

R3G355-AY51-11 ebmpapst Datasheet

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Nominal data

Type	R3G355-AY51-11	
Motor	M3G112-GA	
Phase		3~
Nominal voltage	VAC	200
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Type of data definition		ml
Speed	min ⁻¹	2600
Power input	W	1700
Current draw	A	5.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+40

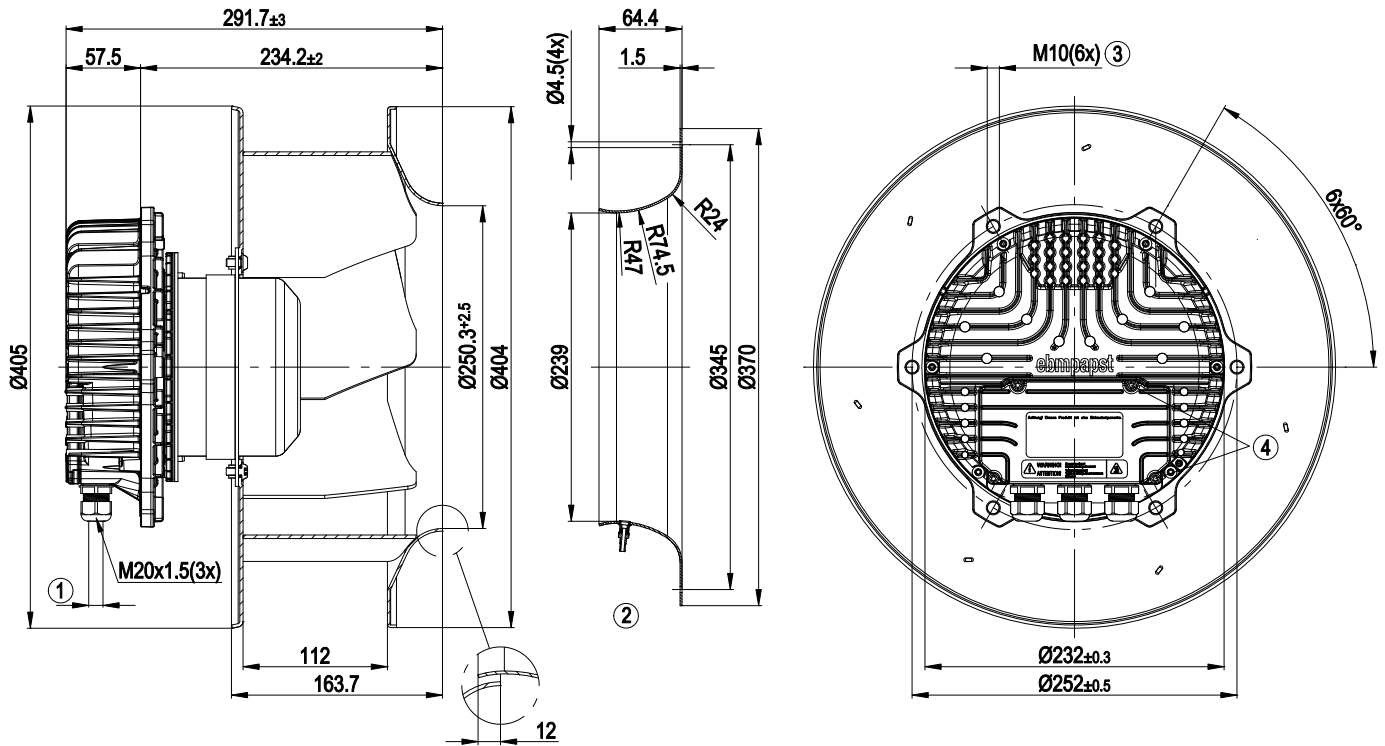
ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit
 Subject to alterations



Technical features

Mass	13 kg
Size	355 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 54
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
Operation mode	S1
Motor bearing	Ball bearing
Technical features	<ul style="list-style-type: none"> - External 24 V input (programming) - RS485 MODBUS RTU - PFC, passive - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Alarm relay - Integrated PID controller - Input for sensor 0-10 V or 4-20 mA - Output for slave 0-10 V - Motor current limit - Soft start - Line undervoltage / phase failure detection - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Over-temperature protected electronics
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
Leakage current	<= 3.5 mA
Electrical leads	Via terminal box
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1

Product drawing



1	Cable diameter: min. 4 mm, max. 10 mm; tightening torque: 4±0.6 Nm
2	Accessory part: inlet nozzle 35675-2-4013 with a pressure tap not included in the standard scope of delivery; other inlet nozzles on request
3	Depth of screw 12 - 16 mm
4	Tightening torque 3.5±0.5 Nm



Connection screen

	8		
	9	Din 2	
	10	Din 3	
	11	GND	
	12	Ain 2 U	
	13	+ 20 V	
	14	Ain 2 I	
1		RSA	
2		RSB	
3		GND	
4		Ain 1 U	
5		+ 10 V	
6		Ain 1 I	
7		Din 1	

KL 3

1	NO
2	COM
3	NC

KL 2

PE

PE

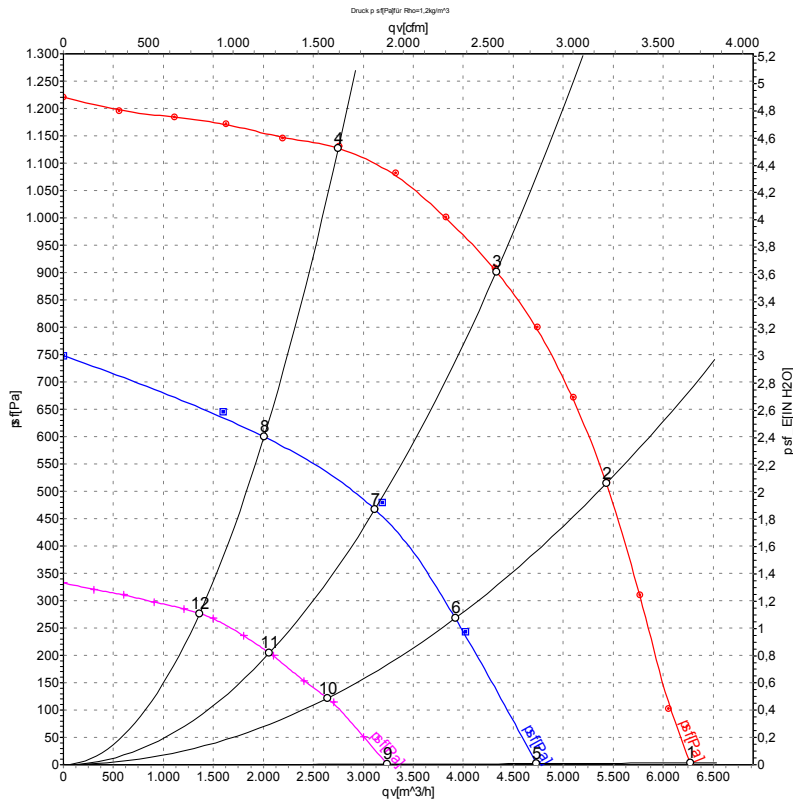
1	L1
2	L2
3	L3

KL 1

No.	Pin	Signal	Function / assignment
KL 1	1	L1	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
KL 1	2	L2	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
KL 1	3	L3	Mains supply connection, supply voltage 3~200-240 VAC; 50/60 Hz
PE		PE	Earth connection, PE connection
KL 2	1	NO	Status relay, floating status contact; normally open; close with error
KL2	2	COM	Status relay; floating status contact; changeover contact; common connection; contact rating 250 VAC / 2 A (AC1)
KL2	3	NC	Status relay, floating status contact; break with error
KL 3	1	RSA	Bus connection RS485; RSA; MODBUS RTU
KL 3	2	RSB	Bus connection RS485; RSB; MODBUS RTU
KL 3	3 / 10	GND	Signal ground for control interface KL3
KL 3	4	Ain1 U	Analogue input 1 (set value); 0-10 V; Ri= 100 kΩ; parametrisable curves; only usable as alternative to input Ain1 I
KL 3	5	+ 10 V	Fixed voltage output 10 VDC; +10 V +/-3 %; max. 10 mA; short circuit proof; power supply for ext. devices (e.g. potentiometer)
KL 3	6	Ain1 I	Analogue input 1 (set value); 4-20 mA; Ri= 100 Ω; parametrisable curves; only usable as alternative to input Ain1 U
KL 3	7	Din1	Digital input 1: enabling of electronics; enabling: open pin or applied voltage 5 to 50 VDC; disabling: bridge to GND or applied voltage < 1 VDC; reset function: triggers software reset after a level change to <1 V
KL 3	8	Din2	Digital input 2: parameter set switch 1/2; according to EEPROM setting, the valid/used parameter set is selectable per BUS or per digital input DIN2. Parameter set 1: open pin or applied voltage 5 to 50 VDC; parameter set 2: bridge to GND or applied voltage < 1 VDC
KL 3	9	Din3	Digital input 3: Control characteristic of the integrated controller; according to EEPROM setting, the control characteristic of the integrated controller is normally/inversely selectable per BUS or per digital input; normal: open pin or applied voltage 5 to 50 VDC (control deviation = actual sensor value - set value) inverse: bridge to GND or applied voltage < 1 VDC (control deviation = set value - actual sensor value)
KL 3	11	Ain2 U	Analogue input 2; actual sensor value 0-10 V; Ri= 100 kΩ; parametrisable curve; only usable as alternative to input Ain2 I
KL 3	12	+ 20 V	Fixed voltage output 20 VDC; +20 V +/-10 %; max. 50 mA; short circuit proof; power supply for ext. devices (e.g. sensors)
KL 3	13	Ain2 I	Analogue input 2; actual sensor value 4-20 mA; Ri= 100 Ω; parametrisable curve; only usable as alternative to input Ain2 U
KL 3	14	Aout	Analogue output 0-10 V; max. 5 mA; output of the actual motor control factor (output voltage of electronics)/ of the actual motor speed; function selectable per bus; parametrisable curve.



Charts: Air flow 50 Hz



Measurement: LU-106936
 Measurement: LU-108548
 Measurement: LU-106951

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 _e	I	LpA _{in}	LwA _{in}	LwA _{out}	qv	P _{sf}
	V	Hz	min ⁻¹	W	A	dB(A)	dB(A)	dB(A)	m ³ /h	Pa
1	200	50	2600	1142	3.50	85	92	97	6270	0
2	200	50	2600	1515	4.60	76	83	89	5430	515
3	200	50	2600	1700	5.20	73	79	86	4330	900
4	200	50	2600	1600	4.86	76	83	89	2750	1130
5	200	50	1940	436	1.46	78	84	88	4735	0
6	200	50	1910	541	1.76	69	76	81	3920	272
7	200	50	1885	534	1.90	67	73	80	3115	487
8	200	50	1905	557	1.82	69	76	82	2005	603
9	200	50	1330	194	0.80	69	76	81	3235	0
10	200	50	1315	226	0.90	63	69	74	2640	123
11	200	50	1305	239	0.94	59	66	72	2060	205
12	200	50	1305	237	0.92	59	66	72	1360	277

