

EC centrifugal fan

backward curved, single inlet



R1G175-AB63-39 ebmpapst Datasheet
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Nominal data

Type	R1G175-AB63-39	
Motor	M1G055-BD	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Type of data definition		fa
Speed	min ⁻¹	3100
Power input	W	34
Current draw	A	1.6
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

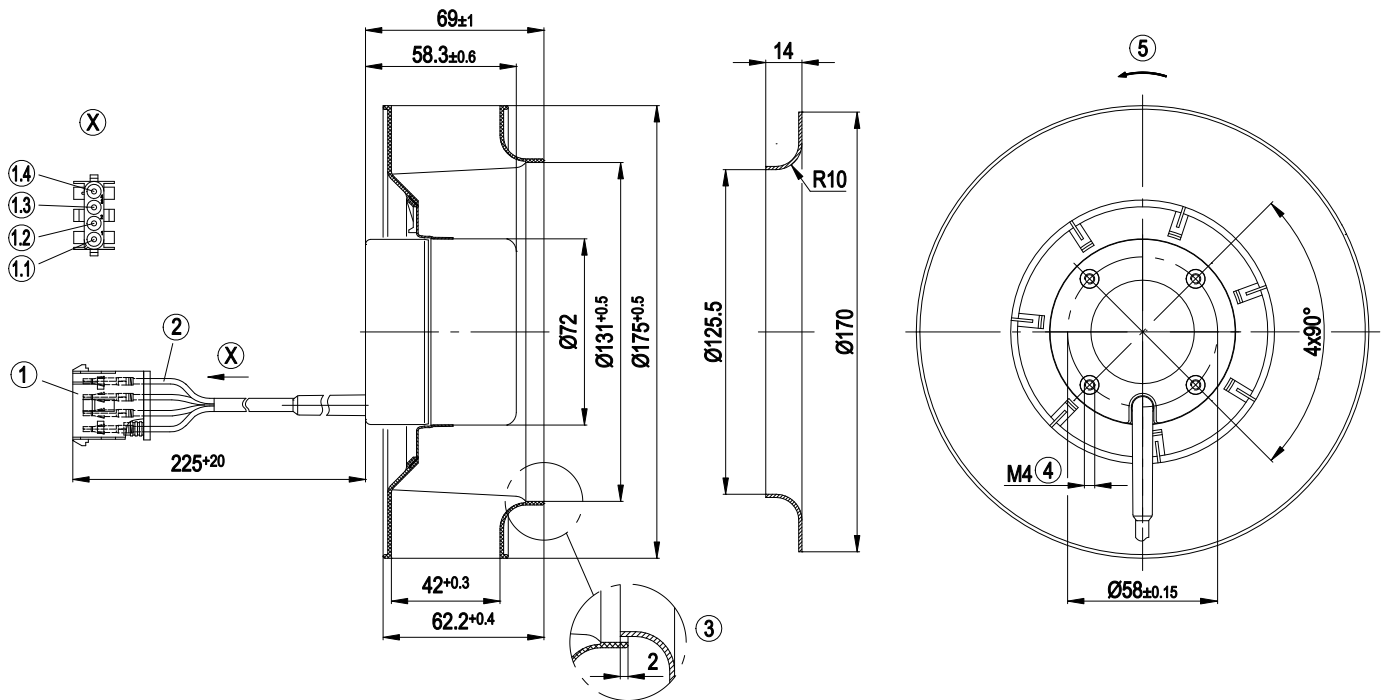


Technical features

Mass	0.79 kg
Size	175 mm
Surface of rotor	Coated in black
Material of impeller	PA plastic 6.6, fiberglass-reinforced
Number of blades	7
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 44
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	- Control input 0-10 VDC / PWM - Tach output - Soft start
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 61000-6-3
Electrical leads	With plug
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Variable
Approval	CSA C22.2 Nr.77; UL 1004-1



Product drawing

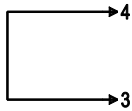


X	View X / plug assignment
1	Connector housing AMP350 780-1, female terminal 926882-1 (4x)
1.1	+ = red
1.2	0-10 VDC = yellow
1.3	Speed monitoring = white
1.4	GND = blue
2	Connection line 4 x AWG20
3	Accessory part: Inlet nozzle 09576-2-4013, not included in the standard scope of delivery
4	Screw depth max. 6 mm
5	Direction of rotation clockwise, seen on rotor

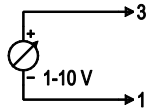
Connection screen

Customer circuit

Full speed

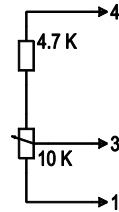


Speed setting

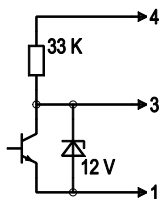


10 V → n = max
1 V → n = min
<1 V → n = 0
Safe start-up at Unom -30 %
from 4 V Ucontr.

Speed setting with fixed resistance

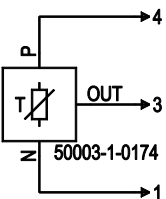


Speed setting via PWM 1-10 kHz



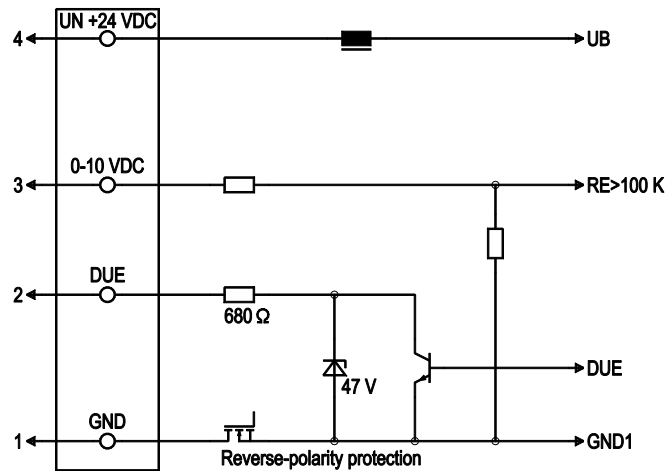
100 % PWM → n = max
10 % PWM → n = min
<10 % PWM → n = 0
Safe start-up at Unom -30 %
from 40 % PWM

Setting of values via temperature controller



Connection

Fan / motor

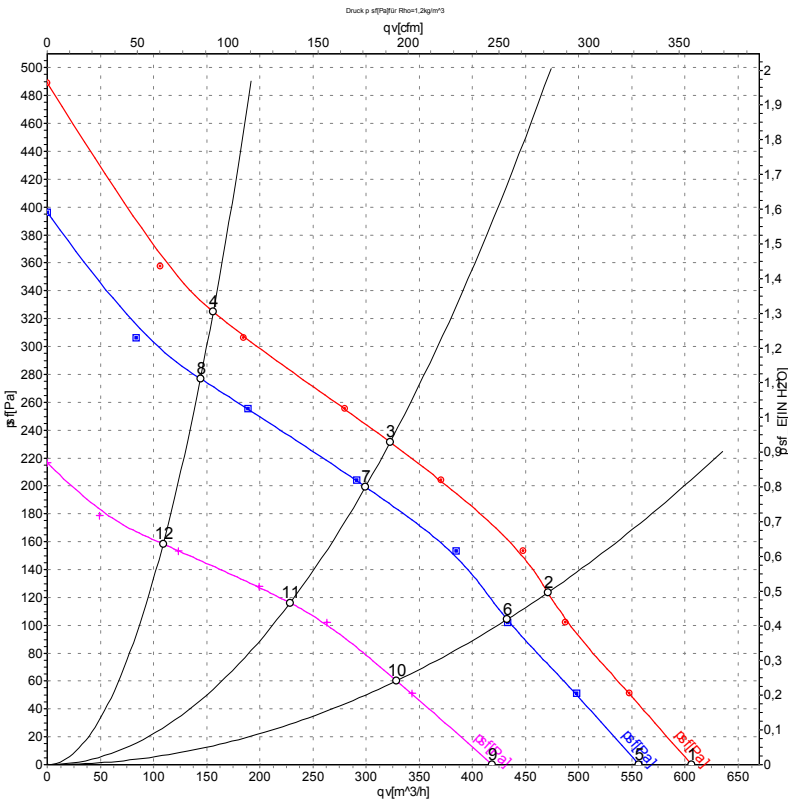


Line	No.	Signal	Colour	Function / assignment
1	1	GND	blue	Reference mass
1	2	DUE	white	Speed monitoring output, 2 pulses per rotation, Isink max = 10 mA
1	3	0-10 VDC	yellow	Control input Re > 100 K
1	4	Un +24 VDC	red	Power supply 24 VDC, residual ripple 3.5 %

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Charts: Air flow



Measurement: LU-44776
Measurement: LU-44775
Measurement: LU-44777

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 _e	I	qv	p _{sf}
	V	min ⁻¹	W	A	m ³ /h	Pa
1	28	3375	46	1.83	605	0
2	28	3170	48	1.97	470	123
3	28	3105	49	2.01	325	231
4	28	3255	47	1.91	155	325
5	24	3100	34	1.60	555	0
6	24	2915	39	1.79	435	100
7	24	2885	39	1.82	300	200
8	24	3010	37	1.69	145	275
9	16	2320	16	1.10	420	0
10	16	2225	17	1.21	330	60
11	16	2205	18	1.24	230	116
12	16	2270	16	1.15	110	158

