R3G146-AD23-13

EC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R3G146-AD23-13**
Motor	**M3G055-CF**

Phase		1~
Nominal voltage	VAC	230
Frequency	Hz	50/60
Type of data definition		ml
Speed (rpm)	min^{-1}	2150
Power input	W	119
Current draw	A	0.9
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

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Technical features

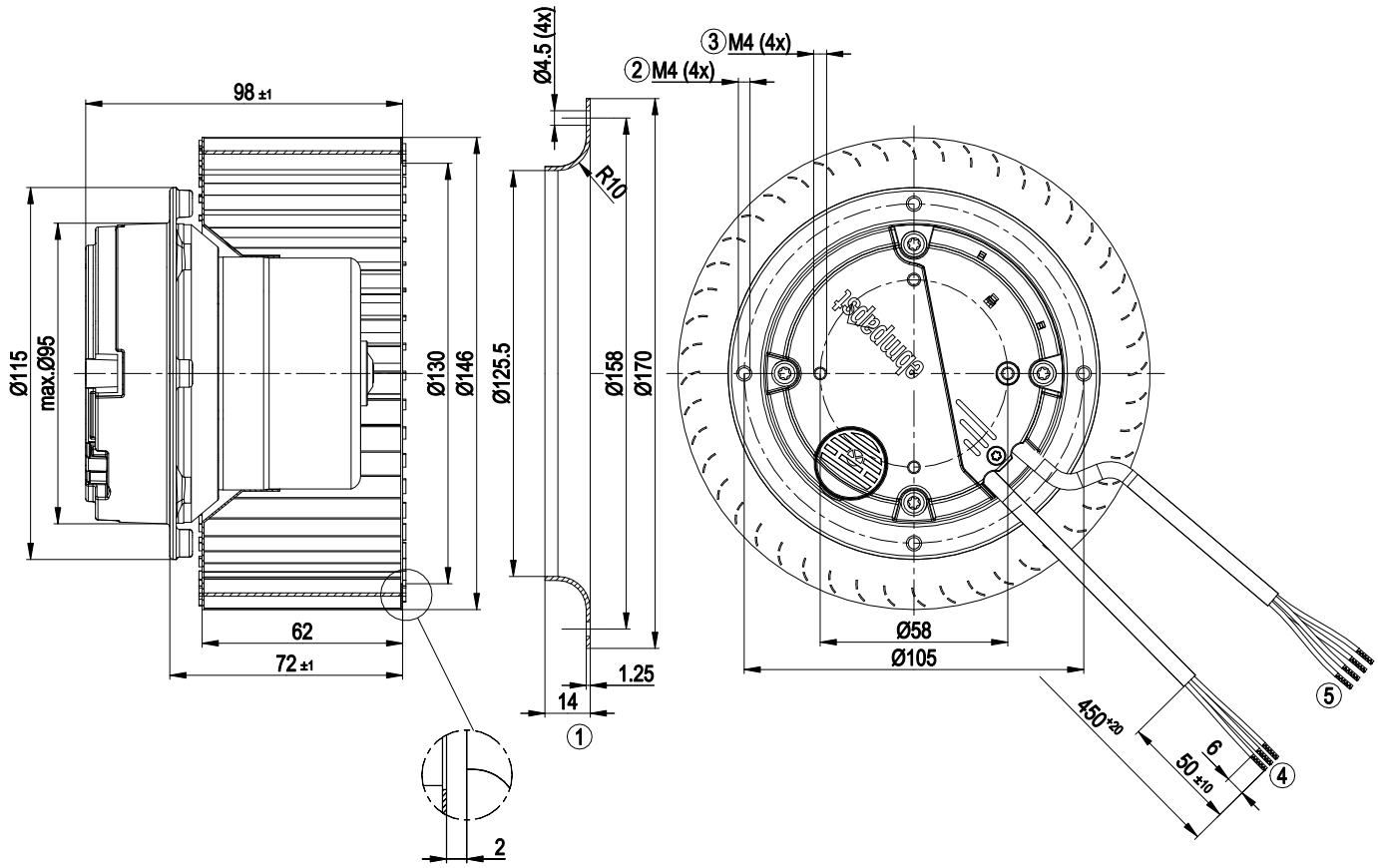
Mass	1.4 kg
Size	146 mm
Material of electronics housing	Die-cast aluminium
Material of impeller	Sheet steel, galvanised
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 44
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor
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

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Product drawing



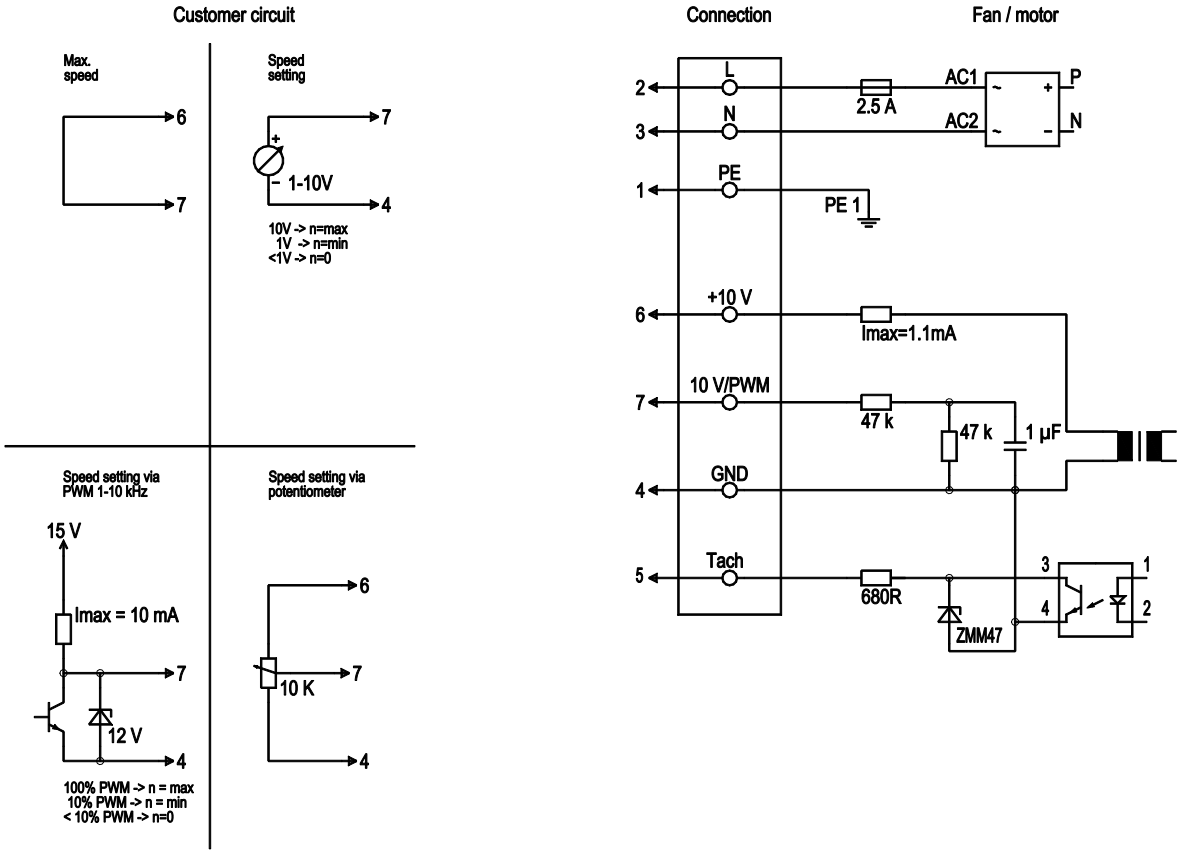
1	Accessory part: Inlet nozzle 09576-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 6 mm
3	Depth of screw max. 6 mm
4	Connection line PVC 3G 0.5 mm², 3x brass lead tips crimped
5	Connection line PVC 0.25 mm², 4x brass lead tips crimped

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Connection screen



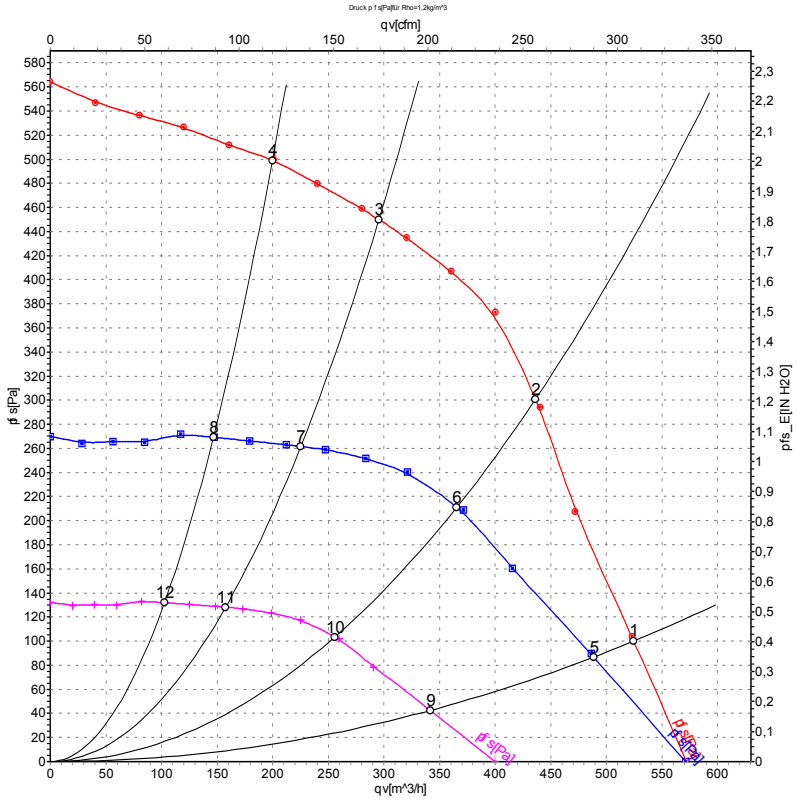
No.	Conn.	Designation	Colour	Function / assignment
	2	L	brown	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	7	0-10 V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	5	Tach	white	Tach output: Open Collector, 1 pulse per revolution, electrically isolated
	6	10V / max. 1.1 mA	red	Voltage output 10V / 1.1mA, electrically isolated, not short-circuit-proof
	4	GND	blue	GND - Connection for control interface

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Charts: Air flow 50 Hz



Measurement: LU-70983-1

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	q_V	p_{fs}	q_V	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	230	50	2150	119	0.90	525	100	310	0.40
2	230	50	2385	118	0.87	435	300	255	1.20
3	230	50	2625	95	0.71	295	450	175	1.81
4	230	50	2725	78	0.58	200	500	120	2.01
5	230	50	2000	96	0.71	490	87	285	0.35
6	230	50	2000	69	0.51	365	212	215	0.85
7	230	50	2000	42	0.31	225	262	130	1.05
8	230	50	2000	31	0.23	145	269	85	1.08
9	230	50	1400	33	0.24	340	43	200	0.17
10	230	50	1400	24	0.18	255	104	150	0.42
11	230	50	1400	14	0.11	160	128	95	0.51
12	230	50	1400	11	0.08	105	132	60	0.53

U = Supply voltage · f = Frequency · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · q_V = Air flow · p_{fs} = Pressure increase

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