

R1G250-AQ37-52

EC centrifugal fan

backward curved, single inlet



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Nominal data

Type	R1G250-AQ37-52	
Motor	M1G074-CF	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Type of data definition		rfa
Speed	min ⁻¹	2600
Power input	W	105
Current draw	A	2.55
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	+60

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

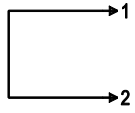
Technical features

Size	250 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Any
Humidity class	F0
Insulation class	"B"
Cable exit	Variable
Condensate discharge holes	None
Motor bearing	Ball bearing
Mass	2 kg
Material of impeller	Plastic PA66, fibreglass-reinforced
Motor protection	Reverse polarity and locked-rotor protection
Product conforming to standard	EN 60950-1
Surface of rotor	Coated in black
Number of blades	11
Type of protection	IP 42
Technical features	<ul style="list-style-type: none"> - Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM
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 1004-1

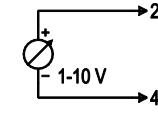
Connection screen

Customer circuit

Full speed

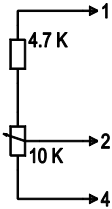


Speed setting

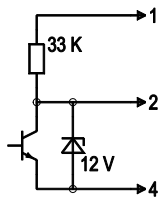


10 V → n = max
 1 V → n = min
 <1 V → n = 0
 Safe start
 at Unom -30 %
 from 4 V Ucontr.

Speed setting via potentiometer

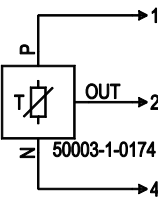


Speed setting via PWM 1-10 kHz



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

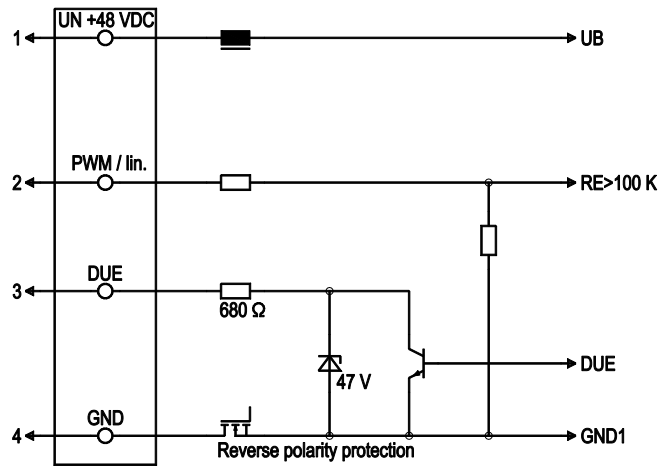
Set value via temperature controller



T < 10 °C → n = 0
 T > 45 °C → n = max

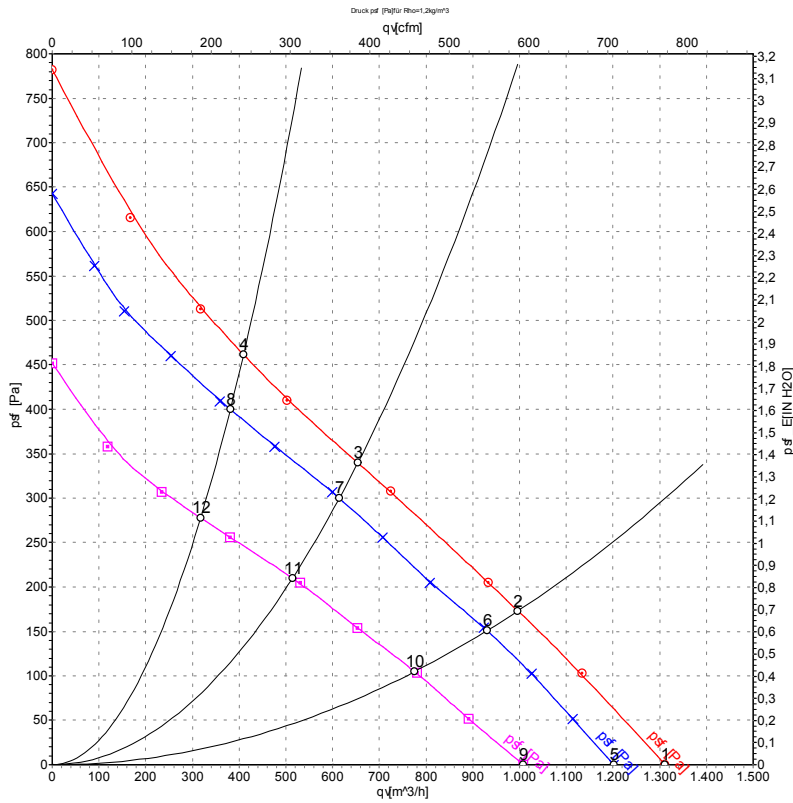
Connection

Fan / motor



Line	No.	Signal	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	DUE	white	Speed monitoring output, 3 pulses per rotation, Isink max = 10 mA
1	4	GND	blue	Reference mass

Charts: Air flow



Measurement: LU-47074
 Measurement: LU-47073
 Measurement: LU-47075

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	56	2850	134	2.78	1310	0
2	56	2625	139	2.93	995	173
3	56	2550	141	2.98	655	340
4	56	2650	138	2.91	410	461
5	48	2600	105	2.55	1200	0
6	48	2450	114	2.74	930	150
7	48	2380	116	2.81	615	300
8	48	2460	113	2.71	380	400
9	36	2180	60	1.94	1010	0
10	36	2040	67	2.16	775	106
11	36	2005	70	2.24	515	210
12	36	2060	66	2.13	320	278