

# EC centrifugal fan

forward curved, single inlet

R3G140-AW17-48 ebmpapst Datasheet

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## Nominal data

<b>Type</b>	<b>R3G140-AW17-48</b>	
<b>Motor</b>	<b>M3G055-CF</b>	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min <sup>-1</sup>	2170
Power input	W	117
Current draw	A	1.1
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit  
Subject to alterations



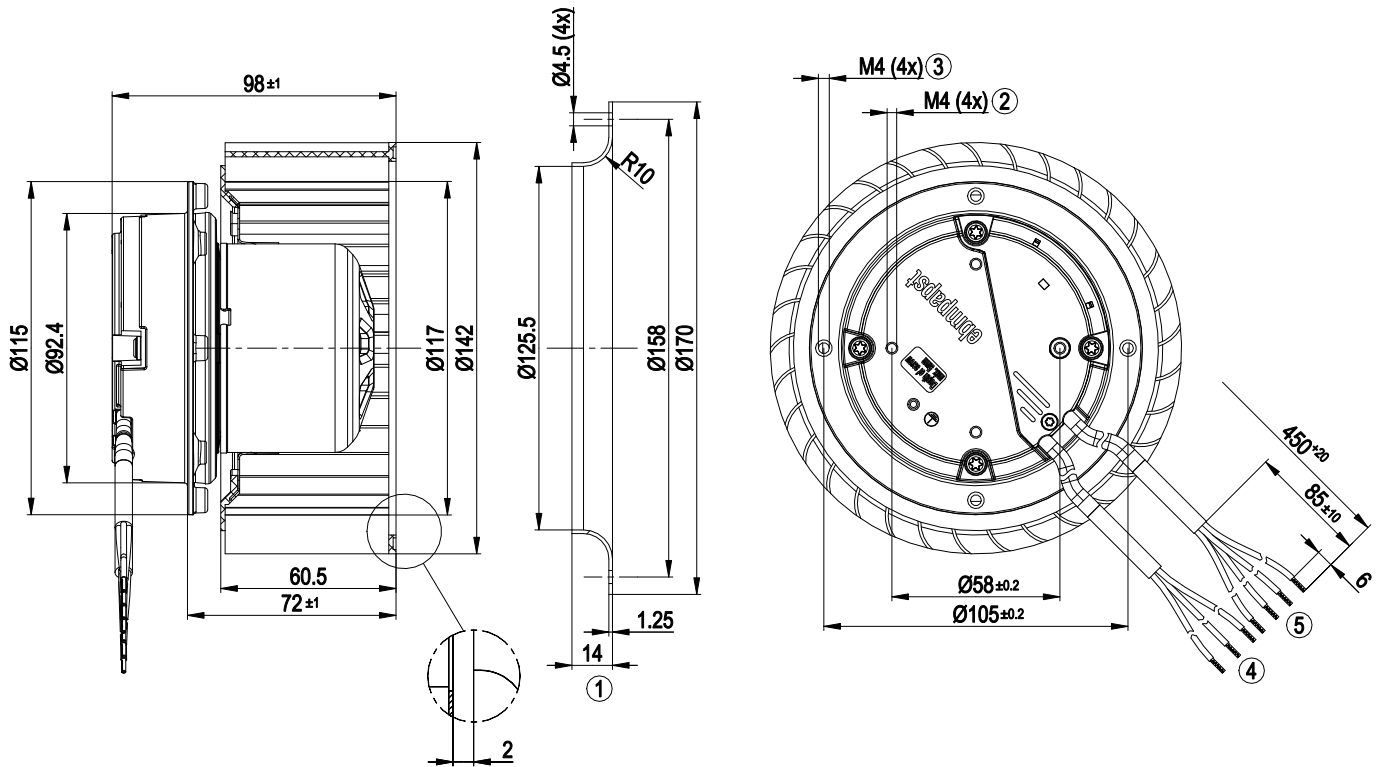
## Technical features

Mass	1.2 kg
Size	140 mm
Surface of rotor	Thick layer passivated
Material of impeller	PA plastic
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Tach output</li> <li>- Output limit</li> <li>- Motor current limit</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Overvoltage detection</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage detection</li> </ul>
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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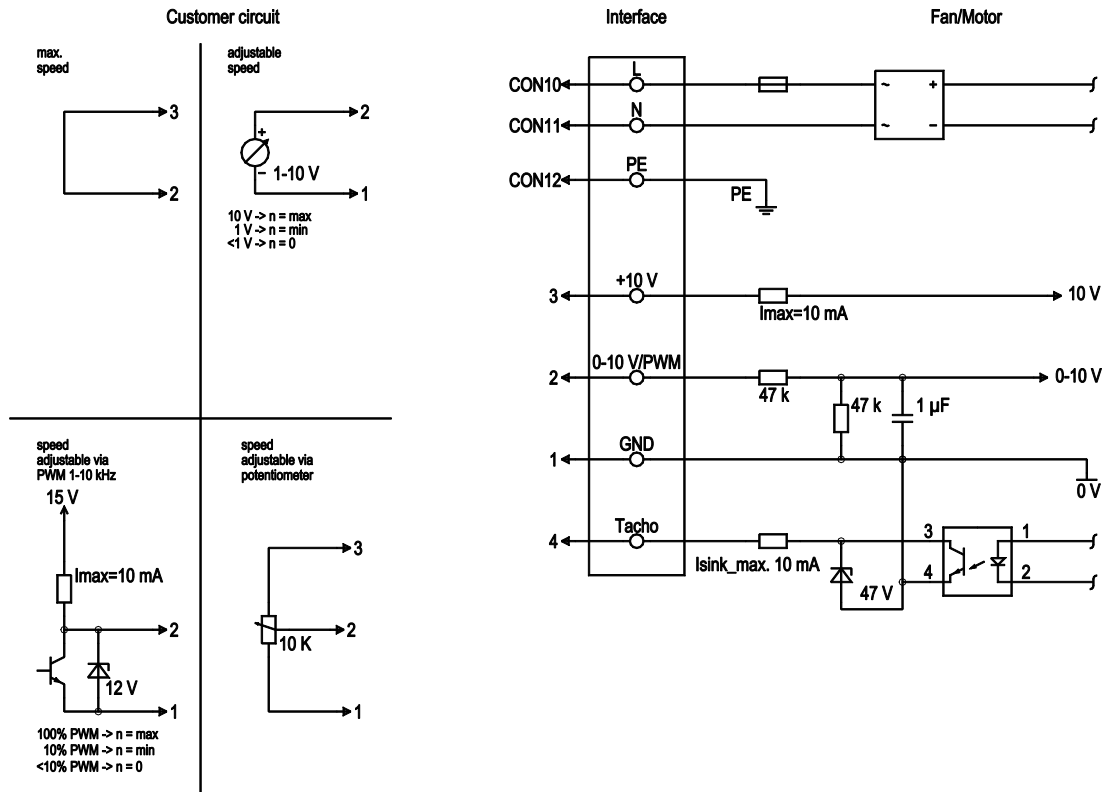
## Product drawing



1	Accessory part: Inlet nozzle: 09576-2-4013 not included in scope of delivery
2	Thread reach max. 6 mm
3	Thread reach max. 6 mm
4	Connection line PVC 3G 0.5 mm <sup>2</sup> , 3x lead tips crimped
5	Connection line PVC 4x 0.25 mm <sup>2</sup> , 4x lead tips crimped

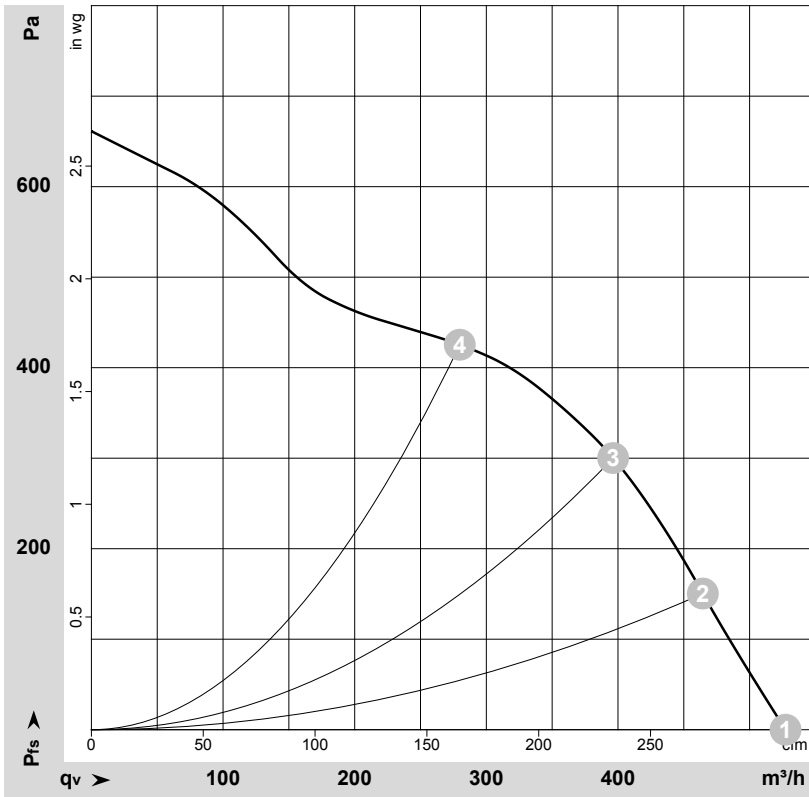


## Connection screen



No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	brown	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10 V/PWM control input, R <sub>i</sub> =100 kΩ, SELV
	4	Tach	white	Speed monitoring output, open collector, 1 pulse per revolution, I <sub>sink max</sub> = 10 mA, SELV
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, I <sub>max.</sub> 10 mA, short-circuit-proof, power supply for ext. devices (e.g. potentiometer), SELV
	1	GND	blue	Signal ground for control interface, SELV

## Charts: Air flow 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-156037-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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	f	n	P <sub>ed</sub>	I	q <sub>v</sub>	p <sub>fs</sub>	q <sub>v</sub>	p <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa	cfm	inH2O
1	230	50	2170	117	1.10	525	0	310	0.00
2	230	50	2355	117	1.10	465	150	275	0.60
3	230	50	2575	111	1.01	395	300	235	1.20
4	230	50	2875	89	0.83	280	425	165	1.71

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power input · I = Current draw · q<sub>v</sub> = Air flow · p<sub>fs</sub> = Pressure increase

