8300100482

VBH0280CSNGS

EC centrifugal module - RadiPac

backward-curved, single-intake

with support bracket

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Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Item	**8300100482**
Motor	**E07430-35**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		ml
Status		prelim.
Speed (rpm)	min^{-1}	3130
Power consumption	W	500
Current draw	A	2.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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 η_{es}	%	71.4	48.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		85.1	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.49
09 Air flow q_v	m^3/h	2105
09 Pressure increase p_{fs}	Pa	553
10 Speed (rpm) n	min^{-1}	3125
11 Specific ratio*		1.01

Data obtained at optimum efficiency level.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-220543

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 ebm-papst. 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

Weight	8.13 kg
Size	280 mm
Motor size	74
Rotor surface	Thick-film passivated
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	ABS plastic
Number of blades	5
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Ambient temperature note	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.
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	See legend on product drawing
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
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 - Control interface with SELV potential safely disconnected from the mains - 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 switch auto reset, internally connected

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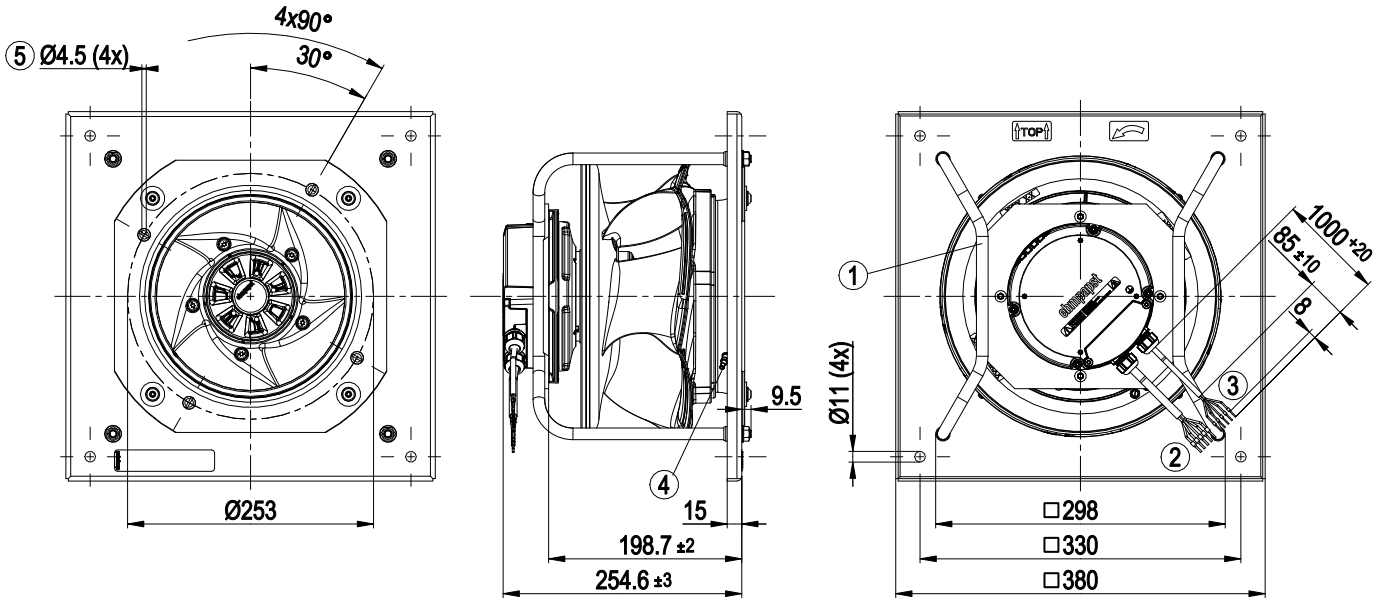
Protection class assignment	I; If a protective earth is connected by the customer This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 60034-1; EN 60204-1; EN 60335-1; UKCA; CE
Approval	EAC; CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1

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Product drawing



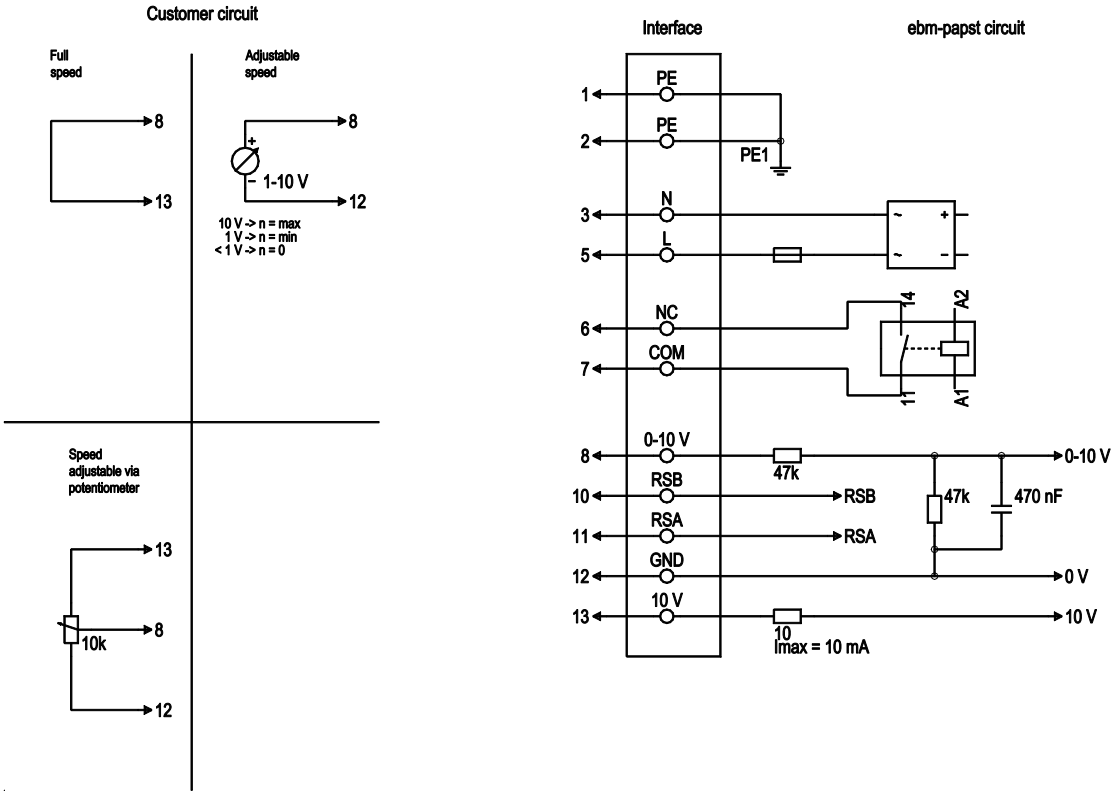
1	Installed position: shaft horizontal (install support struts only vertically as illustrated) or rotor on bottom; rotor on top on request
2	Cable PVC AWG18
	5x wire-end ferrule
3	Cable PVC AWG22
	5x wire-end ferrule
4	Inlet ring with pressure tap (k-factor: 98)
5	Fastening holes for FlowGrid 20280-2-2957 (not included in scope of delivery) are provided and must be subsequently opened as required

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Connection diagram



No.	Conn.	Designation	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 / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) / min. 10 mA, basic insulation on supply side and reinforced 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	brown	RS485 interface for MODBUS, RSB
2	11	RSA	white	RS485 interface for MODBUS, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC, +10 V ±3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. pot)

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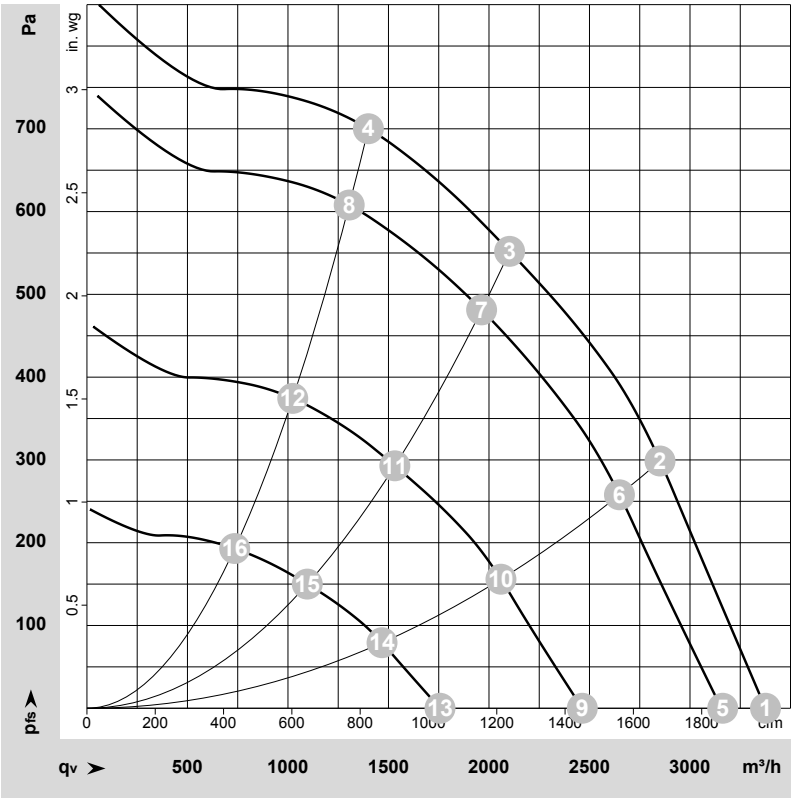
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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-220543-1
Date: 2022-03-24
Nozzle: 8217102502

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	P_e	I	LpA_{in}	LwA_{in}	LwA_{out}	LwA	q_V	p_{fs}	q_V	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	dB	m^3/h	Pa	cfm	in. wg
1	1~	230	50	3130	349	1.54	73	81	84	86	3375	0	1985	0.00
2	1~	230	50	3130	464	2.03	65	74	78	79	2850	300	1680	1.20
3	1~	230	50	3130	500	2.20	61	69	74	75	2105	550	1240	2.21
4	1~	230	50	3130	482	2.11	65	73	77	78	1400	700	825	2.81
5	1~	230	50	2910	286	1.27	71	79	82	84	3165	0	1860	0.00
6	1~	230	50	2910	377	1.66	64	72	76	78	2650	260	1560	1.04
7	1~	230	50	2915	408	1.79	60	68	72	74	1965	483	1155	1.94
8	1~	230	50	2915	391	1.72	63	71	75	76	1305	610	770	2.45
9	1~	230	50	2285	146	0.66	65	73	76	78	2465	0	1450	0.00
10	1~	230	50	2285	187	0.84	58	67	71	72	2060	157	1210	0.63
11	1~	230	50	2285	201	0.91	55	63	67	68	1530	293	900	1.18
12	1~	230	50	2285	195	0.88	57	64	67	69	1025	376	605	1.51
13	1~	230	50	1645	64	0.33	57	65	69	70	1755	0	1035	0.00
14	1~	230	50	1645	79	0.39	53	60	64	66	1470	80	865	0.32
15	1~	230	50	1640	83	0.40	48	56	61	62	1095	150	645	0.60
16	1~	230	50	1640	82	0.40	47	55	59	60	735	194	435	0.78

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

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