

R3G310-AN12-30

EC centrifugal fan

backward-curved, single-intake



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Nominal data

Type	R3G310-AN12-30	
Motor	M3G084-FA	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	2000
Power consumption	W	190
Current draw	A	4.0
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 Commission Regulation (EU) 327/2011 (prEN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	60	45.1	09 Power consumption P_e	kW	0.24
02 Measurement category		A		09 Air flow q_v	m ³ /h	1330
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	350
04 Efficiency grade N		76.9	62	10 Speed (rpm) n	min ⁻¹	1955
05 Variable speed drive		Yes		11 Specific ratio*		1.00

Data obtained at optimum efficiency level.

* Specific ratio = $1 + p_{fs} / 100\,000\text{ Pa}$

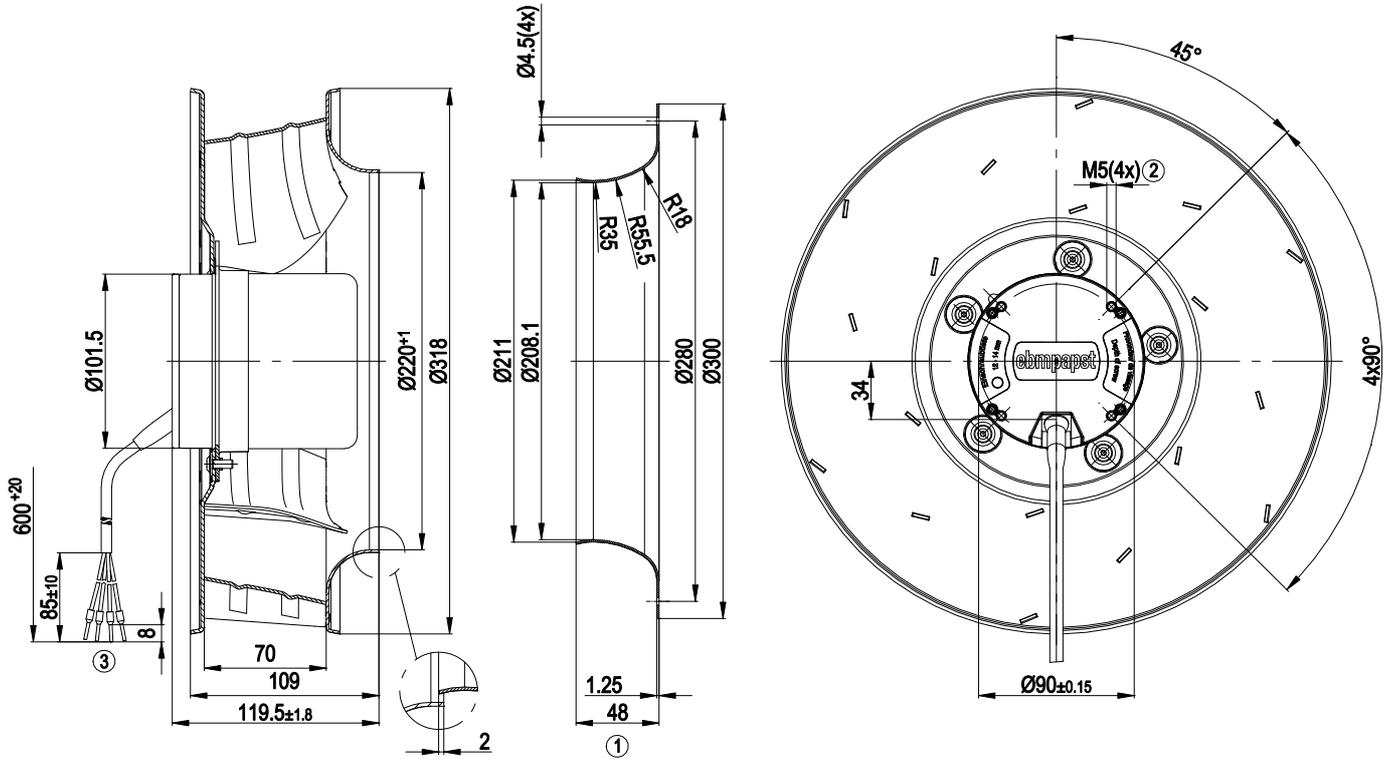
LU-63897

The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings). The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst evaluation loses its validity/the conformity must be confirmed again. The product does not fall within the scope of Regulation (EU) 2019/1781 due to the exception specified in Article 2 (2a) (motors completely integrated into a product).

Technical description

Weight	4.4 kg
Size	310 mm
Motor size	84
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H1
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	<ul style="list-style-type: none"> - Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
Motor protection	Thermal switch auto reset, internally connected
With cable	Variable
Protection class assignment	The built-in component has several local protection class assignments. The final protection class is determined by the intended installation.
Conformity with standards	EN 61800-5-1; CE
Approval	CSA C22.2 No. 100; EAC; UL 1004-1; CCC

Product drawing

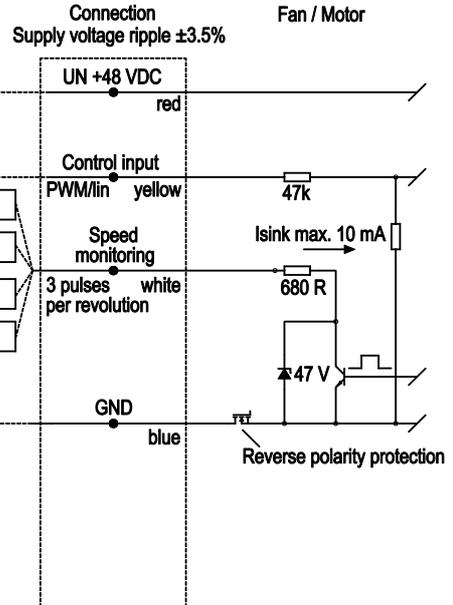
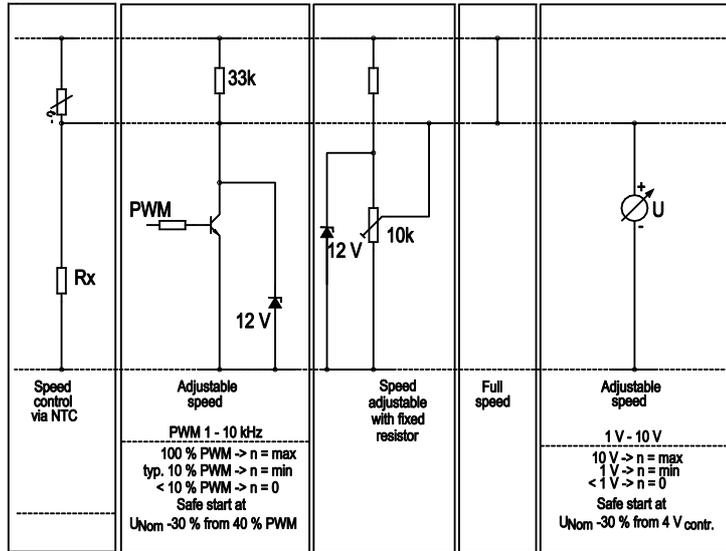


- | | |
|---|---|
| 1 | Accessory part: inlet ring 31050-2-4013 not included in scope of delivery |
| 2 | Max. clearance for screw 14 mm |
| 3 | Cable PVC AWG16, 4x crimped ferrules |

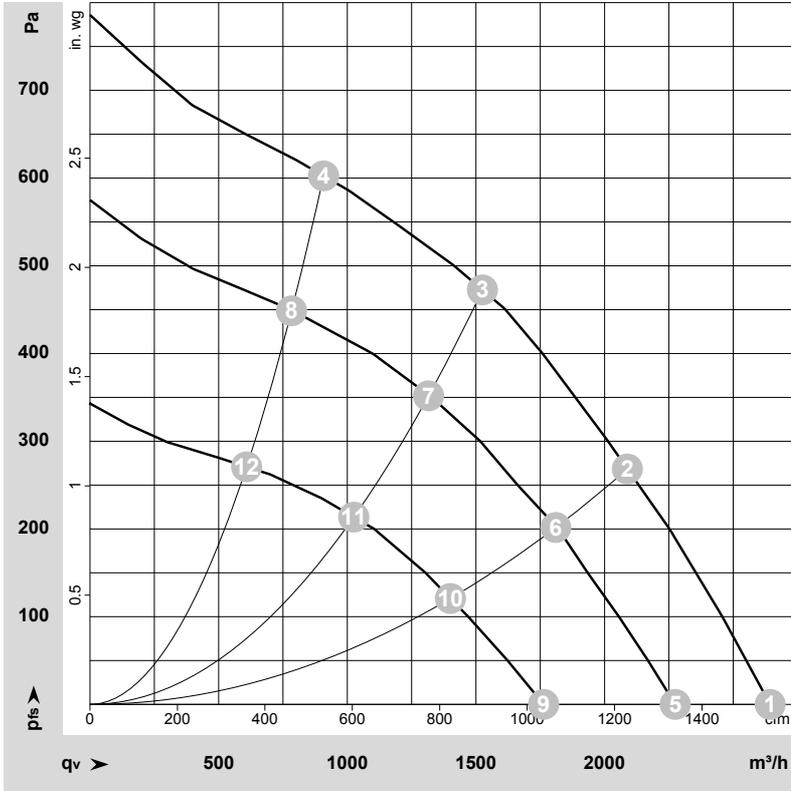
Connection diagram

Customer circuit

Application notes for various control options



Curves: Air performance



$\rho = 1.15 \text{ kg/m}^3 \pm 2 \%$

Measurement: LU-63899-1
Date: 2004-06-01

Measurement: LU-63897-1
Date: 2004-06-01
Nozzle: 31050-2-4013

Measurement: LU-63898-1
Date: 2004-06-01

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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	n	P _{ed}	I	q _v	p _{fs}	q _v	p _{fs}
	V	min ⁻¹	W	A	m ³ /h	Pa	cfm	in. wg
1	57	2325	295	5.22	2645	0	1555	0.00
2	57	2280	352	6.23	2090	268	1230	1.08
3	57	2260	371	6.58	1525	473	900	1.90
4	57	2290	339	6.01	910	602	535	2.42
5	48	2000	190	4.00	2275	0	1340	0.00
6	48	1965	231	4.84	1810	200	1065	0.80
7	48	1955	243	5.11	1315	350	775	1.41
8	48	1980	222	4.65	785	450	460	1.81
9	36	1555	94	2.63	1765	0	1040	0.00
10	36	1530	112	3.13	1400	121	825	0.49
11	36	1525	118	3.30	1025	214	605	0.86
12	36	1540	108	3.01	610	271	360	1.09

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase