EC centrifugal fan

backward curved, single inlet

R3G310-AL09-40 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G310-AL09-40**	
Motor	**M3G084-FA**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Type of data definition		fa
Speed	min^{-1}	1930
Power input	W	208
Current draw	A	4.35
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

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

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

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	61.3	41.5	45.5
Efficiency grade N		77.8	58	62
Power input P_e	kW	0.27		
Air flow q_v	m^3/h	1550		
Pressure increase p_{fs}	Pa	346		
Speed n	min^{-1}	1875		

Data definition with optimum efficiency.
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	4.4 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	Aluminium sheet, coated in black
Number of blades	6
Stability	Salt fog resistant in accordance with TELCORDIA GR-487-CORE, release No. 2, March 2000
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 42
Insulation class	"B"
Humidity class	F4-2
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- 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 motor
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 55022 (Class B)
Motor protection	Thermal overload protector (TOP) wired internally
Cable exit	Variable
Product conforming to standard	EN 60950-1
Approval	UL 1004-1; CSA C22.2 Nr.100

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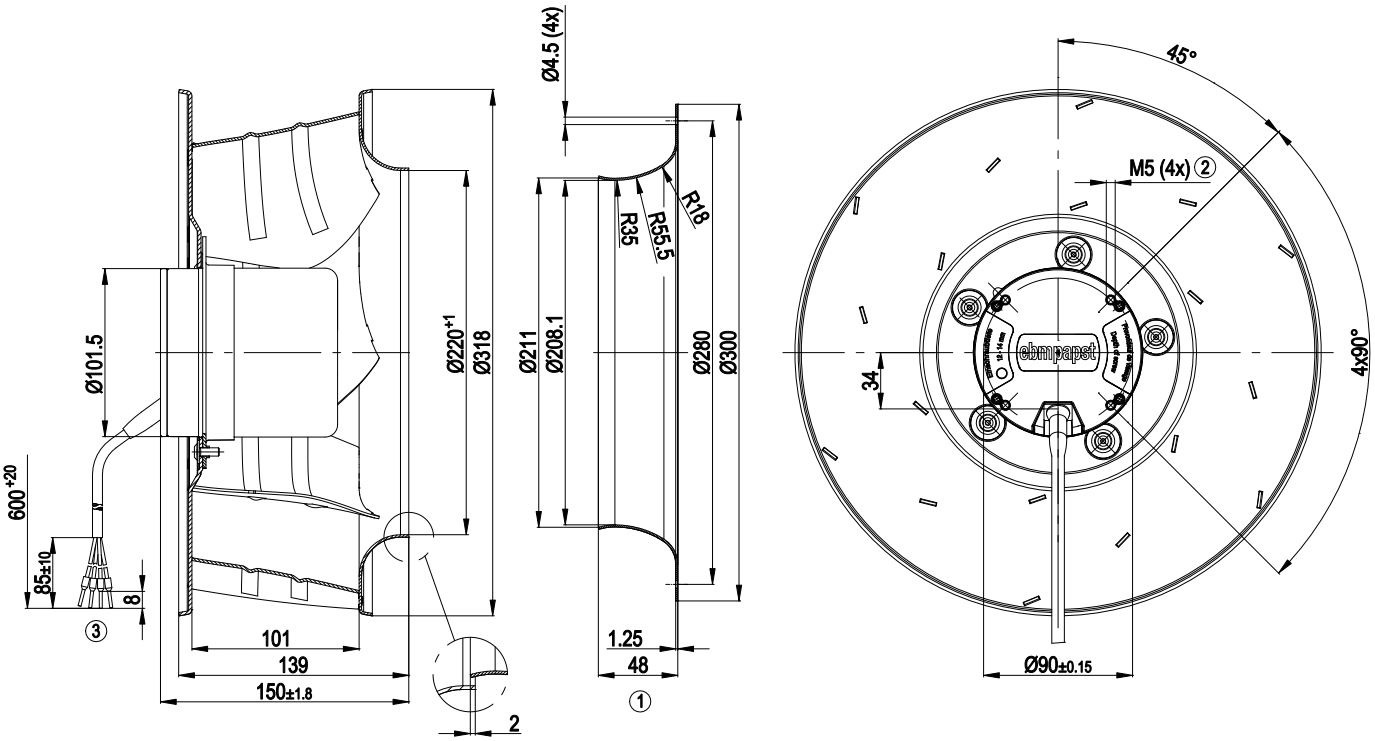
Product drawing



1	Accessory part: Inlet nozzle 31050-2-4013, not included in the standard scope of delivery
2	Depth of screw max. 14 mm
3	Connection line PVC AWG16, 4x crimped core-end sleeves

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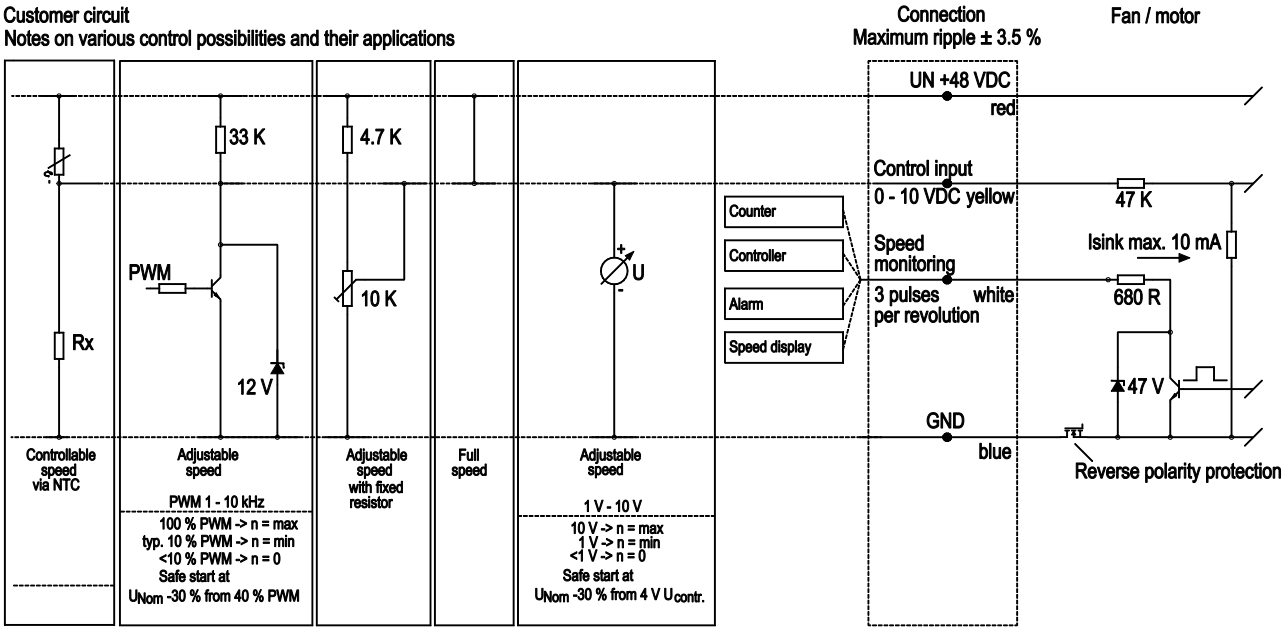
Connection screen



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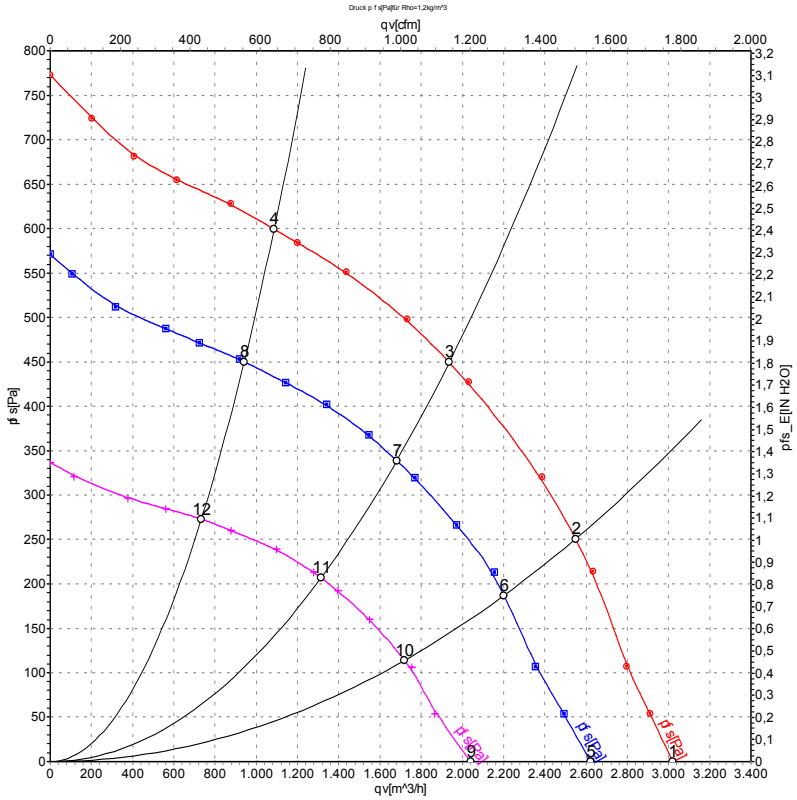
Charts: Air flow



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	n	P_{ed}	I	qv	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa
1	57	2235	317	5.60	3020	0
2	57	2180	380	6.72	2550	250
3	57	2155	414	7.33	1935	450
4	57	2190	370	6.54	1085	600
5	48	1930	208	4.35	2620	0
6	48	1895	250	5.26	2200	188
7	48	1870	273	5.74	1680	339
8	48	1900	245	5.14	940	450
9	36	1500	100	2.81	2040	0
10	36	1480	121	3.39	1720	115
11	36	1465	133	3.72	1315	207
12	36	1480	118	3.30	735	273

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase