R3G270-AB02-05

EC centrifugal fan

backward-curved, single-intake

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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G270-AB02-05**
Motor	**M3G074-CF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 240
Frequency	Hz	50/60
Method of obtaining data		ml
Speed	min^{-1}	2220
Power consumption	W	165
Current draw	A	1.35
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	55

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}	%	52.8	43.1
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		71.7	62
05 Variable speed drive		Yes	

09 Power consumption P_{ed}	kW	0.16
09 Air flow q_v	m^3/h	1205
09 Pressure increase p_{fs}	Pa	226
10 Speed n	min^{-1}	2175
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-160811

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Technical description

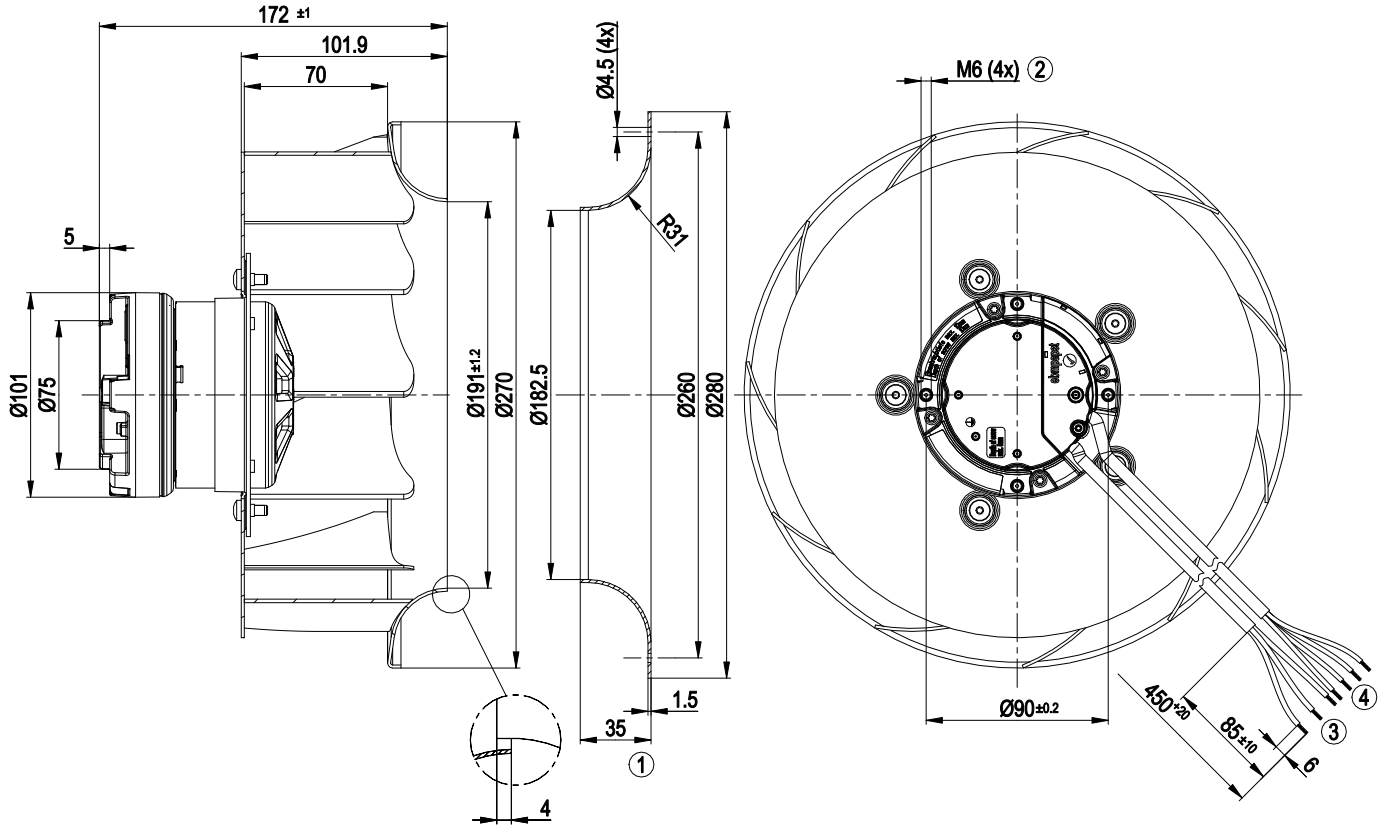
Weight	2.5 kg
Fan size	270 mm
Rotor surface	Galvanized
Impeller material	Sheet aluminum
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F3-1
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Any
Condensation drainage holes	None, open rotor
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Output 10 VDC, max. 1.1 mA - Tach output - Power limiter - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from the mains - Thermal overload protection for electronics/motor
Touch current according to IEC 60990 (measuring circuit Fig. 4, TN system)	<= 3.5 mA
Motor protection	PTC thermistor
With cable	Variable
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1; CE

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Product drawing



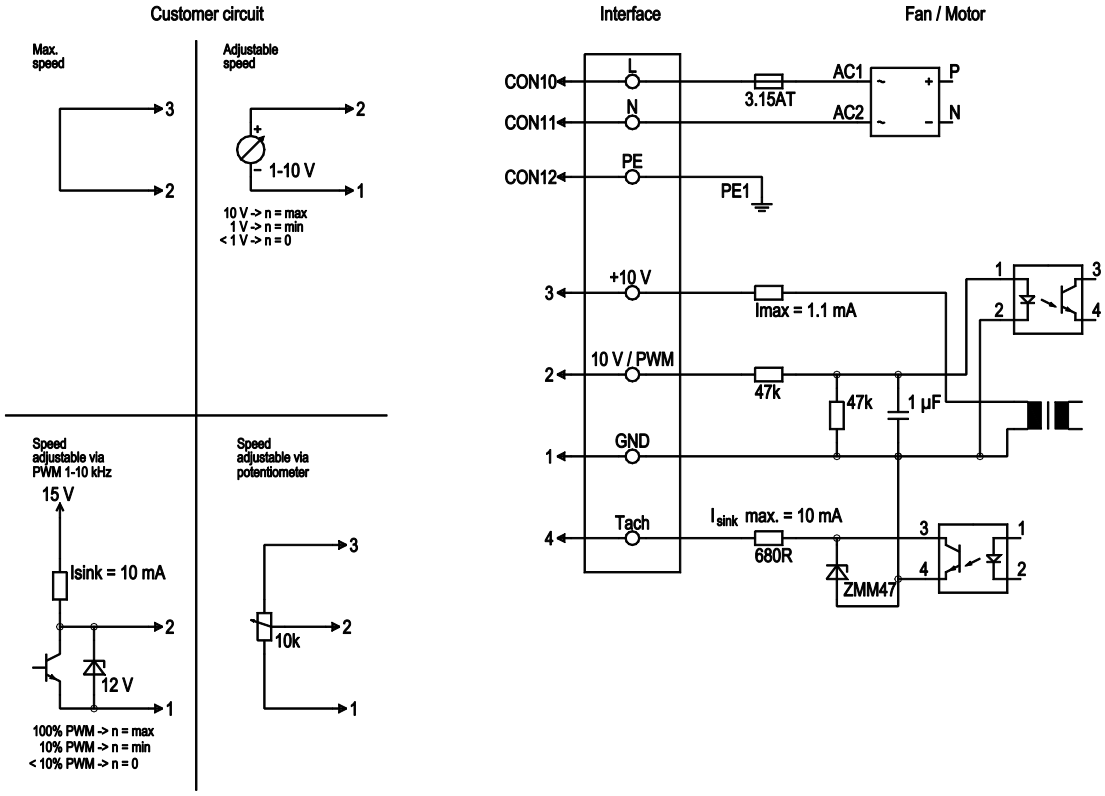
1	Accessory part: inlet ring 96360-2-4013 not included in scope of delivery
2	Max. clearance for screw 5 mm
3	Cable PVC AWG20, 3x crimped splices
4	Cable PVC AWG22, 4x crimped splices

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Connection diagram



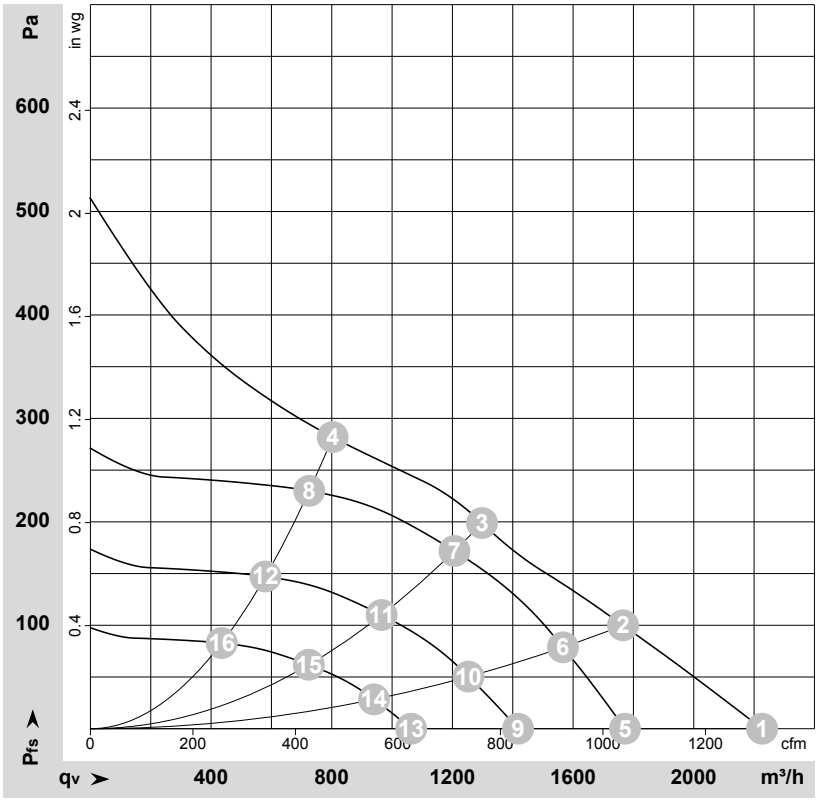
No.	Conn.	Designation	Color	Function/assignment
	CON10	L	black	Power supply 230 VAC, 50-60 Hz, see nameplate for voltage range
	CON11	N	blue	Neutral conductor
	CON12	PE	green/yellow	Protective earth
	1	GND	blue	GND connection for control interface
	2	0- 10V PWM	yellow	Control input 0-10 V or PWM, electrically isolated
	3	10V/ max 1.1mA	red	Voltage output 10 V / 1.1 mA, electrically isolated, not short-circuit-proof, Isink = 10 mA
	4	Tach	white	Tach output: Open collector, 1 pulse per revolution, electrically isolated, Isink max = 10 mA

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Curves: Air performance 50 Hz



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-160811-1

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	LpA_{in}	LwA_{in}	qv	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa
1	230	50	2515	165	1.35	72	79	2225	0
2	230	50	2255	165	1.35	66	74	1765	100
3	230	50	2220	165	1.35	61	69	1300	200
4	230	50	2220	165	1.35	67	76	805	280
5	230	50	2000	83	0.67	66	73	1770	0
6	230	50	2000	113	0.92	64	71	1565	79
7	230	50	2000	131	1.07	59	67	1205	172
8	230	50	2000	120	0.98	64	72	725	231
9	230	50	1600	43	0.35	60	68	1420	0
10	230	50	1600	58	0.47	58	65	1255	50
11	230	50	1600	67	0.55	54	62	965	110
12	230	50	1600	62	0.50	58	67	580	148
13	230	50	1200	18	0.15	53	60	1065	0
14	230	50	1200	24	0.20	51	58	940	28
15	230	50	1200	28	0.23	46	54	725	62
16	230	50	1200	26	0.21	51	60	435	83

U = Power supply · f = Frequency · n = Speed · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side
qv = Air flow · p_{fs} = Pressure increase

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