

R1G225-AF11-21

EC centrifugal fan

backward curved, single inlet



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Nominal data

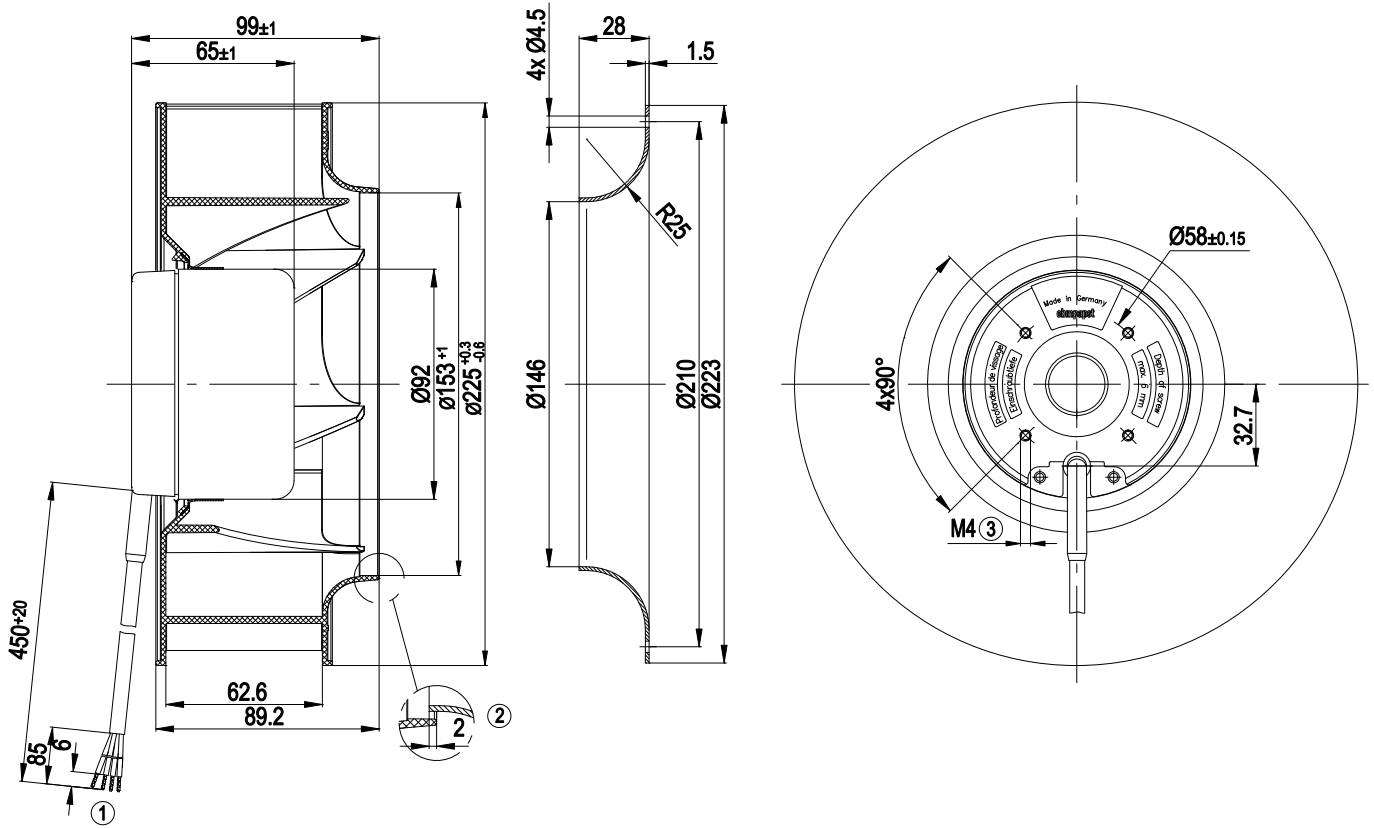
Type	R1G225-AF11-21	
Motor	M1G074-BF	
Nominal voltage	[VDC]	48
Nominal voltage range	[VDC]	36 .. 57
Type of data definition		rfa
Speed	[min ⁻¹]	2700
Power input	[W]	95
Current draw	[A]	2,2
Min. ambient temperature	[°C]	- 25
Max. ambient temperature	[°C]	+ 60
Air flow	[m ³ /h]	1120
Back pressure	[Pa]	0

ml = max. load · me = max. efficiency · rfa = running at free air · cs = customer specs · cu = customer unit
Subject to alterations

Technical features

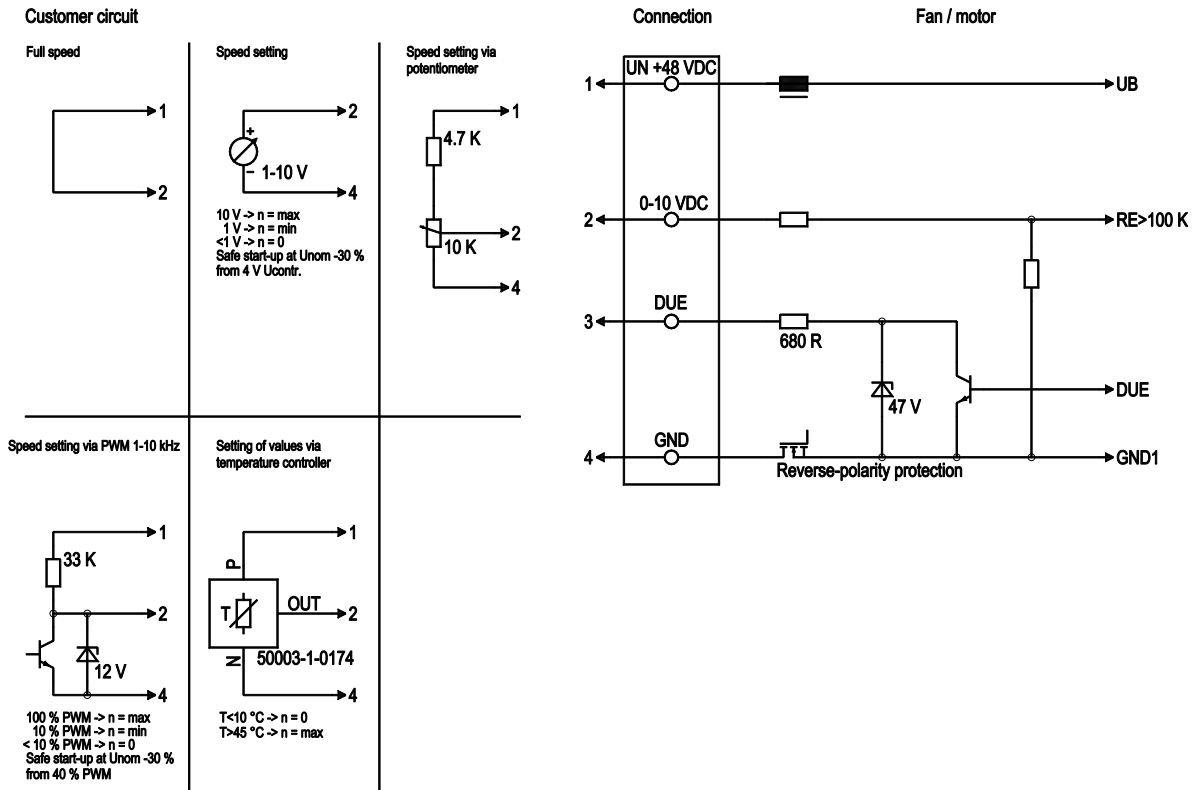
Leakage current	<= 0,25 mA
Size	225 mm
Stability	Salt fog resistant in accordance with TELCORDIA GR-487-CORE, release No. 2, March 2000
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Any
EMC interference emission	Acc. to EN 61000-6-3
EMC interference immunity	Acc. to EN 61000-6-2
Insulation class	"B"
Cable exit	Variable
Condensate discharge holes	None
Bearing motor	Ball bearing
Mass	1.5 kg
Material of impeller	Plastic PA66, fibreglass-reinforced, round sheet-metal plate coated in black
Motor protection	Reverse polarity and locked-rotor protection
Product conforming to standard	EN 60950-1
Surface of rotor	Coated in black
Number of blades	7
Type of protection	IP 44 - depending on position
Technical features	<ul style="list-style-type: none"> - Control input 0-10 VDC / PWM - Tach output - Motor current limit - Soft start
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Approval	CCC; CSA C22.2 Nr.77; UL 1004

Product drawing



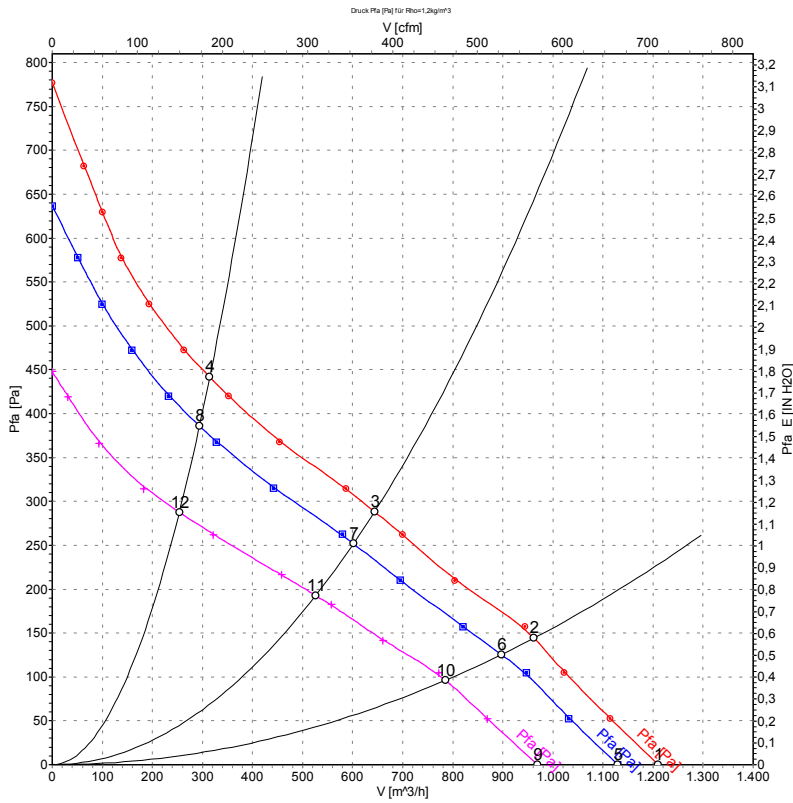
1	Connection line AWG20, 4 x brass lead tips crimped
2	Accessory part: Inlet nozzle 96358-2-4013, not included in the standard scope of delivery
3	Screw depth max. 6 mm

Connection screen



Line	No.	Signal	Colour	Function / assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, residual ripple 3.5 %
1	2	0-10 VDC	yellow	Control input Re > 100 K
1	3	DUE	white	Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA
1	4	GND	blue	Reference mass

Charts: Air flow



Measurement: LU-53006
 Measurement: LU-53007
 Measurement: LU-53005

Measured values

	U	n	P ₁	I	\hat{V}	p _{fa}
	[V]	[min ⁻¹]	[W]	[A]	[m ³ /h]	[Pa]
1	57	2780	112	2.39	1210	0
2	57	2635	116	2.52	960	146
3	57	2580	117	2.58	645	288
4	57	2755	113	2.42	315	442
5	48	2600	91	2.20	1130	0
6	48	2475	93	2.28	895	126
7	48	2410	95	2.34	600	252
8	48	2580	92	2.21	295	386
9	36	2235	59	1.84	970	0
10	36	2150	63	1.96	785	98
11	36	2115	64	2.00	525	193
12	36	2230	59	1.84	255	288

TECHNICAL INFORMATION

ball bearing life expectancy calculation

calculation number:	13050	note:	Data and temperature of bearings based on reference measurements. Calculated for 700 m ³ /h @ 200 Pa.
date:	10.07.2014		
type:	R1G 225-AF11-21		
motor:	M1G 074-BF -		
customer:	IT		

motor data

voltage [V]:	48
frequency [Hz]:	0
capacitor [µF]:	0
power [W]:	95
speed [1/min]:	2420

general data

lubricant :	Asonic GHY 72
rotor side ball bearing :	Kugellager
stator side ball bearing :	Kugellager
ambient temperature [°C] :	40
probability a1 :	1

operating pos	rotor above	bearing :	rotor side	coeff. of grease a ₂₃ :	0,80
nominal life expectancy			L _{nh}	=	146910,00
modified nominal life expectancy			L _{nah} = a ₁ *a ₂₃ *L _{nh}	=	118371*
lubricant life expectancy			t _f	=	61017

*The life expectancy is limited to 61017 by the lubricant life expectancy.

operating pos	rotor below	bearing :	stator side	coeff. of grease a ₂₃ :	0,84
nominal life expectancy			L _{nh}	=	146910,00
modified nominal life expectancy			L _{nah} = a ₁ *a ₂₃ *L _{nh}	=	124611*
lubricant life expectancy			t _f	=	61017

*The life expectancy is limited to 61017 by the lubricant life expectancy.

operating pos	horizontal shaft	bearing:	rotor side	coeff. of grease a ₂₃ :	0,80
nominal life expectancy			L _{nh}	=	162960,10
modified nominal life expectancy			L _{nah} = a ₁ *a ₂₃ *L _{nh}	=	131303*
lubricant life expectancy			t _f	=	61017

*The life expectancy is limited to 61017 by the lubricant life expectancy.