R3G310-AJ31-11

EC centrifugal fan

backward-curved, single-intake

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Nominal data

Type	**R3G310-AJ31-11**	
Motor	**M3G084-DF**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Status		prelim.
External electronics		CHG045AA0101
Speed (rpm)	min^{-1}	2400
Power consumption	W	310
Current draw	A	6.4
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

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}	%	61.4	47.3
02 Measurement category		A	
03 Efficiency category		Static	
04 Efficiency grade N		76.1	62
05 Variable speed drive		Yes	

09 Power consumption P_e	kW	0.39
09 Air flow q_v	m^3/h	1570
09 Pressure increase p_{fs}	Pa	501
10 Speed (rpm) n	min^{-1}	2285
11 Specific ratio*		1.01

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-72210

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Technical description

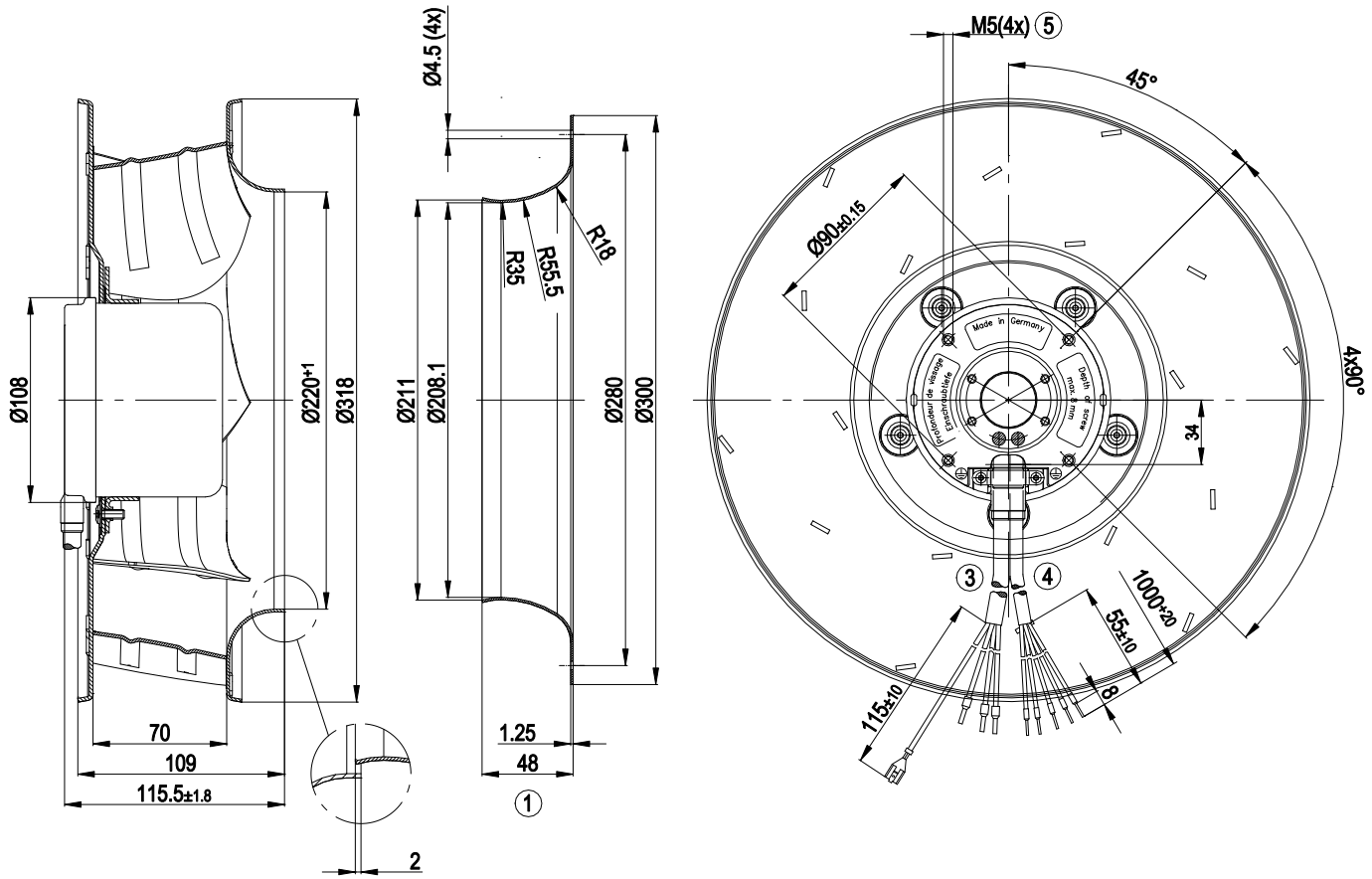
Weight	3.7 kg
Size	310 mm
Motor size	84
Rotor surface	Painted black
Impeller material	Sheet aluminum
Number of blades	6
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H0 - dry environment
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Tach output - Motor current limitation - Soft start
With cable	Lateral
Approval	EAC

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Product drawing



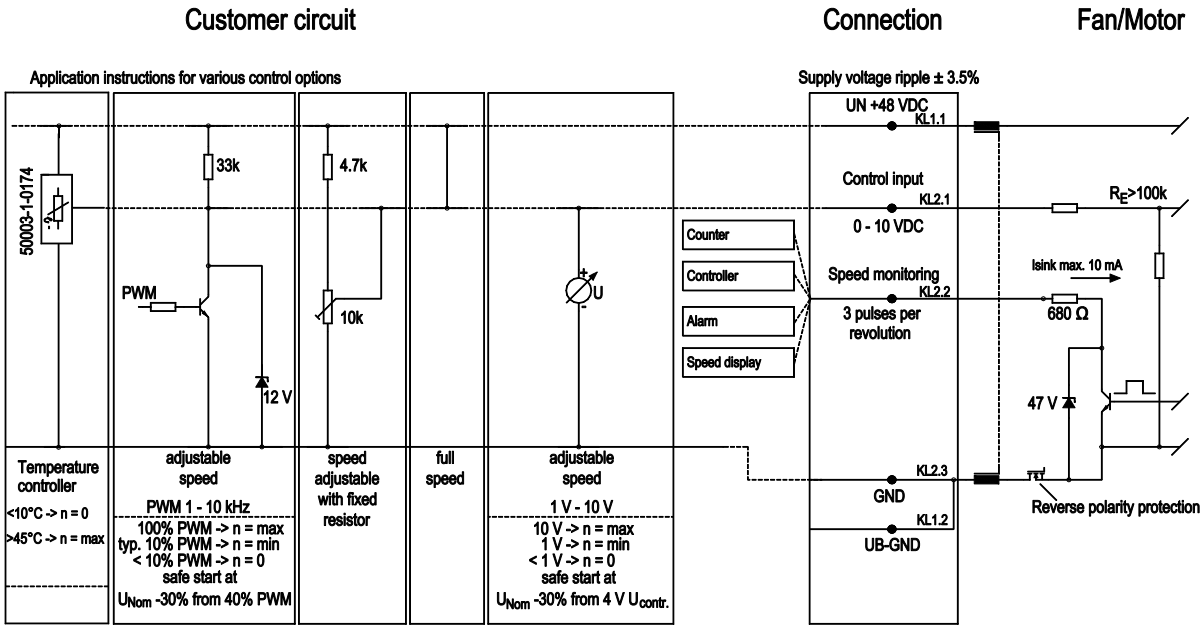
1	Accessory part: Inlet ring 31050-2-4013 not included in scope of delivery, other inlet rings on request
2	Accessory part: external electronics CHG045-AA01-01 not included in scope of delivery
3	Cable silicone 4 x 1.5 mm², 3 x wire-end ferrules and flat push-on receptacle 6.3 x 0.8 crimped
4	Cable silicone 5 x 0.5 mm², 5 x crimped ferrules
5	Max. clearance for screw 8 mm

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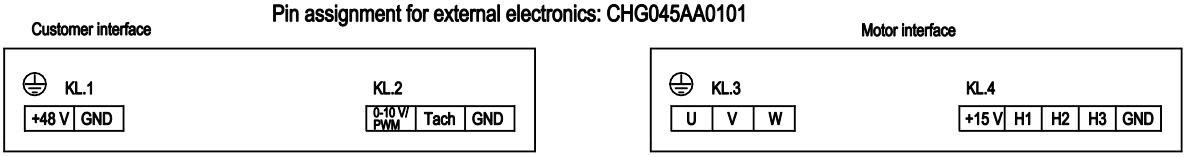
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Connection diagram



Pin assignment for external electronics: CHG045AA0101



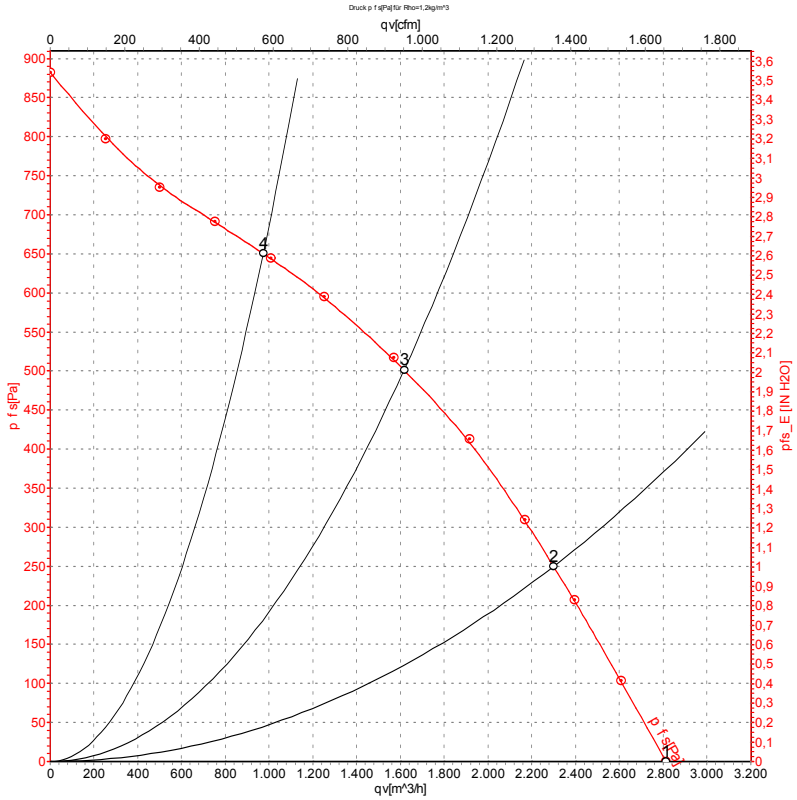
No.	Conn.	Designation	Function/assignment
KL4		+15V	red
KL4		H1	orange
KL4		H2	brown
KL4		H3	yellow
KL4		GND	blue
KL3		U	black
KL3		V	blue
KL3		W	brown
PE		PE	green/yellow

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Curves: Air performance



Measurement: LU-72210-1

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	48	2400	310	6.40	2810	0	1655	0.00
2	48	2325	363	7.58	2300	250	1355	1.00
3	48	2285	395	8.25	1615	500	950	2.01
4	48	2320	368	7.67	975	650	575	2.61

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

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