

8300100447  
VBH0630CTRNS

# EC centrifugal module - RadiPac

backward-curved, single-intake  
with support bracket

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## Nominal data

Item	8300100447	
Motor	E11229-80	
Phase		3~
Nominal voltage	VAC	400
Nominal voltage range	VAC	380 .. 480
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min <sup>-1</sup>	1060
Power consumption	W	1070
Current draw	A	1.7
Min. ambient temperature	°C	-40
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 Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency $\eta_{es}$	%	75.1	51.7	09 Power consumption $P_{ed}$	kW	1.03
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	8660
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	299
04 Efficiency grade N		85.4	62	10 Speed (rpm) n	min <sup>-1</sup>	1060
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

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

LU-228937

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).  
The dimensions must be requested from ebmpapst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again.  
The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

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## Technical description

<b>Weight</b>	39.2 kg
<b>Size</b>	630 mm
<b>Motor size</b>	112
<b>Rotor surface</b>	Painted black
<b>Terminal box material</b>	PP plastic
<b>Electronics housing material</b>	Die-cast aluminum
<b>Impeller material</b>	PP plastic
<b>Support plate material</b>	Sheet steel, galvanized
<b>Support bracket material</b>	Steel, painted black
<b>Inlet nozzle material</b>	ABS plastic
<b>Number of blades</b>	5
<b>Direction of rotation</b>	Clockwise, viewed toward rotor
<b>Degree of protection</b>	IP55
<b>Insulation class</b>	"F"
<b>Moisture (F) / Environmental (H) protection class</b>	H1
<b>Ambient temperature note</b>	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
<b>Max. permitted ambient temp. for motor (transport/storage)</b>	+80 °C
<b>Min. permitted ambient temp. for motor (transport/storage)</b>	-40 °C
<b>Installation position</b>	See legend on product drawing
<b>Condensation drainage holes</b>	On rotor side
<b>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>- Operation and alarm display</li> <li>- External 24 V input (parameter setting)</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- MODBUS V5.1</li> <li>- Motor current limitation</li> <li>- PFC, passive</li> <li>- RS-485 MODBUS-RTU</li> <li>- Soft start</li> <li>- EEPROM write cycles: 100,000 maximum</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Thermal overload protection for electronics/motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
<b>EMC immunity to interference</b>	According to EN 61000-6-2 (industrial environment)
<b>EMC interference emission</b>	According to EN 61000-6-3 (household environment), except EN 61000-3-2 for professionally used equipment with a total rated power greater than 1 kW
<b>Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)</b>	<= 3.5 mA
<b>Electrical hookup</b>	Terminal box

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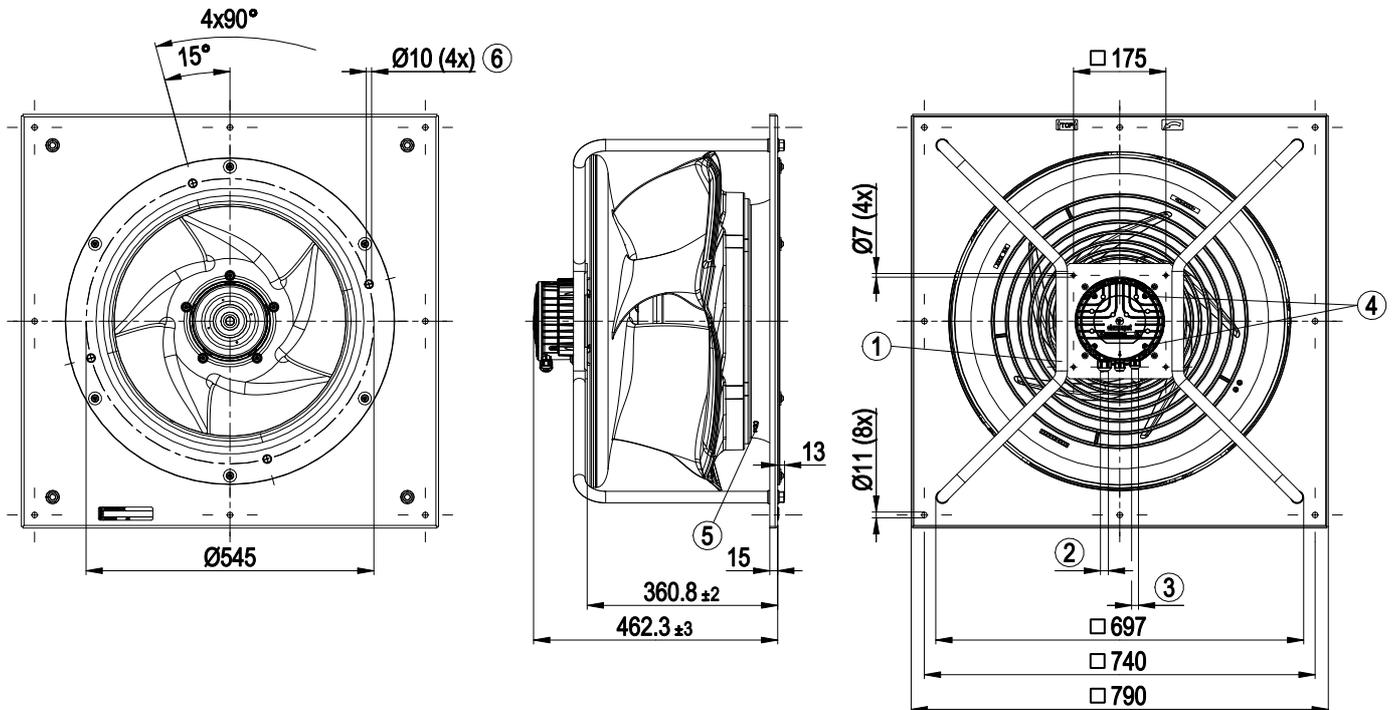
<b>Motor protection</b>	Thermal switch auto reset, internally connected
<b>Protection class assignment</b>	I; If a protective earth is connected. The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
<b>Conformity with standards</b>	EN 61800-5-1; CE; UKCA
<b>Approval</b>	CSA C22.2 No. 77 + CAN/CSA-E60730-1; EAC; UL 1004-7 + 60730-1

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## Product drawing



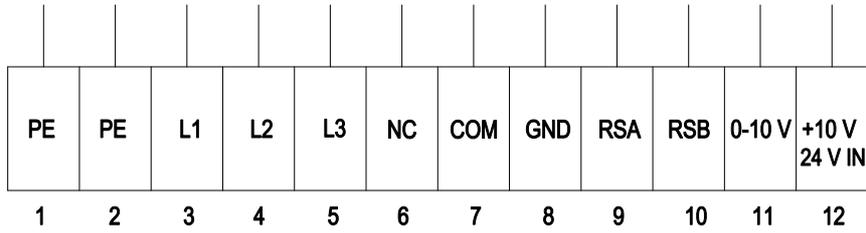
1	Installed position: shaft horizontal (install support struts only vertically as illustrated) or rotor on bottom; rotor on top on request
2	Cable diameter min. 8 mm, max. 12 mm, tightening torque $1.8 \pm 0.3$ Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 10 mm, tightening torque $1.8 \pm 0.3$ Nm
3	Cable diameter min. 6 mm, max. 10 mm, tightening torque $1.8 \pm 0.3$ Nm (use must be made of seal provided) Cable diameter min. 4 mm, max. 7 mm, tightening torque $1.8 \pm 0.3$ Nm
4	Tightening torque $1.5 \pm 0.2$ Nm
5	Inlet ring with pressure tap (k-factor: 463)
6	Fastening holes for FlowGrid 00630-2-2957 (not included in scope of delivery) are provided and must be subsequently opened as required

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## Connection diagram



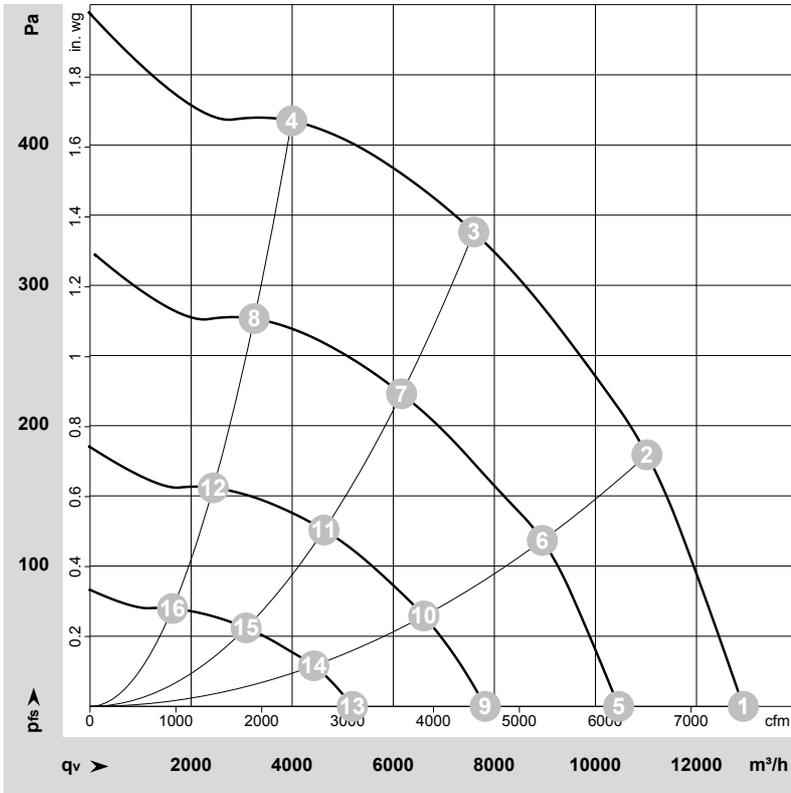
No.	Conn.	Designation	Function/assignment
1	PE	PE	Protective earth
2	PE	PE	Protective earth
3	L1	L1	Power supply
4	L2	L2	Power supply
5	L3	L3	Power supply
6	NC	NC	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
7	COM	COM	Status relay, floating status contact, break for failure, contact rating 250 VAC / 2 A (AC1) / min. 10 mA; reinforced insulation on supply side and basic insulation on control interface side
8	GND	GND	Reference ground for control interface, SELV
9	RSA	RSA	RS485 interface for MODBUS, RSA; SELV
10	RSB	RSB	RS485 interface for MODBUS, RSB; SELV
11	0-10 V	0-10 V	Analog input (set value) SELV, 0-10 V, Ri = 100 kΩ, adjustable curve
12	+10 V	+10 V	Fixed voltage output 10 VDC, SELV, +10 V ±3%, max. 10 mA, short-circuit-proof, power supply for external devices (e.g. pot); fixed voltage input 24 VDC for setting parameters via MODBUS without line voltage supply

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## Curves: Air performance 50 Hz



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

Measurement: LU-228937-1  
Date: 2023-09-20  
Nozzle: 8217101925

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

	Wired	U	f	n	Pe	I	LpA <sub>in</sub>	LwA <sub>in</sub>	LwA <sub>out</sub>	LwA	qv	Pfs	qv	Pfs
		V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	dB(A)	dB	m <sup>3</sup> /h	Pa	cfm	in. wg
1	3~	400	50	1060	669	1.06	71	79	83	84	12925	0	7610	0.00
2	3~	400	50	1060	913	1.42	65	73	77	79	11020	180	6485	0.72
3	3~	400	50	1060	1070	1.70	59	66	71	72	7595	340	4470	1.36
4	3~	400	50	1060	900	1.40	61	69	73	74	3990	420	2350	1.69
5	3~	400	50	860	367	0.63	66	74	78	79	10460	0	6155	0.00
6	3~	400	50	860	511	0.83	60	68	73	74	8950	121	5270	0.49
7	3~	400	50	860	572	0.92	54	62	66	67	6165	223	3630	0.90
8	3~	400	50	860	495	0.81	55	63	67	68	3250	277	1910	1.11
9	3~	400	50	645	178	0.39	59	67	71	73	7820	0	4605	0.00
10	3~	400	50	650	229	0.45	53	61	65	67	6605	65	3890	0.26
11	3~	400	50	650	261	0.49	47	54	58	60	4630	126	2725	0.51
12	3~	400	50	650	228	0.45	47	54	58	60	2440	156	1435	0.63
13	3~	400	50	435	67	0.22	50	57	63	64	5190	0	3055	0.00
14	3~	400	50	435	84	0.25	44	51	56	57	4430	30	2605	0.12
15	3~	400	50	435	92	0.26	39	46	51	52	3090	56	1820	0.22
16	3~	400	50	435	82	0.25	36	43	47	49	1630	70	960	0.28

Wired = Wiring · U = Voltage · f = Frequency · n = Speed (rpm) · Pe = Power consumption · I = Current draw · LpA<sub>in</sub> = Sound pressure level intake side · LwA<sub>in</sub> = Sound power level intake side  
LwA<sub>out</sub> = Sound power level outlet side · qv = Air flow · Pfs = Pressure increase