EC centrifugal fan

backward-curved, single-intake

R3G225-RH19-26 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Limited partnership · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R3G225-RH19-26**
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}	2440
Power consumption	W	107
Current draw	A	0.9
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

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Technical description

Weight	1.5 kg
Fan size	225 mm
Rotor surface	Thick-film passivated
Impeller material	PA plastic
Number of blades	7
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	Ball bearing
Technical features	- Output 10 VDC, max. 10 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
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	Electronic motor protection
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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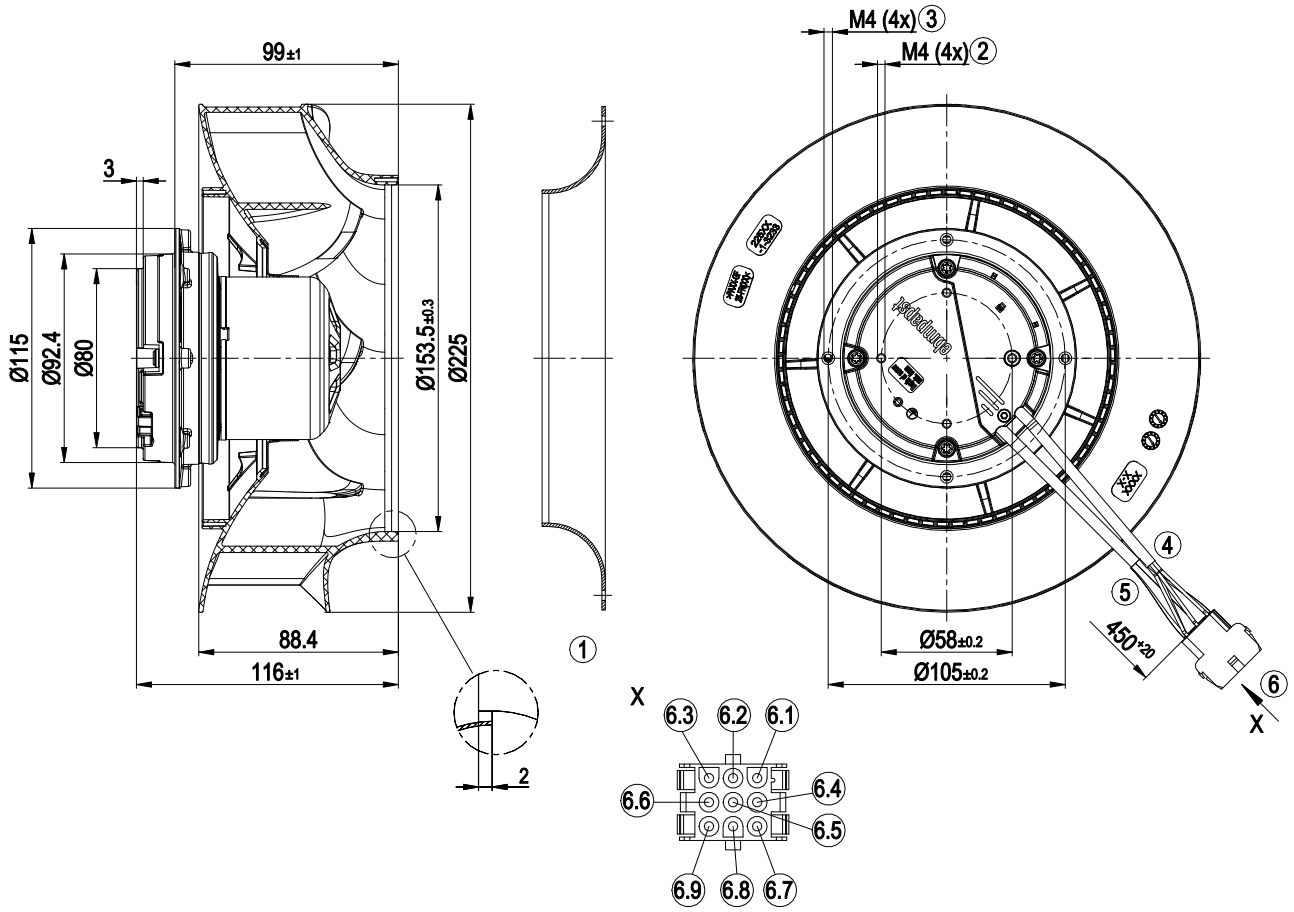
Product drawing



1	Accessory part: inlet ring 96358-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Max. clearance for screw 6 mm
4	Cable PVC 4x 0.25 mm², 4x plug pin tyco 926886-1
5	Cable PVC 3G 0.5 mm², 3x plug pin tyco 926886-1
6	9-pole connector housing tyco 927231-5
6.1	GND (blue)
6.2	Tach (white)
6.3	0-10 V PWM (yellow)
6.4	not used
6.5	not used
6.6	+10 V (red)
6.7	L (brown)
6.8	N (blue)
6.9	PE (green/yellow)

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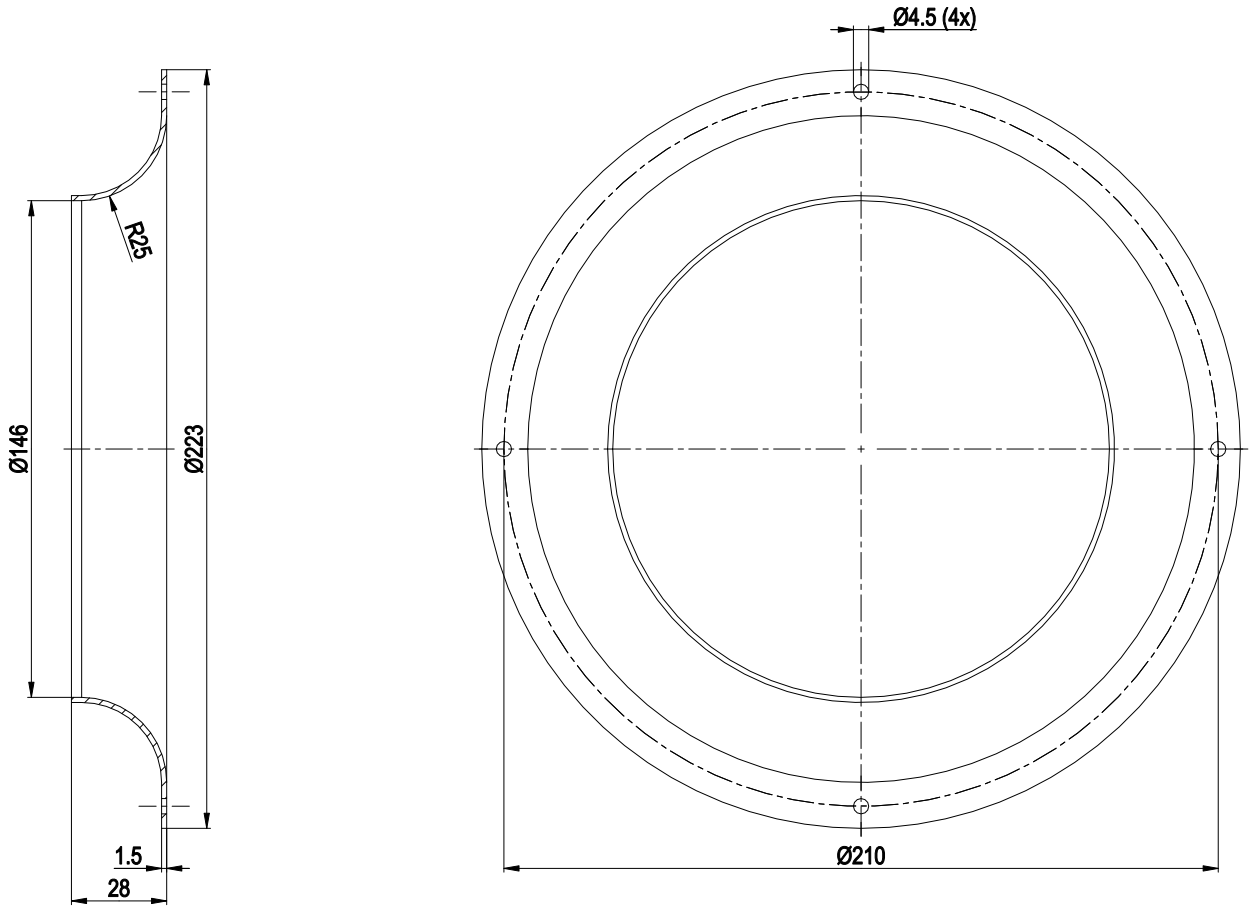
Accessory part



Inlet ring 96358-2-4013 not included in scope of delivery

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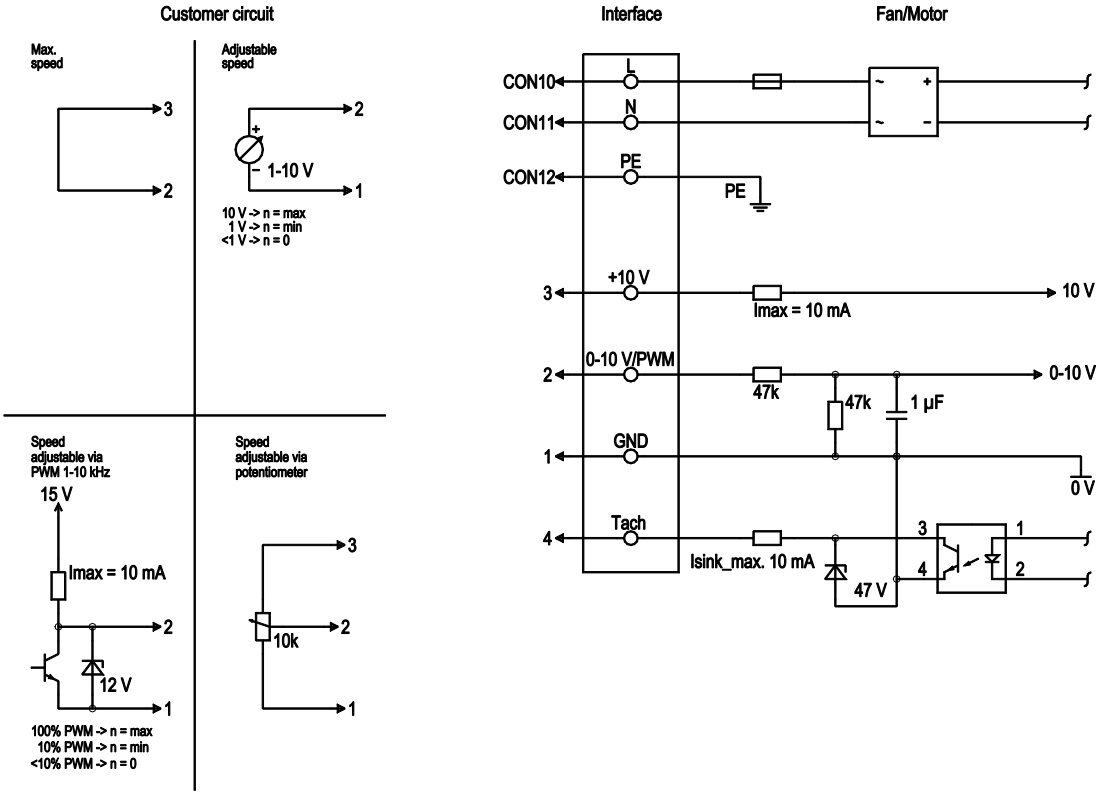
Connection diagram



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
	3	+10 V	red	Fixed voltage output 10 VDC +/-3 %, Imax. 10 mA, short-circuit-proof, power supply for ext. devices (e.g. pot), SELV
	1	GND	blue	Reference ground for control interface, SELV

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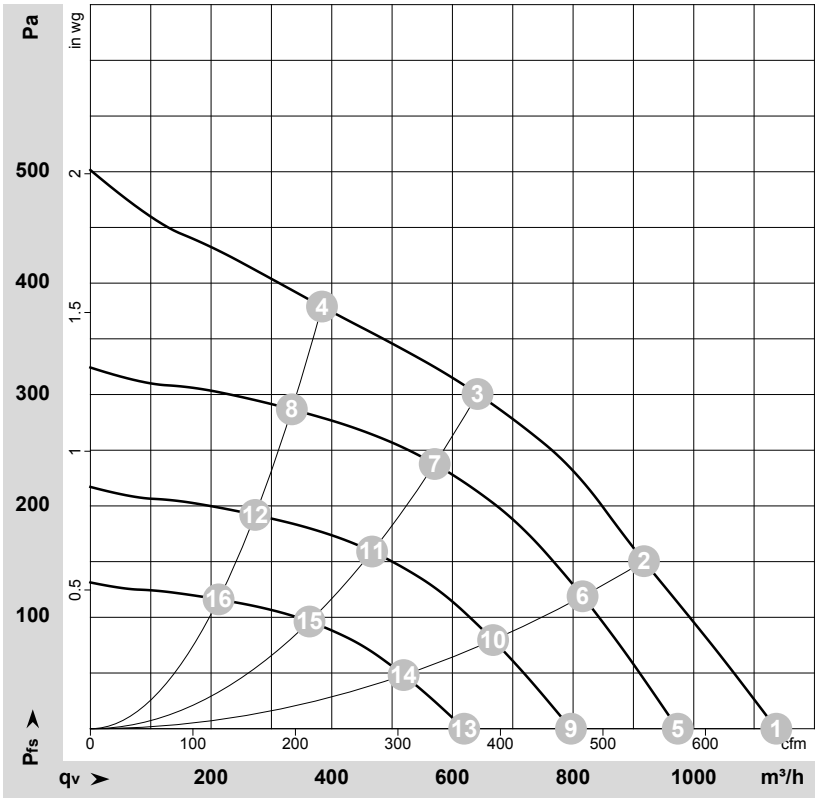
Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-174671-1

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	2570	94	0.81	65	73	1135	0	670	0.00
2	230	50	2475	107	0.90	61	69	920	150	540	0.60
3	230	50	2440	107	0.90	57	65	640	300	380	1.20
4	230	50	2530	99	0.85	62	69	385	380	225	1.53
5	230	50	2200	59	0.51	61	69	975	0	575	0.00
6	230	50	2200	76	0.64	58	66	815	119	480	0.48
7	230	50	2200	75	0.64	54	62	570	238	335	0.96
8	230	50	2200	65	0.56	58	65	335	287	195	1.15
9	230	50	1800	32	0.28	56	64	795	0	470	0.00
10	230	50	1800	41	0.35	53	61	665	80	395	0.32
11	230	50	1800	41	0.35	49	57	465	159	275	0.64
12	230	50	1800	36	0.31	53	60	275	192	160	0.77
13	230	50	1400	15	0.13	49	57	620	0	365	0.00
14	230	50	1400	19	0.17	47	55	520	48	305	0.19
15	230	50	1400	19	0.17	42	50	365	96	215	0.39
16	230	50	1400	17	0.14	47	54	210	116	125	0.47

U = Power supply · 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