R3G310-AL09-30

EC centrifugal fan

backward-curved, single-intake

R3G310-AL09-30 ebmpapst Datasheet
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Nominal data

Type	**R3G310-AL09-30**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min^{-1}	1930
Power consumption	W	208
Current draw	A	4.35
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

		Actual	Req. 2015
01 Overall efficiency η_{es}	%	61.3	45.5
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		77.8	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.27
09 Air flow q_v	m^3/h	1550
09 Pressure increase p_{fs}	Pa	346
10 Speed (rpm) n	min^{-1}	1875
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-55962

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Technical description

Weight	4.4 kg
Fan size	310 mm
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	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Control interface with SELV potential safely disconnected from supply - Thermal overload protection for motor
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class A, industrial environment)
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Conformity with standards	EN 60950-1; CE
Approval	CSA C22.2 No. 100; EAC; CCC; UL 1004-1

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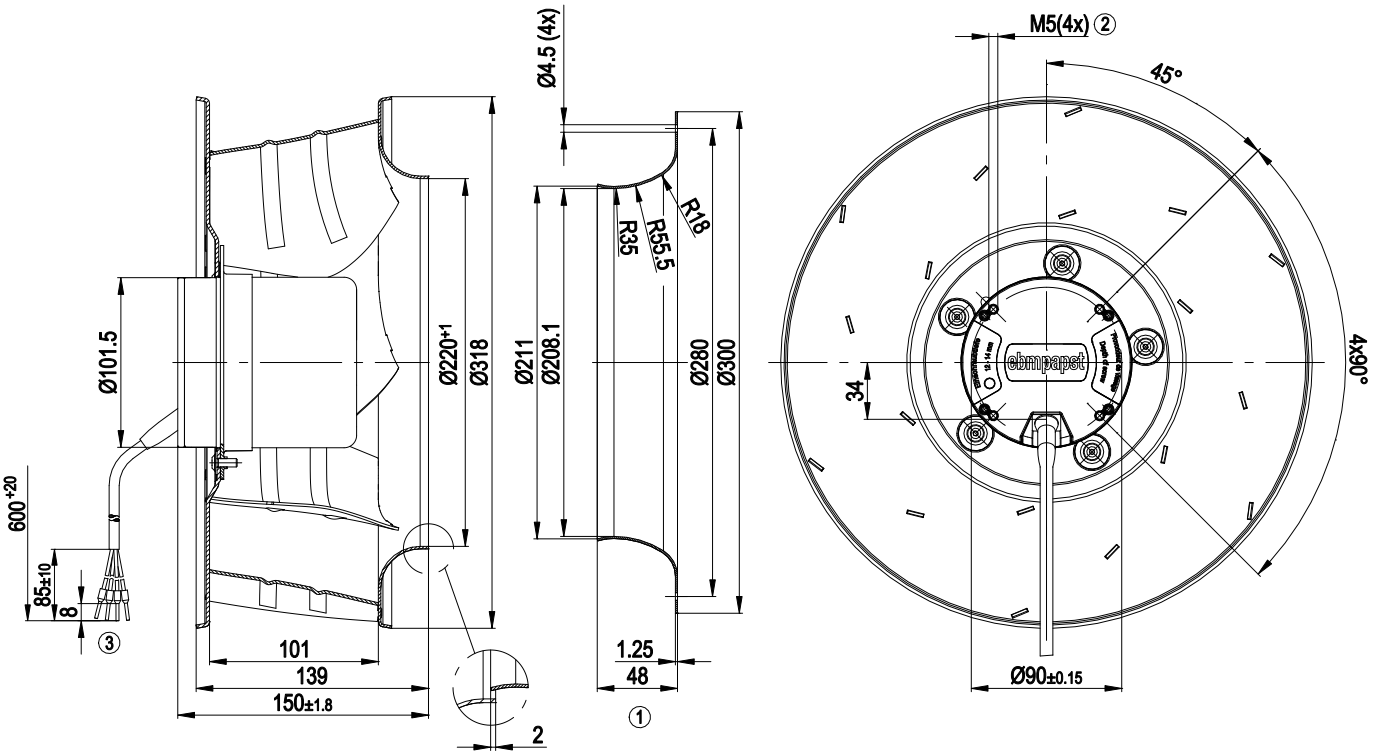
Product drawing



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

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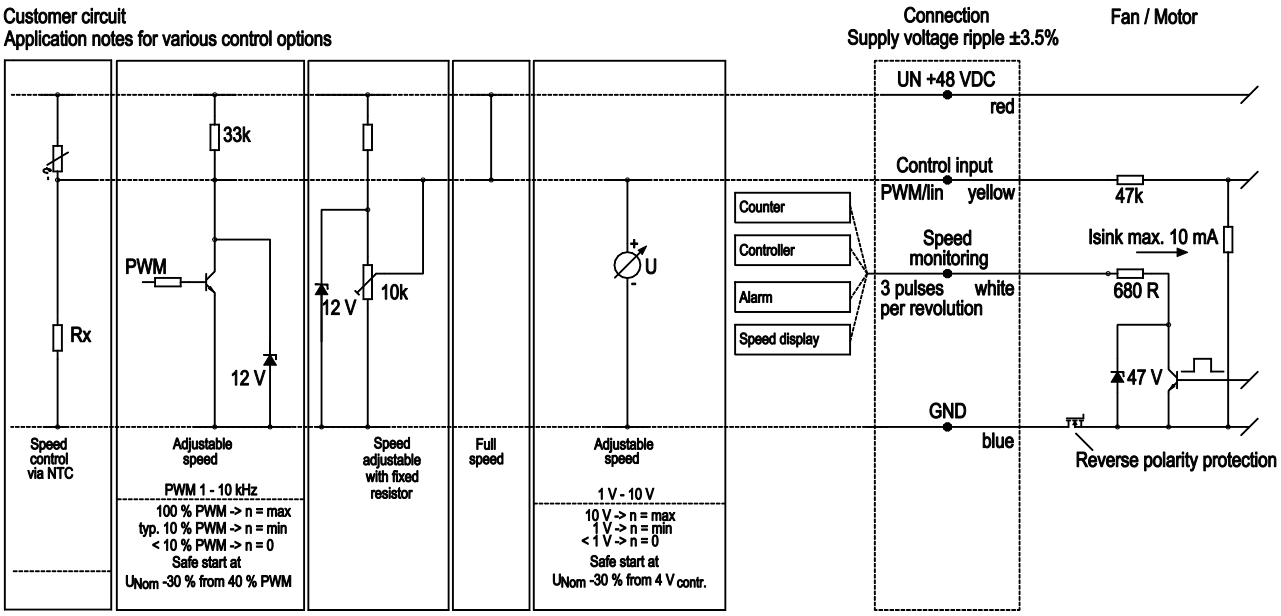
Connection diagram



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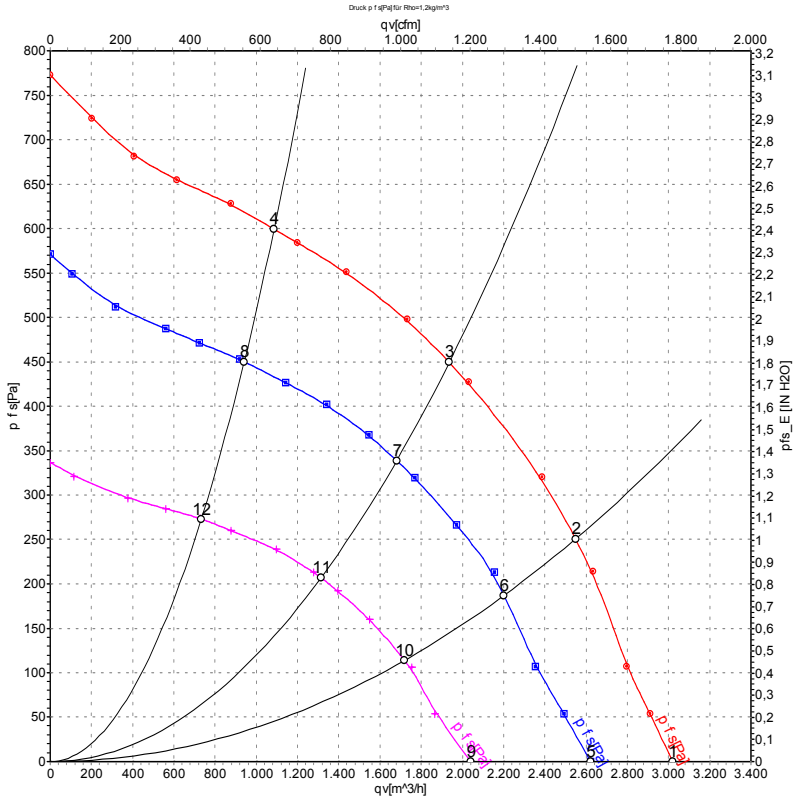
Curves: Air performance



Measurement: LU-55961-1
Measurement: LU-55962-1
Measurement: LU-55960-1

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	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	57	2235	317	5.60	3020	0	1780	0.00
2	57	2180	380	6.72	2550	250	1500	1.00
3	57	2155	414	7.33	1935	450	1140	1.81
4	57	2190	370	6.54	1085	600	640	2.41
5	48	1930	208	4.35	2620	0	1545	0.00
6	48	1895	250	5.26	2200	188	1295	0.75
7	48	1870	273	5.74	1680	339	990	1.36
8	48	1900	245	5.14	940	450	555	1.81
9	36	1500	100	2.81	2040	0	1200	0.00
10	36	1480	121	3.39	1720	115	1010	0.46
11	36	1465	133	3.72	1315	207	775	0.83
12	36	1480	118	3.30	735	273	430	1.10

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