R3G250-AK41-75

EC centrifugal fan

backward-curved, single-intake

R3G250-AK41-75 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G250-AK41-75**
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}	3500
Power consumption	W	500
Current draw	A	3.15
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}	%	48.2	48.2
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	0.48
09 Air flow q_v	m^3/h	1235
09 Pressure increase p_{fs}	Pa	600
10 Speed (rpm) n	min^{-1}	3390
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-76634

ebmpapst

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Technical description

Weight	4.5 kg
Fan size	250 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, hot-dip galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Alarm relay - 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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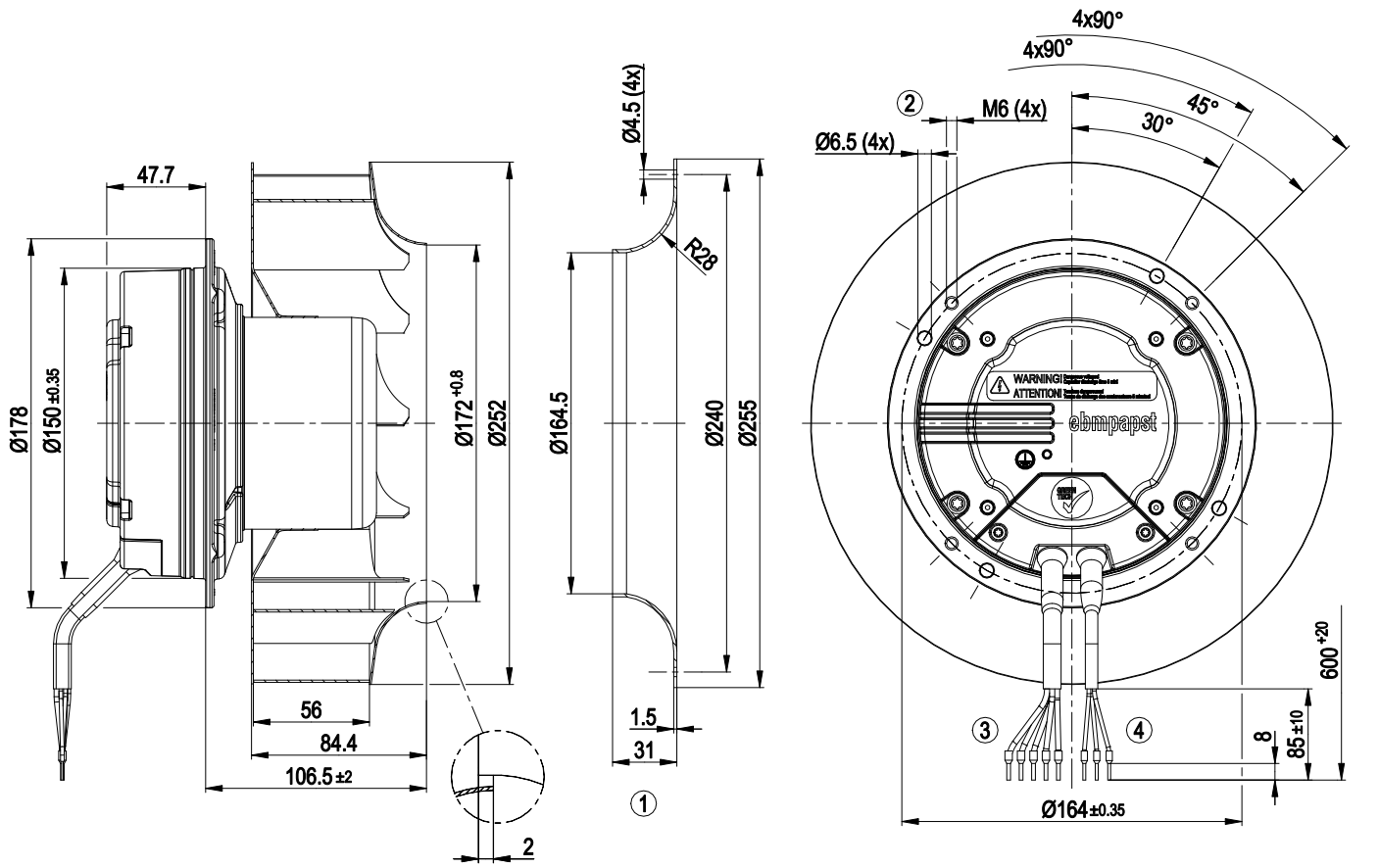
Product drawing



1	Accessory part: inlet ring 96359-2-4013 not included in scope of delivery
2	Max. clearance for screw 10 mm
3	Cable PVC AWG18, 5x crimped ferrules
4	Cable PVC AWG22, 3x crimped ferrules

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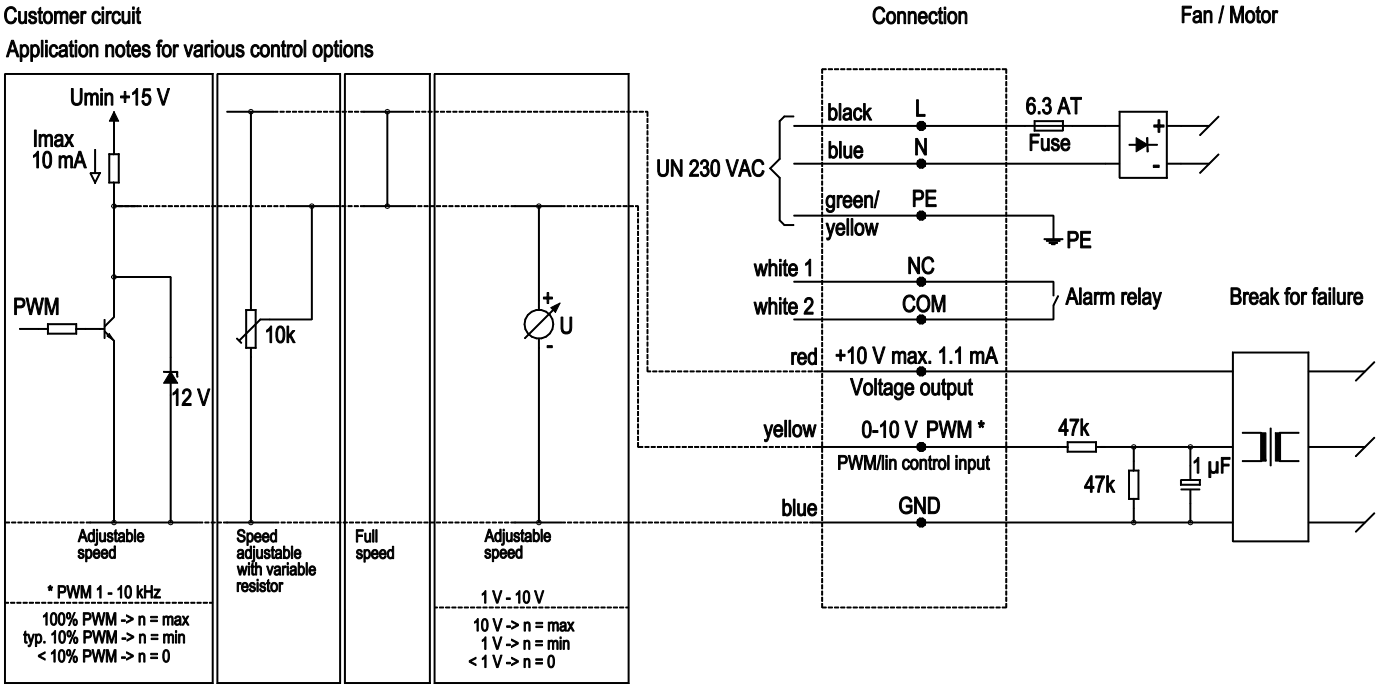
Connection diagram



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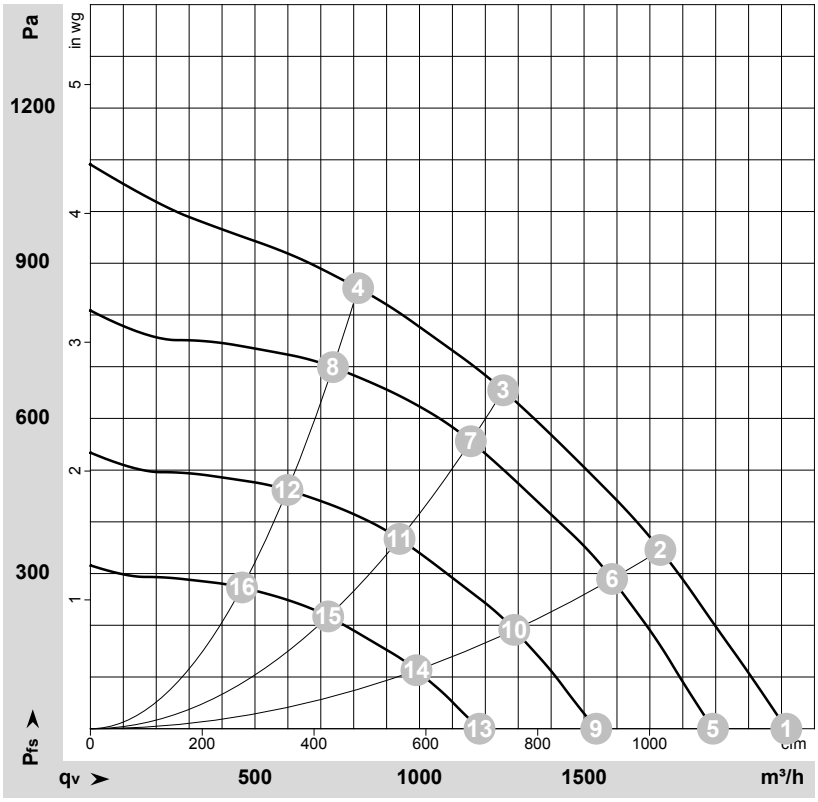
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-76389-1

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	3575	411	2.59	2115	0	1245	0.00
2	230	50	3495	476	3.01	1730	350	1020	1.41
3	230	50	3500	500	3.15	1255	650	740	2.61
4	230	50	3530	463	2.93	815	850	480	3.41
5	230	50	3200	294	1.85	1890	0	1115	0.00
6	230	50	3200	365	2.31	1585	290	935	1.16
7	230	50	3200	398	2.52	1155	556	680	2.23
8	230	50	3200	344	2.18	735	699	435	2.81
9	230	50	2600	158	0.99	1535	0	905	0.00
10	230	50	2600	196	1.24	1290	191	760	0.77
11	230	50	2600	213	1.35	940	367	555	1.47
12	230	50	2600	185	1.17	600	462	355	1.85
13	230	50	2000	72	0.45	1180	0	695	0.00
14	230	50	2000	89	0.56	990	113	585	0.45
15	230	50	2000	97	0.62	725	217	425	0.87
16	230	50	2000	84	0.53	460	273	270	1.10

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