R3G250-AK41-77

EC centrifugal fan

backward-curved, single-intake

for rail applications

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Nominal data

Type	**R3G250-AK41-77**
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}	3390
Power consumption	W	490
Current draw	A	3.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

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Technical description

Weight	4.6 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP20
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F2-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - Run monitoring - Motor current limitation - 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 detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
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

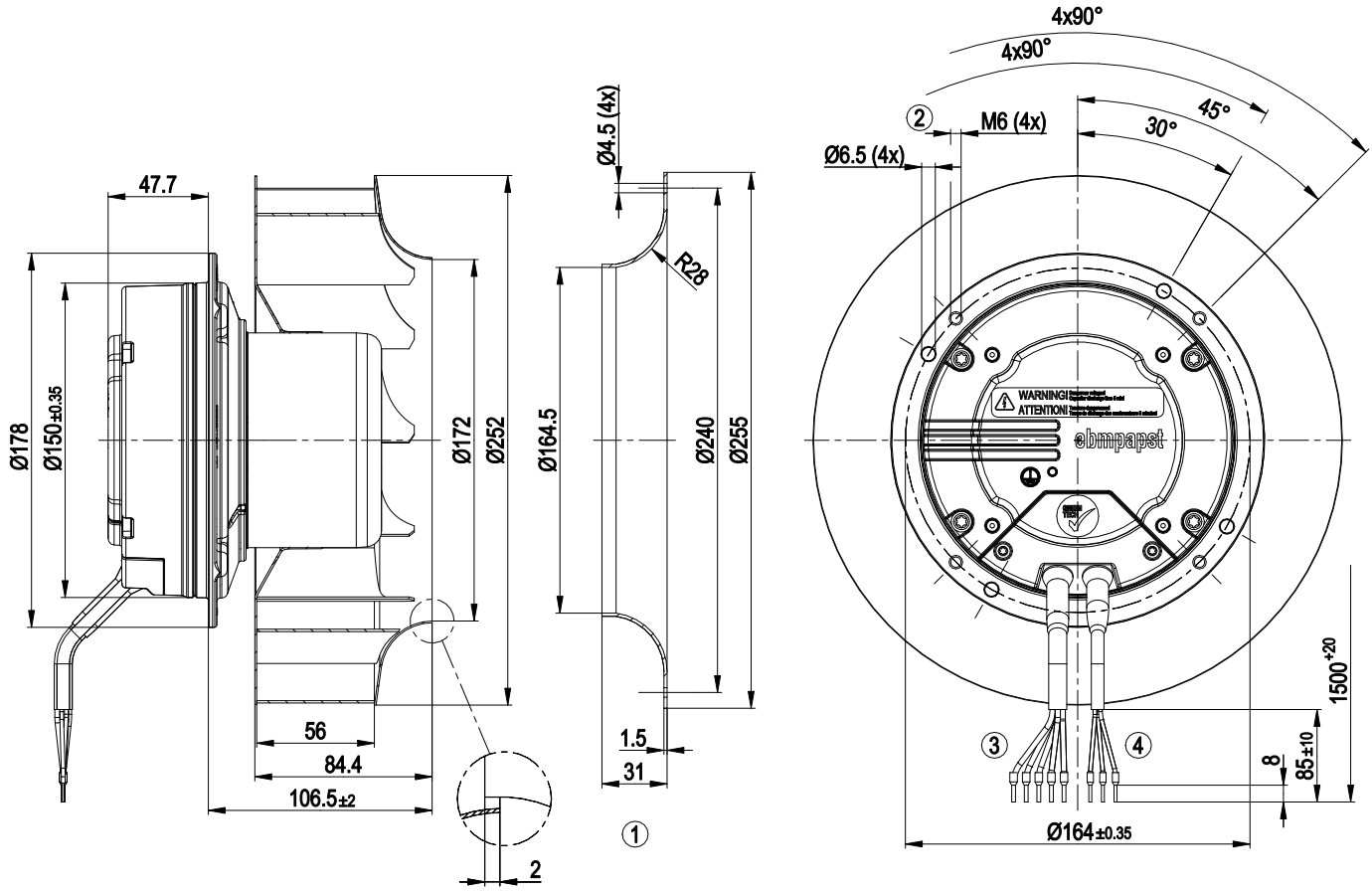
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Product drawing



1	Accessory part: inlet ring 96359-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Cable halogen-free XLPE/XLPO 5G 1.0 mm², 5x crimped ferrules
4	Cable halogen-free XLPE/XLPO 3x 0.33 mm², 3x crimped ferrules

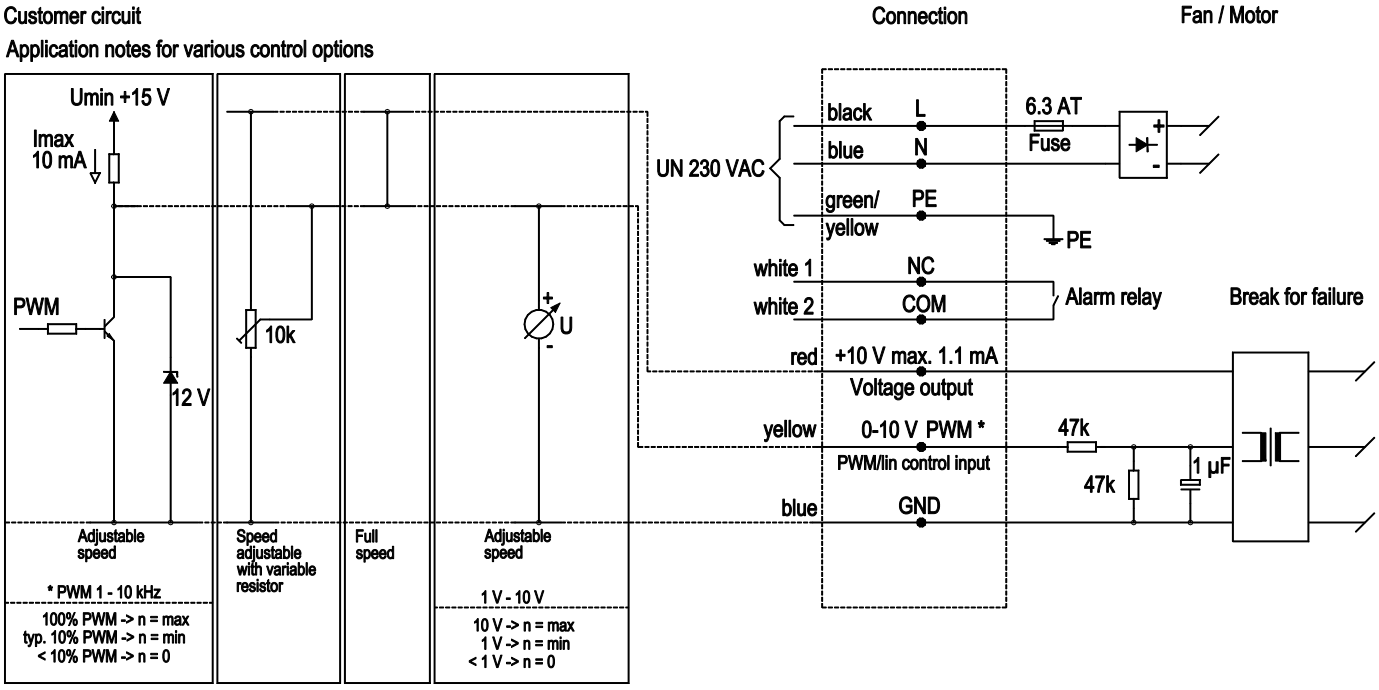
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Connection diagram



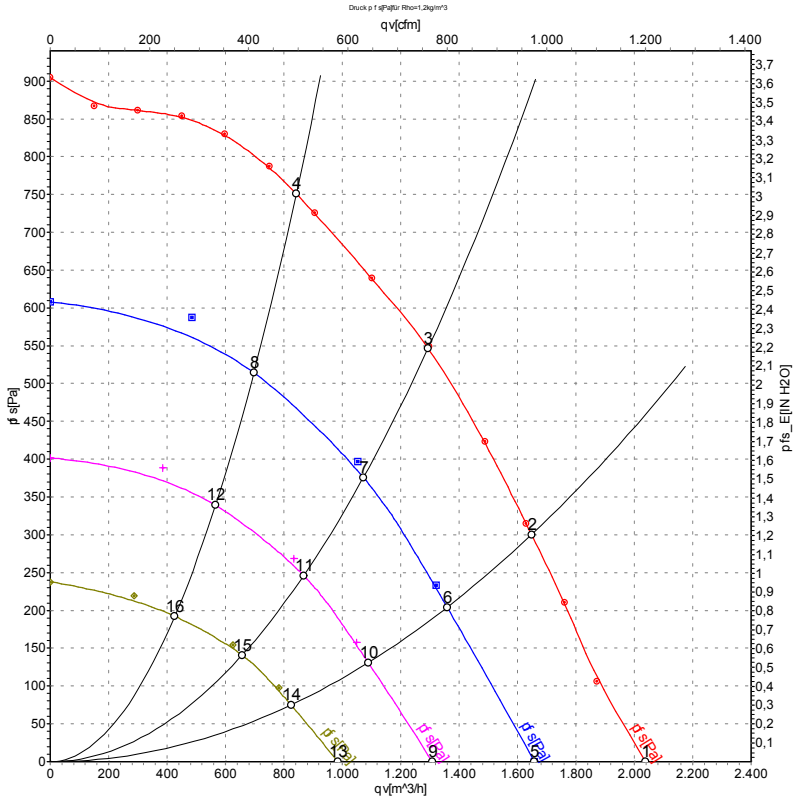
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Curves: Air performance 50 Hz



Measurement: LU-111414-1
Measurement: LU-111481-1
Measurement: LU-111482-1
Measurement: LU-111483-1

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	3390	324	2.11	77	84	2040	0	1200	0.00
2	230	50	3390	412	2.66	75	82	1650	300	970	1.20
3	230	50	3390	490	3.10	74	81	1295	550	760	2.21
4	230	50	3390	430	2.78	76	83	840	750	495	3.01
5	230	50	2800	180	1.20	74	81	1660	0	975	0.00
6	230	50	2800	230	1.52	70	78	1360	207	800	0.83
7	230	50	2800	264	1.71	68	76	1070	386	630	1.55
8	230	50	2800	225	1.48	70	78	695	516	410	2.07
9	230	50	2250	100	0.71	70	77	1310	0	770	0.00
10	230	50	2250	129	0.89	66	73	1090	134	640	0.54
11	230	50	2250	137	0.94	62	69	870	251	510	1.01
12	230	50	2250	124	0.86	63	71	565	340	335	1.36
13	230	50	1700	48	0.37	65	72	985	0	580	0.00
14	230	50	1700	55	0.42	60	67	825	77	485	0.31
15	230	50	1700	63	0.47	55	63	655	143	385	0.57
16	230	50	1700	56	0.42	56	64	425	193	250	0.77

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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