EC centrifugal fan - RadiCal

backward-curved, single-intake

R3G355-RP06-A2 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G355-RP06-A2**
Motor	**M3G084-FA**

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}	1635
Power consumption	W	370
Current draw	A	1.65
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}	%	64.3	48.2
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		78.1	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.48
09 Air flow q_v	m^3/h	2805
09 Pressure increase p_{fs}	Pa	360
10 Speed (rpm) n	min^{-1}	1785
11 Specific ratio*		1.00

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-139017

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Technical description

Weight	5.7 kg
Fan size	355 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Number of blades	6
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	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Alarm relay - Motor current limitation - PFC, active - 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 / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
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
Approval	UL 2111; CSA C22.2 No. 77

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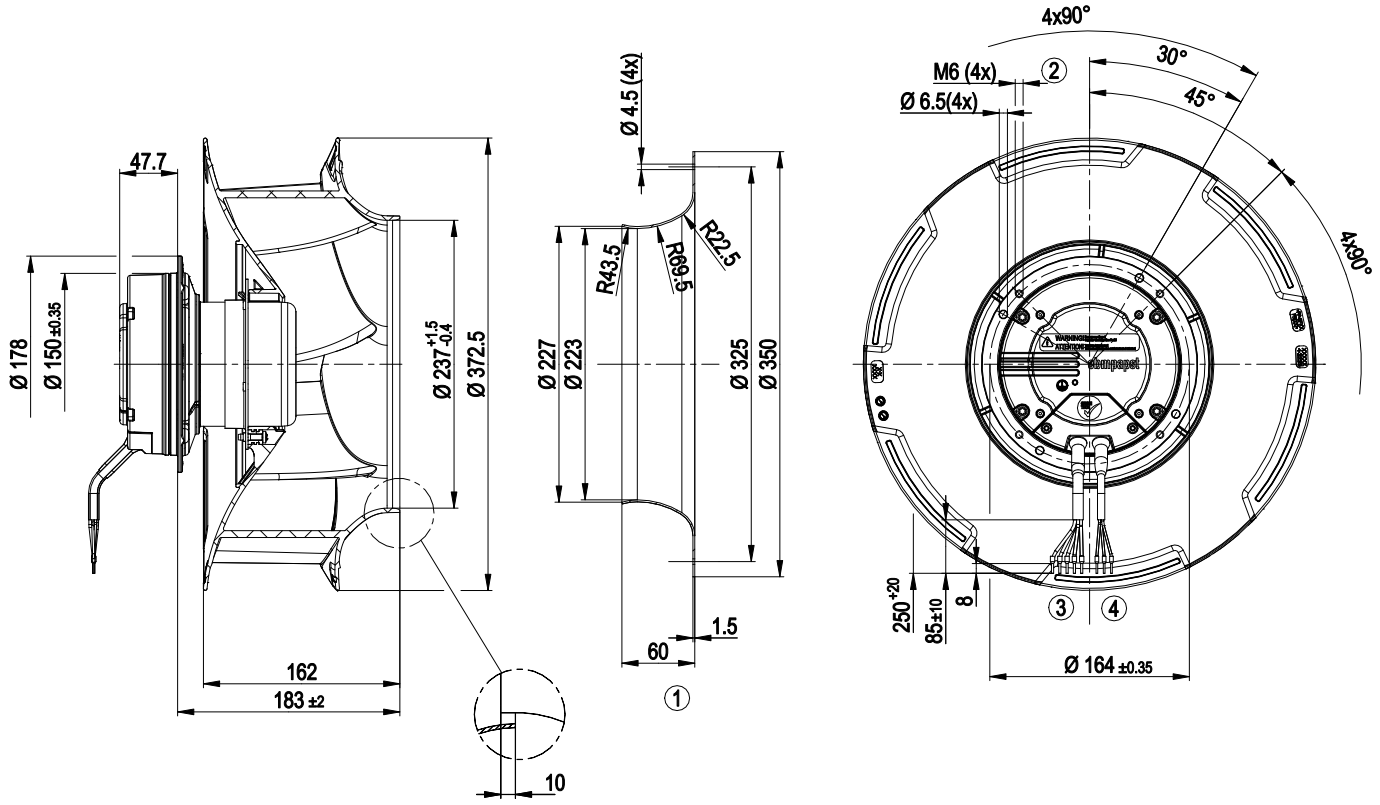
Product drawing



1	Accessory part: Inlet ring 35500-2-4013 not included in scope of delivery.
2	Max. clearance for screw 10 mm
3	Cable PVC AWG18, 5 x crimped ferrules
4	Cable PVC AWG22, 3 x crimped ferrules

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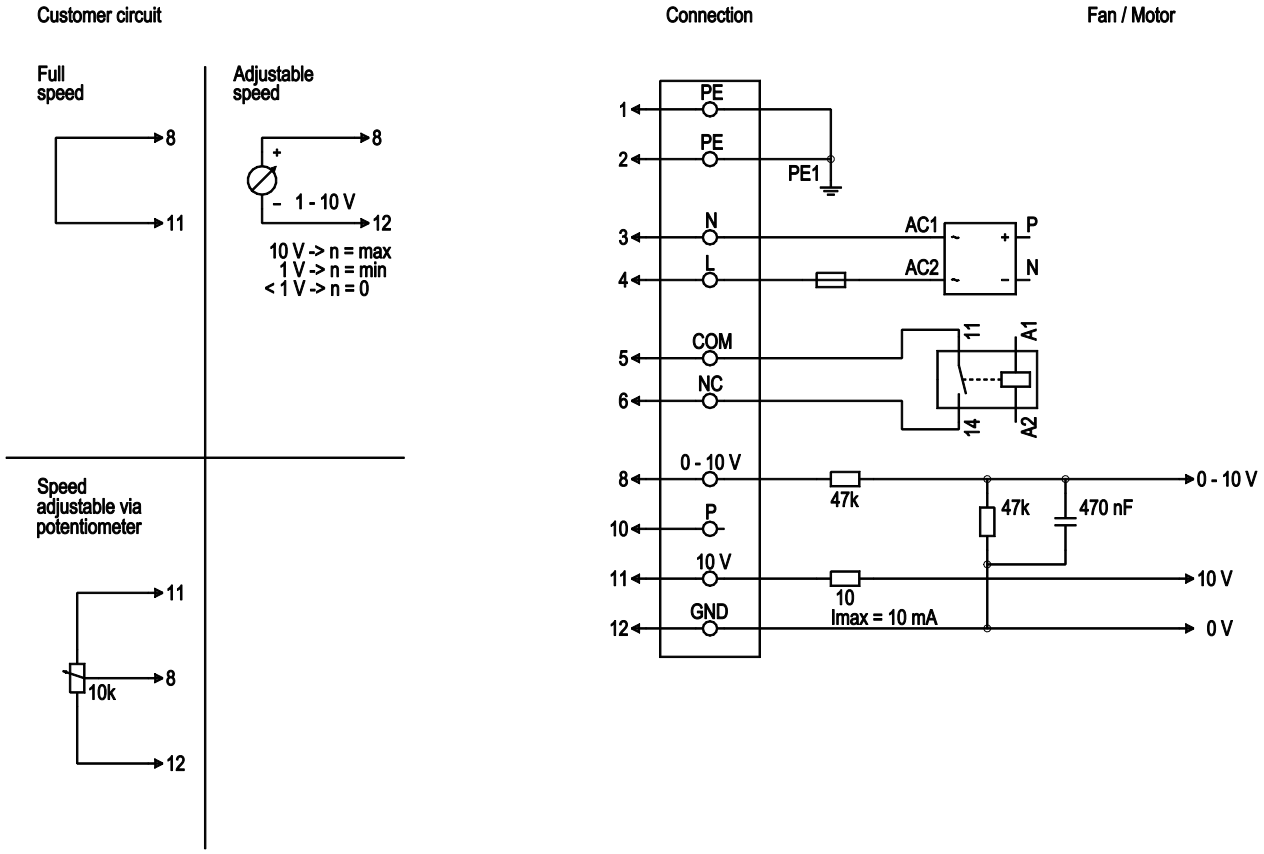
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, see nameplate for voltage range, 50/60 Hz
1	4	L	black	Power supply, phase, see nameplate for voltage range, 50/60 Hz
1	5	COM	white 1	Floating status contact, break for failure (2 A, max. 250 VAC, min. 10 mA)
1	6	NC	white 2	Floating status contact, break for failure
2	8	0 -10 V	yellow	Control input, set value 0-10 VDC, impedance 100 kOhm, SELV
2	10	P	orange	not used
2	11	10 VDC	red	Voltage output 10 VDC (±3%), max. 10 mA, power supply for external devices (e.g. potentiometers), SELV
2	12	GND	blue	Reference ground for control interface, SELV

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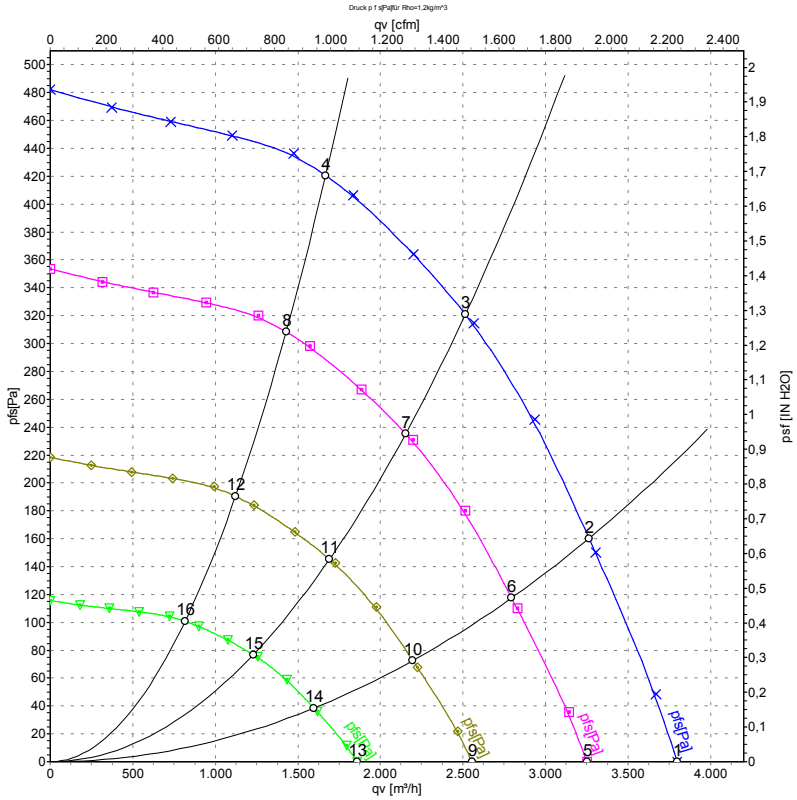
Curves: Air performance 50 Hz



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	1635	250	1.10	3795	0	2235	0.00
2	230	50	1635	315	1.39	3265	160	1920	0.64
3	230	50	1635	370	1.65	2515	320	1480	1.28
4	230	50	1635	350	1.53	1670	420	980	1.69
5	230	50	1400	154	0.69	3250	0	1915	0.00
6	230	50	1400	198	0.87	2795	118	1645	0.47
7	230	50	1400	233	1.02	2155	236	1265	0.95
8	230	50	1400	219	0.96	1430	308	840	1.24
9	230	50	1100	75	0.33	2555	0	1505	0.00
10	230	50	1100	96	0.42	2195	73	1290	0.29
11	230	50	1100	113	0.50	1690	146	995	0.59
12	230	50	1100	106	0.47	1120	190	660	0.76
13	230	50	800	29	0.13	1855	0	1095	0.00
14	230	50	800	37	0.16	1595	38	940	0.15
15	230	50	800	44	0.19	1230	77	725	0.31
16	230	50	800	41	0.18	815	101	480	0.41

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