

R3G355-RS02-H2 ebmpapst Datasheet

sales@fansco.com

www.fansco.com

Limited partnership · Headquarters Muldingen  
County court Stuttgart · HRA 590344

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

## Nominal data

Type	R3G355-RS02-H2	
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 <sup>-1</sup>	1850
Power input	W	500
Current draw	A	2.2
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

## Data according to ErP directive

		Actual	Request 2015			
01 Overall efficiency $\eta_{es}$	%	67.2	48.3	09 Power input $P_{ed}$	kW	0.5
02 Measurement category		A		09 Air flow $q_v$	m <sup>3</sup> /h	2805
03 Efficiency category		Static		09 Pressure increase $p_{fs}$	Pa	395
04 Efficiency grade N		80.9	62	10 Speed (rpm) $n$	min <sup>-1</sup>	1850
05 Variable speed drive		Yes		11 Specific ratio <sup>*</sup>		1.00

Data definition with optimum efficiency.

The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

<sup>\*</sup> Specific ratio =  $1 + p_{fs} / 100\,000\text{ Pa}$

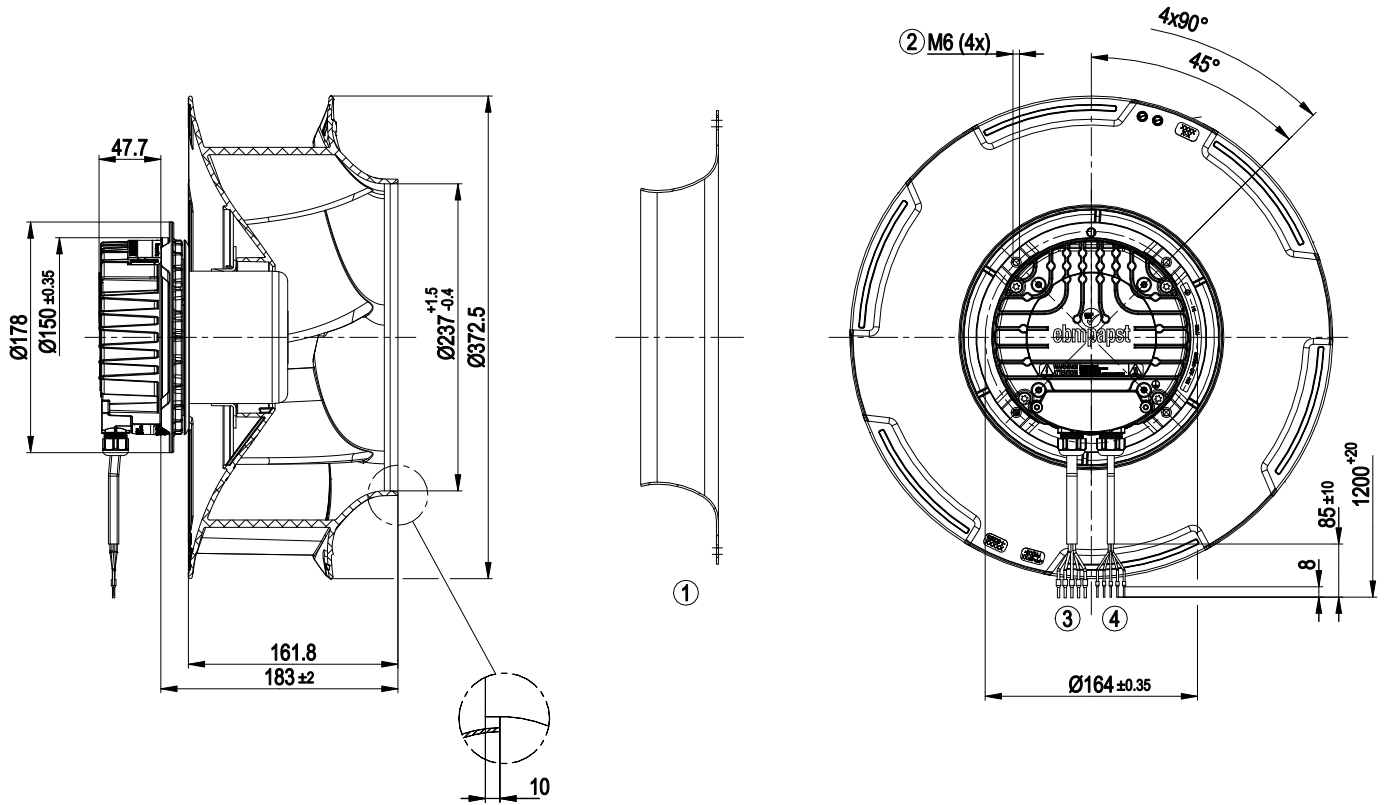
LU-151750



### Technical features

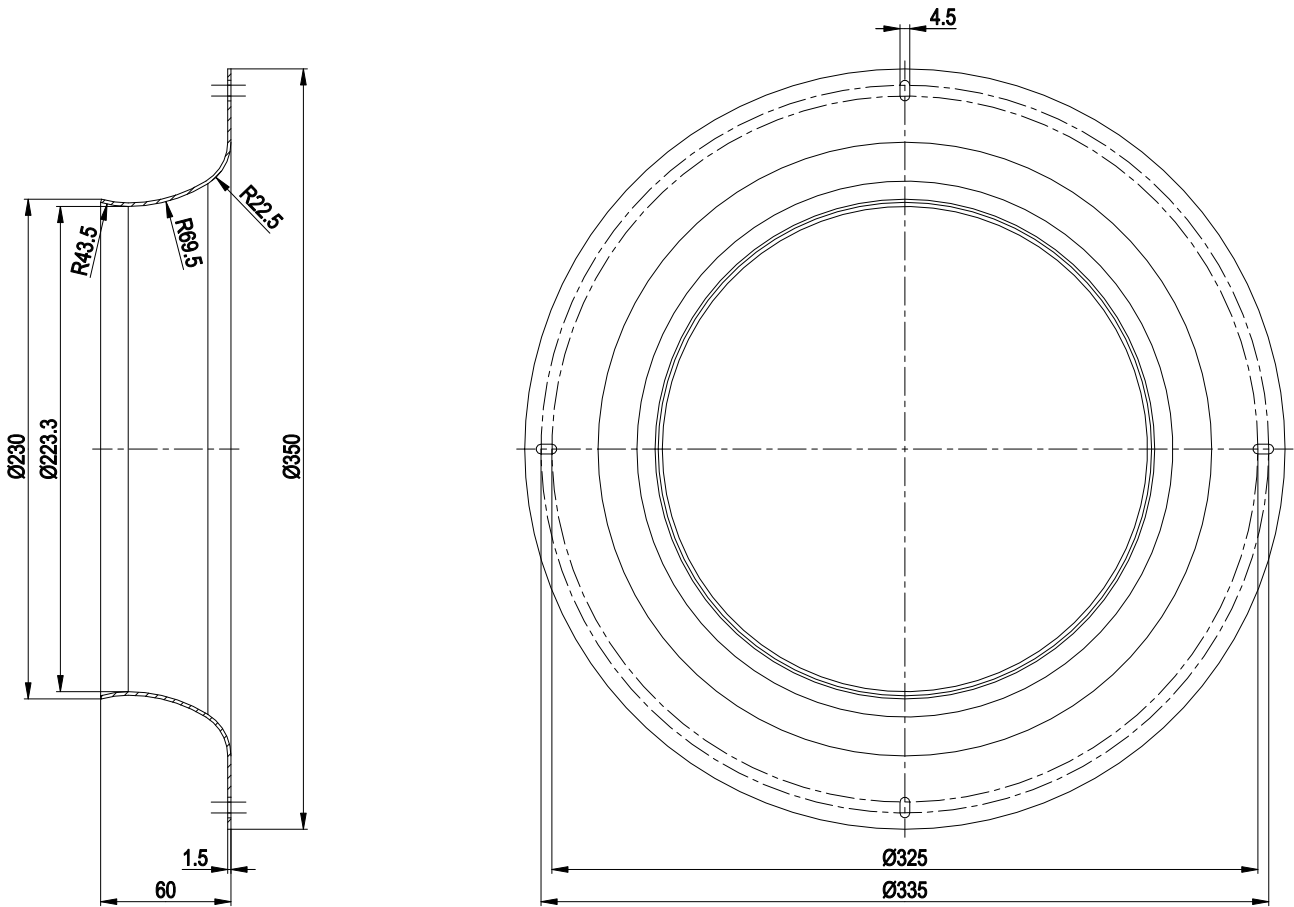
Mass	5.6 kg
Size	355 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	PP plastic
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 55
Insulation class	"F"
Humidity (F)/environmental protection class (H)	F3-1
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	<ul style="list-style-type: none"> <li>- Output 10 VDC, max. 10 mA</li> <li>- Operation and alarm display</li> <li>- Alarm relay</li> <li>- Integrated PID controller</li> <li>- Output limit</li> <li>- Motor current limit</li> <li>- PFC, active</li> <li>- RS485 MODBUS RTU</li> <li>- Soft start</li> <li>- Control input 0-10 VDC / PWM</li> <li>- Control interface with SELV potential safely disconnected from the mains</li> <li>- Over-temperature protected electronics / motor</li> <li>- Line undervoltage / phase failure detection</li> </ul>
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 60335-1; EN 61800-5-1; CE
Approval	UL 1004-7 + 60730; C22.2 Nr.77 + CAN/CSA-E60730-1

Product drawing



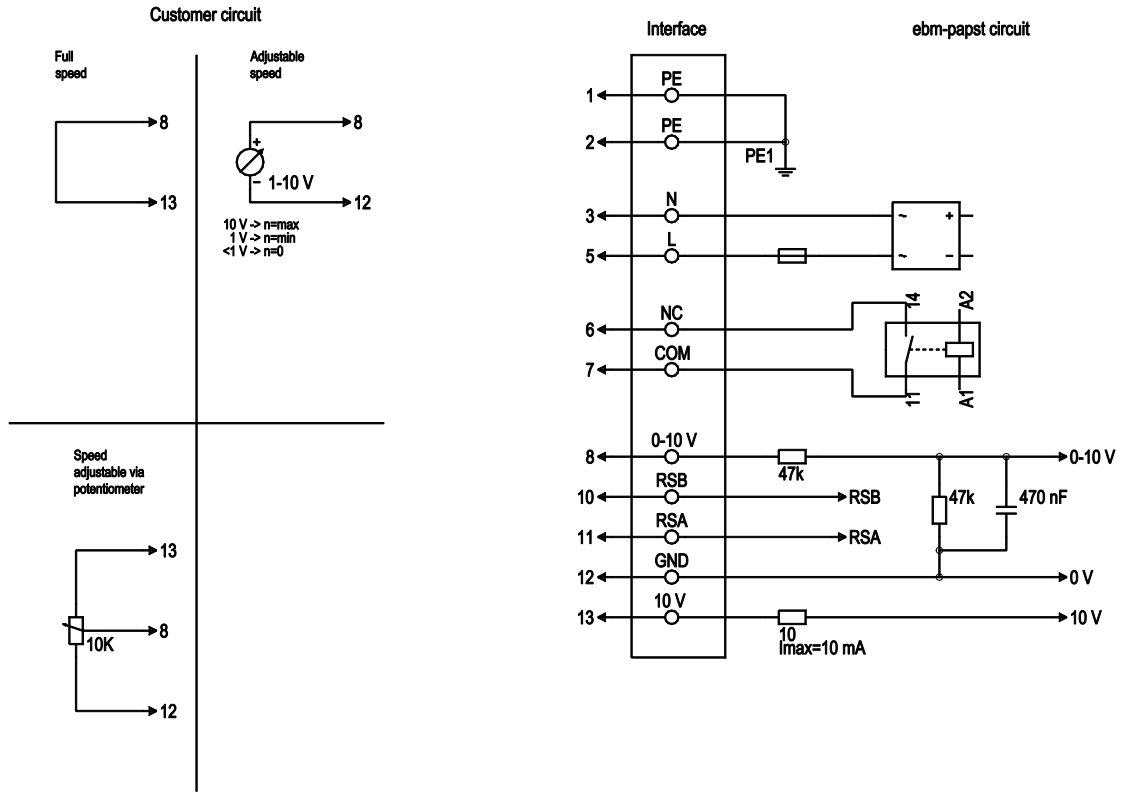
1	Accessory part: Inlet nozzle 35500-2-4013 not included in scope of delivery
2	Thread reach max. 16 mm
3	Connection line PVC AWG18, 5x crimped core-end sleeves
4	Connection line PVC AWG22, 5x crimped core-end sleeves

## Accessory part



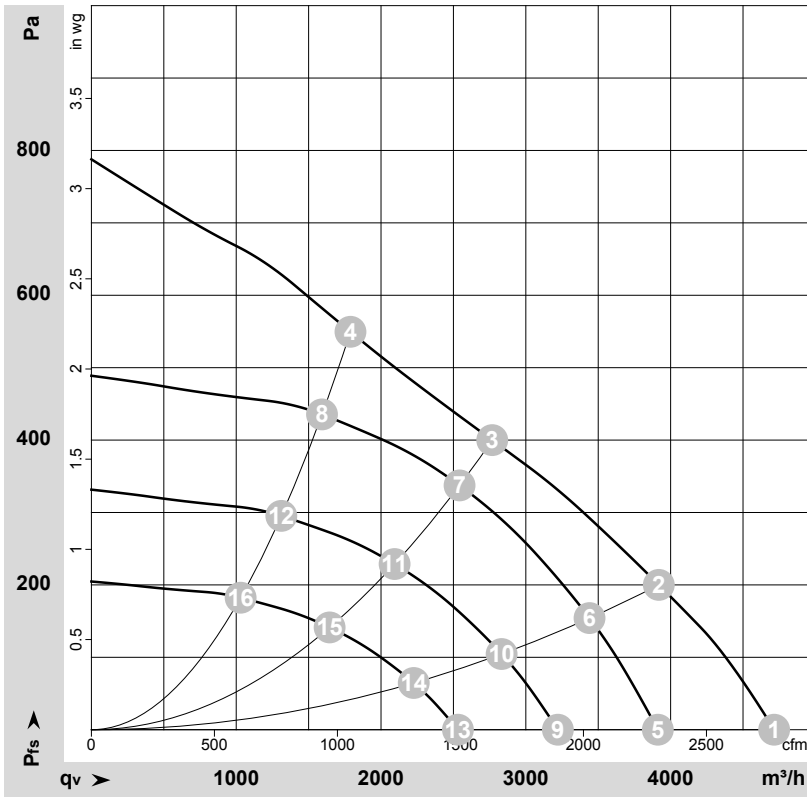
Inlet nozzle 35500-2-4013 not included in scope of delivery

## 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)

## Charts: Air flow 50 Hz



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-151750-1

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebmpapst. 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 <sub>ed</sub>	I	LpA <sub>in</sub>	LwA <sub>in</sub>	q <sub>v</sub>	P <sub>fs</sub>	q <sub>v</sub>	P <sub>fs</sub>
	V	Hz	min <sup>-1</sup>	W	A	dB(A)	dB(A)	m³/h	Pa	cfm	inH2O
1	230	50	2050	456	1.99	79	87	4715	0	2775	0.00
2	230	50	1935	500	2.20	71	78	3920	200	2305	0.80
3	230	50	1850	500	2.20	62	69	2770	400	1630	1.61
4	230	50	1910	500	2.20	66	74	1790	550	1055	2.21
5	230	50	1700	261	1.14	75	82	3910	0	2305	0.00
6	230	50	1700	344	1.50	68	74	3440	155	2025	0.62
7	230	50	1700	394	1.72	60	67	2540	338	1495	1.36
8	230	50	1700	361	1.57	63	71	1590	435	935	1.75
9	230	50	1400	146	0.64	70	77	3220	0	1895	0.00
10	230	50	1400	192	0.84	63	70	2835	105	1665	0.42
11	230	50	1400	220	0.96	55	62	2095	230	1230	0.92
12	230	50	1400	202	0.88	58	66	1310	295	770	1.18
13	230	50	1100	71	0.31	64	71	2530	0	1490	0.00
14	230	50	1100	93	0.41	57	63	2225	65	1310	0.26
15	230	50	1100	107	0.47	49	56	1645	142	970	0.57
16	230	50	1100	98	0.43	52	60	1030	182	605	0.73

U = Supply voltage · f = Frequency · n = Speed (rpm) · P<sub>ed</sub> = Power input · I = Current draw · LpA<sub>in</sub> = Sound pressure level inlet side · LwA<sub>in</sub> = Sound power level inlet side · q<sub>v</sub> = Air flow  
P<sub>fs</sub> = Pressure increase

