R3G500-RS06-G4

EC centrifugal fan

backward curved, single inlet



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**R3G500-RS06-G4**
Motor	**M3G084-FA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	750
Power input	W	250
Current draw	A	1.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60
Starting current	A	1.8

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

Data according to ErP directive

		Actual	Request 2015
01 Overall efficiency η_{es}	%	58.6	45
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		75.6	62
05 Variable speed drive		Yes	

09 Power input P_{ed}	kW	0.24
09 Air flow q_v	m^3/h	3410
09 Pressure increase p_{fs}	Pa	136
10 Speed (rpm) n	min^{-1}	740
11 Specific ratio*		1.00

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-152274

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Technical features

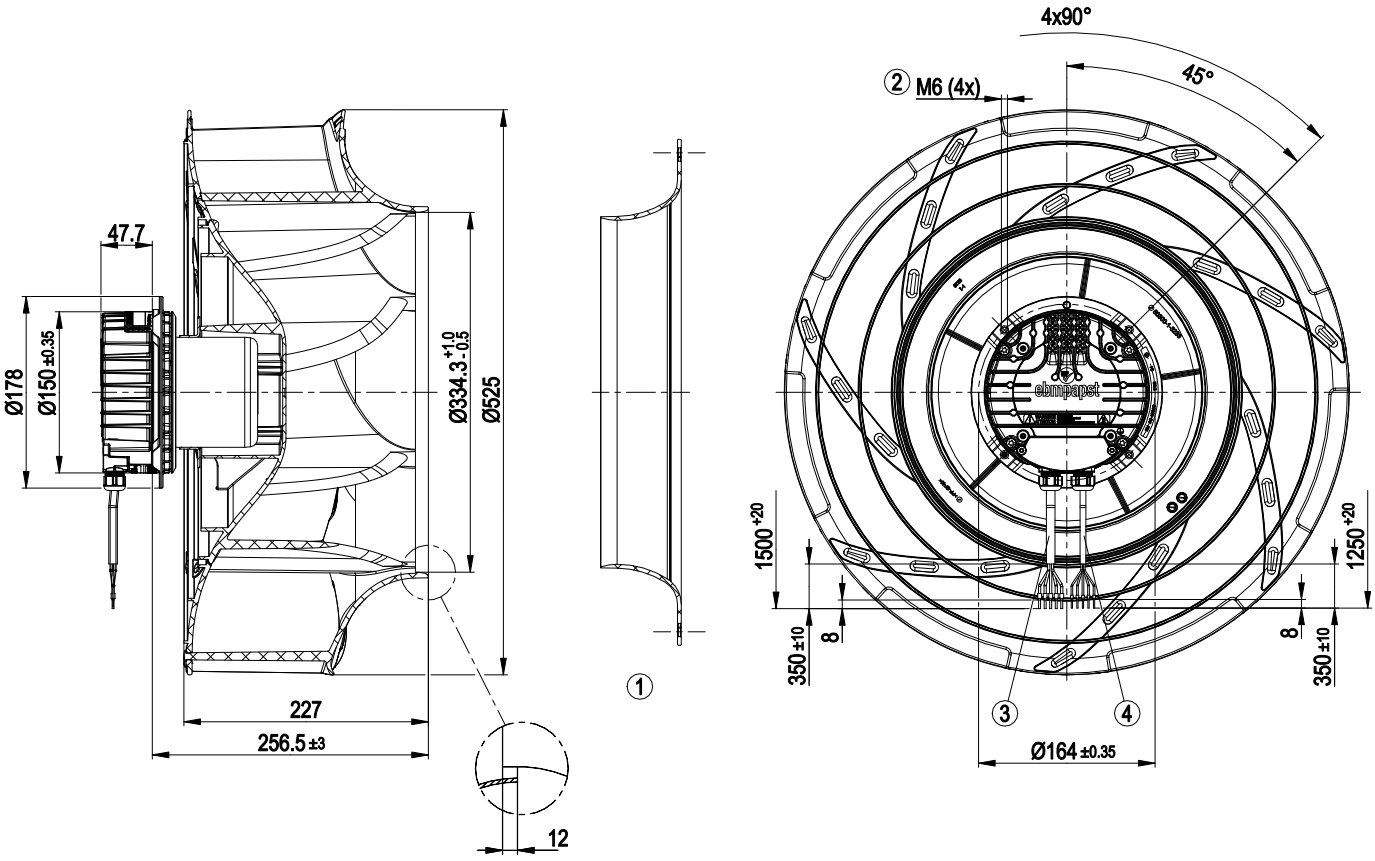
Mass	9.0 kg
Size	500 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 10 mA - Operation and alarm display - Alarm relay - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 MODBUS RTU - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure 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	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; EN 60335-1; CE
Approval	C22.2 Nr.77 + CAN/CSA-E60730-1; UL 1004-7 + 60730; VDE

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Product drawing



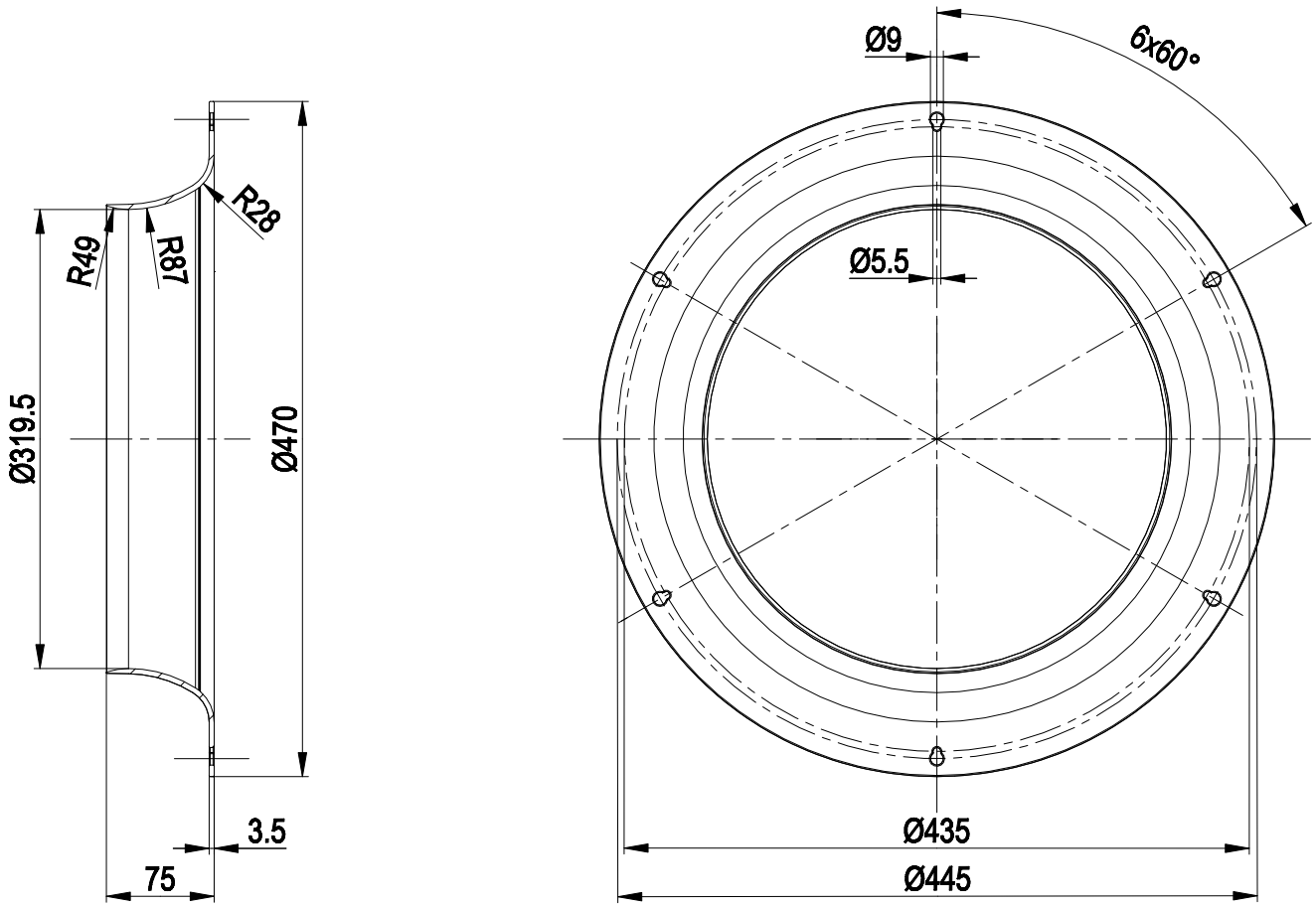
1	Accessory part: Inlet nozzle 50901-2-2943 not included in scope of delivery
2	Thread reach max. 16 mm
3	Connection line PVC AWG18, 5x lead tips crimped
4	Connection line PVC AWG22, 5x lead tips crimped

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Accessory part



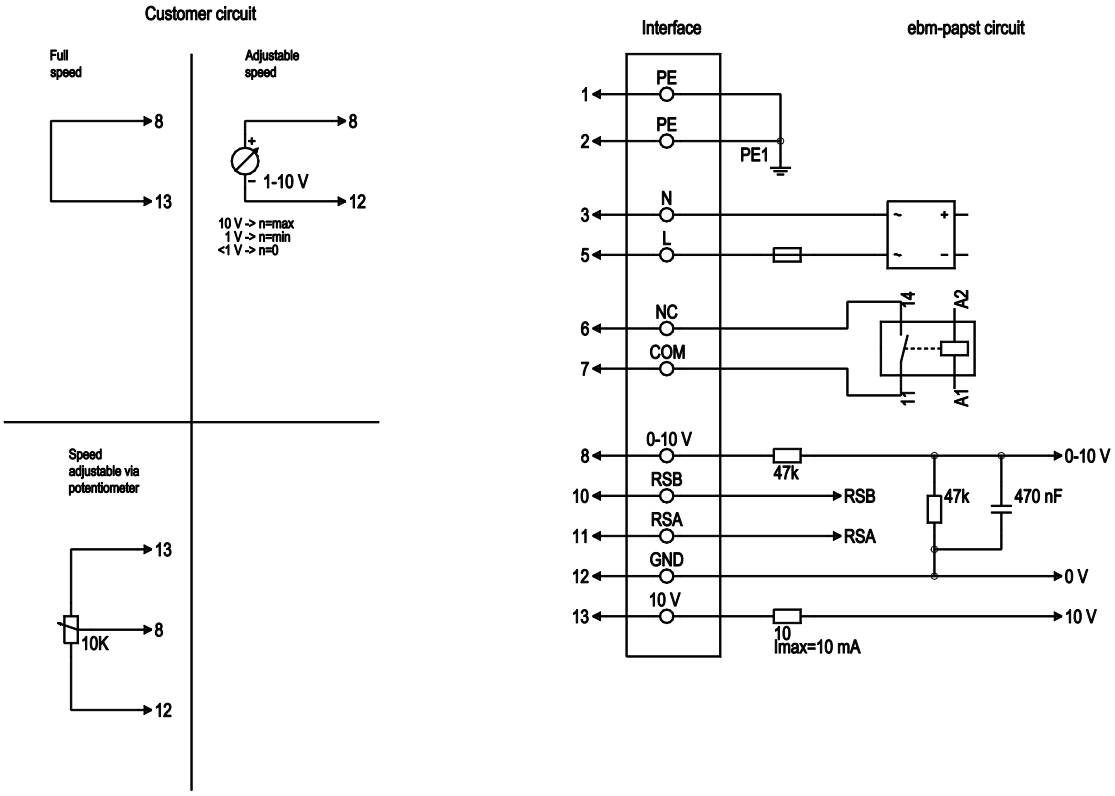
1	Accessory part: inlet nozzle 50901-2-2943

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Connection screen



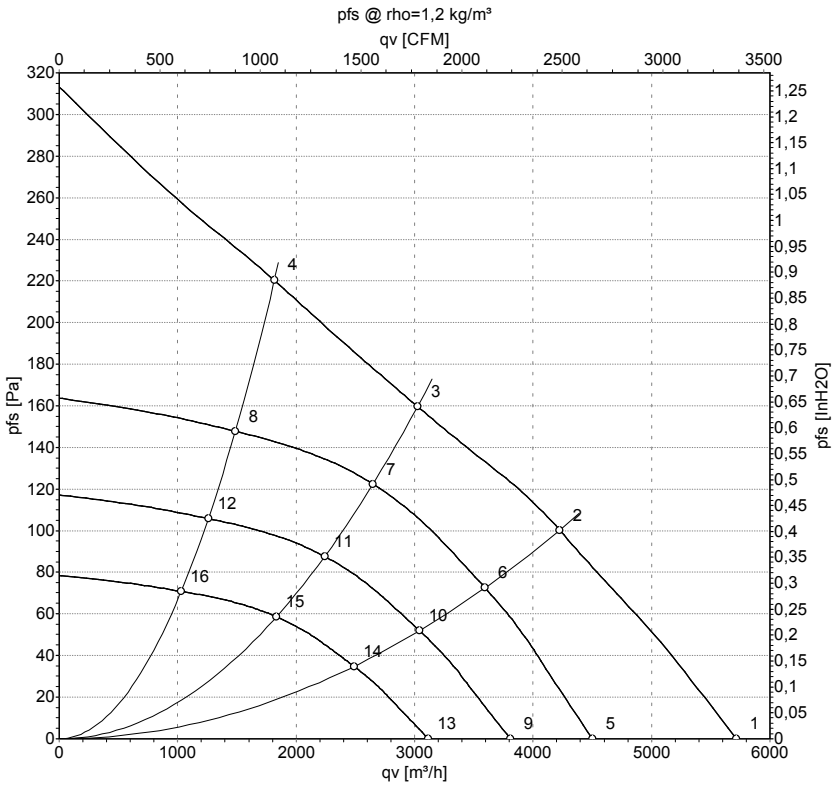
No.	Conn.	Designation	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, 50/60 Hz
1	5	L	black	Supply voltage, phase, 50/60 Hz
1	6	NC	white 1	Status relay, floating status contact; break for failure, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
1	7	COM	white 2	Status relay, floating status contact; common connection, contact rating 250 VAC / 2A (AC1) min. 10 mA, basic insulation on mains side and reinforced insulation on control interface side
2	8	0-10V	yellow	Analogue input 1 (set value); 0-10 V; Ri=100kΩ; parametrisable curve
2	10	RSB	brown	RS485 interface for Modbus, RSB
2	11	RSA	white	RS485 interface for Modbus, RSA
2	12	GND	blue	Reference ground for control interface, SELV
2	13	+10V	red	Fixed voltage output 10 VDC; +10 V +/-3%; max. 10 mA; short-circuit-proof; power supply for external devices (e.g. potentiometer)

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Charts: Air flow 50 Hz



Measurement: LU-152274-1

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}	LwA_{out}	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	230	50	825	226	1.00	60	68	73	5715	0	3365	0.00
2	230	50	765	250	1.10	54	62	67	4225	100	2485	0.40
3	230	50	750	250	1.10	49	56	61	3025	160	1780	0.64
4	230	50	795	250	1.10	52	59	63	1815	220	1070	0.88
5	230	50	650	111	0.49	54	62	67	4500	0	2650	0.00
6	230	50	650	154	0.68	50	58	63	3595	73	2115	0.29
7	230	50	650	168	0.74	46	53	58	2650	123	1560	0.49
8	230	50	650	138	0.61	47	54	58	1485	148	875	0.59
9	230	50	550	67	0.30	50	58	63	3810	0	2240	0.00
10	230	50	550	93	0.41	46	54	59	3040	52	1790	0.21
11	230	50	550	102	0.45	42	49	54	2240	88	1320	0.35
12	230	50	550	84	0.37	43	50	54	1260	106	740	0.43
13	230	50	450	37	0.16	45	52	58	3115	0	1835	0.00
14	230	50	450	51	0.23	41	49	54	2490	35	1465	0.14
15	230	50	450	56	0.25	37	44	49	1835	59	1080	0.24
16	230	50	450	46	0.20	38	44	49	1030	71	605	0.29

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

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