R3G280-AA52-01

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R3G280-AA52-01**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2000
Power consumption	W	145
Current draw	A	1.1
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

Data according to ErP Directive

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	48.9	43.4
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		67.5	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.17
09 Air flow q_v	m^3/h	1205
09 Pressure increase p_{fs}	Pa	219
10 Speed (rpm) n	min^{-1}	1785
11 Specific ratio*		1.00

Data obtained at optimum efficiency level.
The ErP data is determined using a motor-impeller combination in a standardized measurement setup.

* Specific ratio = 1 + p_{fs} / 100 000 Pa

LU-72157

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Technical description

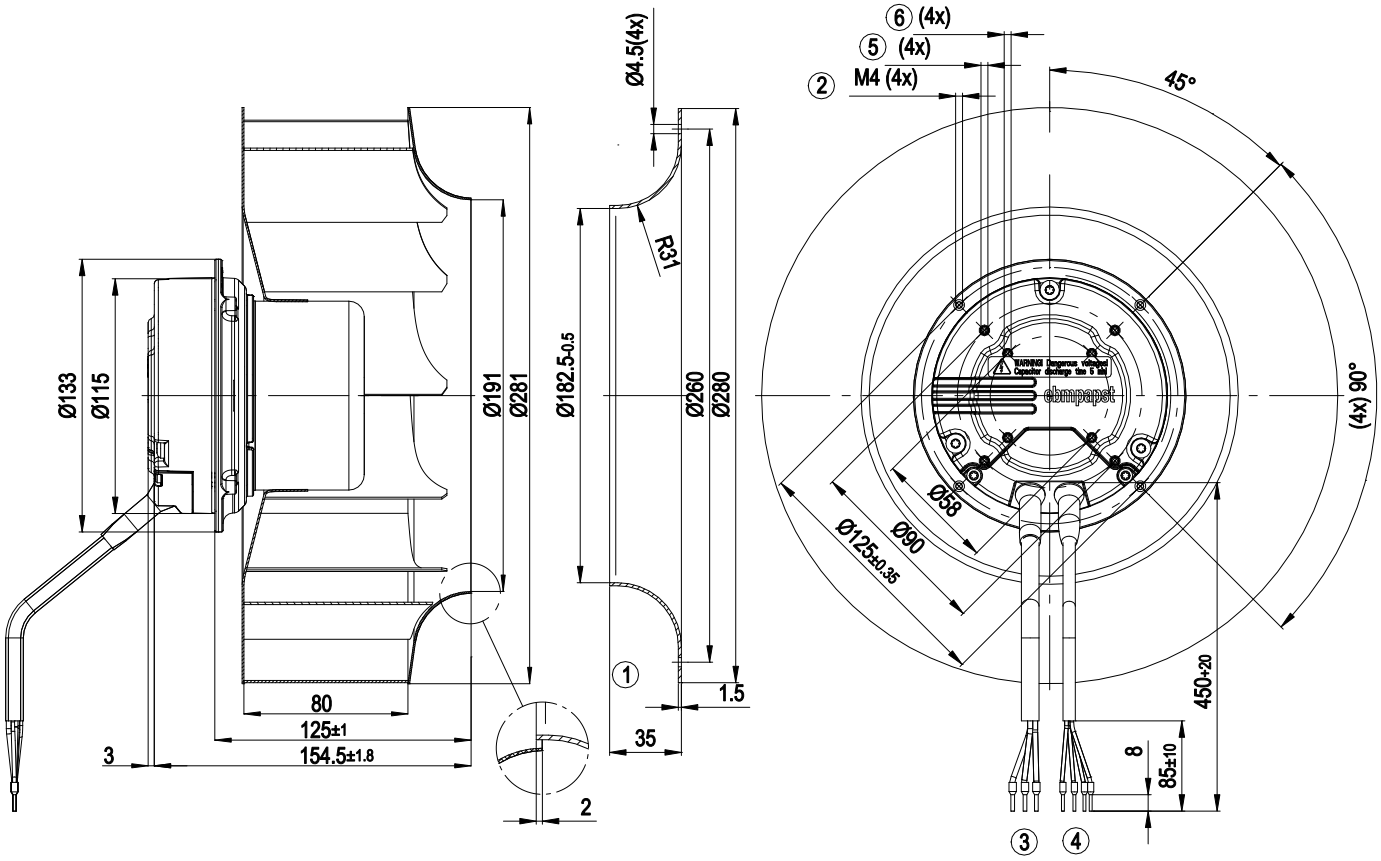
Weight	3.35 kg
Fan size	280 mm
Rotor surface	Galvanized
Electronics housing material	Die-cast aluminum
Impeller material	Sheet steel, galvanized
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP44
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Thermal overload protection for electronics/motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC circuit feedback	According to EN 61000-3-2/3
EMC interference emission	According to EN 61000-6-3 (household environment)
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; EN 61800-5-1; EN 60950-1
Approval	UL 2111; CSA C22.2 No. 77; CCC; EAC

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Product drawing



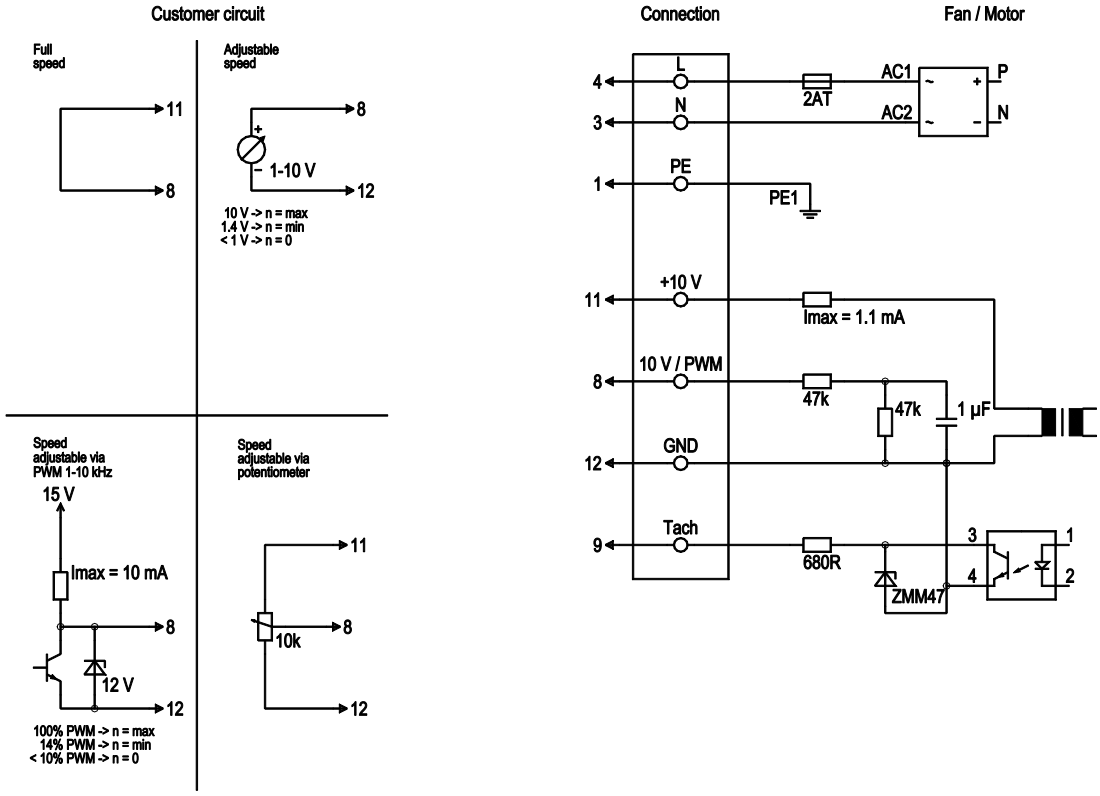
1	Accessory part: Inlet ring 96360-2-4013 not included in scope of delivery, other inlet rings on request
2	Clearance for screw 8-10 mm
3	Cable AWG18, 3 x crimped ferrules
4	Cable AWG22, 4 x crimped ferrules
5	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 6 mm
6	Tapping hole ready for self-tapping M4 screw, max. clearance for screw 6 mm

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Connection diagram



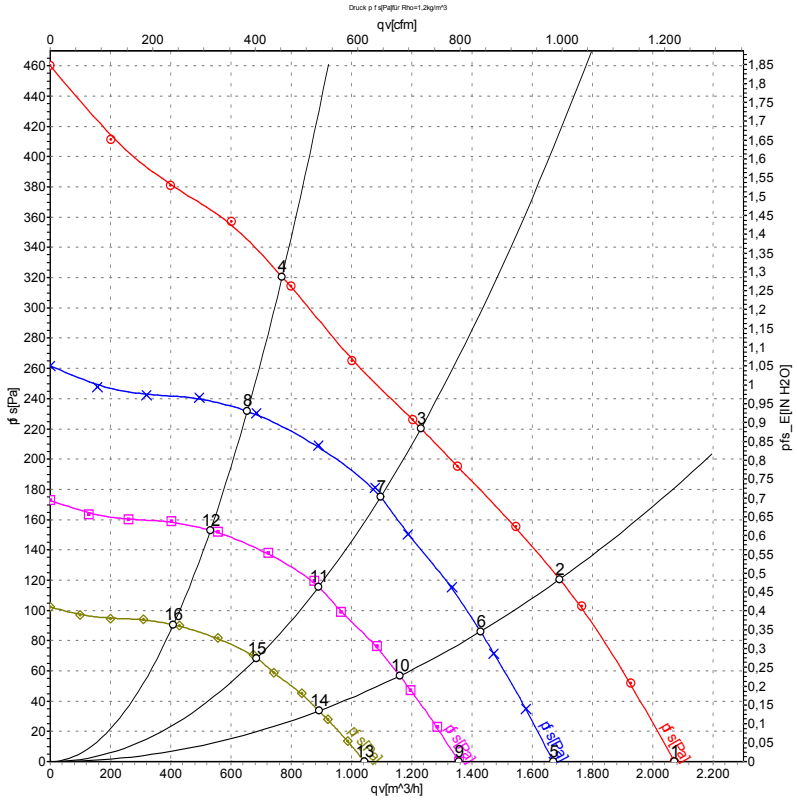
No.	Conn.	Designation	Color	Function/assignment
	4	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	3	N	blue	Neutral conductor
	1	PE	green/yellow	Protective earth
	8	0-10 V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	9	Tach	white	Tach output: open collector, 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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Curves: Air performance 50 Hz



Measurement: LU-72157-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

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	2000	145	1.10	2070	0	1220	0.00
2	230	50	1895	168	1.22	1690	120	995	0.48
3	230	50	1795	170	1.25	1230	220	725	0.88
4	230	50	1880	165	1.21	770	320	455	1.28
5	230	50	1600	75	0.55	1670	0	980	0.00
6	230	50	1600	101	0.74	1425	86	840	0.35
7	230	50	1600	121	0.89	1095	176	645	0.71
8	230	50	1600	101	0.74	655	232	385	0.93
9	230	50	1300	40	0.30	1355	0	800	0.00
10	230	50	1300	54	0.40	1160	57	685	0.23
11	230	50	1300	65	0.48	890	116	525	0.47
12	230	50	1300	54	0.40	530	153	315	0.61
13	230	50	1000	18	0.13	1045	0	615	0.00
14	230	50	1000	25	0.18	890	34	525	0.14
15	230	50	1000	30	0.22	685	69	405	0.28
16	230	50	1000	25	0.18	410	91	240	0.37

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

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