R3G250-AK33-92

EC centrifugal fan

backward curved, single inlet

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G250-AK33-92**	
Motor	**M3G084-DF**	
Nominal voltage	VDC	110
Nominal voltage range	VDC	77 .. 145
Type of data definition		ml
Speed	min^{-1}	2700
Power input	W	250
Current draw	A	2.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

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 integrated	No
Specific ratio*	1,00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}		47,6	41	45
Efficiency grade N		64,6	58	62
Power input P_e	kW	0,24		
Air flow q_v	m³/h	900		
Pressure increase p_{fs}	Pa	417		
Speed n	min^{-1}	2715		

Data established at point of optimum efficiency

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Technical features

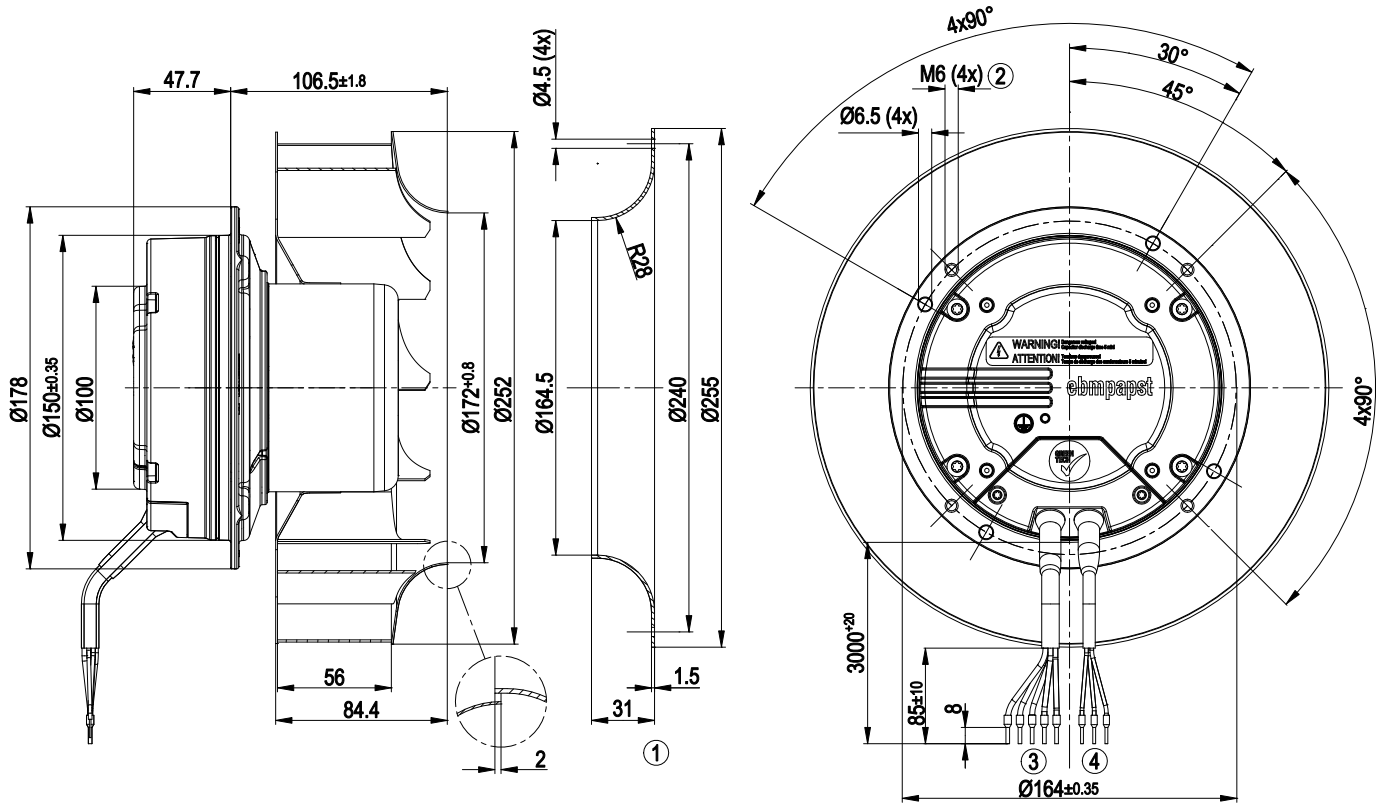
Mass	4.8 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, hot-galvanised
Number of blades	11
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
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

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Product drawing



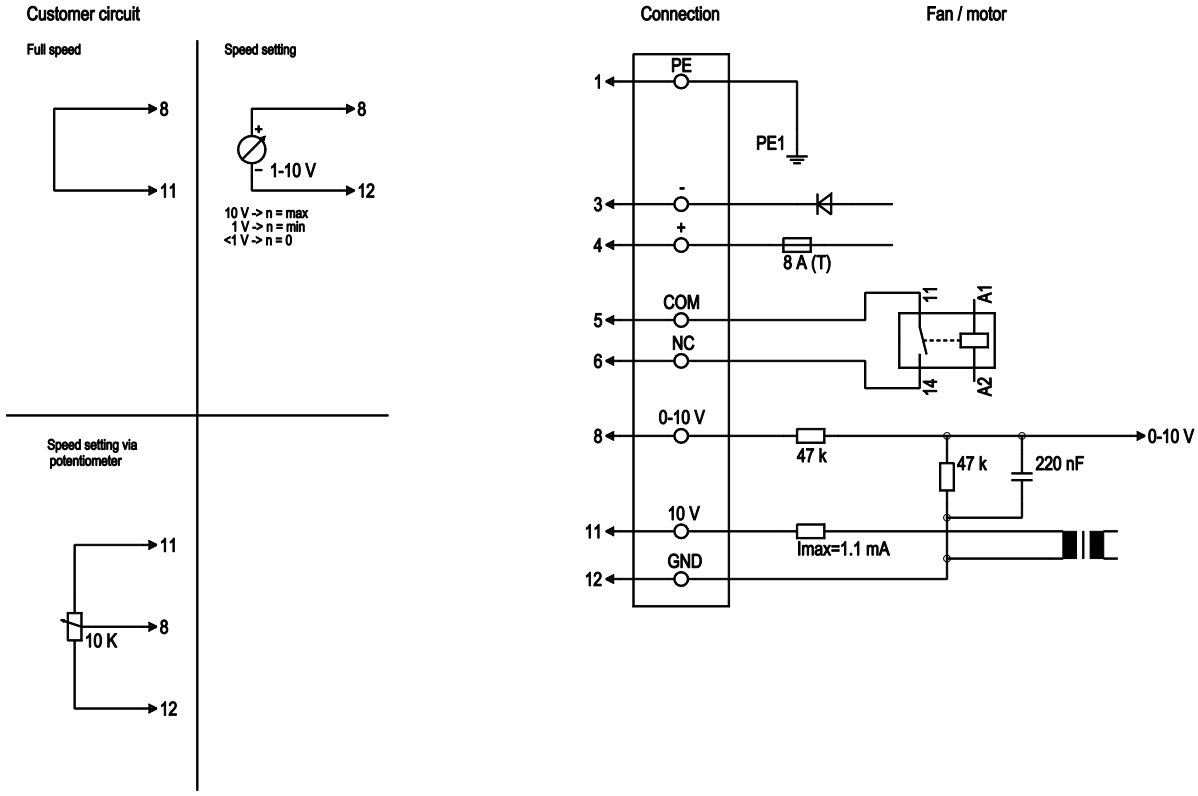
1	Accessory part: inlet nozzle 96359-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
2	Depth of screw 8-10 mm
3	Connection line halogen-free, XLPE / XLPO 5G 1.0 mm², 5x crimped core-end sleeves
4	Connection line halogen-free, XLPE / XLPO 3x 0.33 mm², 3x crimped core-end sleeves

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Connection screen



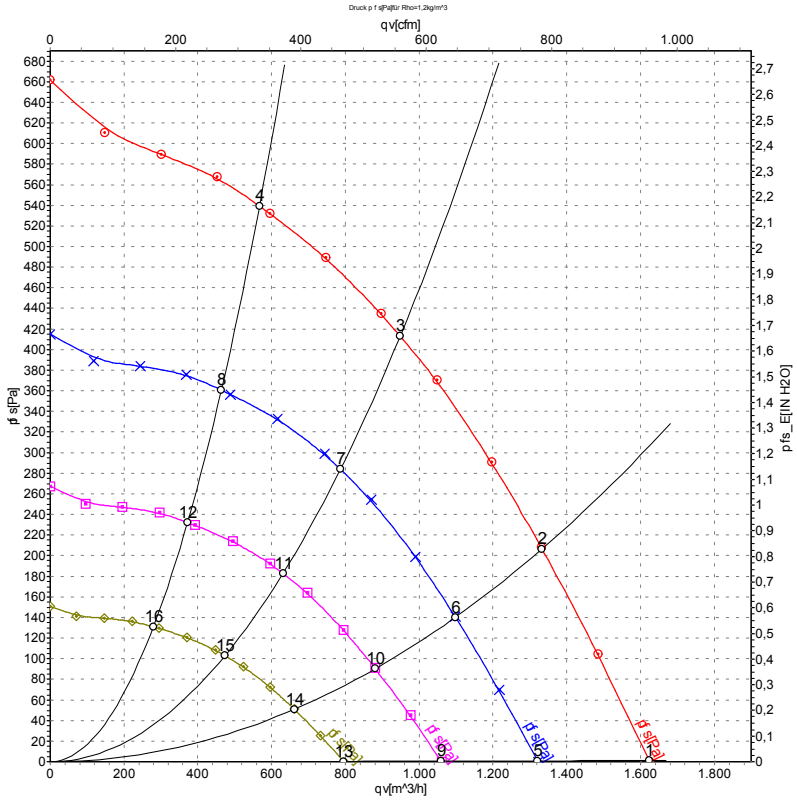
Line	No.	Signal	Colour	Function / assignment
1	1	PE	green/yellow	Protective earth
1	3	-	blue	Supply voltage, GND (110 VDC)
1	4	+	red	Supply voltage, 110 VDC
1	5	COM	white 1	Alarm relay, COMMON (0.6 A-110 VDC, 1 A-80 VDC, 3 A-30 VDC)
1	6	NC	white 2	Alarm relay, normally closed, break for failure
2	8	0-10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kΩ, SELV
2	11	10 VDC	red	Voltage output 10 VDC (+/-3%), max. 1.1 mA, supply voltage for external devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

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Charts: Air flow



Measurement: LU-105348

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	n	P_{ed}	I	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	110	2765	191	1.72	73	80	1625	0
2	110	2730	228	2.07	71	78	1335	210
3	110	2700	250	2.20	70	78	950	415
4	110	2750	216	1.96	72	79	565	540
5	110	2250	103	0.93	69	76	1320	0
6	110	2250	128	1.16	67	74	1100	141
7	110	2250	140	1.27	66	74	785	284
8	110	2250	118	1.07	68	75	465	361
9	110	1805	53	0.48	64	71	1060	0
10	110	1805	66	0.60	62	69	880	91
11	110	1805	72	0.66	61	69	630	183
12	110	1805	61	0.55	63	71	370	232
13	110	1355	22	0.20	58	65	795	0
14	110	1355	28	0.25	56	63	660	51
15	110	1355	31	0.28	55	63	475	103
16	110	1355	26	0.23	57	65	280	131

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