R3G146-AB54-12

EC centrifugal fan

forward curved, single inlet

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Nominal data

Type	**R3G146-AB54-12**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		fa
Speed (rpm)	min^{-1}	2520
Power input	W	175
Current draw	A	1.1
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

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Technical features

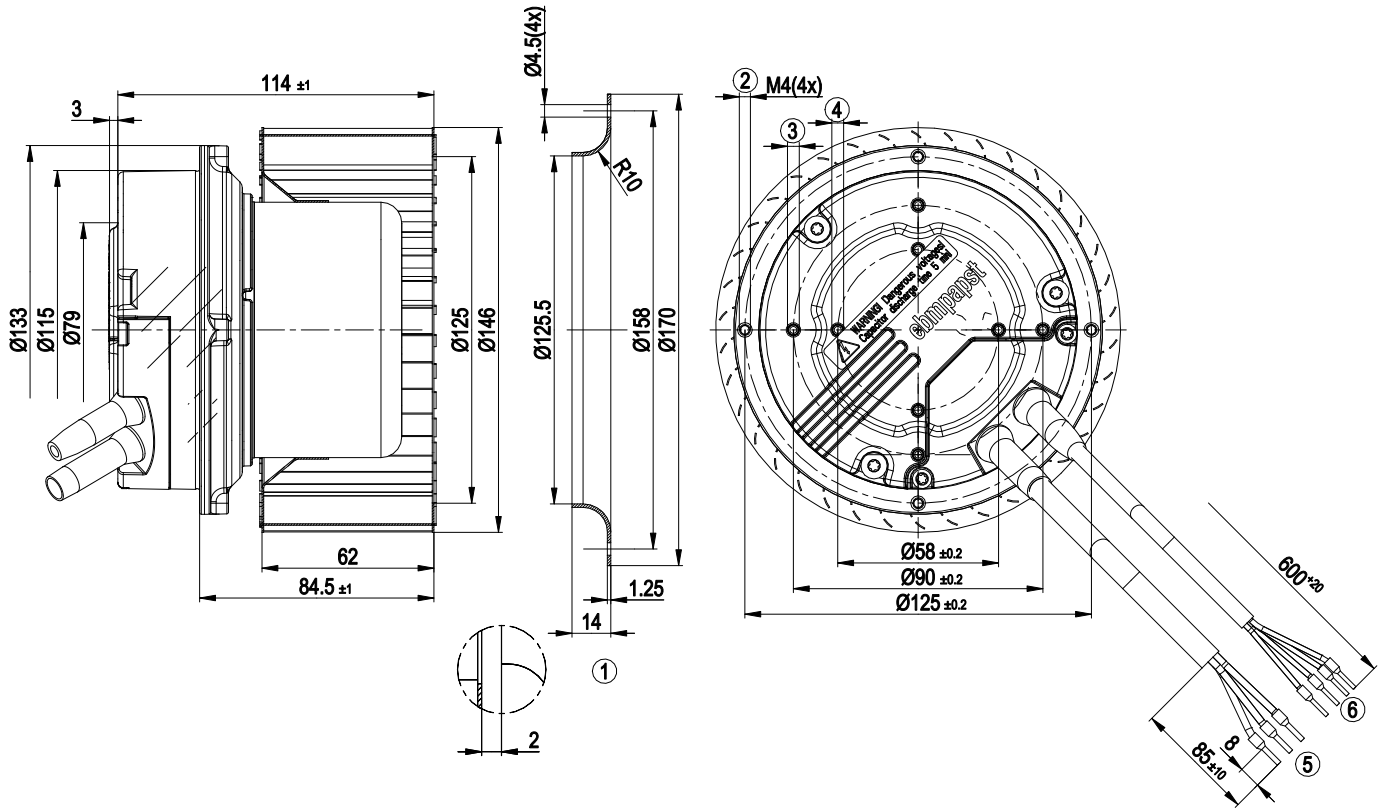
Mass	2.1 kg
Size	146 mm
Surface of rotor	Thick layer passivated
Material of impeller	Sheet steel, galvanised
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44; Depending on installation and position
Insulation class	"B"
Humidity (F)/environmental protection class (H)	F3-1
Max. permissible ambient motor temp. (transp./ storage)	+ 80 °C
Min. permissible ambient motor temp. (transp./storage)	- 40 °C
Mounting position	Any
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; CE
Approval	UL 2111; CSA C22.2 No.77

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Product drawing



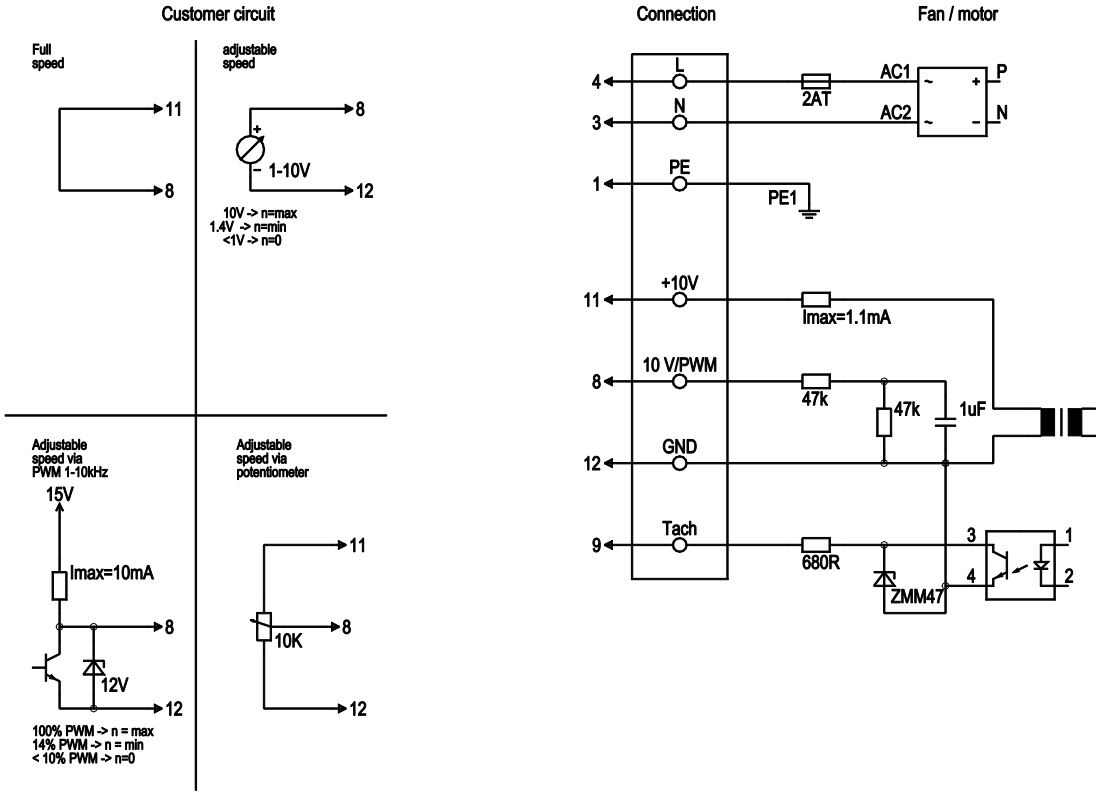
1	Accessory part: Inlet nozzle 09576-2-4013 not included in scope of delivery
2	Depth of screw 8-10 mm; tightening torque 2.5±0.2 Nm; gluing the screws is recommended
3	Pilot hole prepared for M4 self-tapping screw, depth of screw max. 6 mm
4	Pilot hole prepared for M4 self-tapping screw, depth of screw max. 8 mm
5	Connection line PVC AWG18, 3x crimped core-end sleeves
6	Connection line PVC AWG22, 4x crimped core-end sleeves

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Connection screen



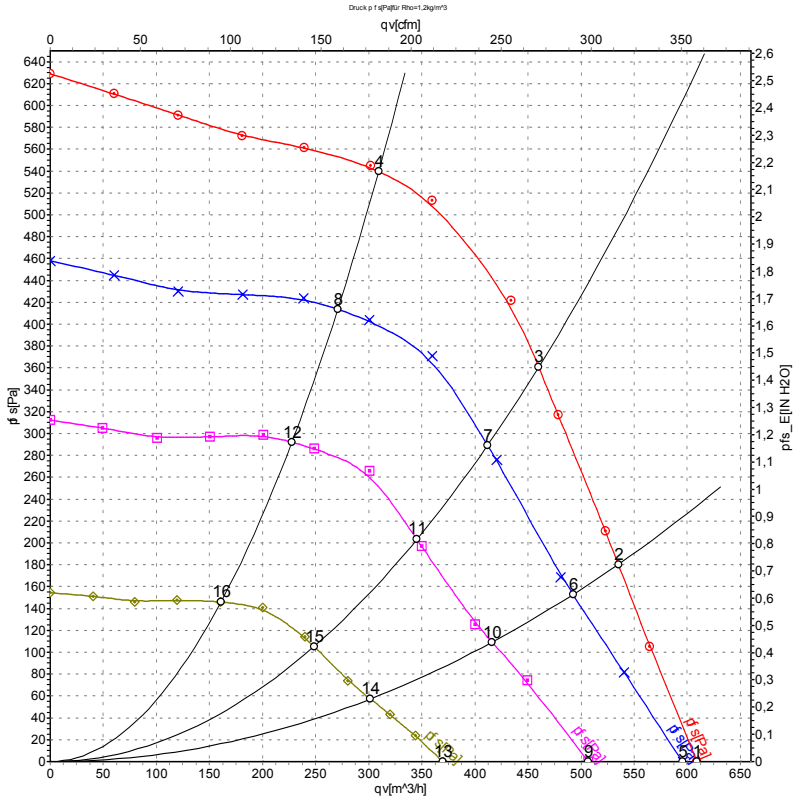
No.	Conn.	Designation	Colour	Function / assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see type plate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0 - 10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 1 pulse per revolution, electrically isolated
	11	10V / max 1.1 mA	red	Voltage output 10 V / max. 1.1 mA, electrically isolated
	12	GND	blue	GND - Connection for control interface

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Charts: Air flow 50 Hz



Measurement: LU-69079-1
Measurement: LU-67514-1
Measurement: LU-67515-1
Measurement: LU-67516-1

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	2520	175	1.27	610	0	360	0.00
2	230	50	2775	172	1.24	535	180	315	0.72
3	230	50	2940	161	1.17	460	360	270	1.45
4	230	50	3140	124	0.92	310	540	180	2.17
5	230	50	2430	172	1.24	595	0	350	0.00
6	230	50	2525	142	1.04	490	152	290	0.61
7	230	50	2605	121	0.91	410	290	240	1.16
8	230	50	2735	90	0.67	270	414	160	1.66
9	230	50	2075	108	0.78	505	0	300	0.00
10	230	50	2145	89	0.66	415	109	245	0.44
11	230	50	2195	74	0.55	345	203	205	0.81
12	230	50	2280	57	0.43	230	292	135	1.17
13	230	50	1535	48	0.35	370	0	220	0.00
14	230	50	1565	39	0.30	300	57	180	0.23
15	230	50	1600	33	0.26	250	106	145	0.43
16	230	50	1635	26	0.21	160	146	95	0.59

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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