K3G250-PR04-H4

EC centrifugal module - RadiPac

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-PR04-H4**
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}	3080
Power consumption	W	500
Current draw	A	2.3
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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}	%	67.8	48.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		81.3	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.51
09 Air flow q_v	m^3/h	1800
09 Pressure increase p_{fs}	Pa	635
10 Speed (rpm) n	min^{-1}	3065
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-174531

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

Technical description

Weight	8.6 kg
Size	250 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	PP plastic
Support plate material	Sheet steel, galvanized
Support bracket material	Steel, painted black
Inlet nozzle material	Sheet steel, galvanized
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
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 bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Power limiter - Motor current limitation - PFC, active - RS-485 MODBUS-RTU - Soft start - Control input 0-10 VDC / PWM - 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
Electrical hookup	Connector with cable
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	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

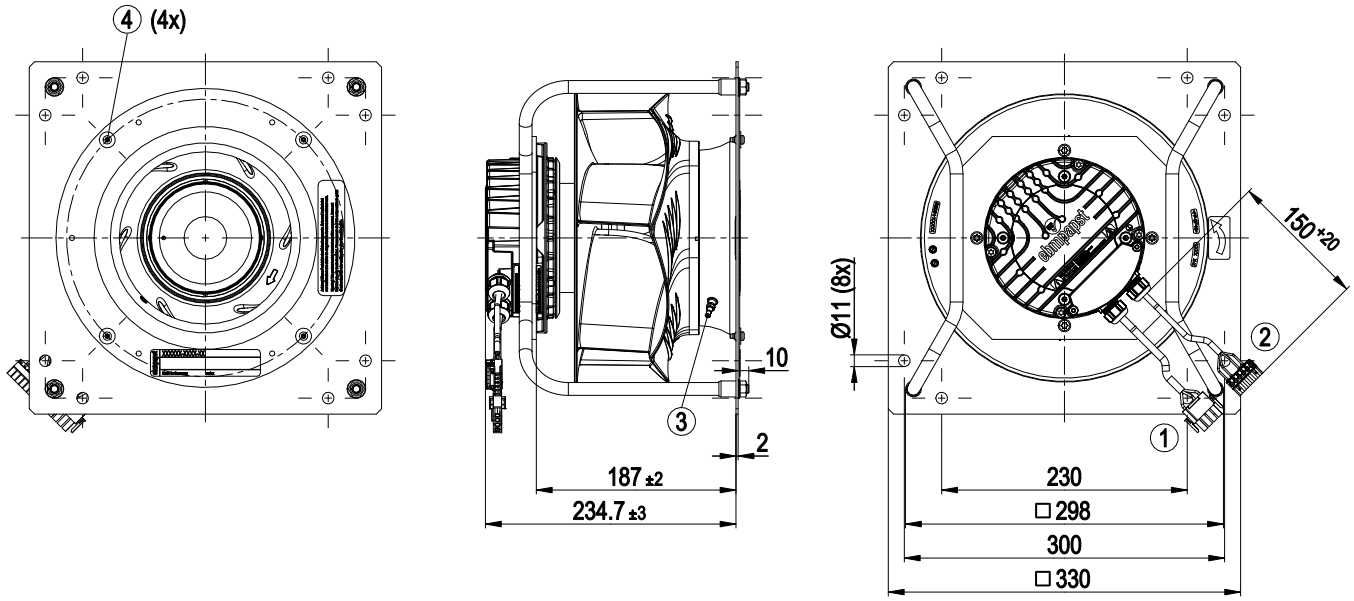
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

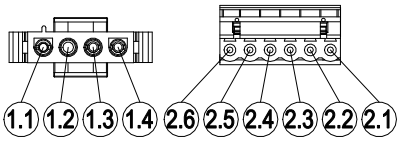
EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

Product drawing





1	Cable PVC AWG18
	4-pole connector housing TE 1-480702-0, 2x plug pin TE 350218-1, 1x plug pin TE 350654-1
1.1	PE
1.2	not used
1.3	L
1.4	N
2	Cable PVC AWG22
	6-pole connector housing Phoenix MSTB 2,5/6-ST/5,08 (Order Number 1757051), 4x wire-end ferrule
2.1	not used
2.2	GND
2.3	0-10 V
2.4	not used
2.5	NC
2.6	COM
3	Inlet ring with pressure tap (k-factor: 76)
4	Attachment for inlet ring and FlowGrid

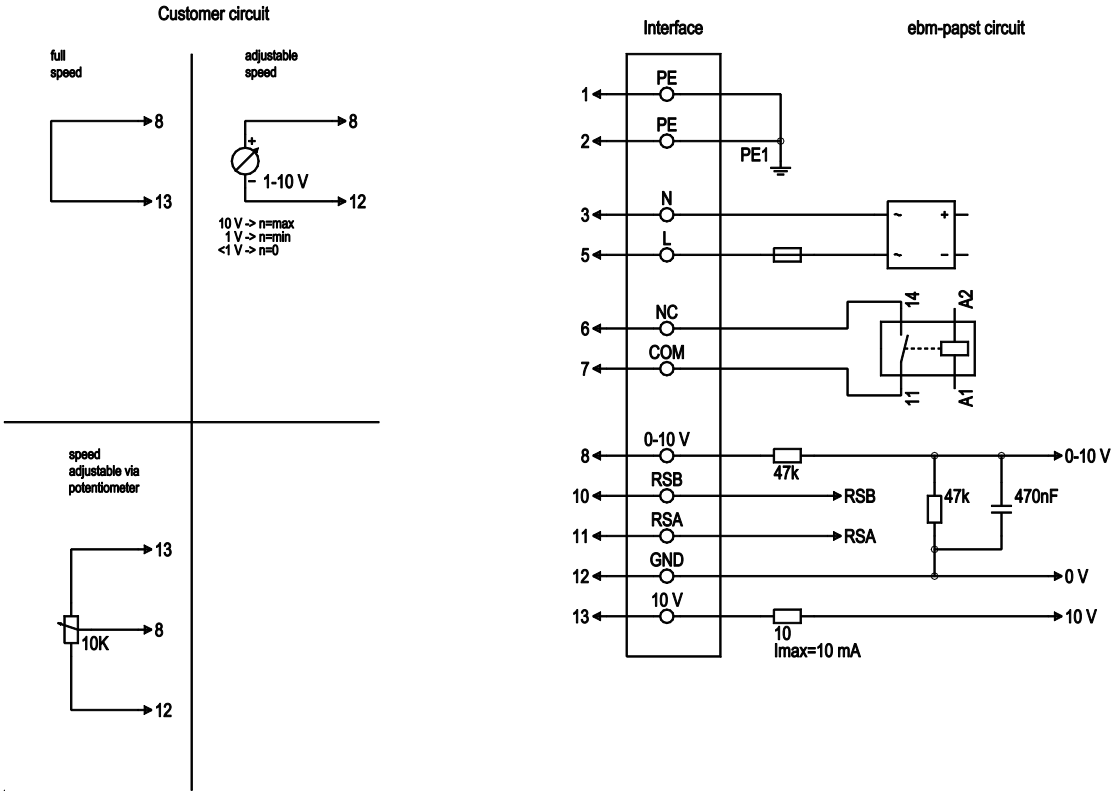
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

Connection diagram



No.	Conn.	Designation	Color	Function/assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Power supply, neutral conductor, 50/60 Hz
1	5	L	black	Power supply, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC/2 A (AC1) min. 10 mA, basic insulation on supply side and basic insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact, common connection, contact rating 250 VAC / 2 A (AC1) min. 10 mA; basic insulation on supply side and basic insulation on control interface side
2	8	0-10V	yellow	Analog input (set value); 0-10 V; Ri = 100 kΩ; adjustable curve
2	10	RSB	-	not brought out via wire
2	11	RSA	-	not brought out via wire
2	12	GND	blue	Reference ground for control interface
2	13	+10V	-	not brought out via wire

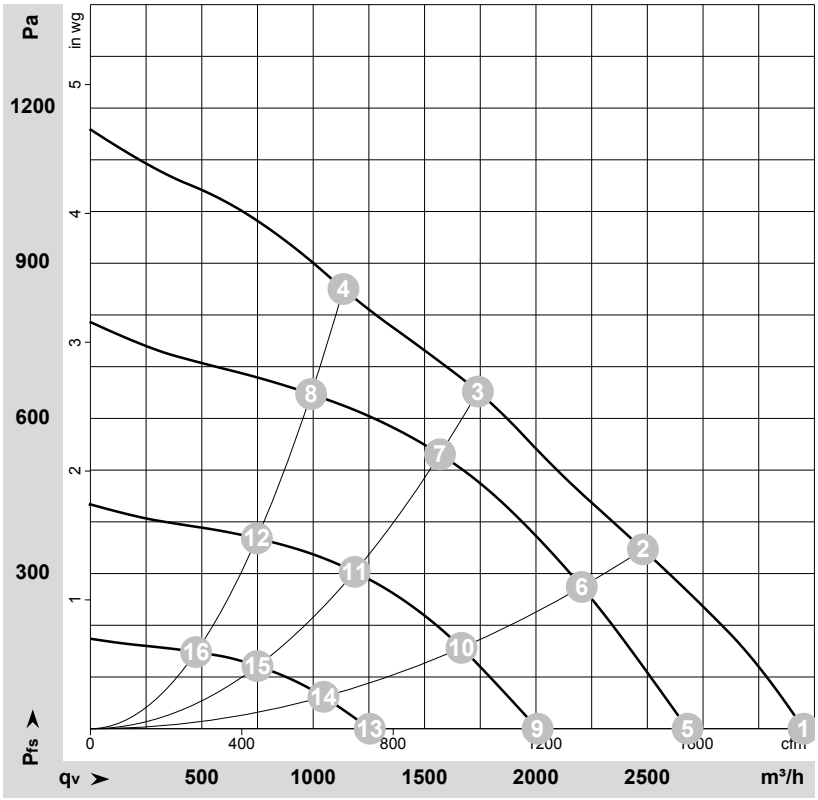
ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174531-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	230	50	3380	494	2.16	77	84	3200	0	1885	0.00
2	230	50	3125	500	2.30	70	77	2480	350	1460	1.41
3	230	50	3080	500	2.30	66	74	1740	650	1025	2.61
4	230	50	3220	500	2.30	70	78	1135	850	670	3.41
5	230	50	2840	296	1.31	73	80	2680	0	1575	0.00
6	230	50	2790	374	1.64	67	75	2205	275	1300	1.10
7	230	50	2775	386	1.70	64	72	1570	531	925	2.13
8	230	50	2805	359	1.58	67	74	990	648	585	2.60
9	230	50	2140	137	0.62	66	73	2005	0	1180	0.00
10	230	50	2115	174	0.78	60	67	1665	157	980	0.63
11	230	50	2105	181	0.81	56	63	1185	304	700	1.22
12	230	50	2120	164	0.74	59	67	745	368	440	1.48
13	230	50	1355	49	0.26	55	63	1255	0	740	0.00
14	230	50	1345	57	0.29	51	58	1045	62	615	0.25
15	230	50	1340	59	0.30	45	53	750	121	440	0.49
16	230	50	1345	55	0.29	46	54	475	148	280	0.59

U = Voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
q_V = Air flow · p_{fs} = Pressure increase

ebm-papst Mulfingen GmbH & Co. KG · Bachmühle 2 · D-74673 Mulfingen · Phone +49 (0) 7938 81-0 · Fax +49 (0) 7938 81-110 · info1@de.ebmpapst.com · www.ebmpapst.com