

EC centrifugal fan

forward-curved, single-intake

R3G146-AH23-01 ebmpapst Datasheet
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Nominal data

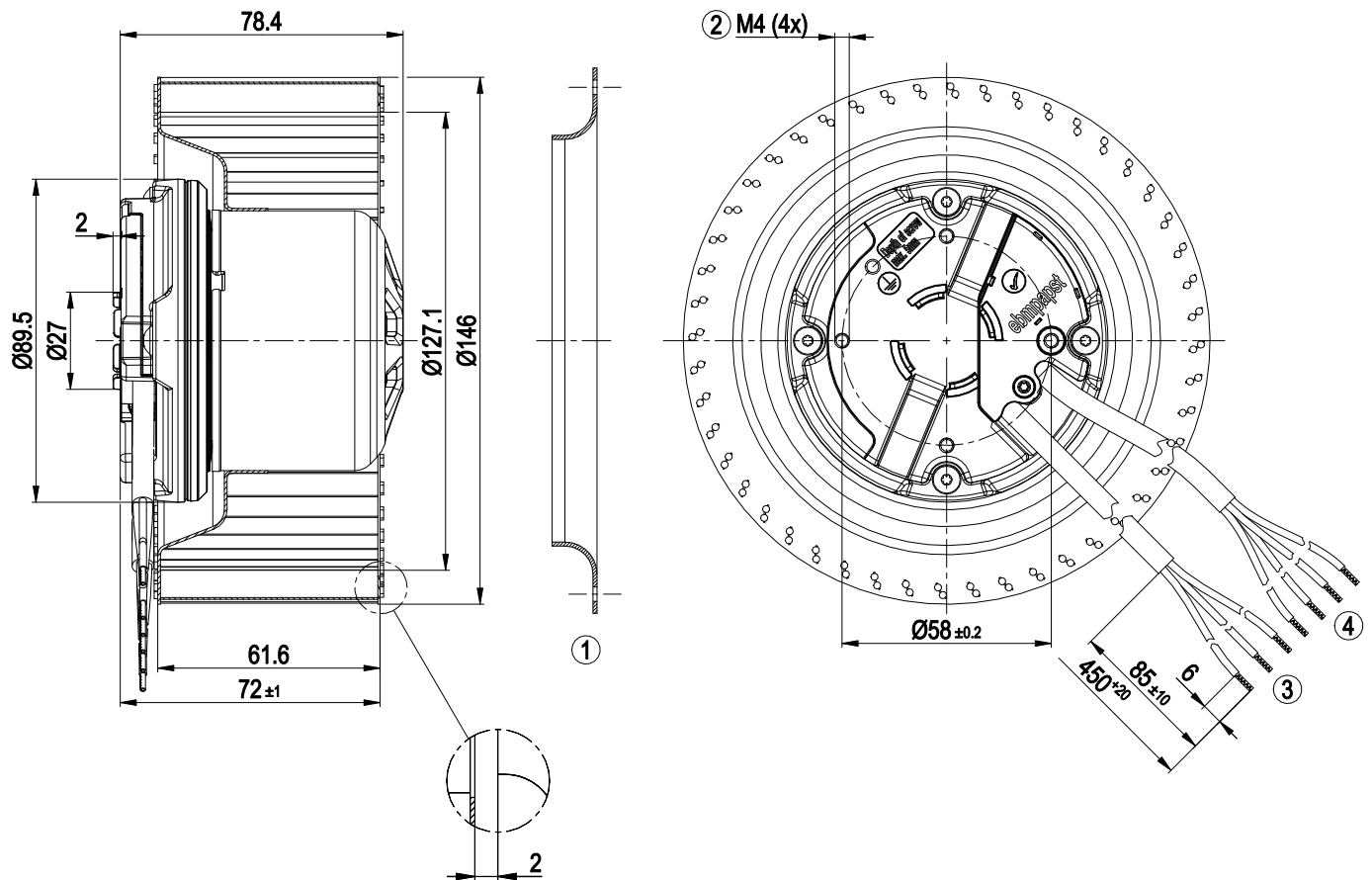
Type	R3G146-AH23-01	
Motor	M3G055-CF	
Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min ⁻¹	1830
Power consumption	W	81
Current draw	A	0.7
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

Technical description

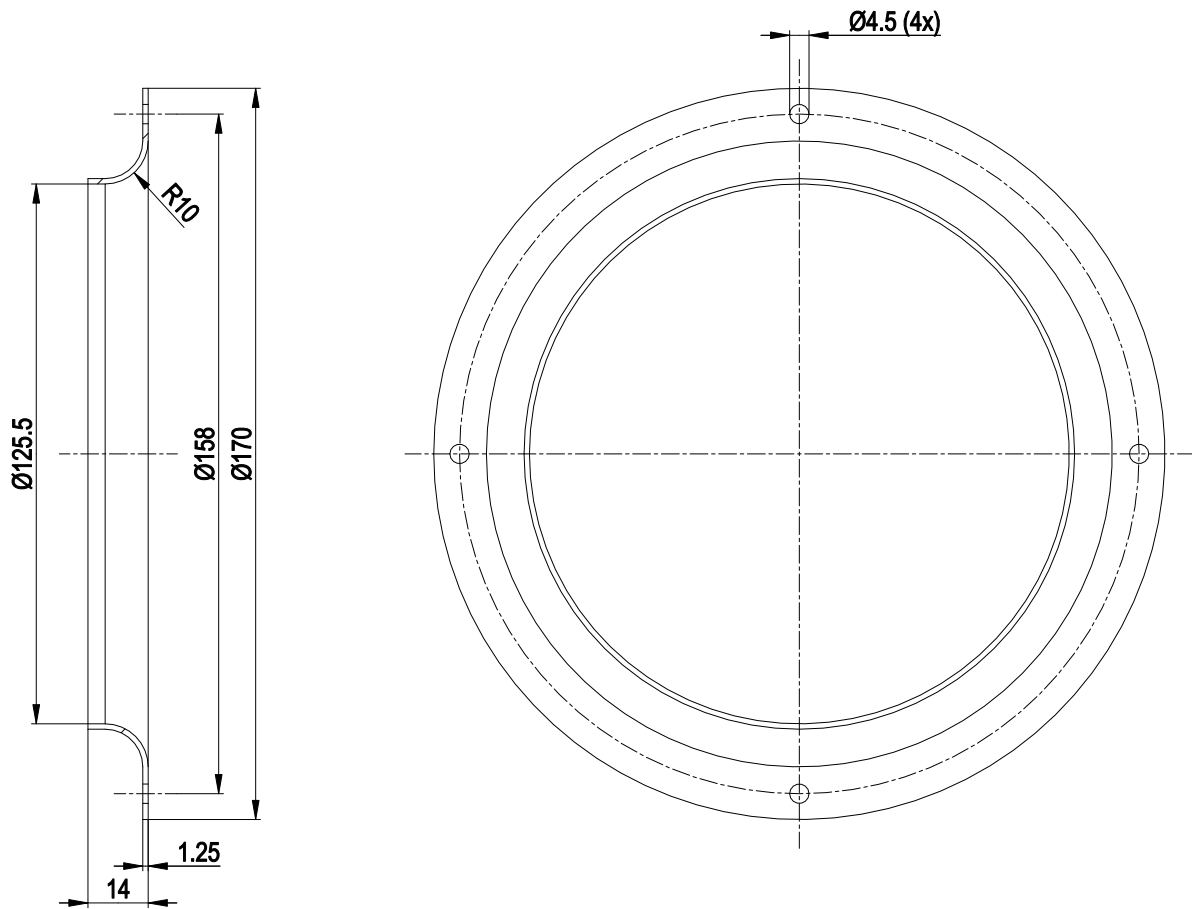
Weight	1.26 kg
Size	146 mm
Motor size	55
Impeller material	Sheet steel, galvanized
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Mode	S1
Motor bearing	Hybrid bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Thermal overload protection for electronics/motor - Line undervoltage detection
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Electronic motor protection
With cable	Variable
Protection class assignment	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.
Conformity with standards	EN 60335-1; CE; UKCA
Comment on CE	Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 does not apply, as power consumption <125W.
Approval	CSA C22.2 No. 77 + CAN/CSA-E60730-1; UL 1004-7 + 60730-1; CCC

Product drawing



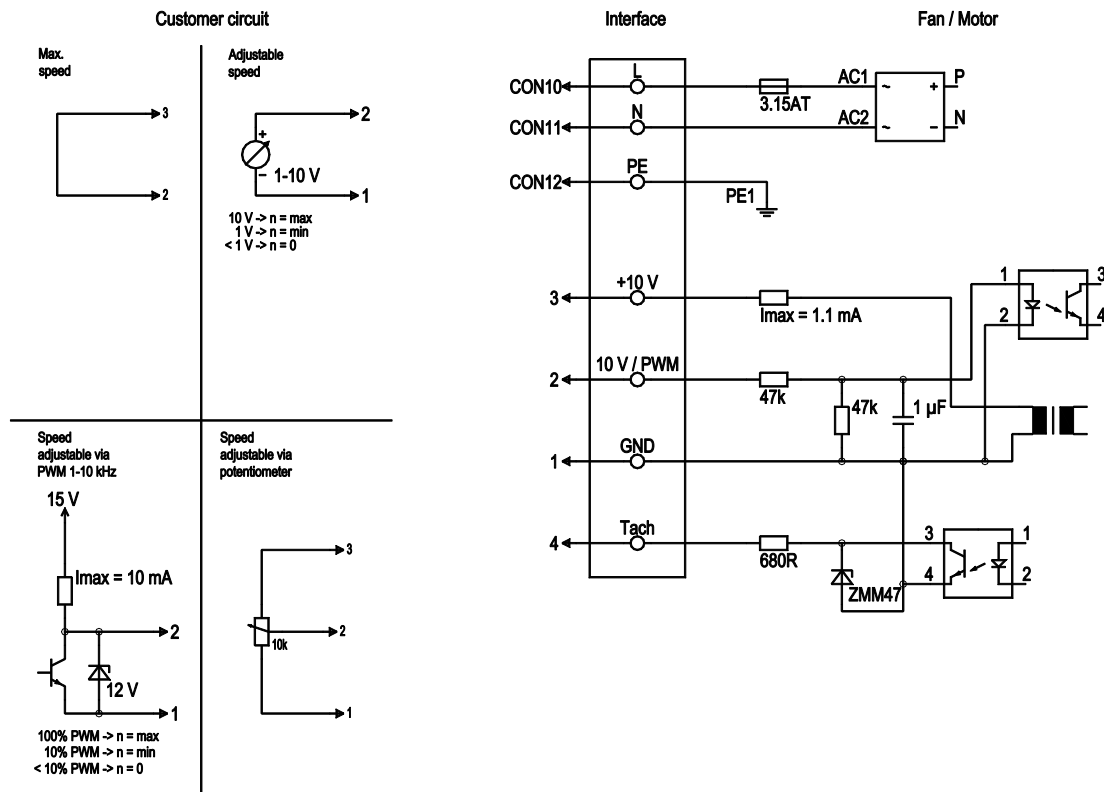
1	Accessory part: inlet ring 09576-2-4013, not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PVC AWG20, 3x crimped splices
4	Cable PVC AWG22, 4x crimped splices

Accessory part



Inlet ring 09576-2-4013

Connection diagram

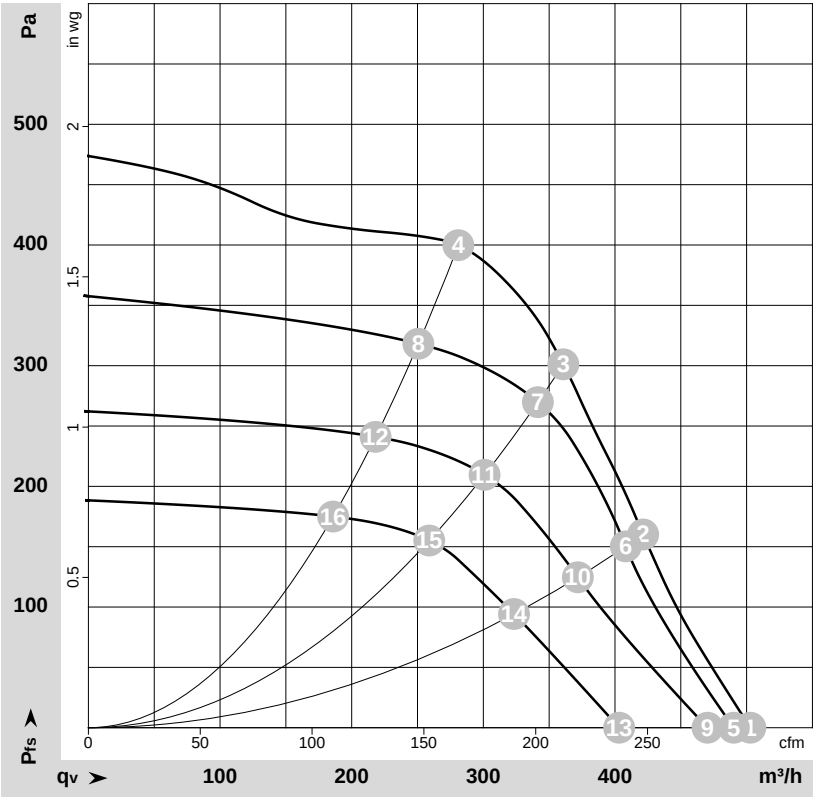


No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10 V / max. 1,1 mA	red	Voltage output 10 VDC 1.1 mA, electrically isolated, short-circuit-proof
	4	Tacho	white	Tach output: open collector, 1 pulse per revolution, electrically isolated

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Curves: Air performance 50 Hz



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

Measurement: LU-132024-1
Date: 2026-07-15
Nozzle: 37000-2-2517

Measurement: LU-132761-1
Date: 2026-07-15

Measurement: LU-132762-1
Date: 2026-07-15

Measurement: LU-132763-1
Date: 2026-07-15

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)	m³/h	Pa	cfm	in. wg
1	230	50	1830	81	0.70	65	74	505	0	295	0.00
2	230	50	2090	81	0.70	63	70	420	160	250	0.64
3	230	50	2325	81	0.70	62	69	360	300	210	1.20
4	230	50	2575	81	0.67	62	70	280	400	165	1.61
5	230	50	1800	80	0.68	64	74	490	0	290	0.00
6	230	50	2020	78	0.67	63	70	410	150	240	0.60
7	230	50	2200	73	0.62	61	69	340	281	200	1.13
8	230	50	2300	61	0.54	61	68	250	321	150	1.29
9	230	50	1735	71	0.61	63	72	470	0	275	0.00
10	230	50	1845	59	0.53	60	68	370	125	220	0.50
11	230	50	1935	49	0.45	58	66	300	217	175	0.87
12	230	50	2015	40	0.39	57	65	220	243	130	0.98
13	230	50	1505	44	0.41	60	67	405	0	235	0.00
14	230	50	1595	38	0.37	57	64	325	94	190	0.38
15	230	50	1670	32	0.32	54	62	260	161	150	0.65
16	230	50	1725	26	0.27	53	62	185	176	110	0.71

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