R3G097-AC01-01

EC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R3G097-AC01-01**
Motor	**M3G045-AI**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min^{-1}	3100
Power input	W	35
Current draw	A	0.35
Min. back pressure	Pa	0
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

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

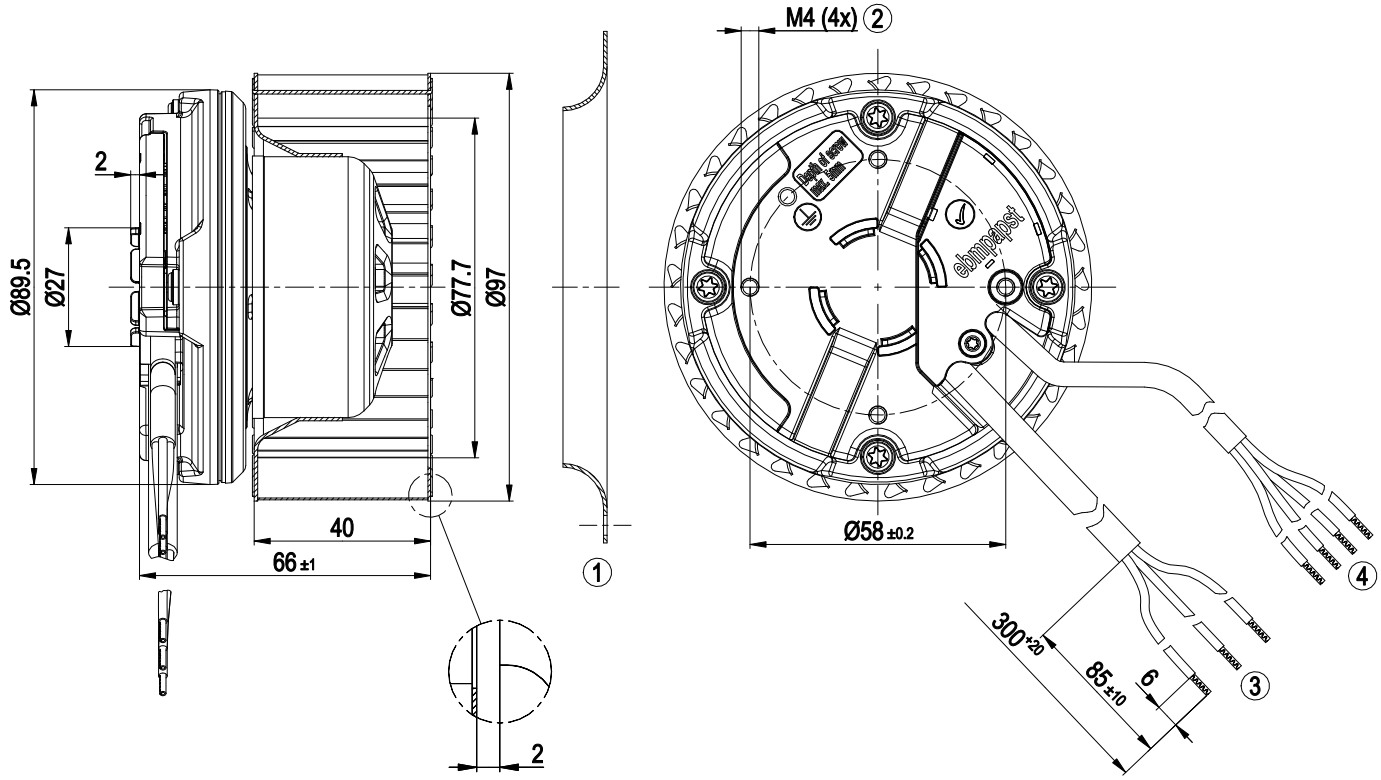
Mass	0.6 kg
Size	97 mm
Surface of rotor	Thick layer passivated
Material of impeller	Sheet steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H1
Max. permissible ambient motor temp. (transp./ storage)	+ 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	- Output 10 VDC, max. 1.1 mA - 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
Approval	UL 1004-7 + 60730; C22.2 Nr.77 + CAN/CSA-E60730-1; EAC

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Product drawing



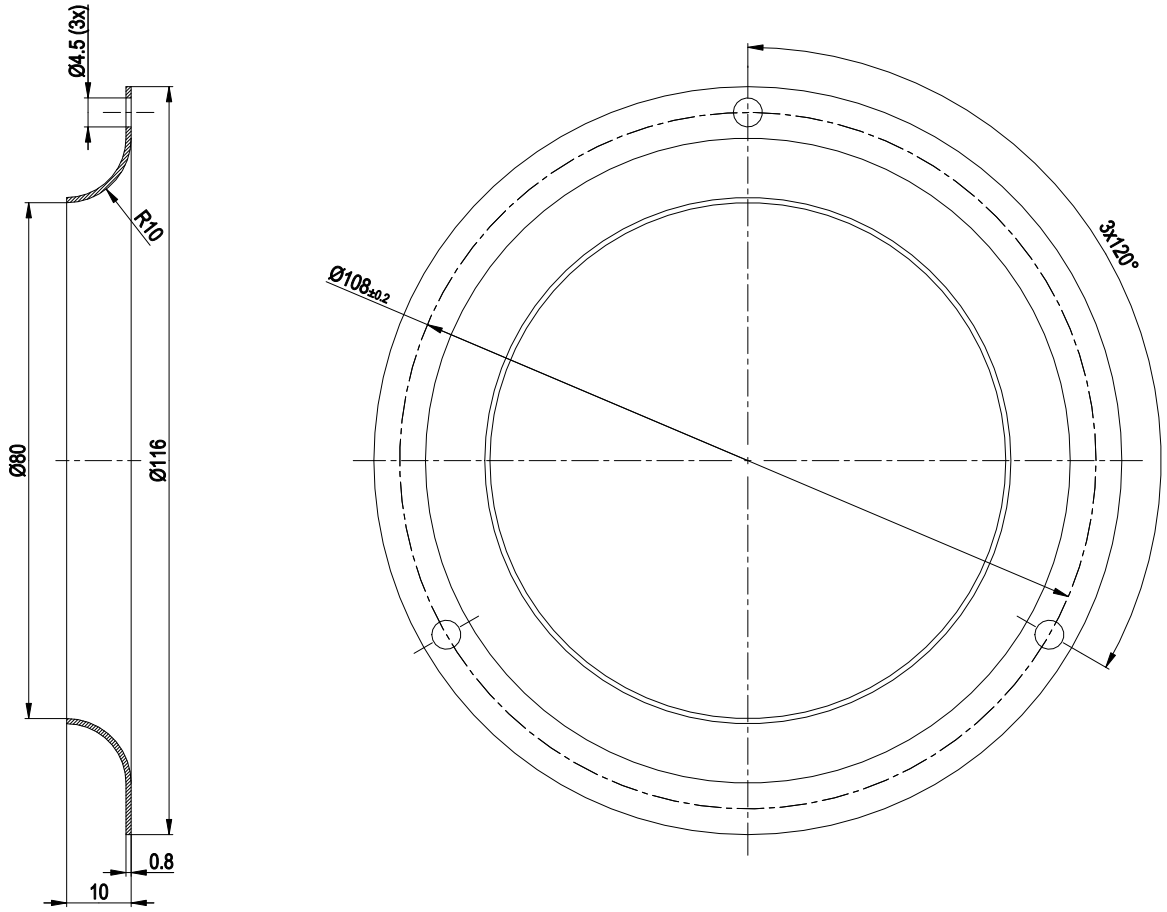
1	Accessory part: Inlet nozzle 09563-2-4013 not included in scope of delivery
2	Thread reach max. 5 mm
3	Connection line PVC AWG20, 3x lead tips crimped
4	Connection line PVC AWG22, 4x lead tips crimped

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Accessory part



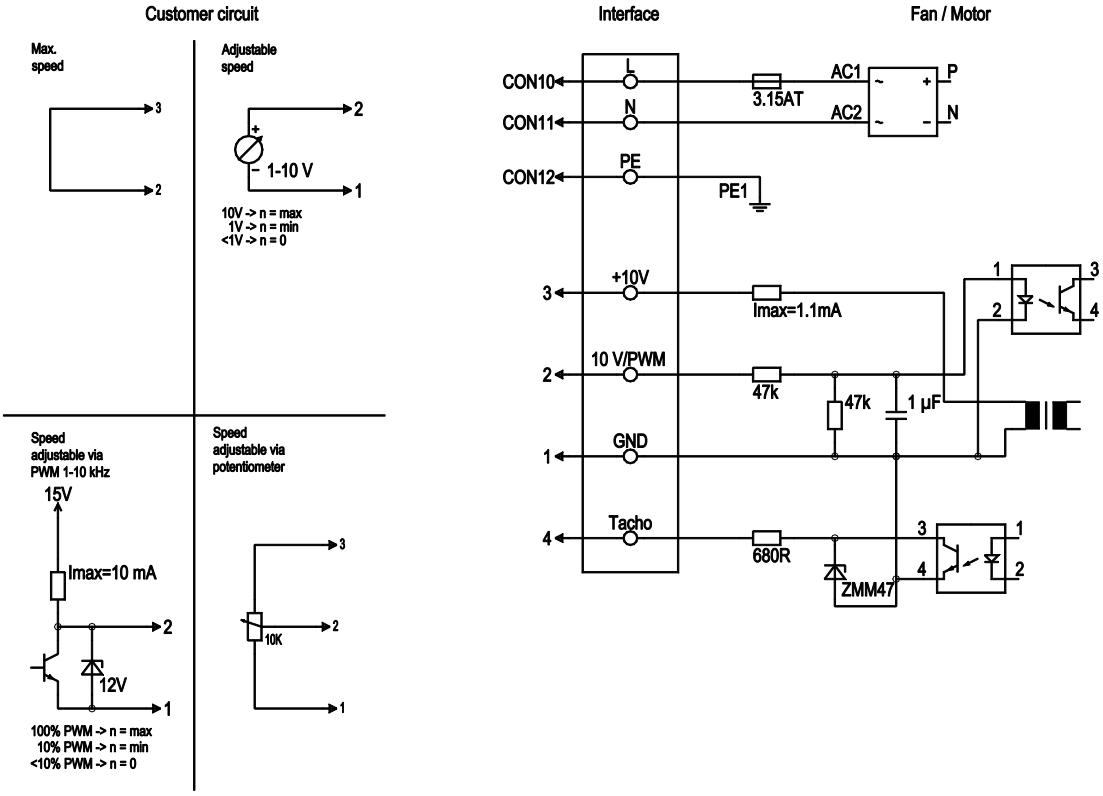
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Connection screen



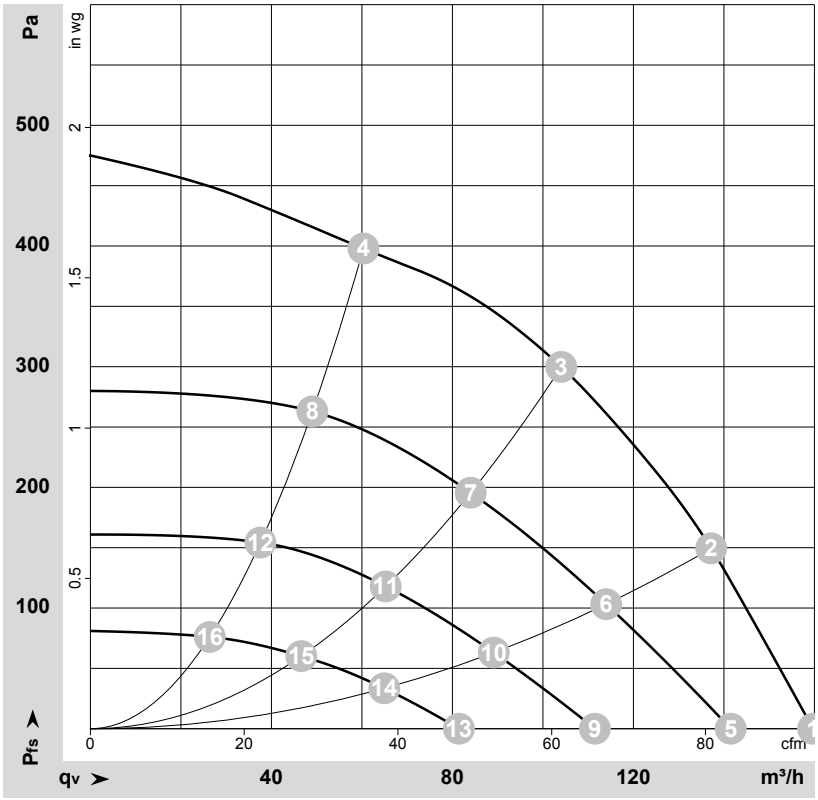
No.	Conn.	Designation	Colour	Function / assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0-10V PWM	yellow	Control input 0-10 V or PWM, 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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Charts: Air flow 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-172730-1
Measurement: LU-175017-1
Measurement: LU-175019-1
Measurement: LU-175022-1

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	3100	35	0.35	62	69	160	0	95	0.00
2	230	50	3410	35	0.35	61	68	135	150	80	0.60
3	230	50	3715	31	0.31	61	68	105	300	60	1.20
4	230	50	4100	23	0.24	61	68	60	400	35	1.61
5	230	50	2695	25	0.26	58	66	140	0	85	0.00
6	230	50	2875	21	0.23	57	64	115	110	65	0.44
7	230	50	3080	17	0.19	55	63	85	196	50	0.79
8	230	50	3315	13	0.15	55	63	50	263	30	1.06
9	230	50	2120	13	0.15	52	60	110	0	65	0.00
10	230	50	2240	11	0.13	50	57	90	67	50	0.27
11	230	50	2390	9.0	0.11	49	56	65	118	40	0.47
12	230	50	2545	7.0	0.09	49	57	40	154	20	0.62
13	230	50	1555	7.0	0.09	45	53	80	0	50	0.00
14	230	50	1635	6.0	0.08	42	50	65	37	40	0.15
15	230	50	1730	5.0	0.07	41	48	45	60	30	0.24
16	230	50	1825	4.0	0.06	41	48	25	76	15	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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