R3G500-RH52-28

EC centrifugal fan - RadiCal®

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

ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G500-RH52-28**
Motor	**M3G112-GA**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		ml
State		prelim.
Speed	min^{-1}	1150
Power input	W	880
Current draw	A	3.9
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	45

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

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	60.5	46.9	50.9
Efficiency grade N		71.6	58	62
Power input P_{ed}	kW	0.87		
Air flow q_v	m^3/h	4885		
Pressure increase p_{fs}	Pa	359		
Speed n	min^{-1}	1155		

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

EC centrifugal fan - RadiCal®

backward curved, single inlet

Technical features

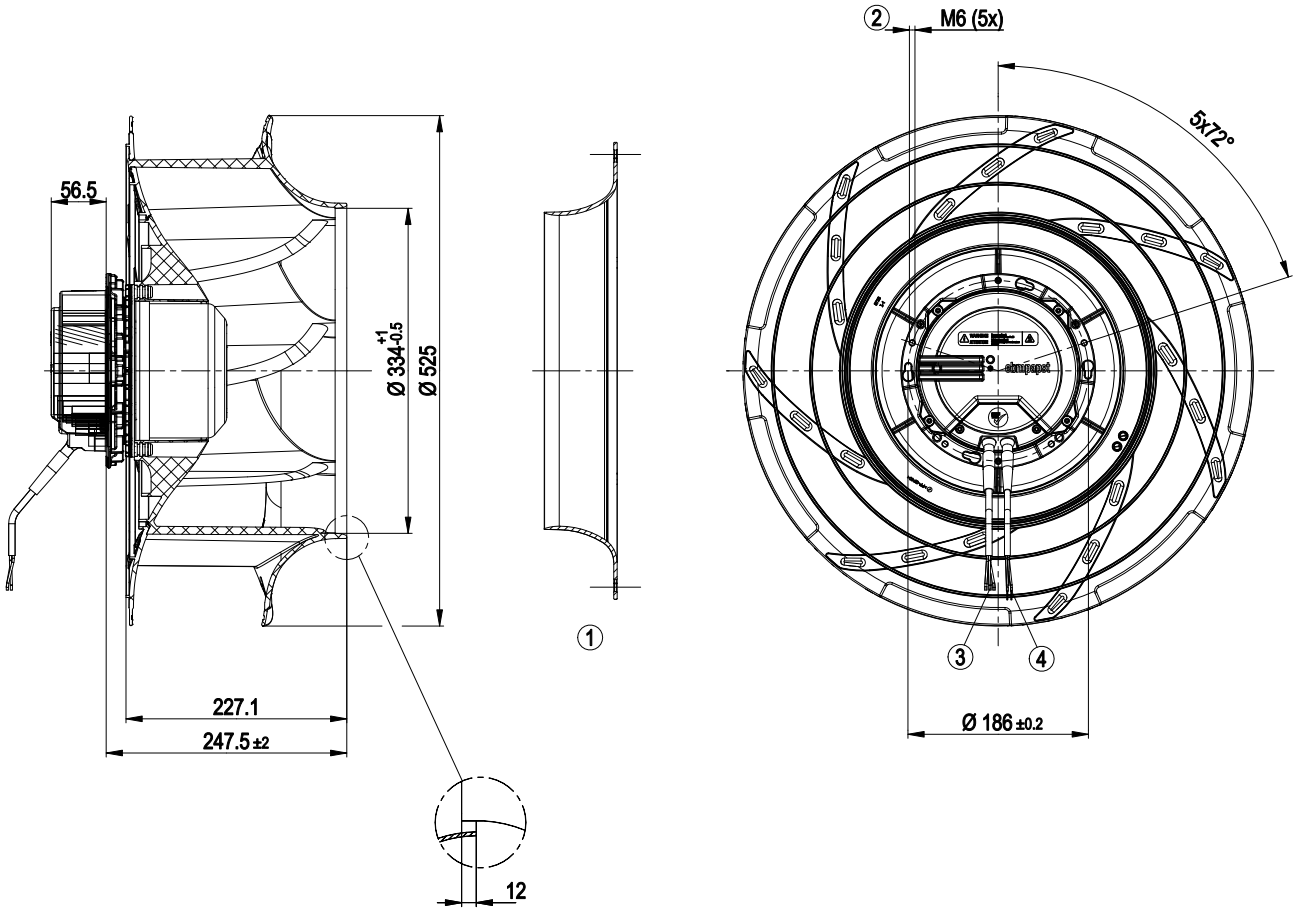
Mass	13 kg
Size	500 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F4-1
Max. permissible ambient motor temp. (transp./ storage)	+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
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 30 mA - Operation and alarm display: reversible voltage output 0 V / +15 V - Integrated PID controller - Output limit - Motor current limit - PFC, active - RS485 ebmBUS - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
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; CE

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

EC centrifugal fan - RadiCal®

backward curved, single inlet

Product drawing



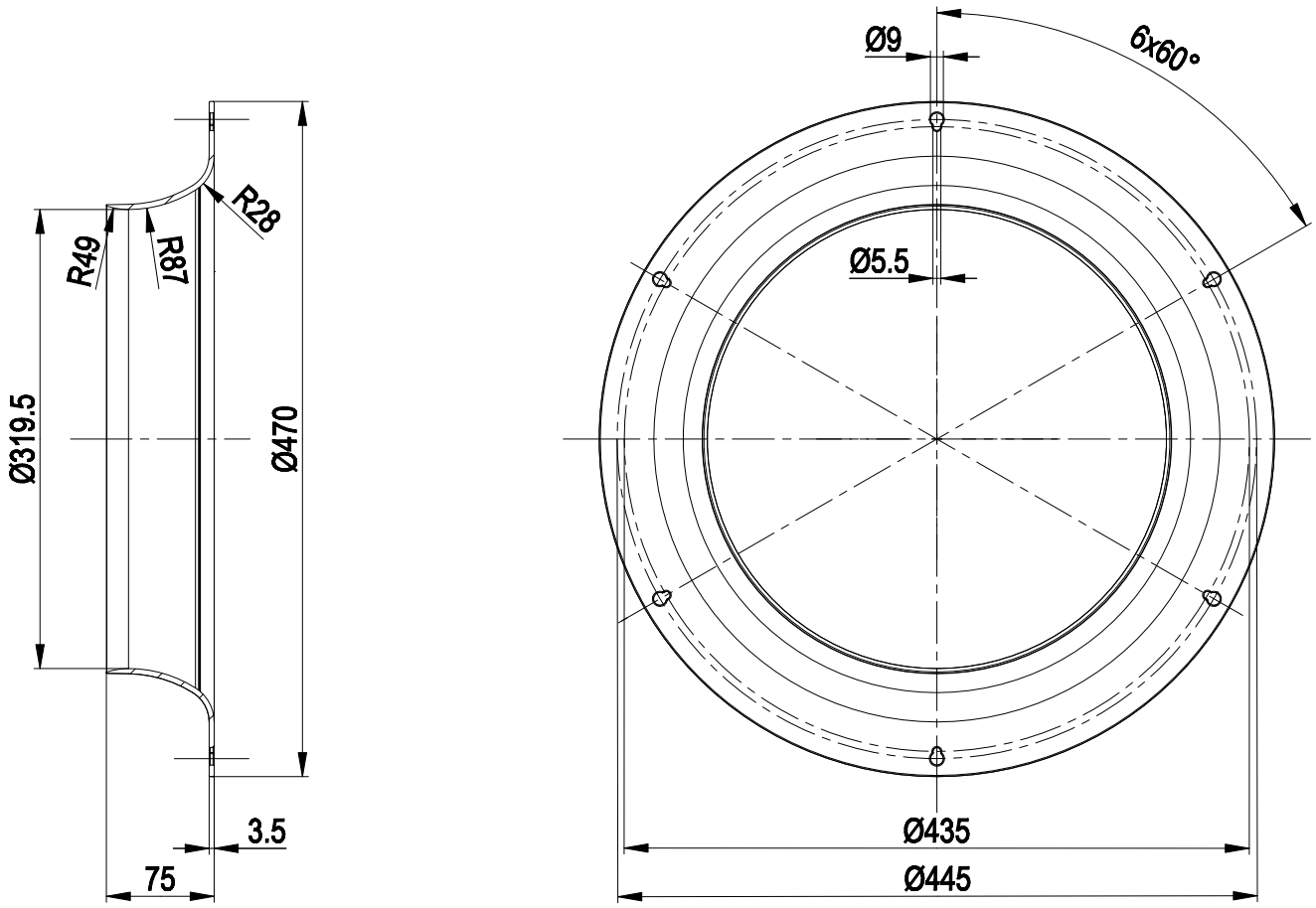
1	Accessory part: inlet nozzle 50901-2-2943 not included in scope of delivery.
2	Depth of screw 12-16 mm
3	Connection line PVC AWG 22, 4x crimped core-end sleeves
4	Connection line PVC AWG 18, 3x crimped core-end sleeves

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

EC centrifugal fan - RadiCal®

backward curved, single inlet

Accessory part



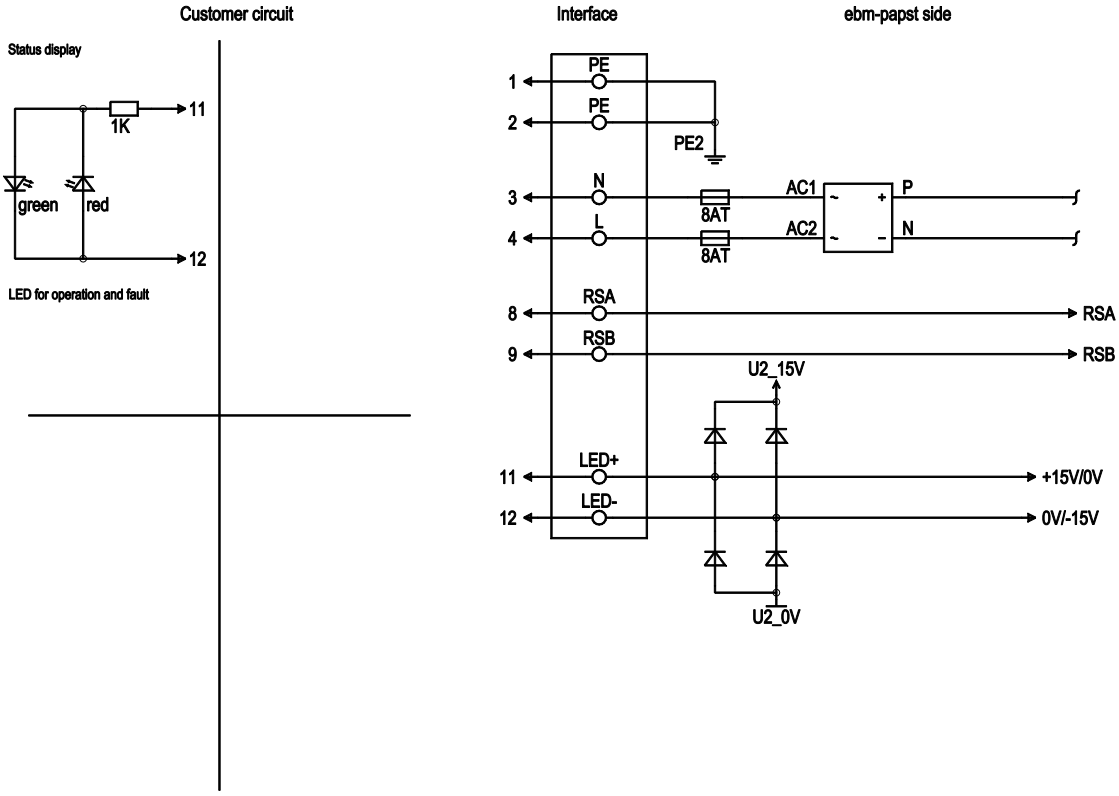
1	Accessory part: inlet nozzle 50901-2-2943

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

EC centrifugal fan - RadiCal®

backward curved, single inlet

Connection screen



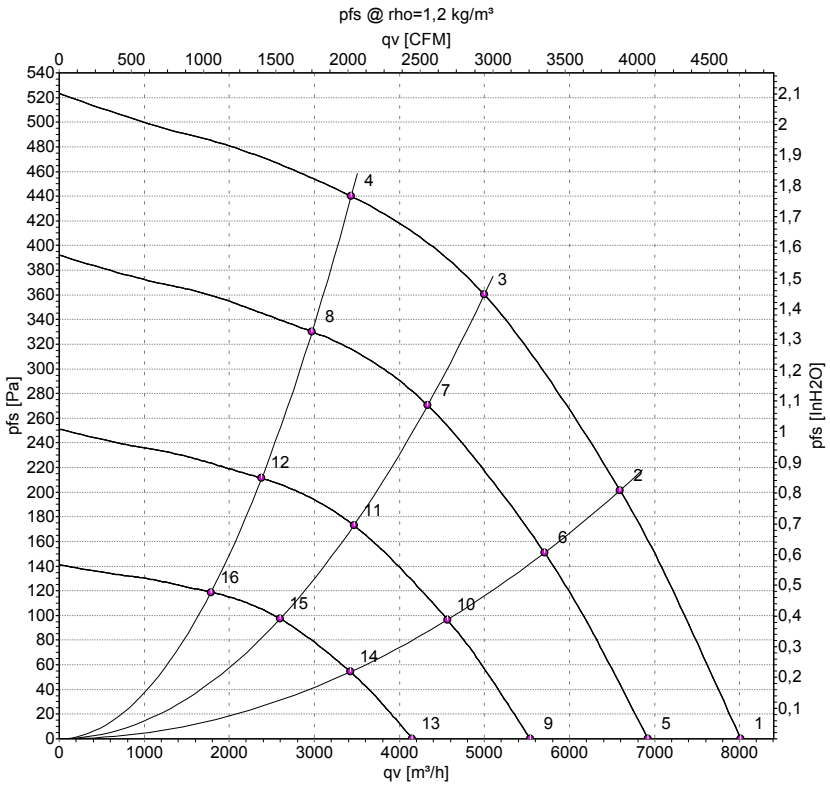
Line	No.	Signal	Colour	Function / assignment
1	1, 2	PE	green/yellow	Protective earth
1	3	N	blue	Supply voltage, neutral conductor, for voltage range refer to rating plate, 50/60 Hz
1	4	L	black	Supply voltage, phase, for voltage range refer to rating plate, 50/60 Hz
2	8	RSA	yellow	RS485 interface for ebm BUS, RSA, SELV
2	9	RSB	white	RS485 interface for ebmBUS, RSB, SELV
2	11	LED+	red	Voltage output 15 V (+15 % / -10 %) max. 30 mA, Supply voltage for external device (e.g. status display for LED), SELV
2	12	LED-	blue	Signal ground for control interface, SELV

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

EC centrifugal fan - RadiCal®

backward curved, single inlet

Charts: Air flow 50 Hz



Measurement: LU-145845

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}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa
1	230	50	1150	597	2.62	68	75	81	8015	0
2	230	50	1150	799	3.51	65	71	78	6595	200
3	230	50	1150	880	3.90	62	68	74	5000	360
4	230	50	1150	793	3.47	62	68	74	3435	440
5	230	50	1000	385	1.69	64	71	78	6920	0
6	230	50	1000	517	2.28	61	68	74	5705	152
7	230	50	1000	569	2.50	58	64	70	4330	272
8	230	50	1000	516	2.25	58	65	70	2975	330
9	230	50	800	197	0.86	59	66	72	5535	0
10	230	50	800	265	1.17	55	62	68	4565	97
11	230	50	800	291	1.28	52	59	65	3465	174
12	230	50	800	264	1.15	53	59	65	2380	211
13	230	50	600	83	0.36	51	58	65	4150	0
14	230	50	600	112	0.49	48	55	61	3425	55
15	230	50	600	123	0.54	45	52	57	2600	98
16	230	50	600	111	0.49	45	52	57	1785	119

U = Supply voltage · f = Frequency · n = Speed · 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
qv = Air flow · p_{fs} = Pressure increase

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