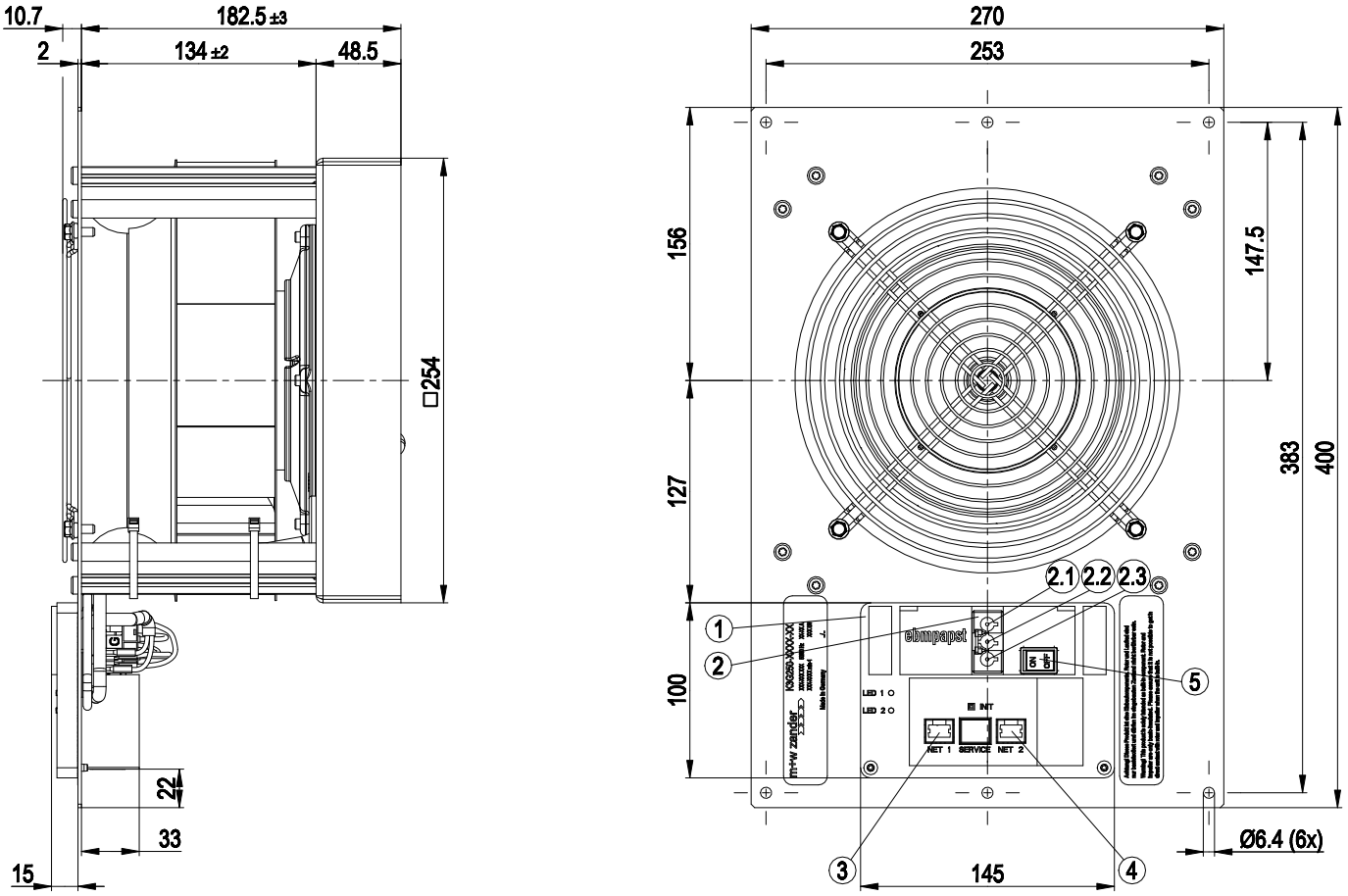
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Product drawing



1	Terminal box
2	Connector housing 3-pole GST18/3 Wieland 92.032.9058.1
2.1	N
2.2	PE
2.3	L
3	8-pole socket housing tyco 100616-2
4	8-pole socket housing tyco 100616-2
5	Switch, ARCOLECTRIC SWITCHES P L C (no. H8550VBACF) As-delivered condition end customer switch set to "OFF"

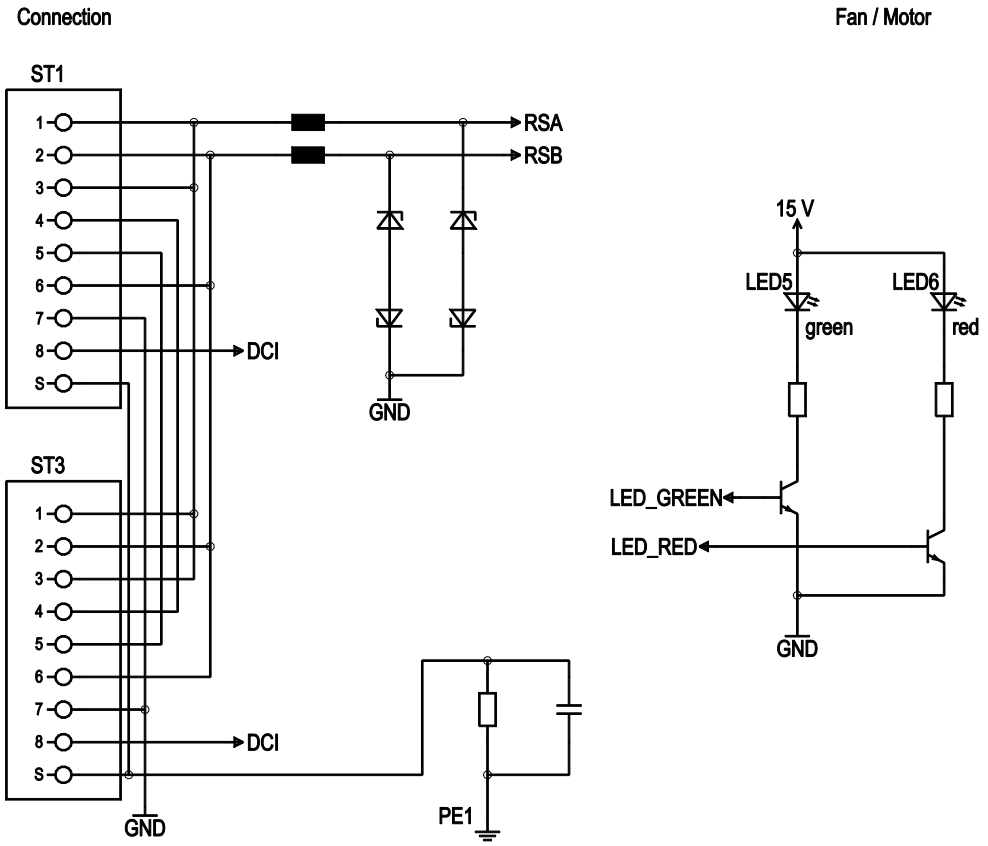
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Connection diagram



LED1 / LED2

Status	Priority	Address S/N	Speed	LED red	LED green
General malfunction	1	S/N any	n any	Flashing 1 Hz	OFF
Signal function	2	S/N <> 1/1	n any	OFF	Flashing 10 Hz
As-delivered condition	3	S/N = 1/1	n > 0	Always ON	OFF
After initializing	3	S/N <> 1/1	n > 0	OFF	Always ON
Fan to speed 0	3	S/N <> 1/1	n = 0	OFF	Flashing 1 Hz
As-delivered condition	3	S/N = 1/1	n = 0	Always ON	Flashing 1 Hz

No.	Conn.	Designation	Function/assignment
ST1/ST3	1	LON_A	Bus connection RS485, LON_A
ST1/ST3	2	LON_B	Bus connection RS485, LON_B
ST1/ST3	3	LON_A	Bus connection RS485, LON_A
ST1/ST3	4	-	Bridge ST1 – ST3
ST1/ST3	5	-	Bridge ST1 – ST3
ST1/ST3	6	LON_B	Bus connection RS485, LON_B
ST1/ST3	7	GND	Reference ground
ST1/ST3	8	DCI	Daisy chain signal
ST1/ST3	S	Schirm	Shield for RJ45 CAT5 wire

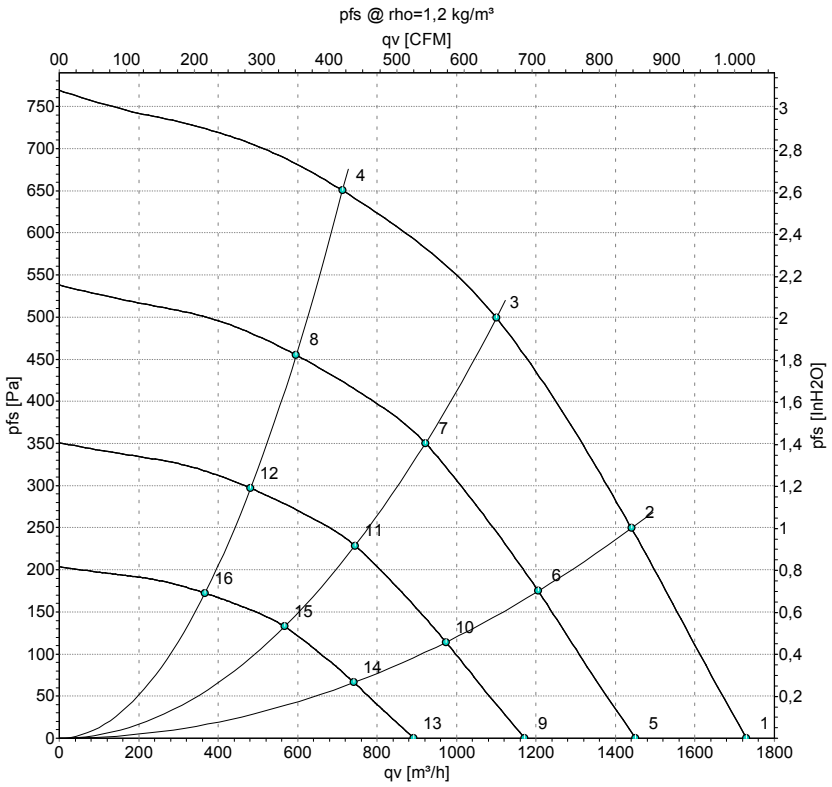
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Curves: Air performance 50 Hz



Measurement: LU-125277-1

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	qv	p_{fs}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	CFM	inH2O
1	230	50	3100	299	1.31	1730	0	1020	0.00
2	230	50	3100	344	1.50	1440	250	850	1.00
3	230	50	3100	370	1.80	1100	500	645	2.01
4	230	50	3100	343	1.50	715	650	420	2.61
5	230	50	2600	176	0.77	1450	0	855	0.00
6	230	50	2600	201	0.88	1205	175	710	0.70
7	230	50	2600	214	0.94	920	352	545	1.41
8	230	50	2600	201	0.88	595	455	350	1.83
9	230	50	2100	93	0.41	1170	0	690	0.00
10	230	50	2100	106	0.46	975	114	575	0.46
11	230	50	2100	113	0.49	745	230	440	0.92
12	230	50	2100	106	0.46	480	297	285	1.19
13	230	50	1600	41	0.18	895	0	525	0.00
14	230	50	1600	47	0.20	740	66	435	0.26
15	230	50	1600	50	0.22	565	133	335	0.53
16	230	50	1600	47	0.20	365	172	215	0.69

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

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