K3G250-AK20-64

EC centrifugal module

backward curved, single inlet

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
Type of data definition		ml
Speed	min^{-1}	3100
Power input	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 = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.01

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	47.4	43.4	47.4
Efficiency grade N		62	58	62
Power input P_{ed}	kW	0.41		
Air flow q_v	m^3/h	945		
Pressure increase p_{fs}	Pa	672		
Speed n	min^{-1}	3355		

Data definition with optimum efficiency. LU-68961
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	6 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Material of mounting plate	Aluminium sheet
Material of distancing profiles	Aluminium
Material of inlet nozzle	Aluminium sheet
Material of guard grille	Steel, galvanised and plastic-coated in white aluminium (RAL 9006)
Number of blades	11
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Rotor on top
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and fault indication via LED - Integrated PID controller - LON / RS485 with DCI function - Motor current limit - PFC, active - Soft start - Control interface with SELV potential safely isolated from the mains - Electronics / motor excess temperature protection - 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 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; CSA C22.2 Nr.77; UL 2111

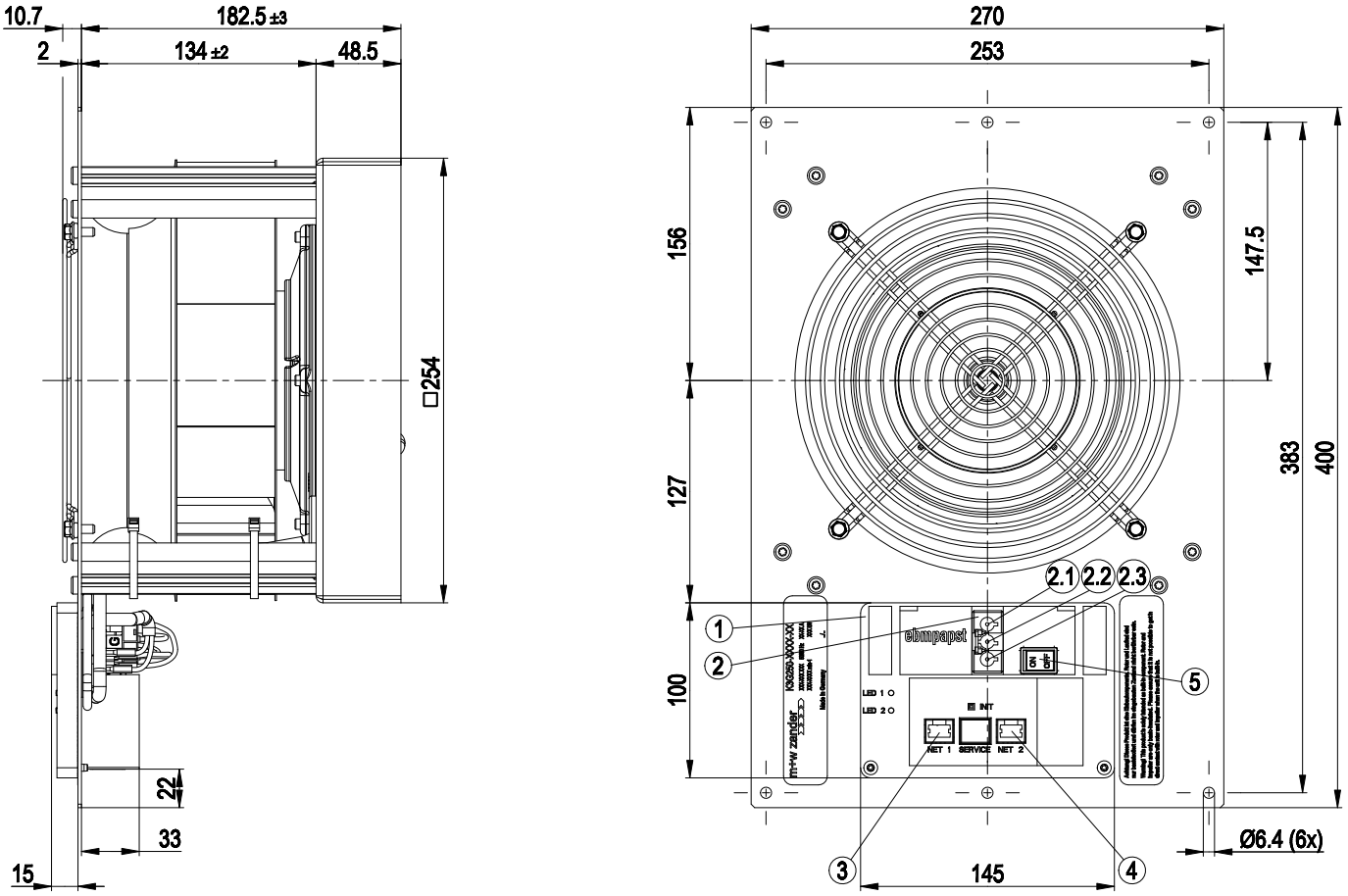
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Product drawing



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	Connector housing 8-pole Tyco 100616-2
4	Connector housing 8-pole Tyco 100616-2
5	Switch, ARCOLECTRIC SWITCHES P L C (no. H8550VBACF) As-delivered condition end customer switch set to "OFF"

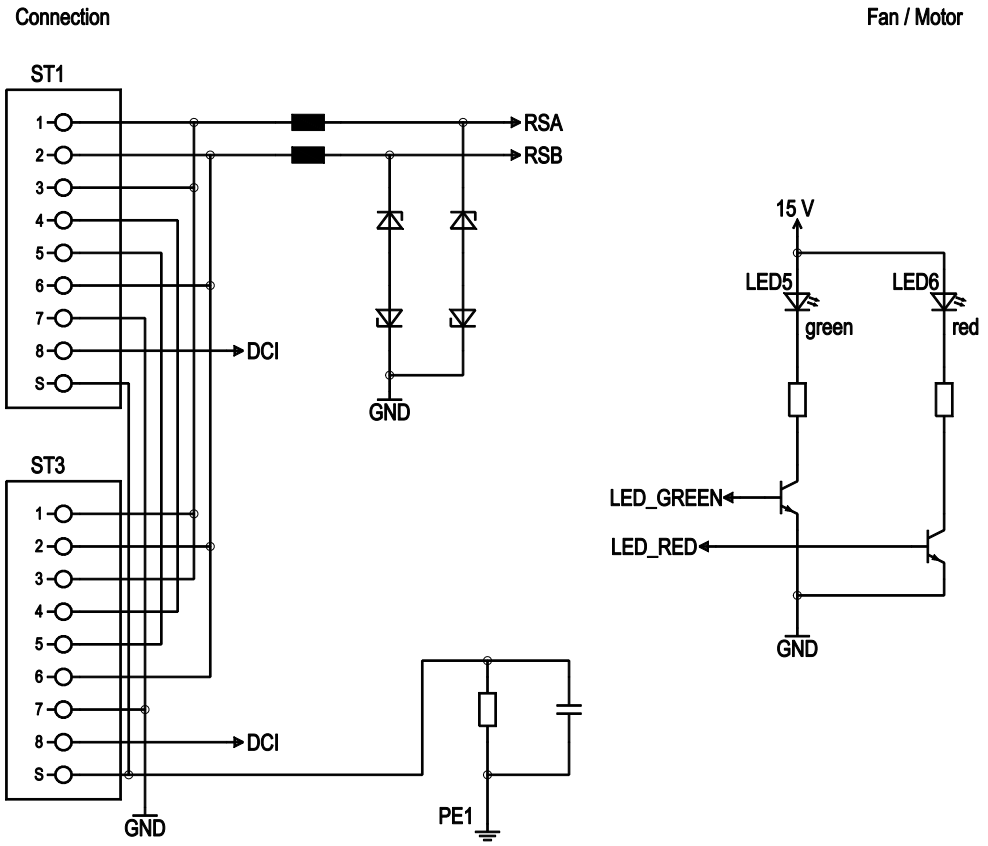
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Connection screen



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"
Factory default setting	3	S/N = 1/1	n > 0	Permanent "ON"	"OFF"
After initialisation	3	S/N <> 1/1	n > 0	"OFF"	Permanent "ON"
Fan to speed 0	3	S/N <> 1/1	n = 0	"OFF"	"Flashing 1 Hz"
Factory default setting	3	S/N = 1/1	n = 0	Permanent "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 earth
ST1/ST3	8	DCI	Daisy chain signal
ST1/ST3	S	Schirm	Shield for RJ45 CAT5 wire

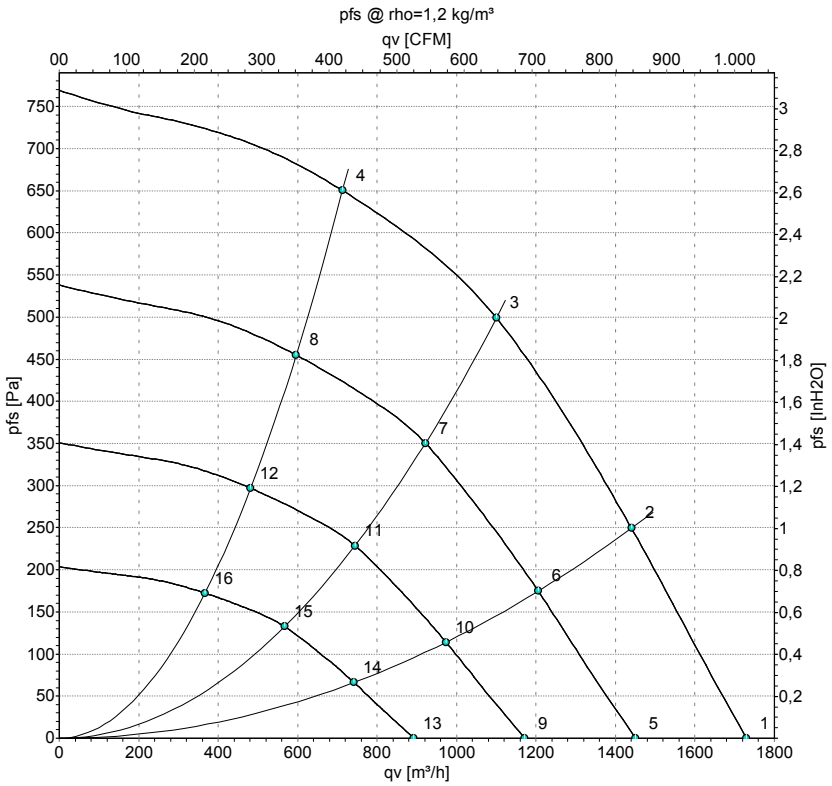
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Charts: Air flow 50 Hz



Measurement: LU-125277

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

	U	f	n	P_{ed}	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	3100	299	1.31	1730	0
2	230	50	3100	344	1.50	1440	250
3	230	50	3100	370	1.80	1100	500
4	230	50	3100	343	1.50	715	650
5	230	50	2600	176	0.77	1450	0
6	230	50	2600	201	0.88	1205	175
7	230	50	2600	214	0.94	920	352
8	230	50	2600	201	0.88	595	455
9	230	50	2100	93	0.41	1170	0
10	230	50	2100	106	0.46	975	114
11	230	50	2100	113	0.49	745	230
12	230	50	2100	106	0.46	480	297
13	230	50	1600	41	0.18	895	0
14	230	50	1600	47	0.20	740	66
15	230	50	1600	50	0.22	565	133
16	230	50	1600	47	0.20	365	172

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

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