

EC centrifugal fan

backward-curved, single-intake



Beijing Hengrui Mechanical and Electrical Equipment Co,Ltd
Phone +86 10-62547612
zhangyu@bjhengrui.cn
en.bjhengrui.com

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 (EN 17166)

		Actual	Req. 2015			
01 Overall efficiency η_{es}	%	61.3	45.6	09 Power consumption P_e	kW	0.27
02 Measurement category		A		09 Air flow q_v	m ³ /h	1550
03 Efficiency category		Static		09 Pressure increase p_{fs}	Pa	346
04 Efficiency grade N		77.7	62	10 Speed (rpm) n	min ⁻¹	1875
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-55962

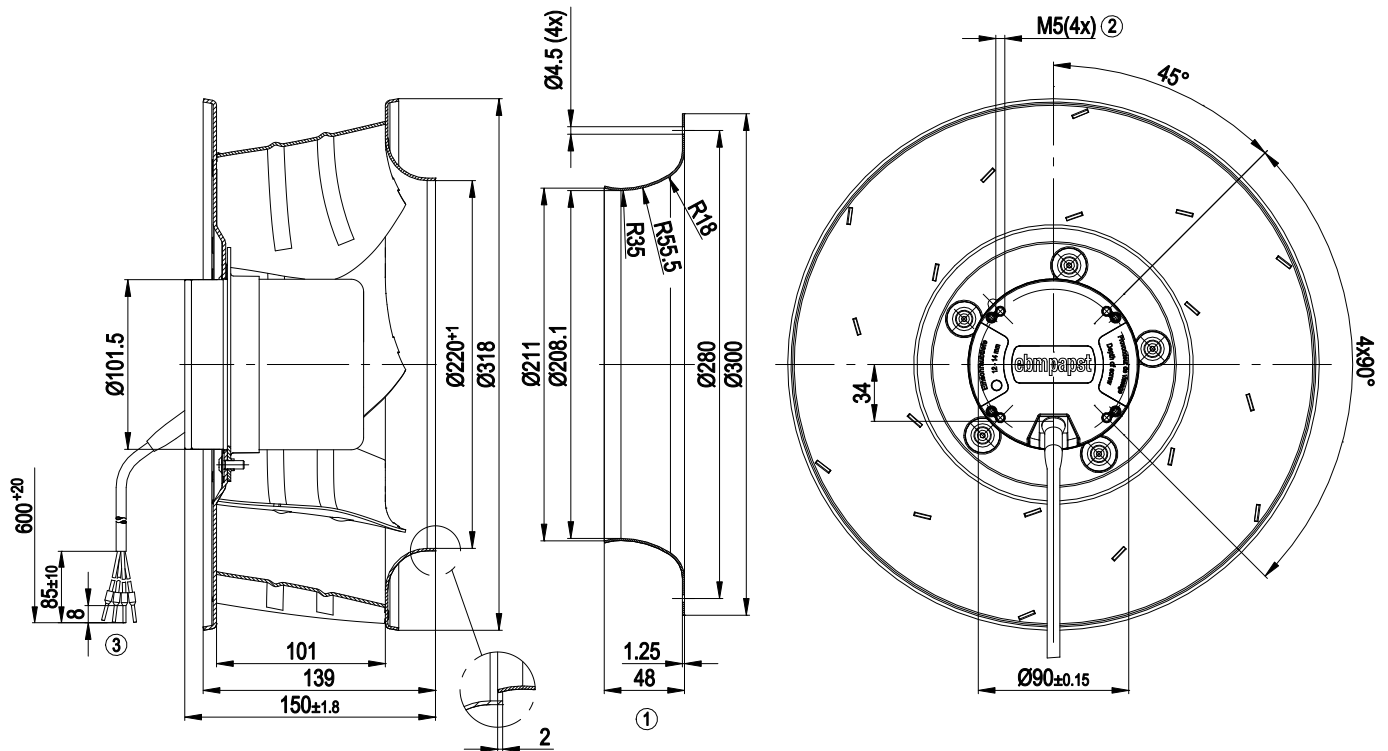
The efficiency values displayed for achieving conformity with the Ecodesign Regulation EU 327/2011 has been reached with defined air duct components (e.g. inlet rings).
The dimensions must be requested from ebm-papst. If other air conduction geometries are used on the installation side, the ebm-papst 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	4.3 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	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Reverse polarity protection
Motor protection	Thermal overload protector (TOP) internally connected
With cable	Variable
Protection class assignment	Built-in component, protection class is based on the intended installation. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Conformity with standards	EN 61800-5-1; CE; UKCA
Approval	CSA C22.2 No. 100; CCC; EAC; UL 1004-1

Product drawing

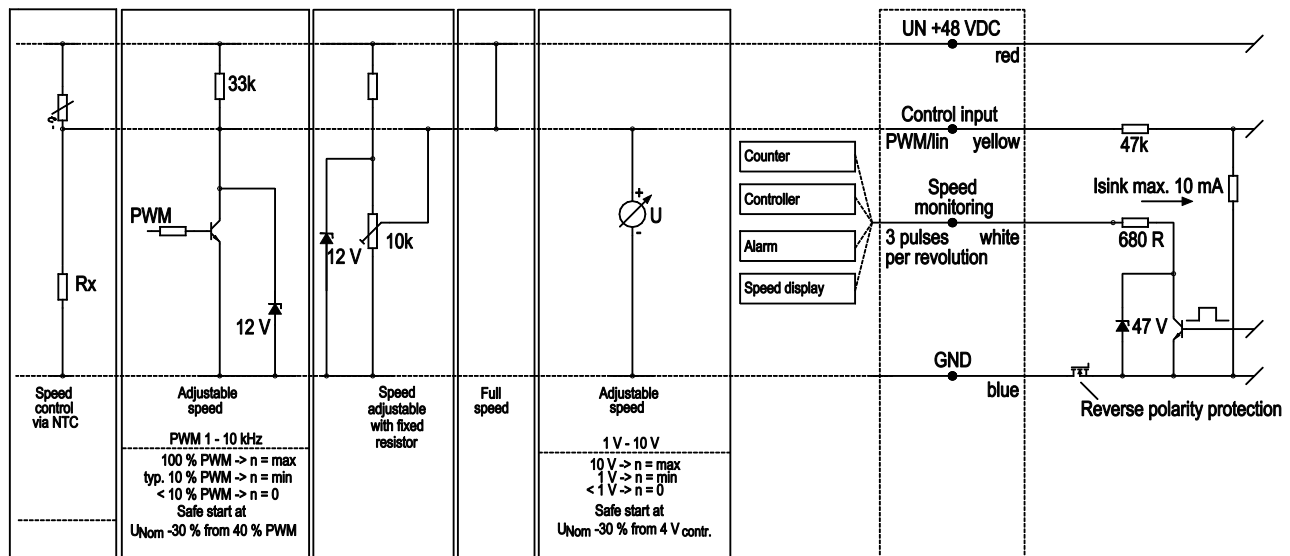


1	Accessory part: inlet ring 31050-2-4013 not included in scope of delivery
2	Max. clearance for screw 14 mm
3	Cable PVC AWG16, 4x crimped ferrules

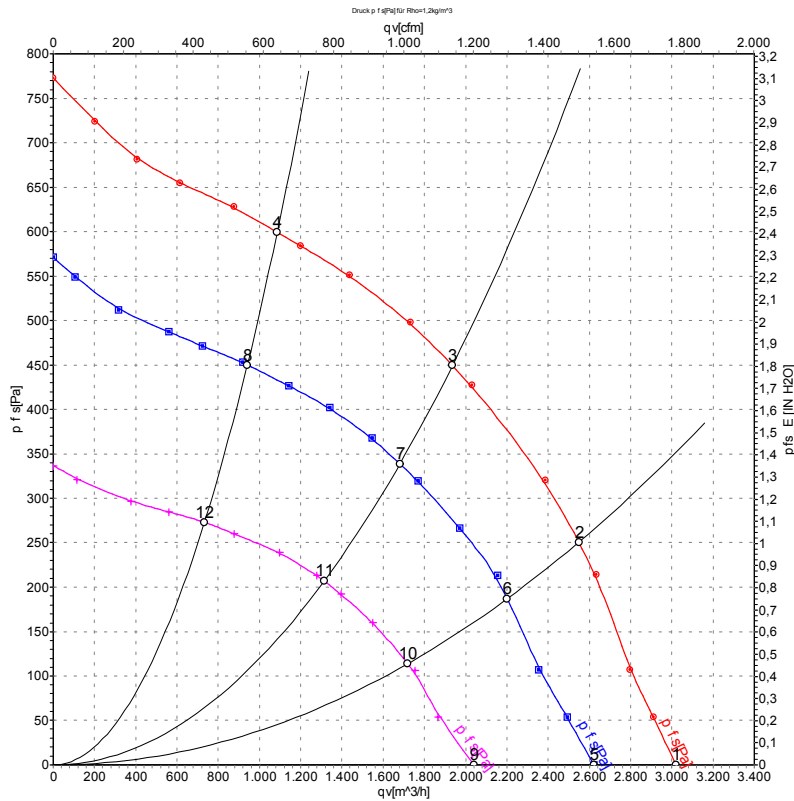
Connection diagram

Customer circuit

Application notes for various control options



Curves: Air performance



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