R3G355-AI56-01

EC centrifugal fan

backward curved, single inlet



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Nominal data

Type	**R3G355-AI56-01**
Motor	**M3G112-EA**

Phase		3~
Nominal voltage	[VAC]	400
Nominal voltage range	[VAC]	380 .. 480
Frequency	[Hz]	50/60
Type of data definition		ml
Speed	[min^{-1}]	2200
Power input	[W]	950
Current draw	[A]	1.75
Min. ambient temperature	[°C]	-25
Max. ambient temperature	[°C]	60

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

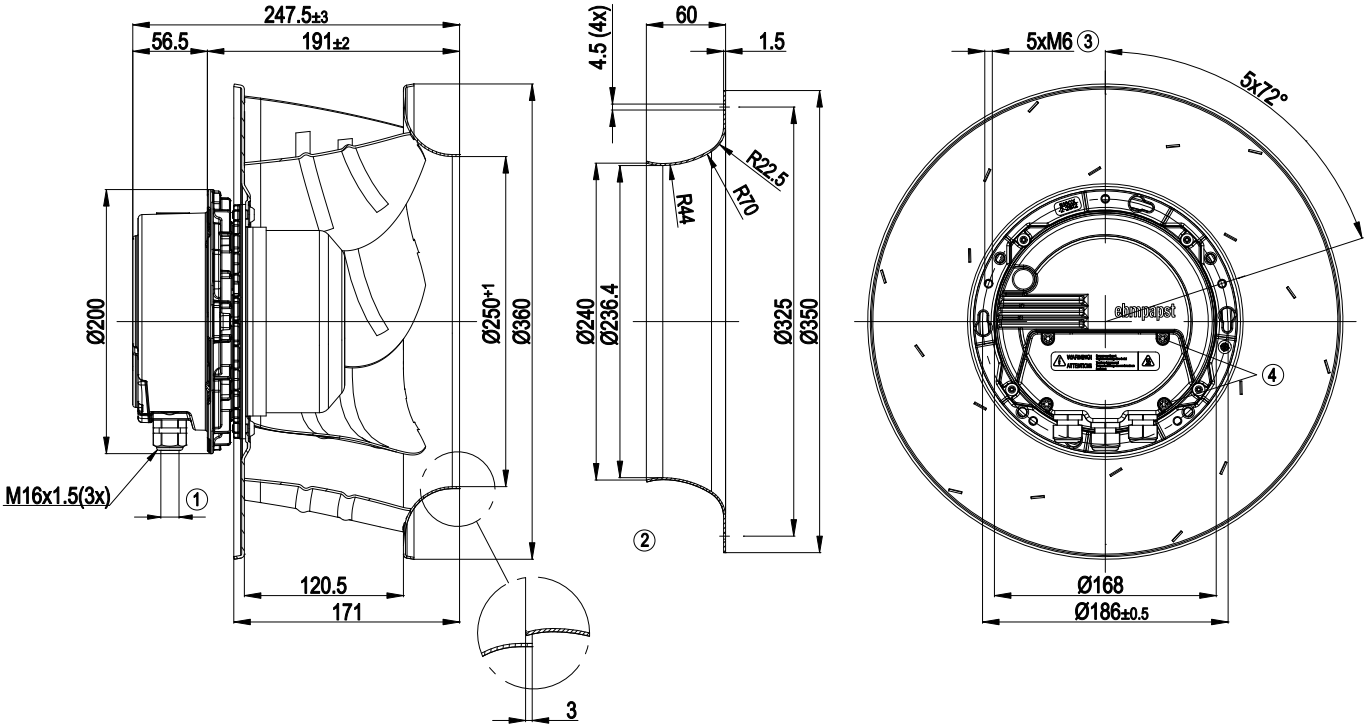
Leackage current	<= 3.5 mA
Size	355 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Electrical leads	Via terminal box
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Humidity class	F4-1
Insulation class	"B"
Condensate discharge holes	Rotor-side
Motor bearing	Ball bearing
Mass	8 kg
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
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	- Output 10 VDC, max. 10 mA - Output 20 VDC, max. 50 mA - Output for slave 0-10 V - Input for sensor 0-10 V or 4-20 mA - Alarm relay - Integrated PID controller - Motor current limit - PFC, passive - RS485 ebmBUS - Soft start - Control input 0-10 VDC / PWM - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Approval	CCC

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Product drawing



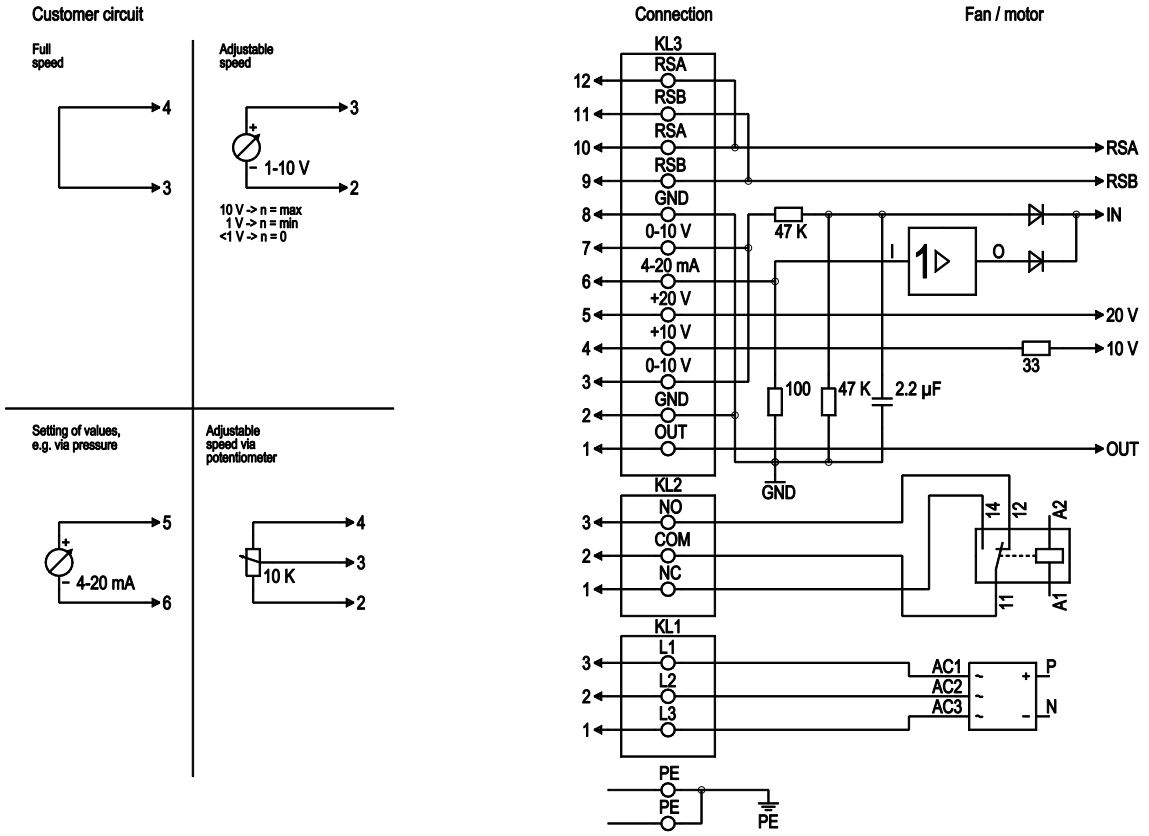
1	Cable diameter: min. 4 mm; max. 10 mm; tightening torque: 2.5±0.4 Nm
2	Accessory part: inlet nozzle: 35560-2-4013 not included in the standard scope of delivery; other inlet nozzles on request
3	Depth of screw 12 - 16 mm
4	Tightening torque 3.5±0.5 Nm

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Connection screen



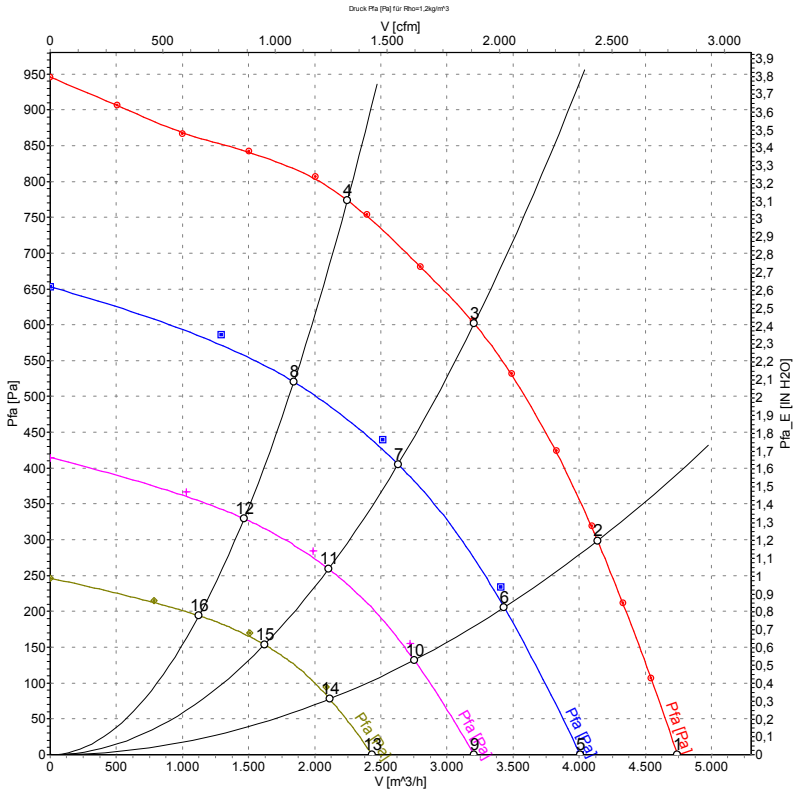
No.	Pin	Signal	Function / assignment
PE		PE	Protective earth connection
KL1	1, 2, 3	L1, L2, L3	Supply voltage, 50/60 Hz
KL2	1	NC	Floating status message contact, normally closed connection
KL2	2	COM	Floating status message contact, changeover contact, common connection (2 A, max. 250 VAC, min. 10 mA, AC1)
KL2	3	NO	Floating status message contact, normally open connection
KL3	1	OUT	Analog output, 0-10 VDC, max. 3 mA, SELV, output of the current level control coefficient: 1 V equates to 10% level control coefficient. 10 V equate 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 external devices (e.g. potentiometers), SELV
KL3	5	+20 V	Voltage output 20 VDC (+25%/-10%), max. 50 mA, supply voltage for external 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-78488
Measurement: LU-120618
Measurement: LU-120619
Measurement: LU-120620

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_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	400	50	2200	690	1.35	81	79	88	94	4745	0
2	400	50	2200	859	1.61	77	75	84	90	4140	300
3	400	50	2200	950	1.75	73	72	80	86	3205	600
4	400	50	2200	851	1.61	76	76	83	88	2245	775
5	400	50	1825	386	0.72	74	72	81	87	4010	0
6	400	50	1825	476	0.87	70	69	77	84	3430	224
7	400	50	1825	502	0.90	67	66	74	80	2630	414
8	400	50	1825	462	0.84	69	68	76	82	1840	520
9	400	50	1450	206	0.43	67	65	73	79	3205	0
10	400	50	1450	251	0.51	64	62	71	77	2750	145
11	400	50	1450	265	0.53	61	59	67	73	2105	264
12	400	50	1450	244	0.49	62	61	69	74	1465	329
13	400	50	1100	106	0.26	58	56	65	71	2435	0
14	400	50	1100	123	0.29	56	54	63	68	2115	87
15	400	50	1100	126	0.29	53	52	60	66	1620	156
16	400	50	1100	118	0.28	54	53	61	67	1125	194

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