R3G140-AW05-49

EC centrifugal fan

forward-curved, single-intake

R3G140-AW05-49 ebmpapst Datasheet
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Nominal data

Type	**R3G140-AW05-49**
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}	2050
Power consumption	W	100
Current draw	A	0.85
Min. back pressure	Pa	0
Min. back pressure	in. wg	0
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

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Technical description

Weight	1.22 kg
Size	140 mm
Motor size	55
Rotor surface	Thick-film passivated
Impeller material	PA plastic
Direction of rotation	Counterclockwise, 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	Ball bearing
Technical features	- 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
Electrical hookup	Connector with cable
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 60034-1; EN 60204-1; EN 60335-1; CE
Comment on CE	Ecodesign Directive 2009/125/EC + Fan Directive (EC) No. 327/2011 does not apply, as power consumption <125W.

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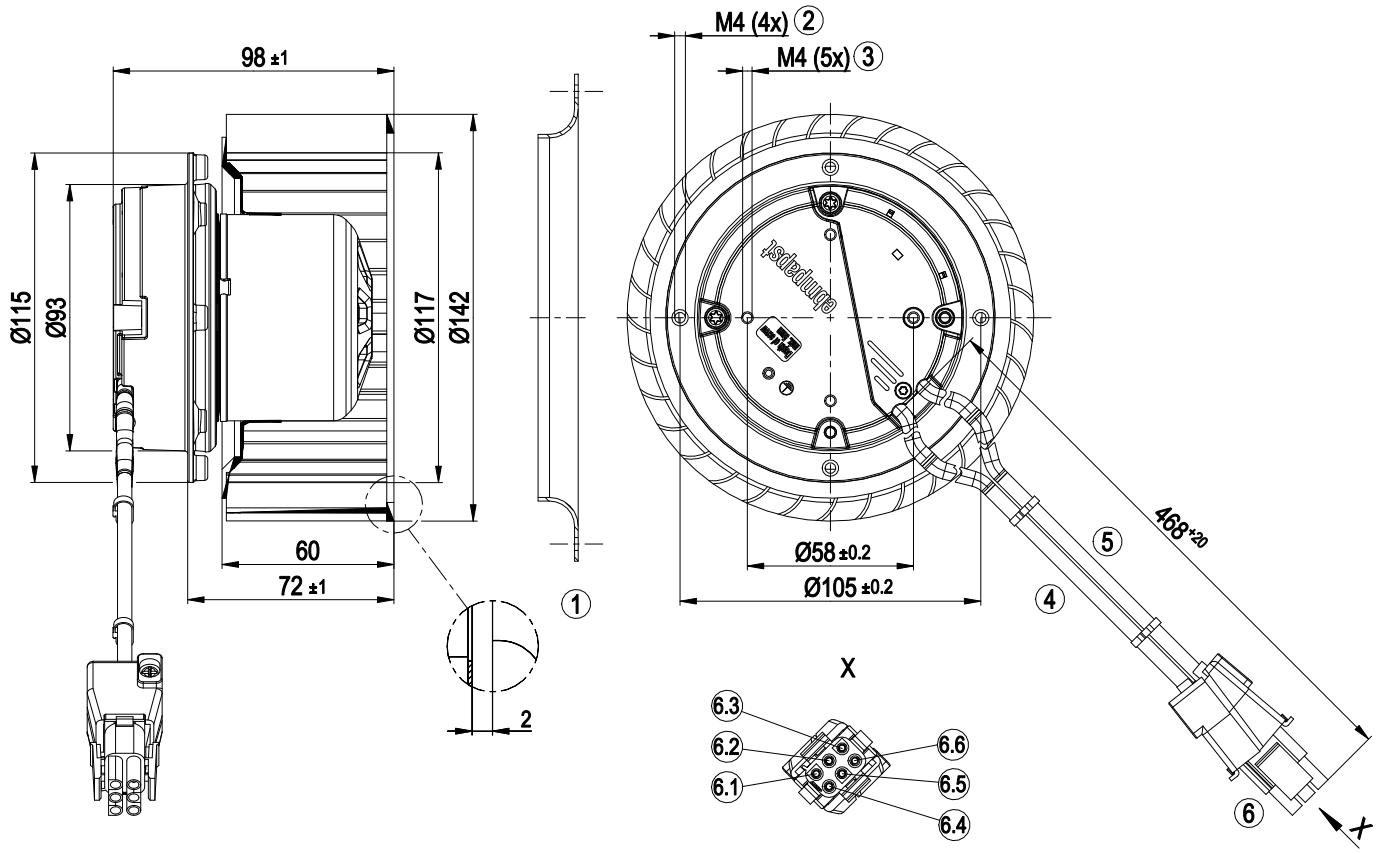
Product drawing



1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Max. clearance for screw 5 mm
4	Cable PVC 3G 0.5 mm²
5	Cable PVC 3x 0.25 mm²
6	6-Pole connector housing TE 1586846-1, 2x strain relief TE 1-640721-0, 5x plug pin TE 926885-1, 1x plug pin TE 350654-1 (gn/ge)
6.1	0-10 V/PWM
6.2	GND
6.3	Tach
6.4	L
6.5	N
6.6	PE

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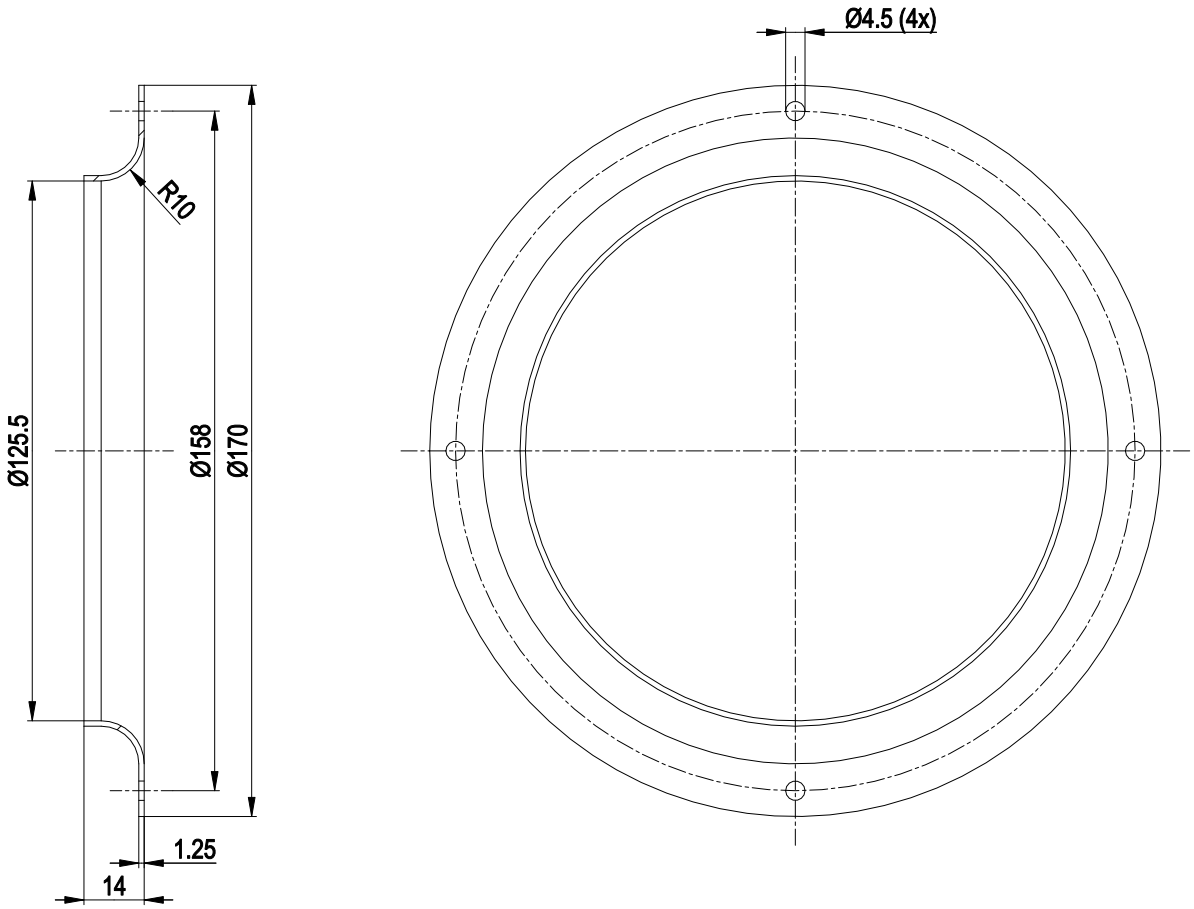
Accessory part



Inlet ring 09576-2-4013

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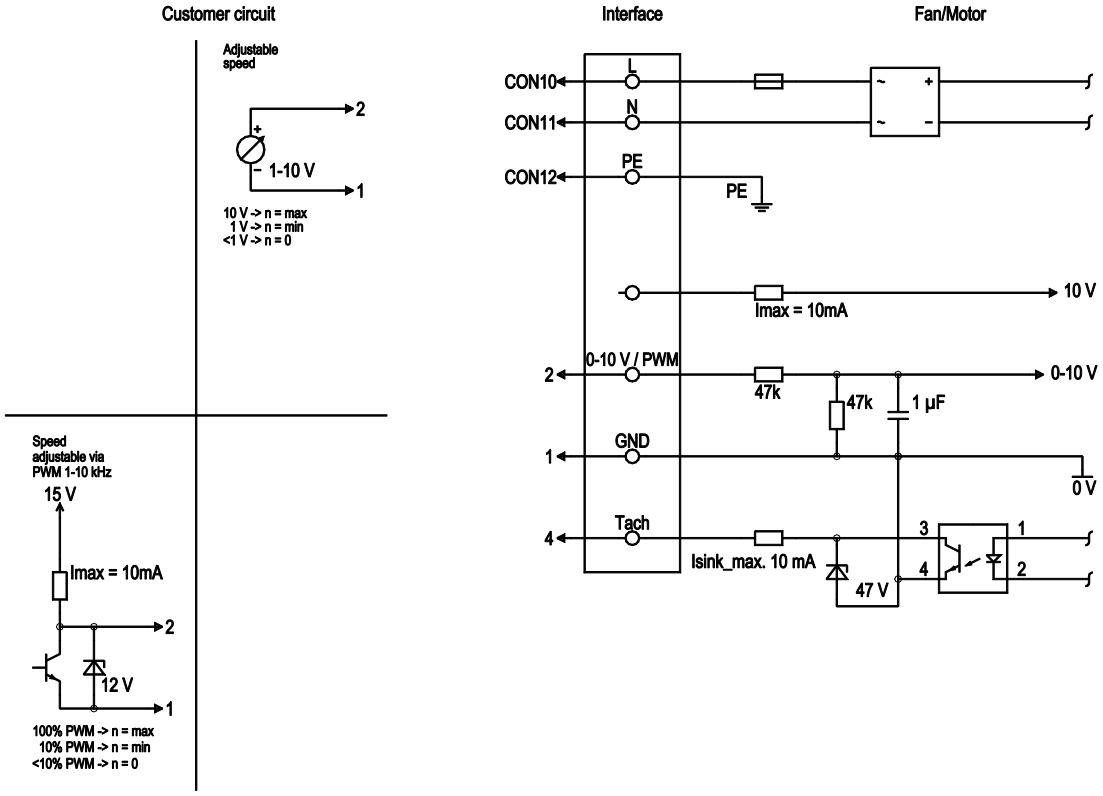
Connection diagram



No.	Conn.	Designation	Color	Function/assignment
	CON10	L	brown	Supply connection, power supply, phase, see nameplate for voltage range
	CON11	N	blue	Supply connection, power supply, neutral conductor, see nameplate for voltage range
	CON12	PE	green/yellow	Ground connection
	2	0- 10V PWM	yellow	0-10 V / PWM control input, Ri=100 kΩ, SELV
	4	Tach	white	Tach output, open collector, 1 pulse per revolution, Isink max = 10 mA, SELV
	1	GND	blue	Reference ground for control interface, SELV

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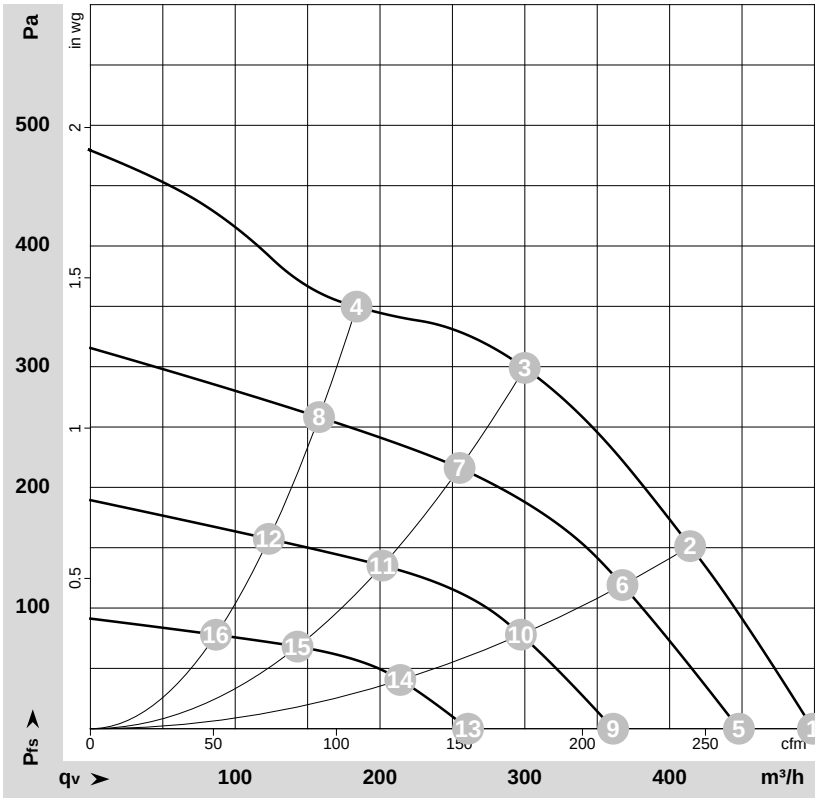
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174764-1
Date: 2026-06-13
Nozzle: 03452-2-2517

Measurement: LU-173479-1
Date: 2026-06-13

Measurement: LU-173481-1
Date: 2026-06-13

Measurement: LU-173483-1
Date: 2026-06-13

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	2050	100	0.85	66	72	500	0	295	0.00
2	230	50	2195	86	0.74	64	71	415	150	245	0.60
3	230	50	2420	70	0.62	62	68	300	300	175	1.20
4	230	50	2670	52	0.48	61	68	185	350	110	1.41
5	230	50	1785	66	0.61	62	69	450	0	265	0.00
6	230	50	1900	56	0.53	60	67	365	121	215	0.49
7	230	50	2050	45	0.43	58	65	255	216	150	0.87
8	230	50	2165	36	0.35	57	64	160	261	95	1.05
9	230	50	1435	36	0.35	57	64	360	0	210	0.00
10	230	50	1530	29	0.29	54	62	295	80	175	0.32
11	230	50	1625	22	0.23	52	60	200	135	120	0.54
12	230	50	1700	19	0.19	51	59	125	158	70	0.63
13	230	50	1040	14	0.15	48	56	260	0	155	0.00
14	230	50	1100	12	0.13	46	54	215	42	125	0.17
15	230	50	1160	10.0	0.11	44	52	145	68	85	0.27
16	230	50	1215	8.0	0.10	42	51	85	78	50	0.31

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