

W1G180-AB31-10

EC axial compact fan



ASIA PACIFIC SHENGRUI LIMITED

Phone +00852 56261528

info@apacfan.com

www.apacfan.com

Nominal data

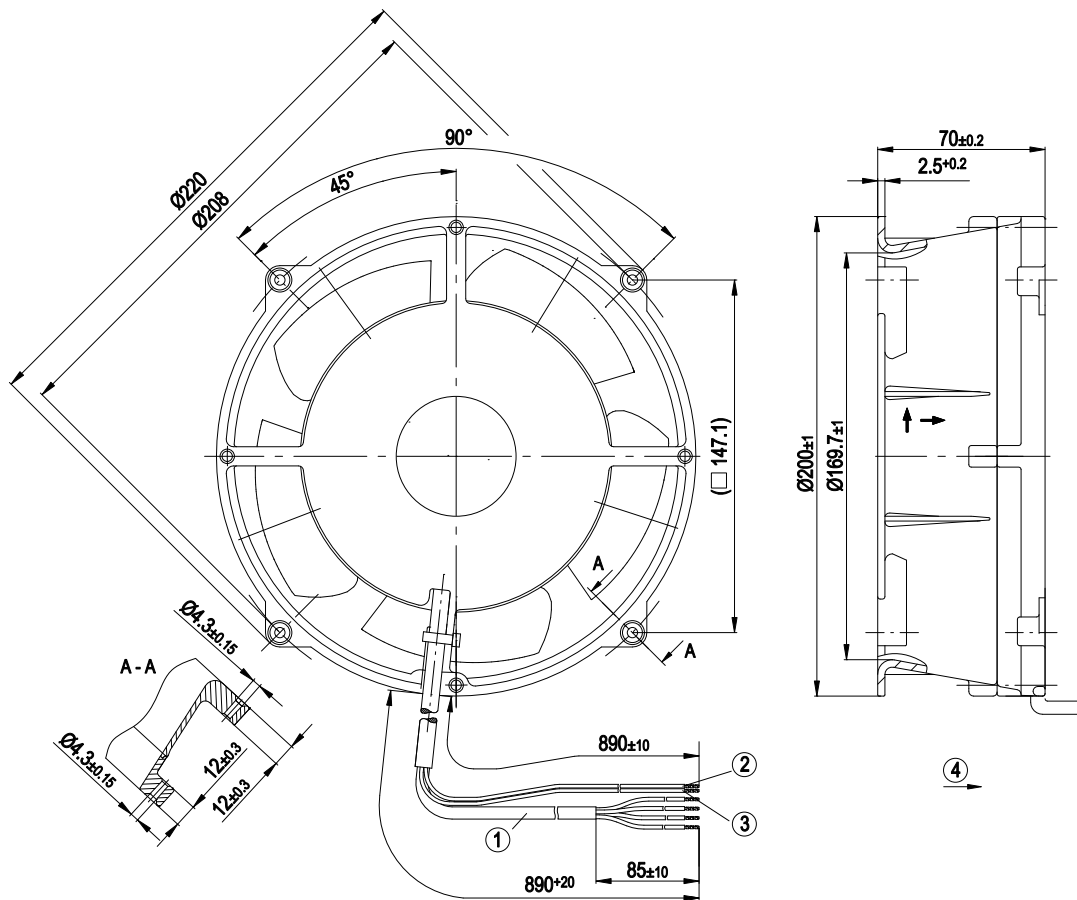
Type	W1G180-AB31-10	
Motor	M1G074-BF	
Nominal voltage	[VDC]	24
Nominal voltage range	[VDC]	16 .. 28
Type of data definition		rfa
Speed	[min ⁻¹]	4550
Power input	[W]	93
Current draw	[A]	4.3
Min. ambient temperature	[°C]	- 25
Max. ambient temperature	[°C]	+60

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

Technical features

Leakage current	<= 0,25 mA
Size	180 mm
Operation mode	S1
Direction of rotation	Counter-clockwise, seen on rotor
Mounting position	Any
EMC interference emission	Acc. to EN 55022 (Class B)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Direction of air flow	"V"
Insulation class	"B"
Cable exit	Lateral
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	1.92 kg
Material of impeller	Plastic PA66, fibreglass-reinforced
Material of wall ring	Die-cast aluminium, coated in black
Motor protection	Reverse polarity and locked-rotor protection
Product conforming to standard	EN 60950-1
Surface of rotor	Galvanised
Number of blades	5
Type of protection	IP 44 - depending on position
Protection class	I
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	CSA C22.2 Nr.113; UL 507

Product drawing

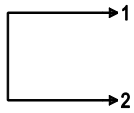


1	Connecting cable AWG 20, 4x brass lead tips crimped
2	Cable AWG 22 black
3	Cable AWG 22 black
4	Direction of air flow "V"

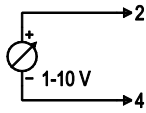
Connection screen

Customer circuit

Full speed

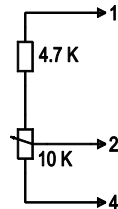


Speed setting

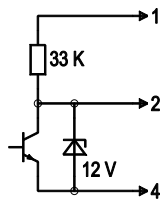


10 V → n = max
 1 V → n = min
 <1 V → n = 0
 Safe start
 at Unom -30 %
 from 4 V Ucontr.

Speed setting via potentiometer

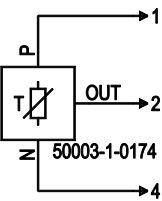


Speed setting via PWM 1-10 kHz



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

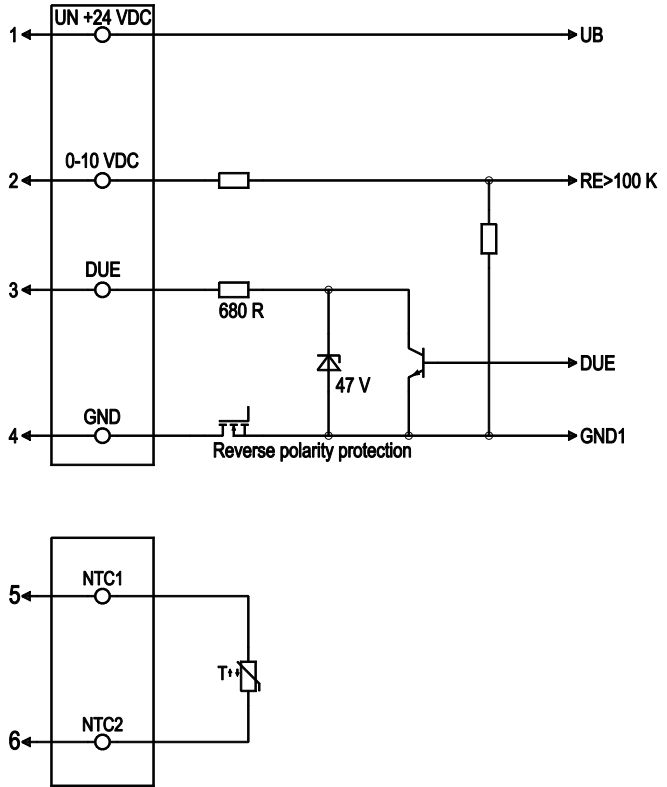
Set value via temperature controller



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

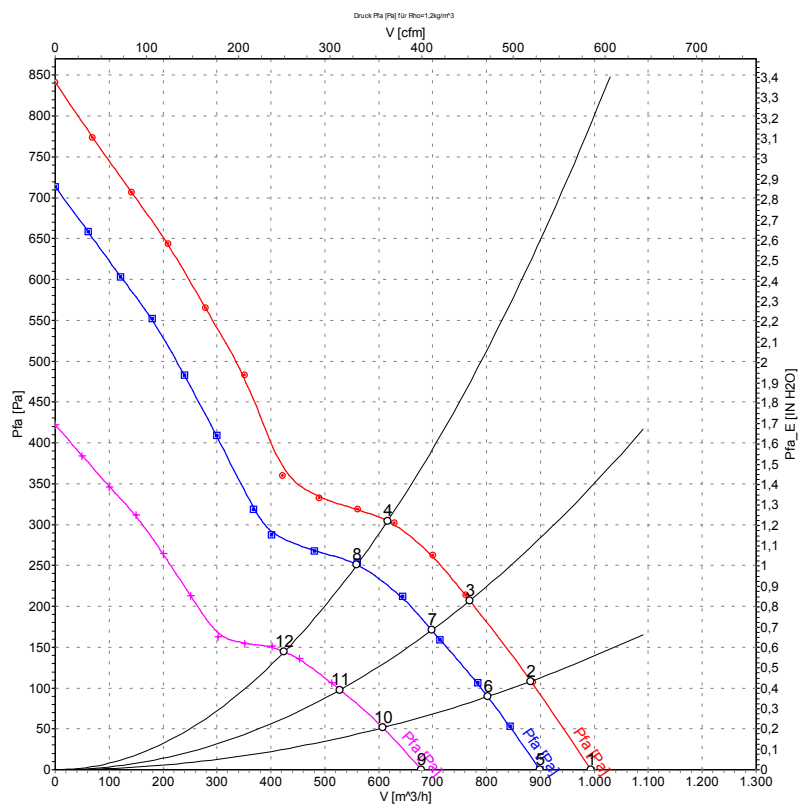
Connection

Fan / motor



Line	No.	Signal	Colour	Function / assignment
1	1	Un +24 VDC	red	Power supply 24 VDC, residual ripple 3.5 %
1	2	0 - 10 VDC	yellow	Control input Re > 100 k
1	3	DUE	white	Speed, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference mass
2	5	NTC1	black	NTC not connected to electronics
3	6	NTC2	black	NTC not connected to electronics

Charts: Air flow



Measurement: LU-76822
 Measurement: LU-76821
 Measurement: LU-76825

Measured values

	U	n	P ₁	I	\hat{V}	p _{fa}
	[V]	[min ⁻¹]	[W]	[A]	[m ³ /h]	[Pa]
1	28	5060	127	5.02	995	0
2	28	4900	133	5.31	880	111
3	28	4780	139	5.57	770	208
4	28	4750	140	5.64	615	305
5	24	4550	93	4.30	900	0
6	24	4460	102	4.73	800	90
7	24	4350	106	4.93	700	170
8	24	4325	108	5.00	560	250
9	16	3465	45	3.27	680	0
10	16	3370	48	3.41	610	54
11	16	3315	49	3.52	530	98
12	16	3300	50	3.55	425	144