R3G140-AW05-50

EC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R3G140-AW05-50**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2050
Power input	W	100
Current draw	A	0.85
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

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Technical features

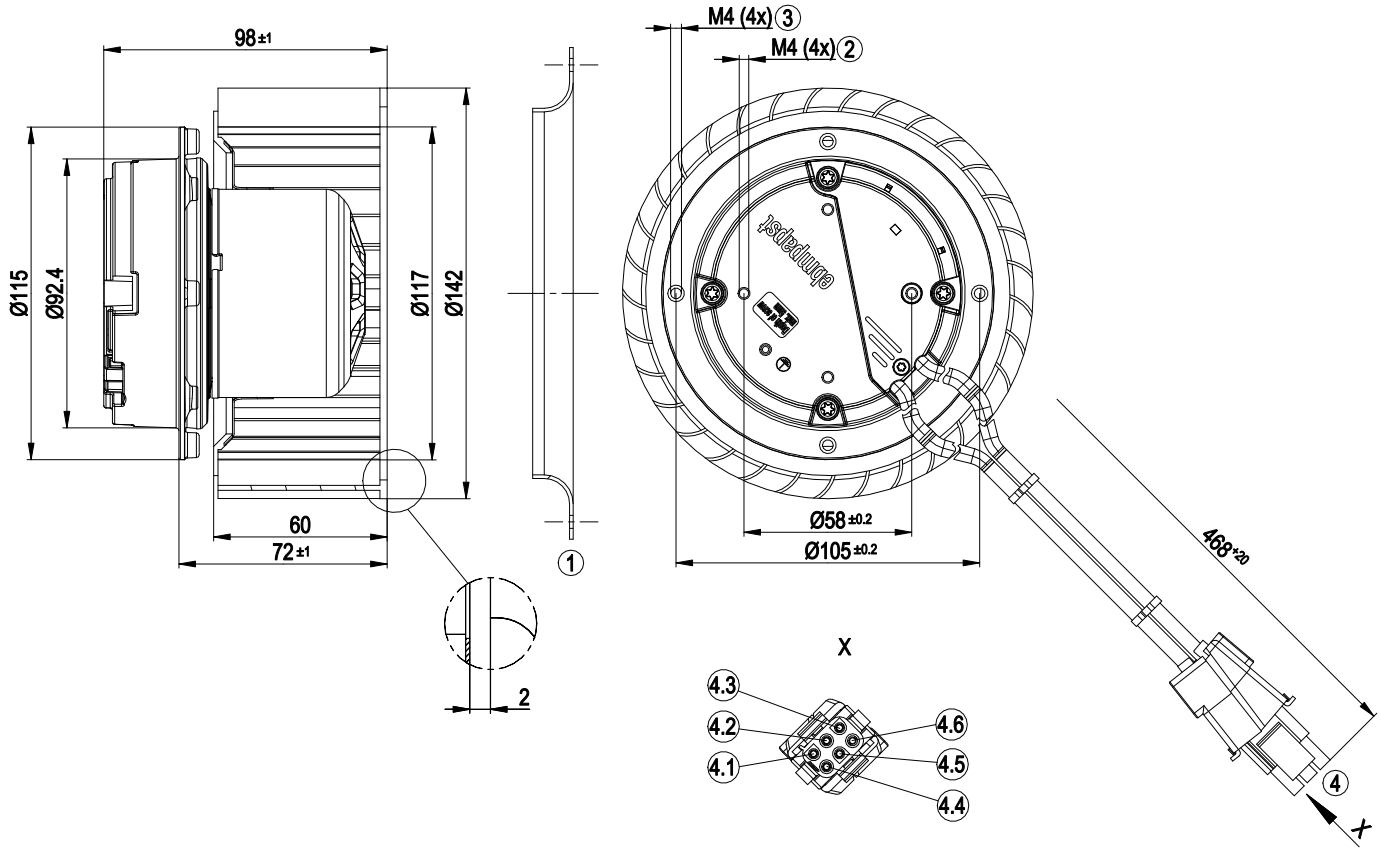
Mass	1.2 kg
Size	140 mm
Surface of rotor	Thick layer passivated
Material of impeller	PP plastic
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	None, open rotor
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Output limit - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Overvoltage detection - Over-temperature protected electronics / motor - Line undervoltage detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Motor protection	Locked-rotor protection
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 60335-1; CE

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Product drawing



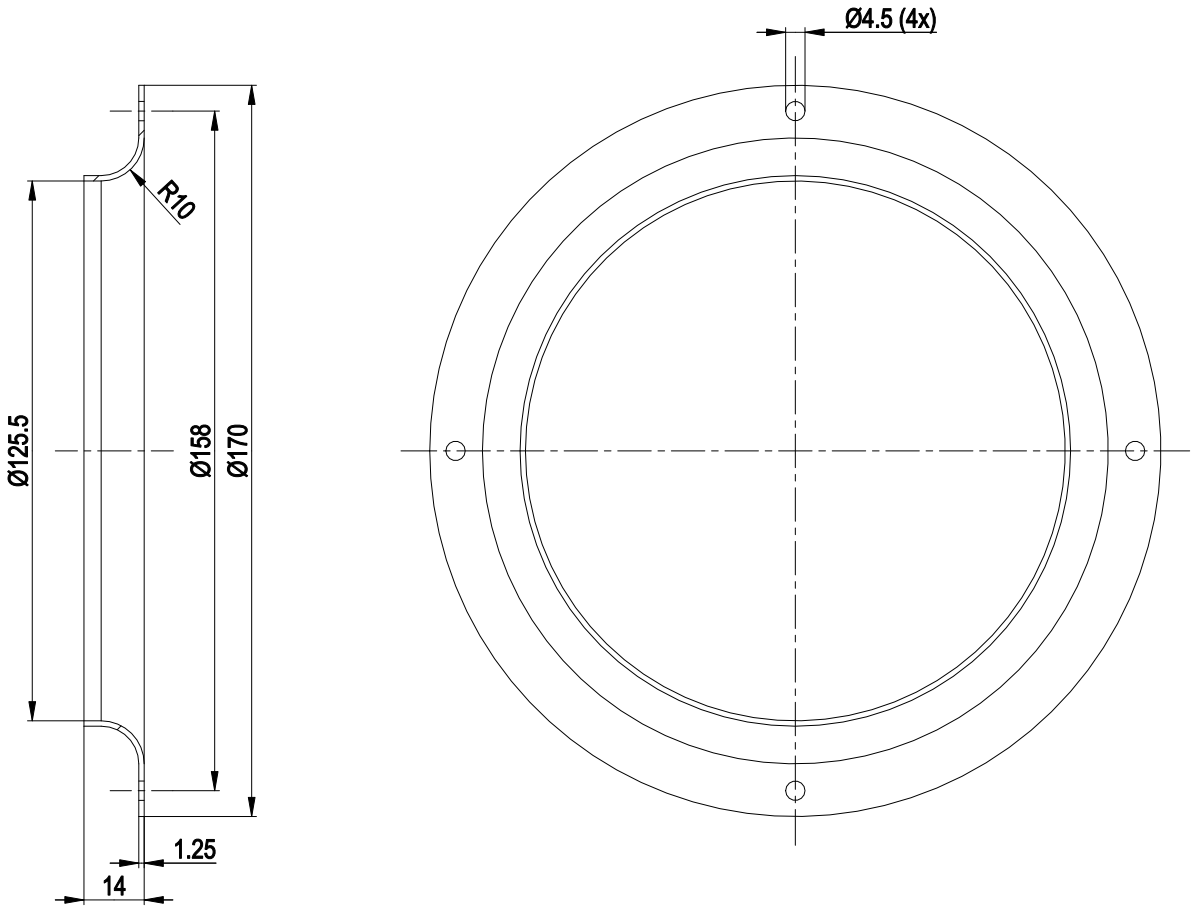
1	Accessory part: Inlet nozzle: 09576-2-4013 not included in scope of delivery
2	Thread reach max. 6 mm
3	Thread reach max. 6 mm
4	Connection line PVC 3G 0.5 mm², connection line 3x 0.25 mm², 6-pole connector housing tyco 1-640721-0, 6-pole connector housing tyco 1586846-1, 1x plug pin tyco 350654-1 (green/yellow), 5x plug pin tyco 926885-1
4.1	0-10 V PWM (yellow)
4.2	GND (blue)
4.3	Tach (white)
4.4	L (brown)
4.5	N (blue)
4.6	PE (green/yellow)

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Accessory part



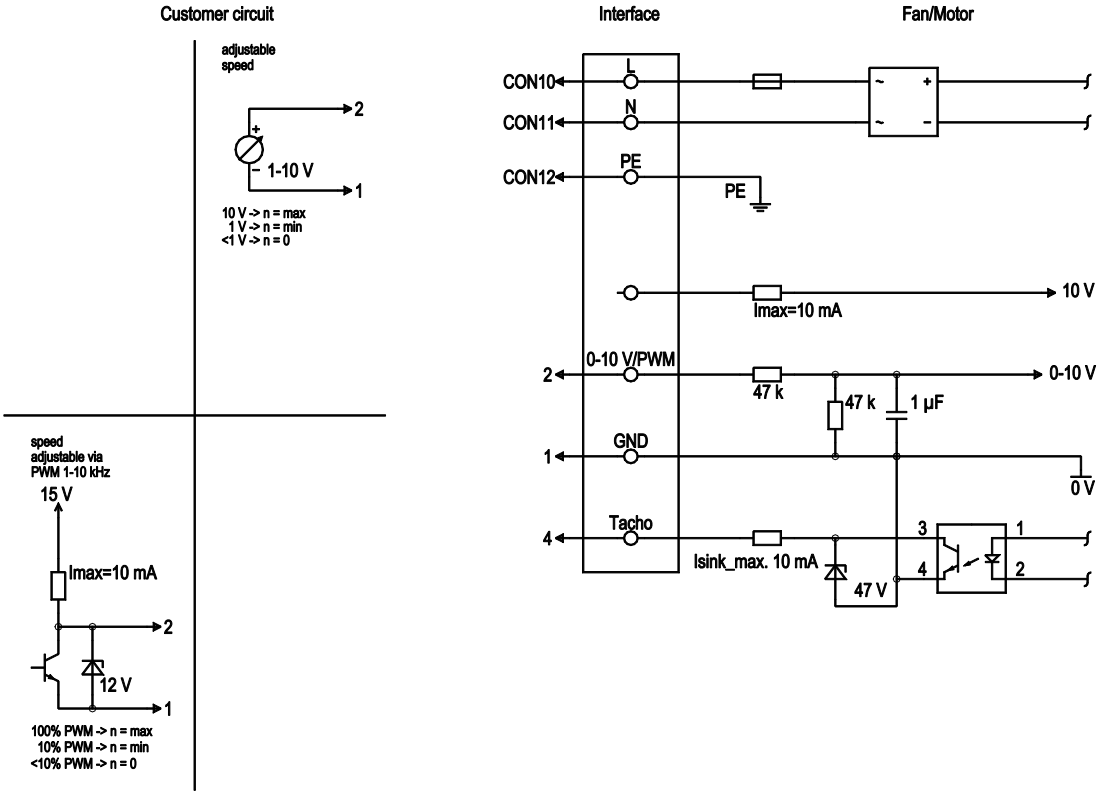
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Connection screen



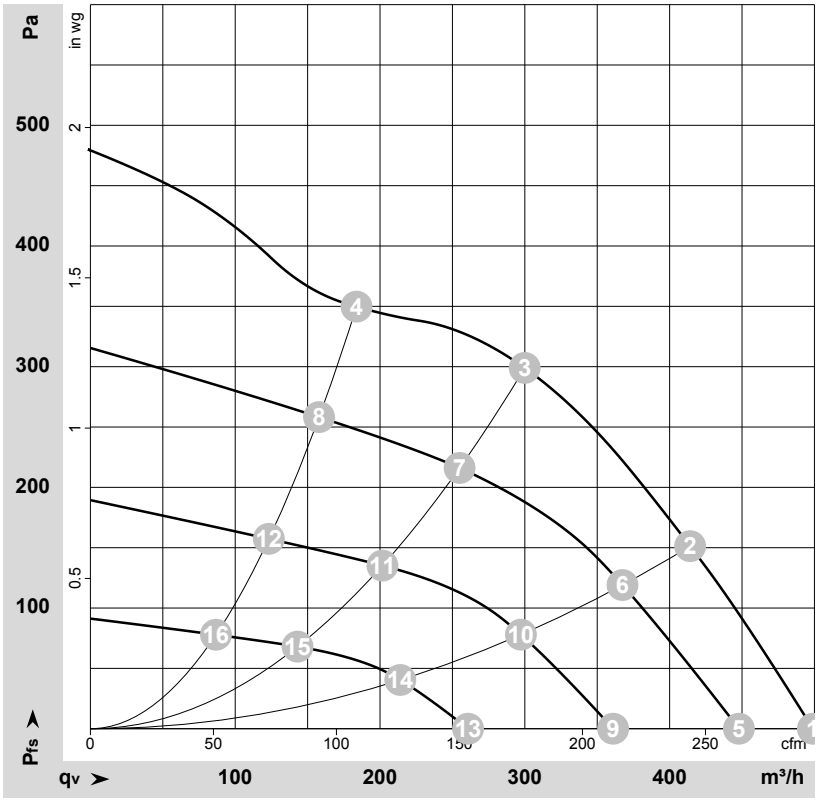
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	brown	Mains connection, power supply, phase, see type plate for voltage range
	CON11	N	blue	Mains connection, power supply, neutral conductor, see type plate for voltage range
	CON12	PE	green/yellow	Earth connection
	2	0- 10V PWM	yellow	0-10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

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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174764-1
Measurement: LU-173479-1
Measurement: LU-173481-1
Measurement: LU-173483-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

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	inH2O
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 = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow
p_{fs} = Pressure increase

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