R3G250-AK20-01

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R3G250-AK20-01**
Motor	**M3G084-DF**

Nominal voltage	VDC	400
Method of obtaining data		fa
External electronics		CHW050AA0170
Speed (rpm)	min^{-1}	3400
Power consumption	W	315
Current draw	A	1.4 (230V)
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 Commission Regulation (EU) 327/2011

		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

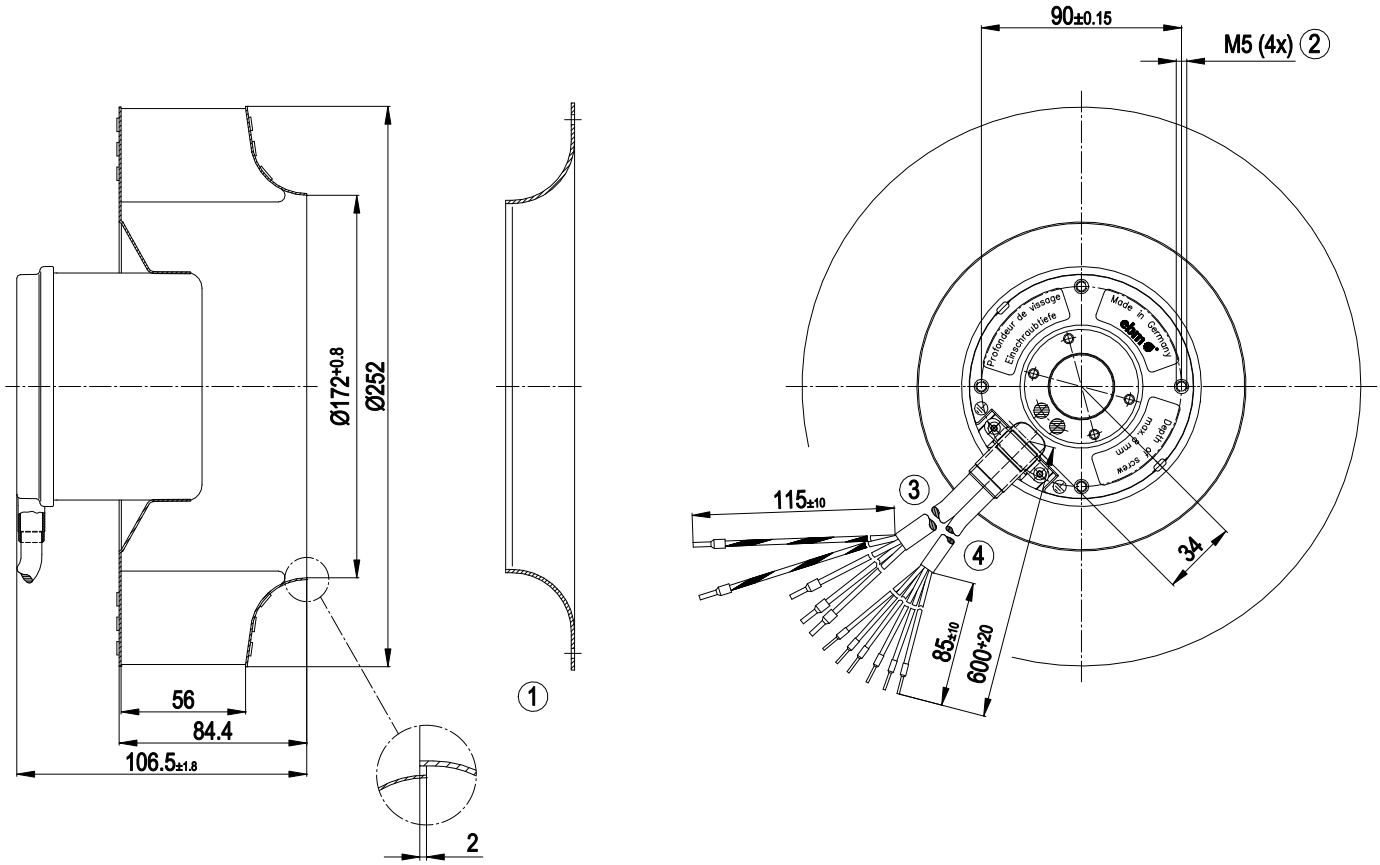
Weight	3.5 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Impeller material	Sheet steel, galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	- mA
Motor protection	Electronic motor protection
With cable	Lateral
Protection class	I (with customer connection of protective earth)
Approval	CSA C22.2 No. 100; UL 1004-1

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Product drawing



Type only to be connected with external electronics

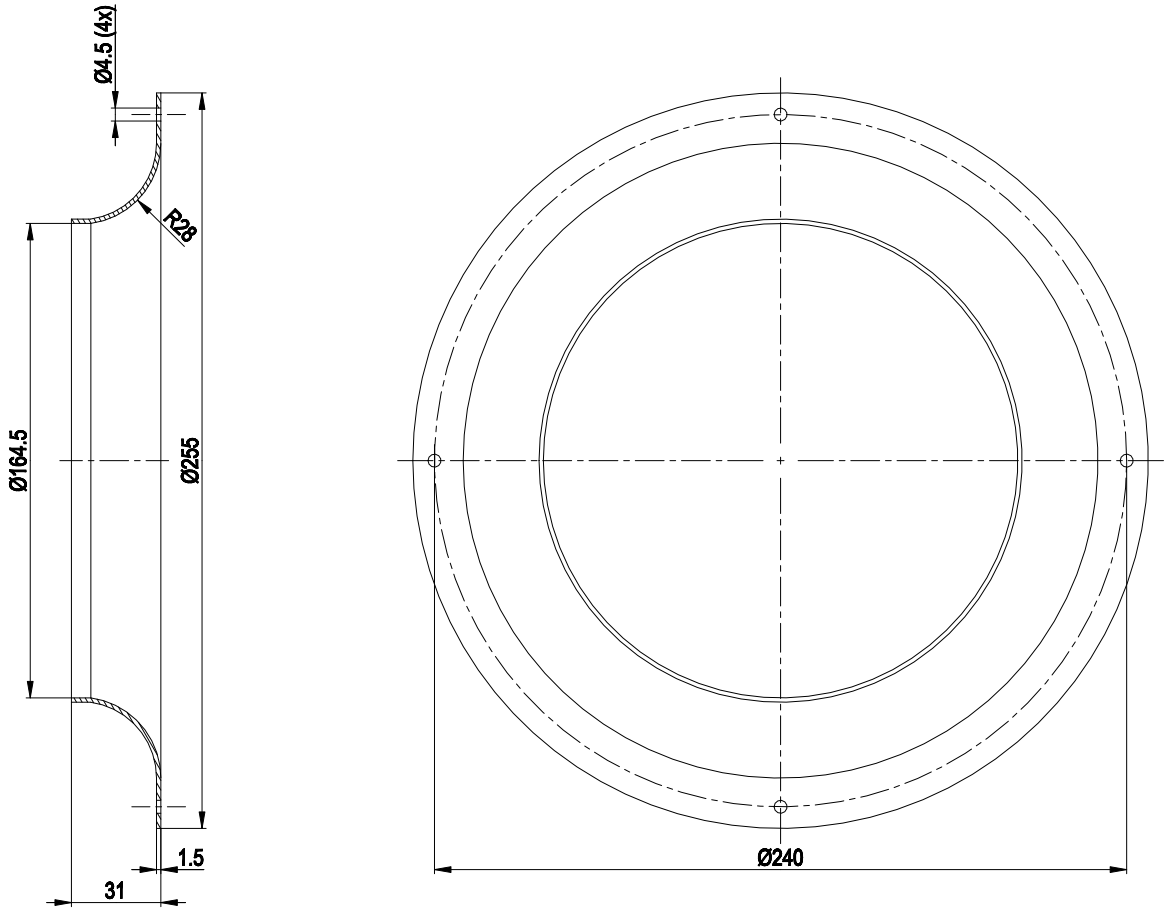
1	Accessory part: inlet ring 96359-2-4013 not included in scope of delivery
2	Max. clearance for screw 8 mm
3	Cable PVC AWG18
	5x wire-end ferrule
4	Cable PVC AWG20
	6x wire-end ferrule
5	Accessory part: External electronics CHW050-AA01-70, not included in scope of delivery

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Accessory part



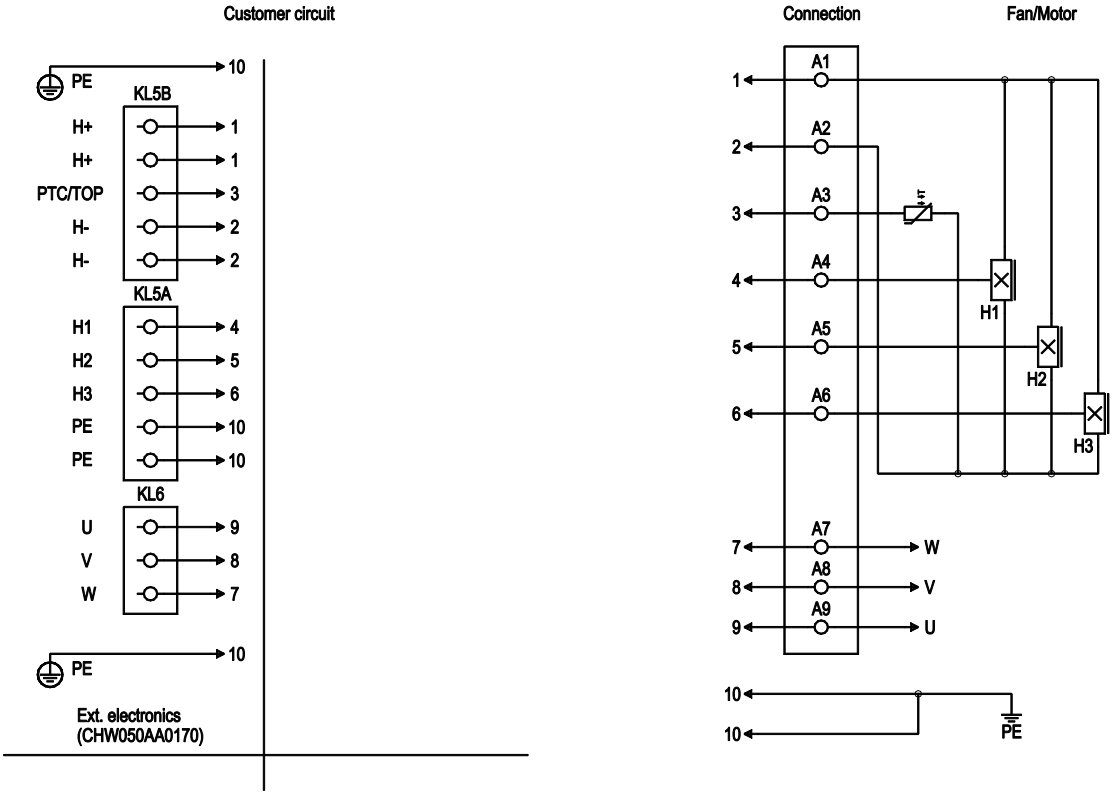
Accessory part: inlet ring 96359-2-4013 not included in scope of delivery

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Connection diagram



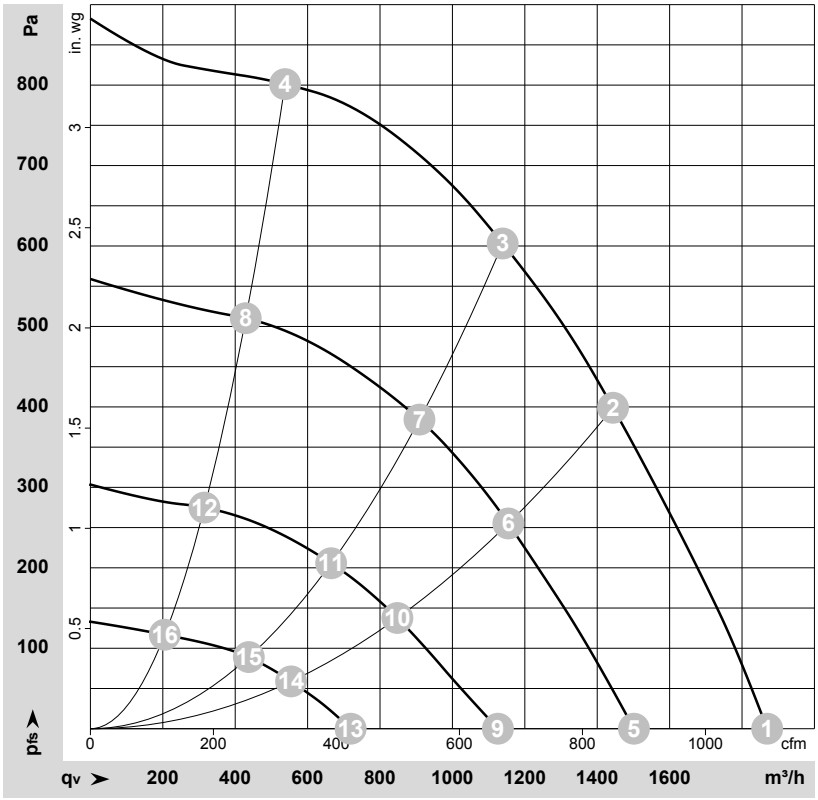
No.	Conn.	Designation	Function/assignment
KL5A	4	A4	Hall 1 (orange) open collector, pull-up resistor to UB 4.5-24 V
KL5A	5	A5	Hall 2 (brown) open collector, pull-up resistor to UB 4.5-24 V
KL5A	6	A6	Hall 3 (yellow) open collector, pull-up resistor to UB 4.5-24 V
KL5B	1	A1	+ (red)
KL5B	2	A2	- (blue)
KL5B	3	A3	PTC (black)
KL6	7	A7	W (brown)
KL6	8	A8	V (blue)
KL6	9	A9	U (black)
-	10	-	PE (green/yellow) - 2x

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-199761-1
Measurement: LU-34305-1
Measurement: LU-34306-1
Measurement: LU-34307-1

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	3400	315	1.40	1870	0	1100	0.00
2	230	50	3400	414	1.81	1445	400	850	1.61
3	230	50	3400	430	1.88	1140	600	670	2.41
4	230	50	3400	345	1.50	540	800	315	3.21
5	230	50	2730	165	0.73	1500	0	885	0.00
6	230	50	2720	216	0.95	1155	255	680	1.02
7	230	50	2720	229	1.00	910	388	535	1.56
8	230	50	2720	175	0.77	430	511	250	2.05
9	230	50	1995	76	0.34	1125	0	665	0.00
10	230	50	1990	95	0.42	850	138	500	0.55
11	230	50	1995	99	0.44	665	207	390	0.83
12	230	50	1995	79	0.35	315	276	185	1.11
13	230	50	1330	33	0.16	720	0	425	0.00
14	230	50	1330	39	0.18	555	59	325	0.24
15	230	50	1330	42	0.20	440	89	260	0.36
16	230	50	1330	35	0.17	205	117	120	0.47

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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