

K3G250-RO40-A2

EC centrifugal module - RadiCal

backward-curved, single-intake

with support bracket

ebm-papst Mulfingen GmbH & Co. KG

Bachmühle 2 · D-74673 Mulfingen

Phone +49 7938 81-0

Fax +49 7938 81-110

info1@de.ebmpapst.com

www.ebmpapst.com

Limited partnership · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	K3G250-RO40-A2	
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	3700
Power consumption	W	490
Current draw	A	2.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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

Data according to Commission Regulation (EU) 327/2011 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	58.7	48.3	09 Power consumption P_{ed}	kW	0.49
02 Measurement category		A		09 Air flow q_v	m ³ /h	1205
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	789
04 Efficiency grade N		72.4	62	10 Speed (rpm) n	min ⁻¹	3735
05 Variable speed drive		Yes		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 = $1 + p_{fs} / 100\,000\text{ Pa}$

LU-145183



Technical description

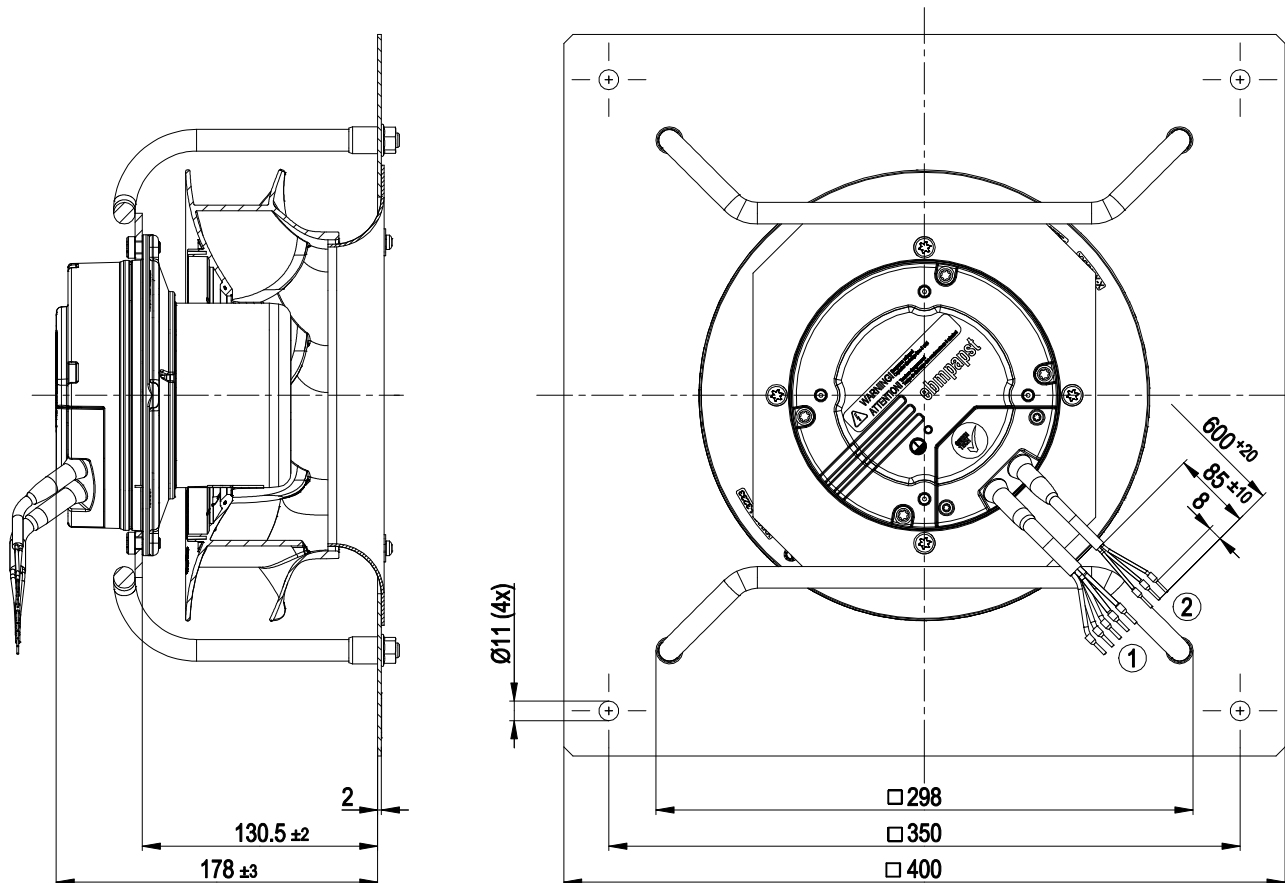
Weight	8 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PA plastic
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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. 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 supply - 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 1004-3 + 60730-1; EAC; CCC; CSA C22.2 No. 77 + CAN/CSA-E60730-1



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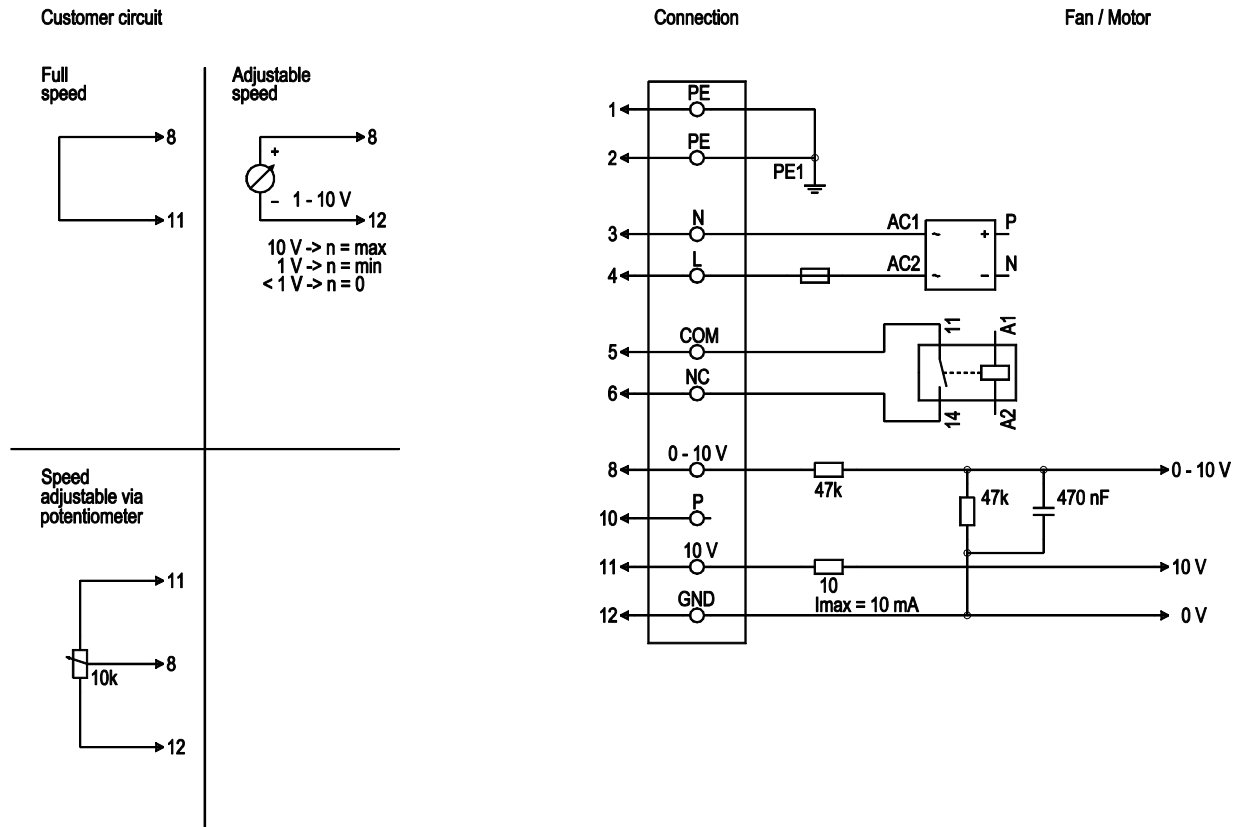
Product drawing



- | | |
|---|--------------------------------------|
| 1 | Cable PVC AWG18, 5x crimped ferrules |
| 2 | Cable PVC AWG22, 3x crimped ferrules |

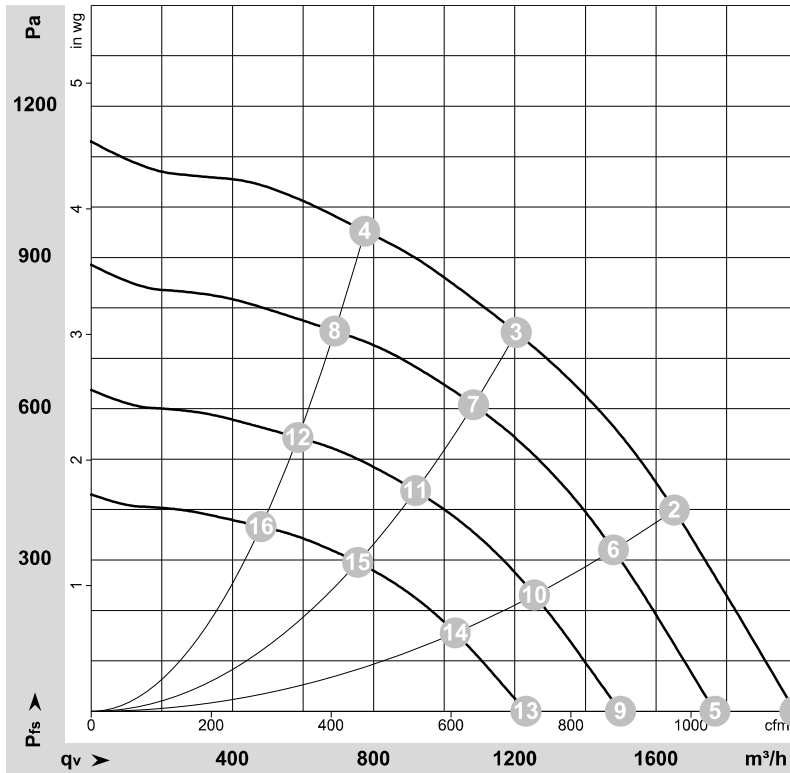


Connection diagram



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

Curves: Air performance 50 Hz



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

Measurement: LU-140418-1

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	q _v	p _{fs}	q _v	p _{fs}
	V	Hz	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	230	50	3700	407	1.79	1995	0	1175	0.00
2	230	50	3700	463	2.03	1650	400	970	1.61
3	230	50	3700	490	2.20	1205	750	710	3.01
4	230	50	3700	459	2.01	775	950	455	3.81
5	230	50	3300	283	1.25	1765	0	1040	0.00
6	230	50	3300	332	1.46	1480	321	870	1.29
7	230	50	3300	355	1.56	1085	609	635	2.44
8	230	50	3300	323	1.42	690	754	405	3.03
9	230	50	2800	173	0.76	1500	0	880	0.00
10	230	50	2800	203	0.89	1255	231	740	0.93
11	230	50	2800	217	0.95	920	439	540	1.76
12	230	50	2800	198	0.86	585	543	345	2.18
13	230	50	2300	96	0.42	1230	0	725	0.00
14	230	50	2300	113	0.49	1030	156	605	0.63
15	230	50	2300	120	0.53	755	296	445	1.19
16	230	50	2300	109	0.48	480	366	285	1.47

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

