R1G225-AG39-10

EC centrifugal fan

backward curved, single inlet



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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R1G225-AG39-10**	
Motor	**M1G074-CF**	
Nominal voltage	VDC	54.5
Nominal voltage range	VDC	36 .. 57
Type of data definition		fa
Speed	min^{-1}	3250
Power input	W	165
Current draw	A	3.8
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}	%	50.5	39.4	43.4
Efficiency grade N		69.1	58	62
Power input P_e	kW	0.17		
Air flow q_v	m³/h	790		
Pressure increase p_{fs}	Pa	350		
Speed n	min^{-1}	2970		

Data definition with optimum efficiency. LU-63727
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

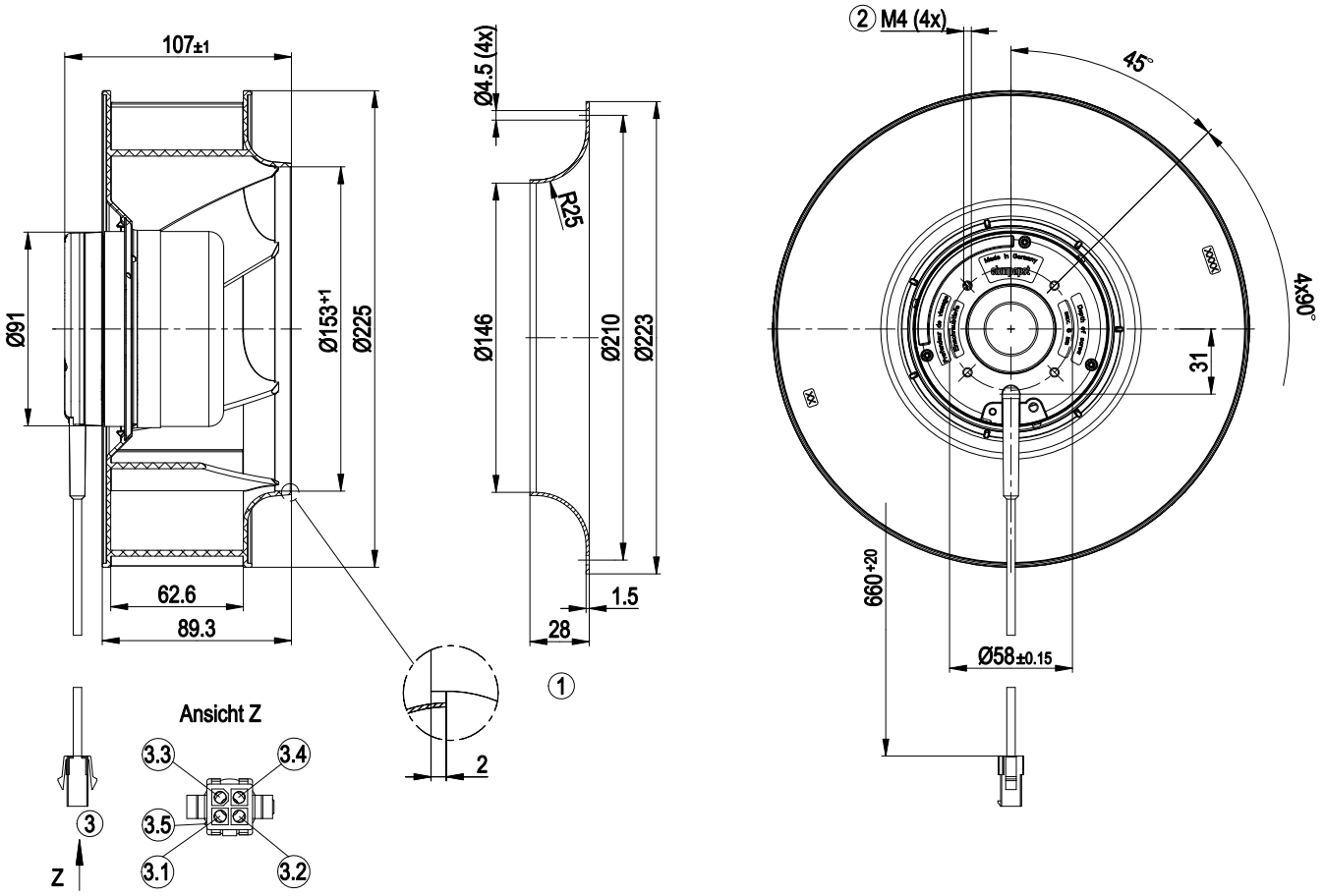
Mass	1.8 kg
Size	225 mm
Surface of rotor	Coated in black
Material of impeller	PA plastic
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Cooling bore / aperture	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Tach output - Motor current limit - Soft start
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 55022 (Class B)
Electrical leads	With plug
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Variable
Product conforming to standard	EN 60950-1
Approval	CCC; UL 1004-1; CSA C22.2 Nr.77

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Product drawing



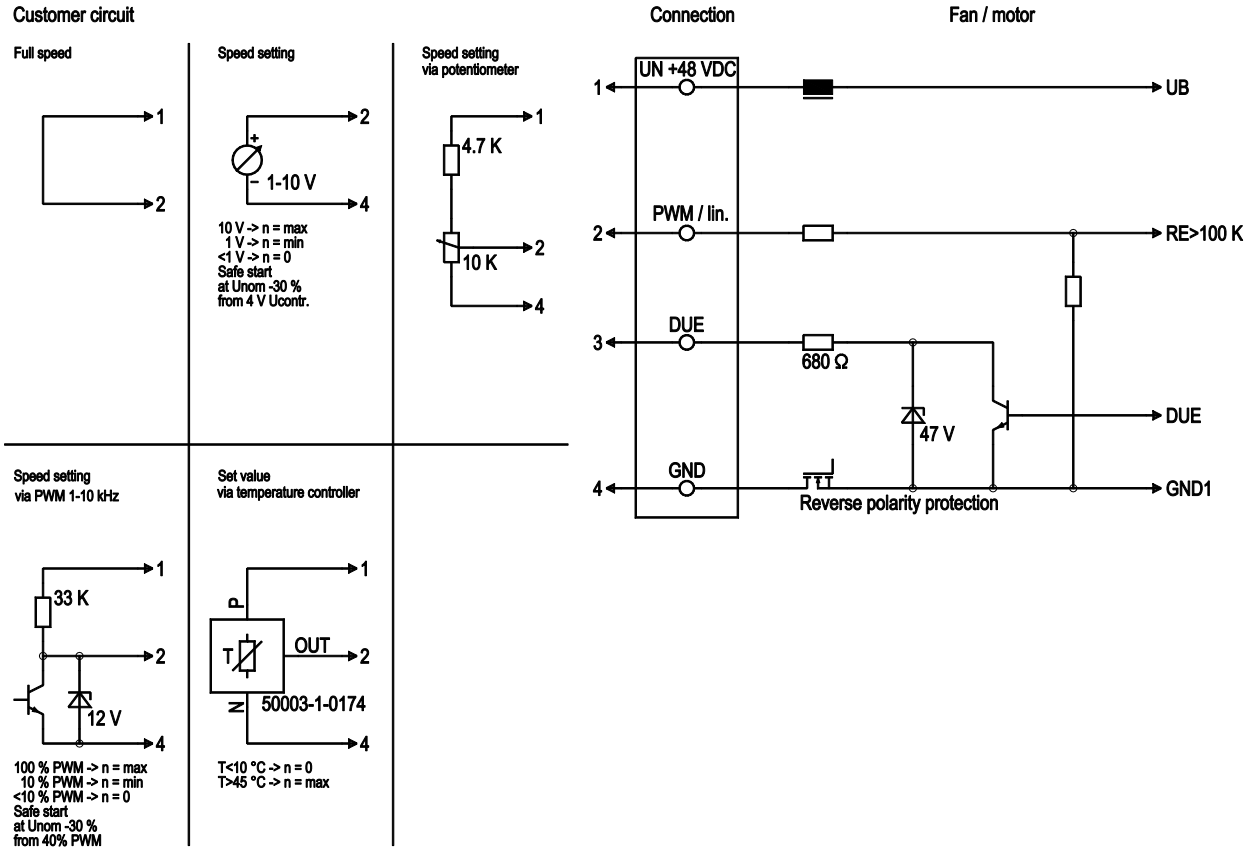
Z	View Z shown magnified
1	Accessory part: Inlet nozzle 96358-2-4013 not included in scope of delivery
2	Depth of screw max. 6 mm
3	Connection line PVC AWG20 with connector housing 4-pole Tyco 172159-1, 4x plug pin Tyco 170360-3
3.1	+ (red)
3.2	- (blue)
3.3	Tach (white)
3.4	PWM/LIN (yellow)
3.5	Polarising rib

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Connection screen



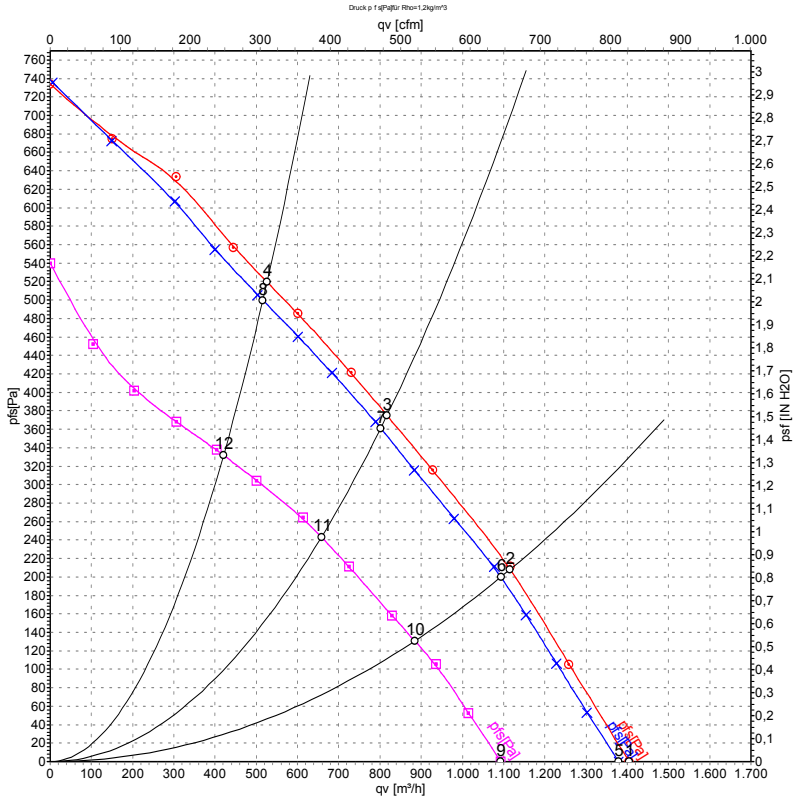
No.	Conn.	Designation	Colour	Function / assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, residual ripple 3.5 %
1	2	PWM / lin	yellow	PWM / lin. control input, 0-10 V
1	3	Tach	white	Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA
1	4	GND	blue	Reference mass

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Charts: Air flow



Measurement: LU-63731
Measurement: LU-63727
Measurement: LU-63730

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	3300	176	3.94	1405	0
2	57	3105	181	4.16	1115	212
3	57	3040	183	4.24	815	375
4	57	3085	181	4.19	525	520
5	54.5	3250	165	3.80	1380	0
6	54.5	3110	170	3.99	1095	200
7	54.5	2970	173	4.14	800	360
8	54.5	3025	172	4.08	515	500
9	36	2580	85	2.88	1095	0
10	36	2480	92	3.10	885	131
11	36	2435	96	3.21	660	243
12	36	2465	94	3.15	420	332

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

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