R3G500-AG10-13

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R3G500-AG10-13**
Motor	**M3G150-FF**

Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed (rpm)	min^{-1}	1700
Power consumption	W	2800
Current draw	A	8.5
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	50

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

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Technical description

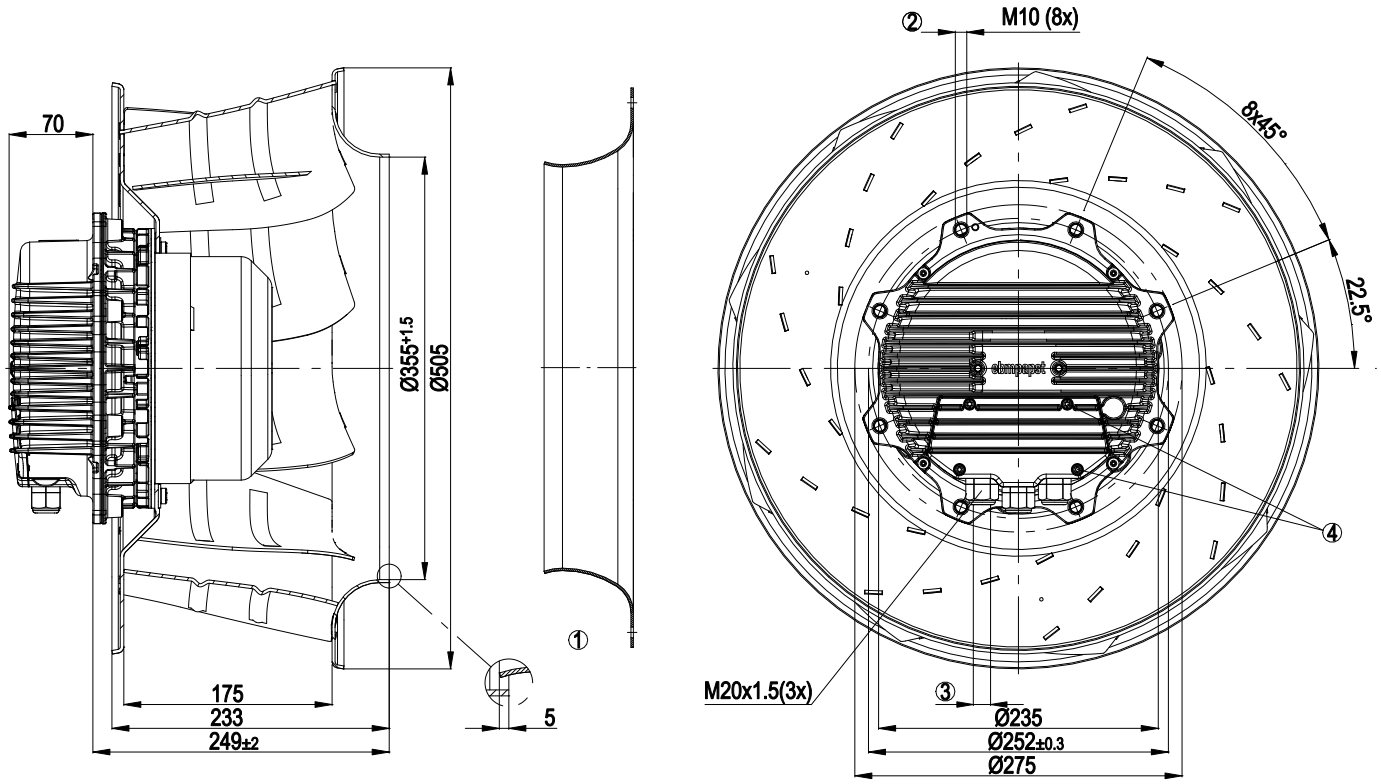
Weight	22.0 kg
Fan size	500 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	9
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP55
Insulation class	"F"
Moisture (F) / Environmental (H) protection class	F4-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - Alarm relay - Integrated PID controller - Motor current limitation - PFC, passive - RS-485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for electronics/motor - Line undervoltage / phase failure detection
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 61000-6-4 (industrial environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Electrical hookup	Via terminal box
Motor protection	Reverse polarity and locked-rotor protection
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 61800-5-1; CE
Approval	EAC; UL 2111; CSA C22.2 No. 77

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Product drawing



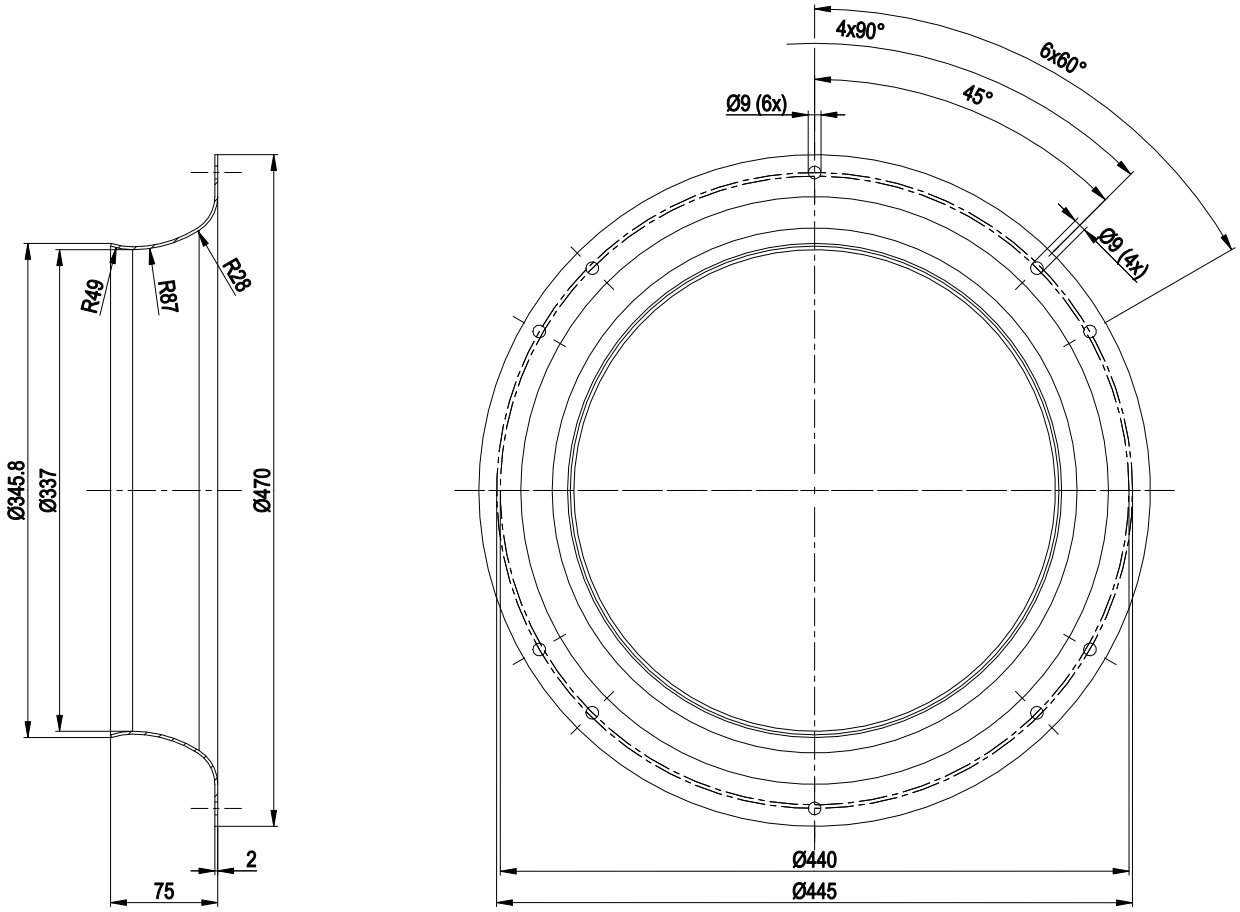
1	Accessory part: inlet ring 63072-2-4013, not included in scope of delivery.
2	Max. clearance for screw 25 mm
3	Cable diameter min. 4 mm, max. 10 mm, tightening torque 4 ± 0.6 Nm
4	Tightening torque 3.5 ± 0.5 Nm

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Accessory part



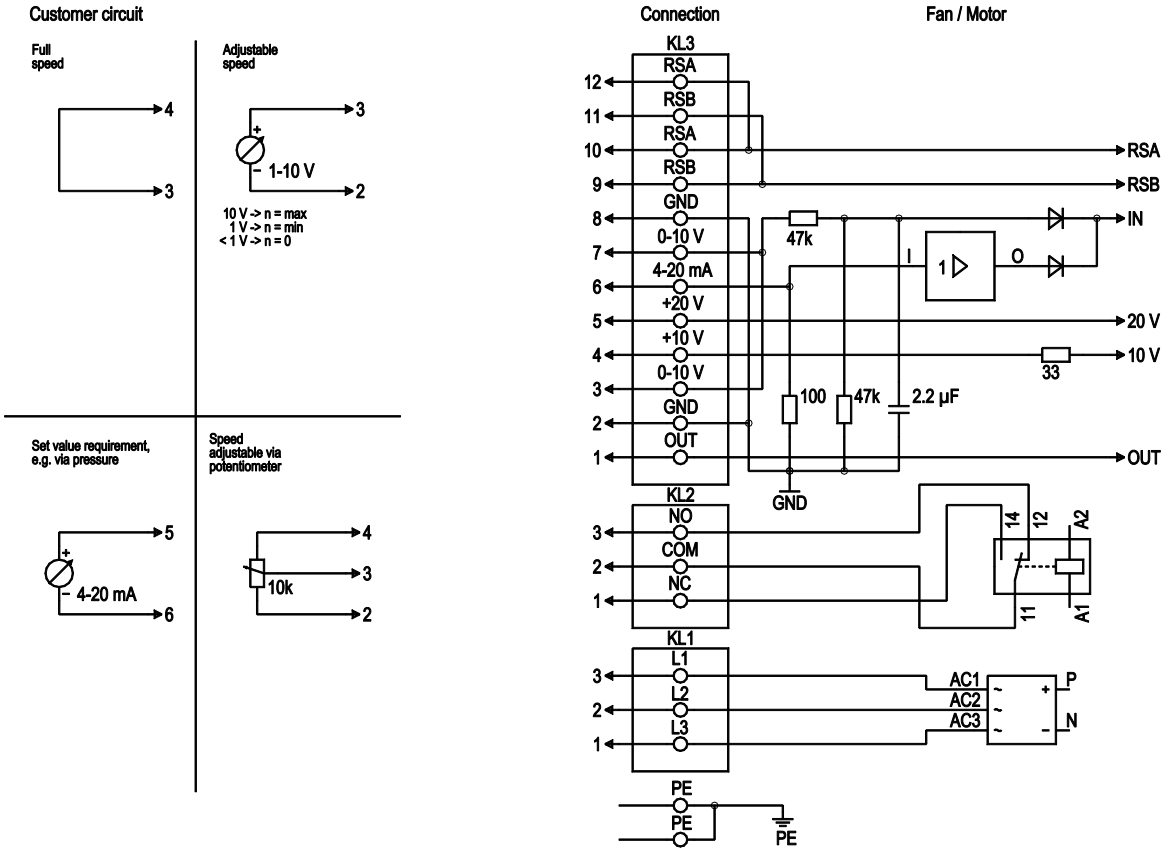
inlet ring 63072-2-4013 not included in scope of delivery

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Connection diagram



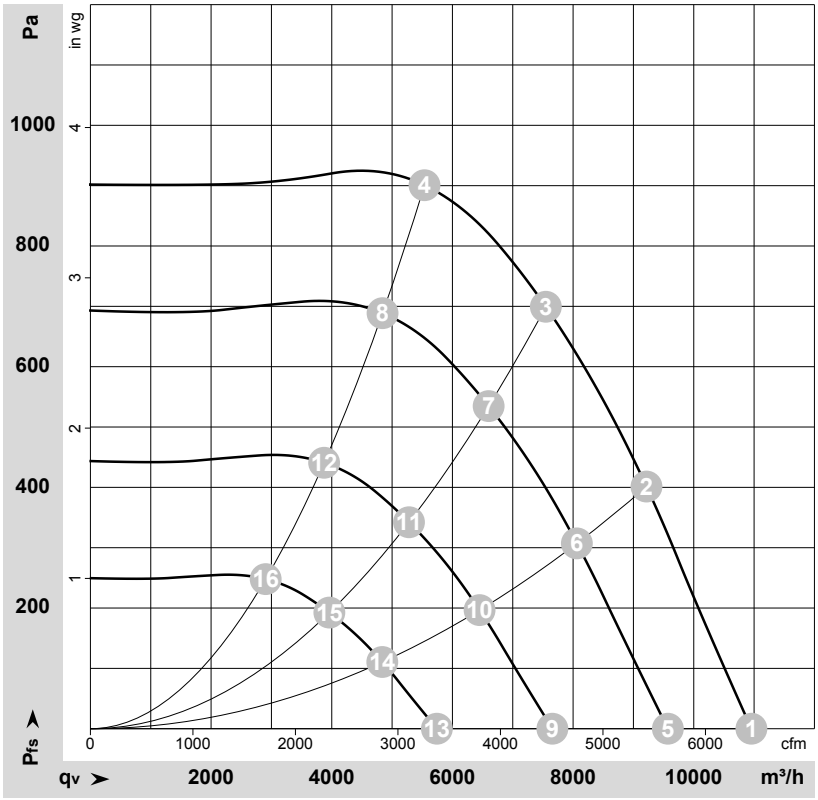
No.	Conn.	Designation	Function/assignment
PE		PE	Protective earth terminal
KL1	1, 2, 3	L1, L2, L3	Power supply 50/60 Hz
KL2	1	NC	Floating status contact, break for failure
KL2	2	COM	floating status contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status contact, make for failure
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of current motor modulation level: 1 V corresponds to 10 % modulation level. 10 V corresponds to 100 % modulation level.
KL3	2, 8	GND	Reference ground for control interface, SELV
KL3	3, 7	0-10 V	Use control / current sensor value input 0-10 VDC, impedance 100 kΩ only as alternative to 4-20 mA input, SELV
KL3	4	+10 V	Voltage output 10 VDC (±3 %), max. 10 mA, power supply for external devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25% / -10%), max. 50 mA, power supply for external devices (e.g. sensors); SELV
KL3	6	4-20 mA	Use control / current sensor value input 4-20 mA, impedance 100 Ω only as alternative to 0-10 V input, SELV
KL3	9, 11	RSB	RS485 interface for ebmBUS, RSB, SELV
KL3	10, 12	RSA	RS485 interface for ebmBUS, RSA, SELV

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Curves: Air performance 50 Hz



ρ = 1.181 kg/m³ ± 2 %

Measurement: LU-176494-1

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

	Wired	U	f	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	qv	p_{fs}	qv	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	CFM	inH2O
1	Y	200	50	1715	2022	6.29	84	92	96	10955	0	6450	0.00
2	Y	200	50	1715	2534	7.82	79	87	92	9215	400	5425	1.61
3	Y	200	50	1700	2800	8.50	76	83	90	7550	700	4445	2.81
4	Y	200	50	1715	2547	7.86	75	82	88	5535	900	3260	3.61
5	Y	200	50	1500	1348	4.19	81	88	93	9570	0	5635	0.00
6	Y	200	50	1500	1696	5.23	76	83	89	8065	309	4745	1.24
7	Y	200	50	1500	1869	5.75	73	80	86	6600	536	3885	2.15
8	Y	200	50	1500	1703	5.25	72	79	85	4840	689	2850	2.77
9	Y	200	50	1200	690	2.15	75	83	87	7655	0	4505	0.00
10	Y	200	50	1200	868	2.68	70	78	83	6450	198	3795	0.79
11	Y	200	50	1200	957	2.95	67	74	81	5280	343	3110	1.38
12	Y	200	50	1200	872	2.69	66	73	79	3875	441	2280	1.77
13	Y	200	50	900	291	0.91	68	76	80	5745	0	3380	0.00
14	Y	200	50	900	366	1.13	63	70	76	4840	111	2850	0.45
15	Y	200	50	900	404	1.24	60	67	73	3960	193	2330	0.77
16	Y	200	50	900	368	1.13	59	66	72	2905	248	1710	1.00

Wired = Wiring · 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 LwA_{out} = Sound power level outlet side · qv = Air flow · p_{fs} = Pressure increase

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