

R3G400-AM56-11

EC centrifugal fan

backward curved, single inlet



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Nominal data

Type	R3G400-AM56-11	
Motor	M3G112-EA	
Phase		1~
Nominal voltage	[VAC]	230
Nominal voltage range	[VAC]	200 .. 277
Frequency	[Hz]	50/60
Type of data definition		ml
Speed	[min ⁻¹]	1720
Power input	[W]	775
Current draw	[A]	3.5
Min. ambient temperature	[°C]	-25
Max. ambient temperature	[°C]	40

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

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Technical features

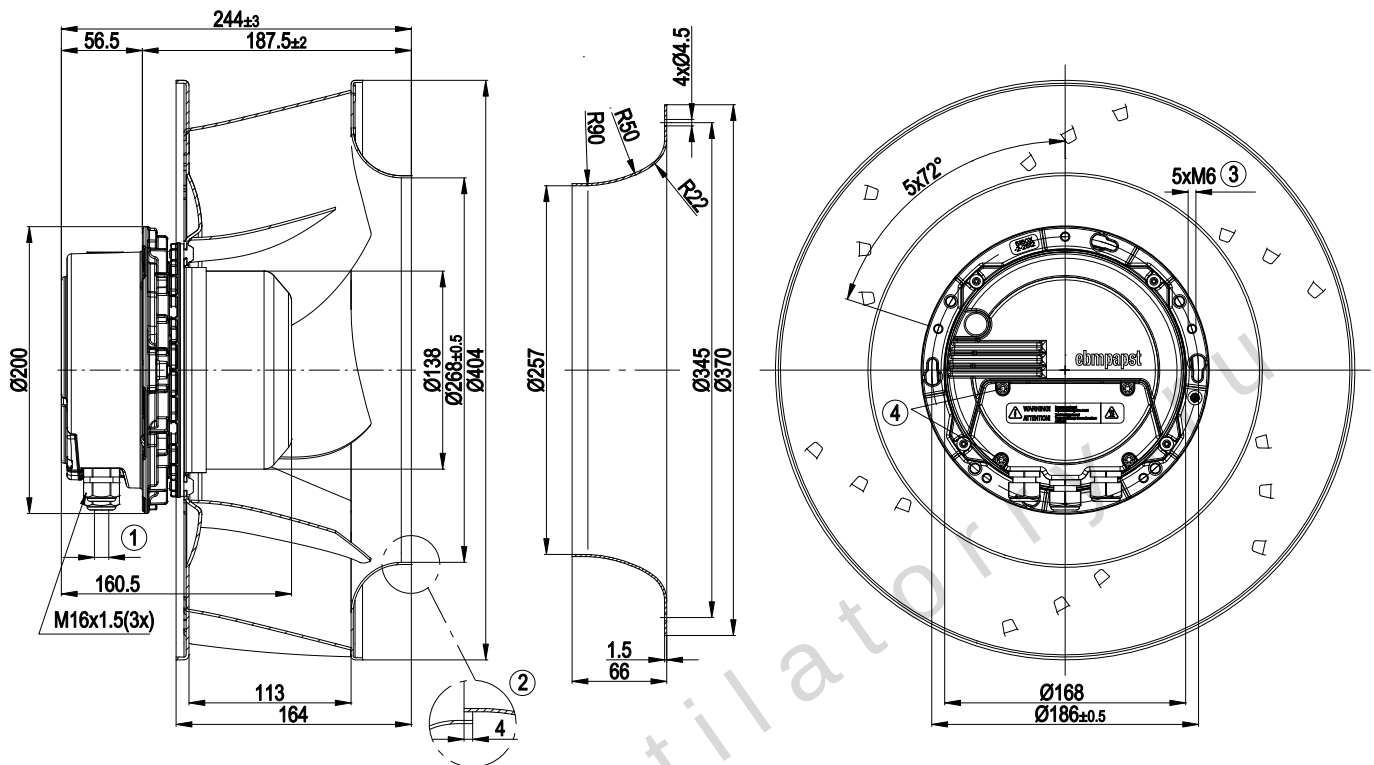
Leakage current	<= 3,5 mA
General description	Integrated electronics
Size	400 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Electrical leads	Via terminal box
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Insulation class	"B"
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	7.75 kg
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminum sheet, joined by tabs
Motor protection	Thermal overload protector (TOP) wired internally
Surface of rotor	Coated in black
Number of blades	6
Type of protection	IP 54
Protection class	I
Technical features	- Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Alarm relay - PFC, active - Integrated PID controller - Output for slave 0-10 V - RS485 ebmBUS - Line undervoltage detection - Motor current limit - Soft start - Line undervoltage / phase failure detection - Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C

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Product drawing



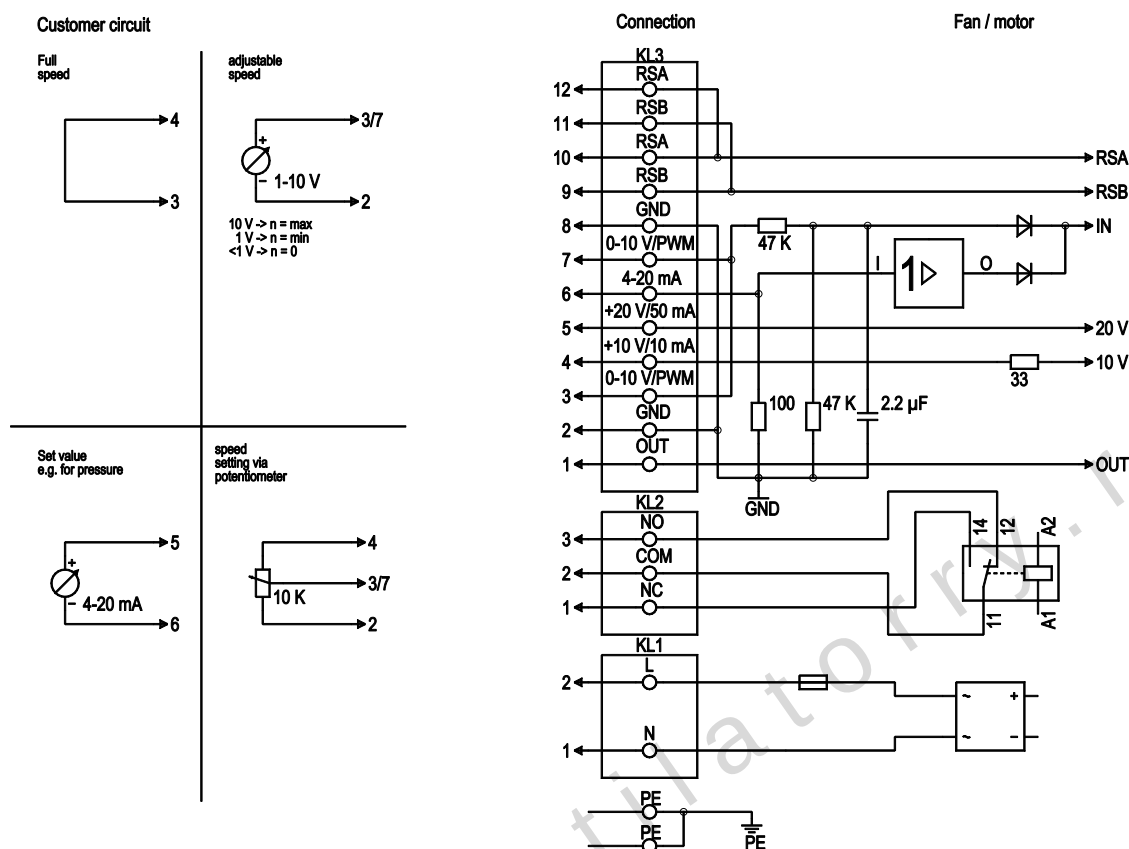
1	Cable diameter: min. 4 mm, max. 10 mm, tightening torque: 2.5±0.4 Nm
2	Accessory part: inlet nozzle 54476-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
3	Depth of screw 12 - 16 mm
4	Tightening torque 3.5±0.5 Nm

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Connection screen



Drawing preliminary!

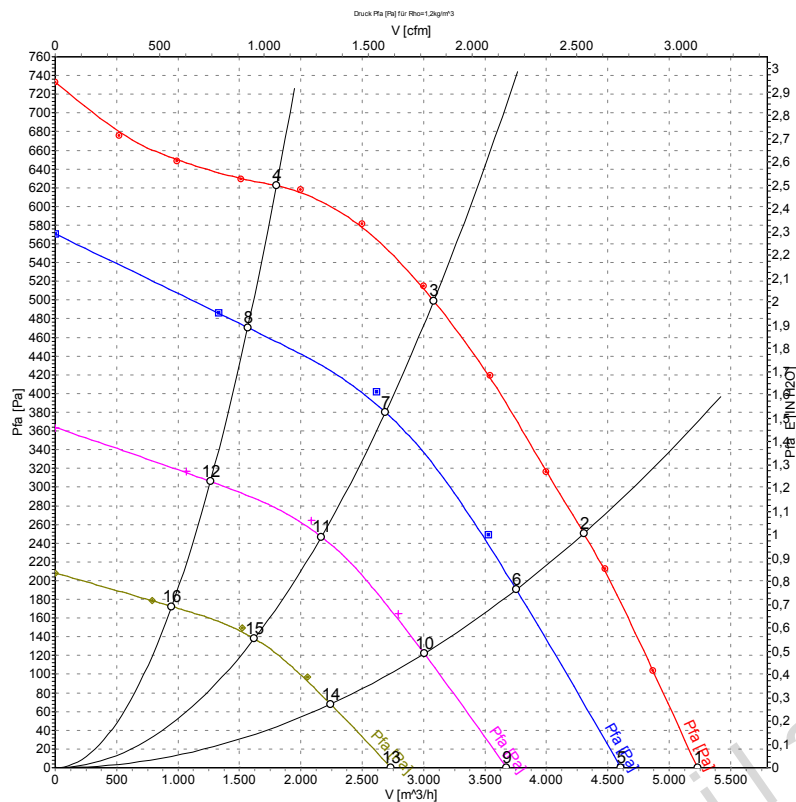
No.	Pin	Signal	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2	N, L	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, normally closed connection
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open connection
KL3	1	OUT	Analogue output, 0-10 VDC, max. 3 mA, SELV, Output of the current motor level control coefficient: 1 V corresponds to 10% level control coefficient, 10 V correspond to 100% level control coefficient.
KL3	2, 8	GND	Reference mass for control interface, SELV
KL3	3, 7	0-10 V	Use control / actual 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, supply voltage for ext. devices (e.g. potentiometer), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, supply voltage for ext. devices (e.g. sensors), SELV
KL3	6	4-20 mA	Use control / actual 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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Charts: Air flow 50 Hz



Measurement: LU-109926
 Measurement: LU-118303
 Measurement: LU-118304
 Measurement: LU-118305

Measured values

	U	f	n	P ₁	I	LpA _{ss}	LpA _{ds}	LwA _{ss}	LwA _{ds}	$\dot{V}$	p _{fa}
	[V]	[Hz]	[min ⁻¹]	[W]	[A]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]	[m ³ /h]	[Pa]
1	230	50	1720	568	2.58	77	74	83	89	5230	0
2	230	50	1720	691	3.10	73	70	79	85	4305	250
3	230	50	1720	775	3.50	67	65	73	79	3085	500
4	230	50	1720	673	3.03	73	72	80	85	1805	625
5	230	50	1500	364	1.69	73	70	79	85	4605	0
6	230	50	1500	438	2.02	68	65	74	79	3755	196
7	230	50	1500	495	2.27	64	63	71	76	2690	390
8	230	50	1500	421	1.94	68	67	75	80	1565	471
9	230	50	1200	197	0.94	67	63	73	78	3675	0
10	230	50	1200	230	1.08	62	58	68	73	3005	125
11	230	50	1200	260	1.21	59	57	65	71	2170	253
12	230	50	1200	218	1.03	62	60	68	73	1265	307
13	230	50	900	93	0.48	58	55	66	70	2735	0
14	230	50	900	107	0.53	54	51	61	65	2245	70
15	230	50	900	118	0.57	51	51	60	65	1620	140
16	230	50	900	102	0.50	53	52	61	67	950	172