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Limited partnership · Headquarters Mulfingen  
County court Stuttgart · HRA 590344General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen  
County court Stuttgart · HRB 590142**Nominal data**

<b>Type</b>	<b>R3G250-RO40-A1</b>	
<b>Motor</b>	<b>M3G084-DF</b>	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed	min <sup>-1</sup>	3700
Power input	W	490
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	Yes
Specific ratio*	1.01

\* Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

		Actual	Request 2013	Request 2015
Overall efficiency $\eta_{es}$		57.2	44.2	48.2
Efficiency grade N		71	58	62
Power input $P_{ed}$	kW	0.48		
Air flow $q_v$	m <sup>3</sup> /h	1205		
Pressure increase $p_{fs}$	Pa	754		
Speed n	min <sup>-1</sup>	3670		

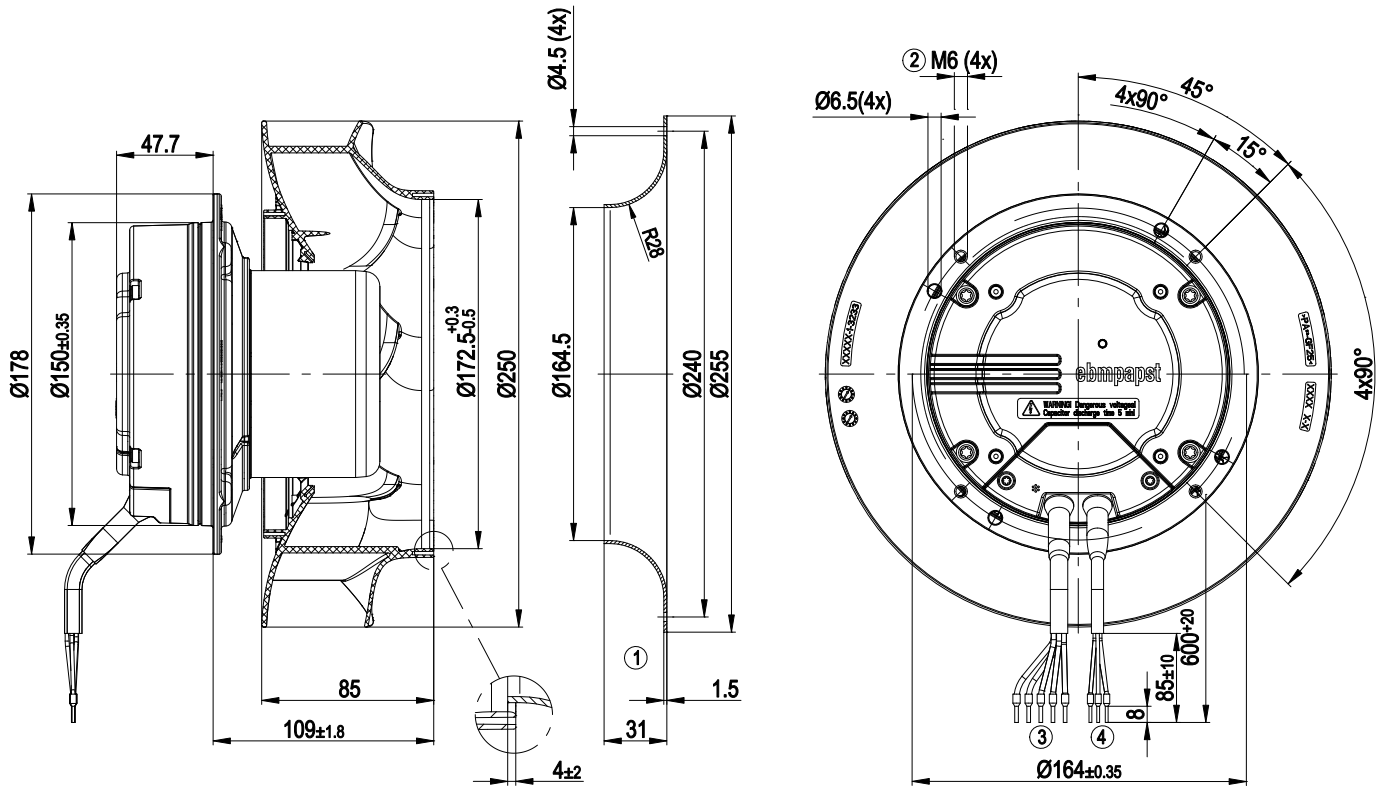
Data established at point of optimum efficiency



## Technical features

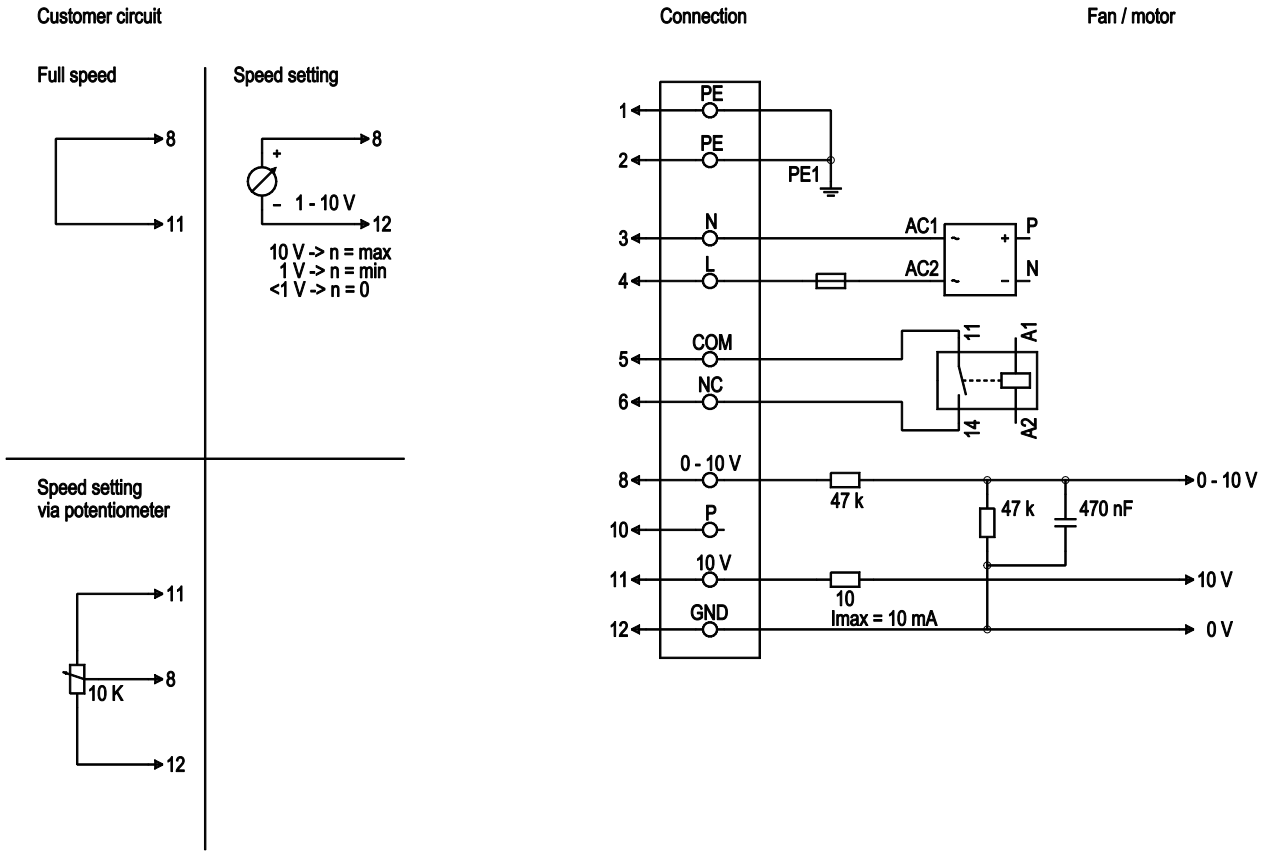
<b>Mass</b>	4.1 kg
<b>Size</b>	250 mm
<b>Surface of rotor</b>	Coated in black
<b>Material of electronics housing</b>	Die-cast aluminium
<b>Material of impeller</b>	PA plastic
<b>Number of blades</b>	7
<b>Direction of rotation</b>	Clockwise, seen on rotor
<b>Type of protection</b>	IP 54
<b>Insulation class</b>	"B"
<b>Humidity class</b>	F3-1
<b>Max. permissible ambient motor temp. (transp./ storage)</b>	+ 80 °C
<b>Min. permissible ambient motor temp. (transp./storage)</b>	- 40 °C
<b>Mounting position</b>	Shaft horizontal or rotor on top; rotor on bottom on request
<b>Condensate discharge holes</b>	None
<b>Operation mode</b>	S1
<b>Motor bearing</b>	Ball bearing
<b>Technical features</b>	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Alarm relay</li> <li>- Motor current limit</li> <li>- PFC, active</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>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>EMC interference immunity</b>	Acc. to EN 61000-6-2 (industrial environment)
<b>EMC harmonics</b>	Acc. to EN 61000-3-2/3
<b>EMC interference emission</b>	Acc. to EN 55022 (Class B)
<b>Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)</b>	<= 3.5 mA
<b>Motor protection</b>	Thermal overload protector (TOP) wired internally
<b>Cable exit</b>	Variable
<b>Protection class</b>	I (if protective earth is connected by customer)
<b>Product conforming to standard</b>	EN 60335-1; CE
<b>Approval</b>	UL 2111; CSA C22.2 Nr.77

Product drawing



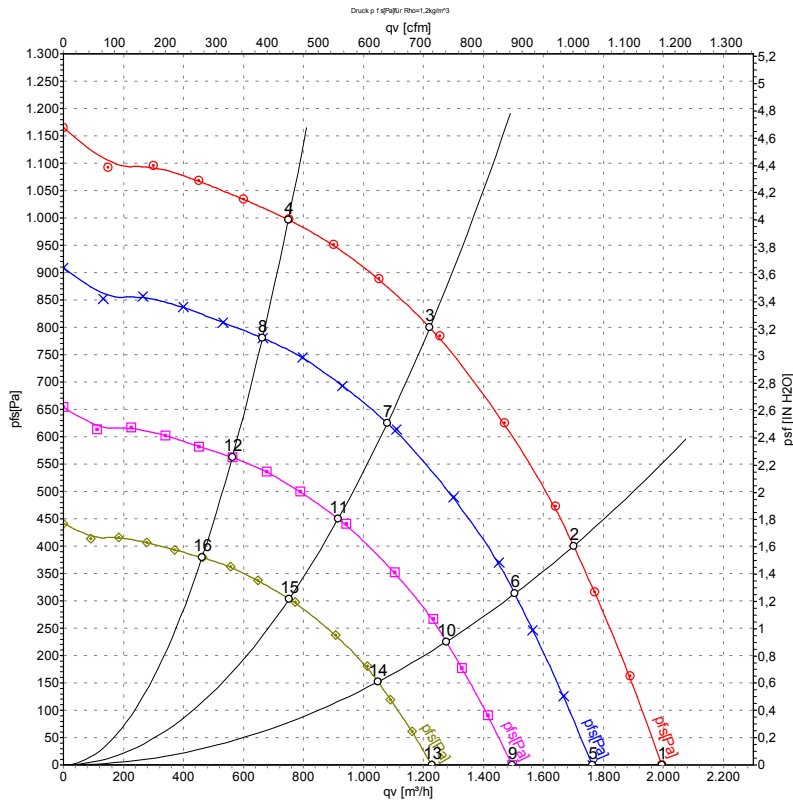
1	Accessory part: Inlet nozzle 96359-2-4013, not included in the standard scope of delivery
2	Depth of screw 8 - 10 mm
3	Connection line PVC AWG 18, 5x crimped core-end sleeves
4	Connection line PVC AWG 22, 3x crimped core-end sleeves

## Connection screen



Line	No.	Signal	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, voltage range see rating plate, 50 / 60 Hz
1	4	L	black	Supply voltage, phase, voltage range see rating plate, 50 / 60 Hz
1	5	COM	white 1	Floating status message contact, normally closed connection (2 A, max. 250 VAC, min. 10 mA)
1	6	NC	white 2	Floating status message contact, normally closed connection
2	8	0 - 10 V	yellow	Control input, set value 0 - 10 VDC, impedance 100 kOhm, SELV
2	10	P	orange	Not assigned
2	11	10 VDC	red	Voltage output 10 VDC (+/-3%), max. 10 mA, supply voltage for ext. devices (e.g. potentiometer), SELV
2	12	GND	blue	Reference mass for control interface, SELV

## Charts: Air flow 50 Hz



Measurement: LU-139148

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	f	n	P <sub>ed</sub>	I	qv	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	m <sup>3</sup> /h	Pa
1	230	50	3700	414	1.82	1995	0
2	230	50	3700	482	2.11	1700	400
3	230	50	3700	490	2.20	1220	800
4	230	50	3700	446	1.95	750	1000
5	230	50	3300	286	1.26	1765	0
6	230	50	3300	333	1.46	1505	313
7	230	50	3300	348	1.52	1080	627
8	230	50	3300	309	1.35	665	782
9	230	50	2800	174	0.77	1495	0
10	230	50	2800	204	0.89	1275	226
11	230	50	2800	213	0.93	915	451
12	230	50	2800	189	0.83	565	563
13	230	50	2300	97	0.43	1230	0
14	230	50	2300	113	0.49	1050	152
15	230	50	2300	118	0.52	750	304
16	230	50	2300	105	0.46	460	380

U = Supply voltage · f = Frequency · n = Speed · P<sub>ed</sub> = Power input · I = Current draw · qv = Air flow · P<sub>fs</sub> = Pressure increase

