

R1G133-AA17-02

EC centrifugal fan

backward curved, single inlet



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Nominal data

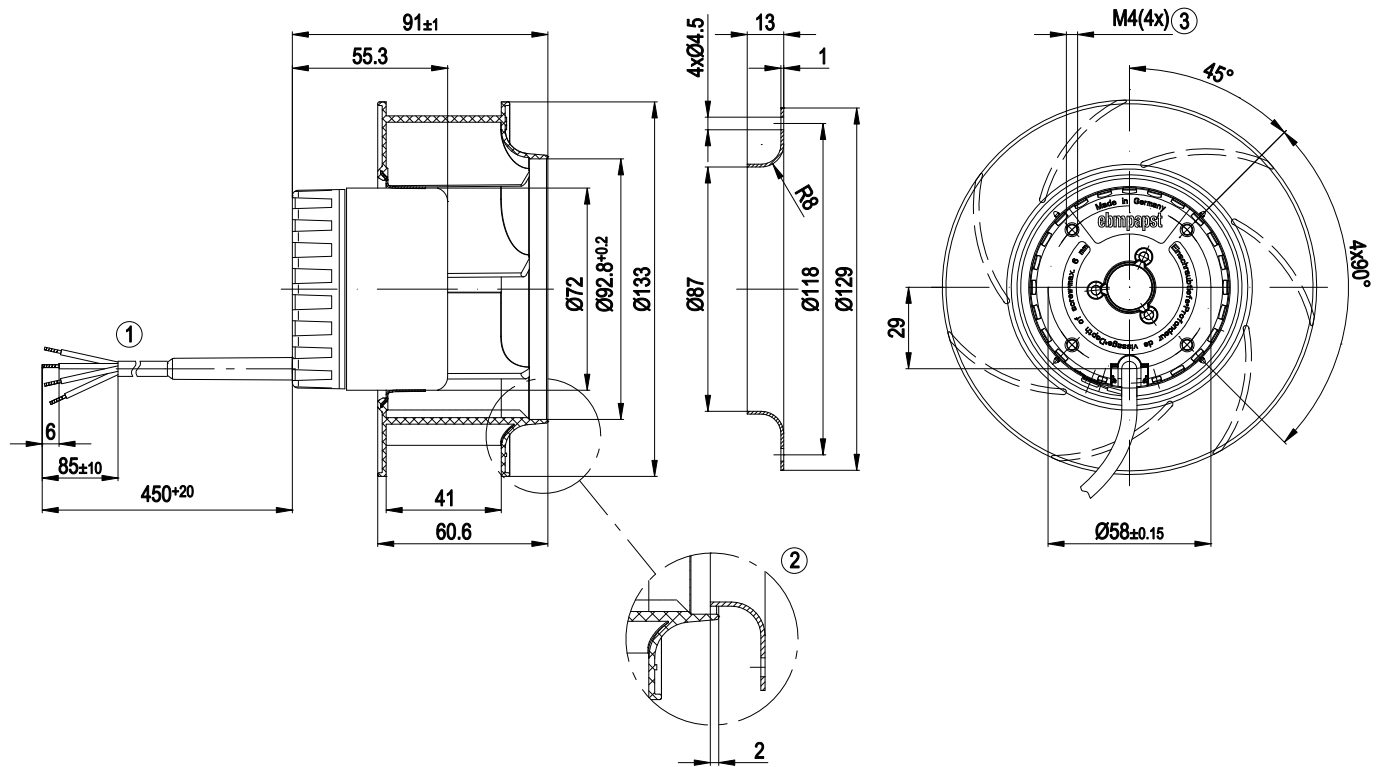
Type	R1G133-AA17-02	
Motor	M1G055-BD	
Nominal voltage	[VDC]	24
Nominal voltage range	[VDC]	16 .. 28
Type of data definition		rfa
Speed	[min ⁻¹]	3900
Power input	[W]	28
Current draw	[A]	1.3
Min. ambient temperature	[°C]	- 25
Max. ambient temperature	[°C]	+60

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

Technical features

Size	133 mm
Operation mode	S1
Direction of rotation	Clockwise, seen on rotor
Mounting position	Any
EMC interference emission	Acc. to EN 61000-6-3 (household environment)
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
Insulation class	"B"
Cable exit	Variable
Condensate discharge holes	Rotor-side
Bearing motor	Ball bearing
Mass	0.65 kg
Material of electronics housing	Die-cast aluminium
Material of impeller	Plastic PA66, fibreglass-reinforced
Motor protection	Reverse polarity and locked-rotor protection
Surface of rotor	Thick layer passivated
Number of blades	7
Type of protection	IP 20
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.77; UL 1004

Product drawing

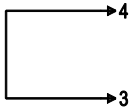


1	Connection line AWG20; 4 x brass lead tips crimped
2	Accessory part: Inlet nozzle 09566-2-4013, not included in the standard scope of delivery
3	Depth of screw max. 6 mm

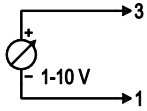
Connection screen

Customer circuit

Full speed

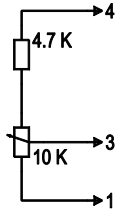


Speed setting

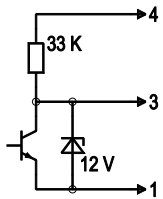


10 V → n = max
1 V → n = min
<1 V → n = 0
Safe start-up at Unom -30 %
from 4 V Ucontr.

Speed setting with fixed resistance

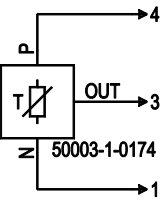


Speed setting via PWM 1-10 kHz



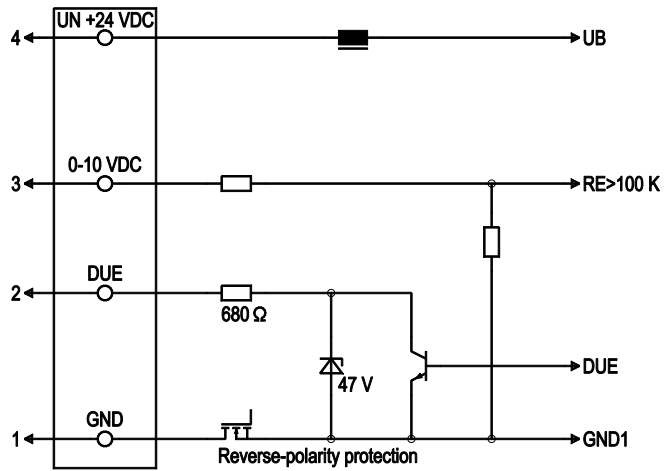
100 % PWM → n = max
10 % PWM → n = min
<10 % PWM → n = 0
Safe start-up at Unom -30 %
from 40 % PWM

Setting of values via temperature controller



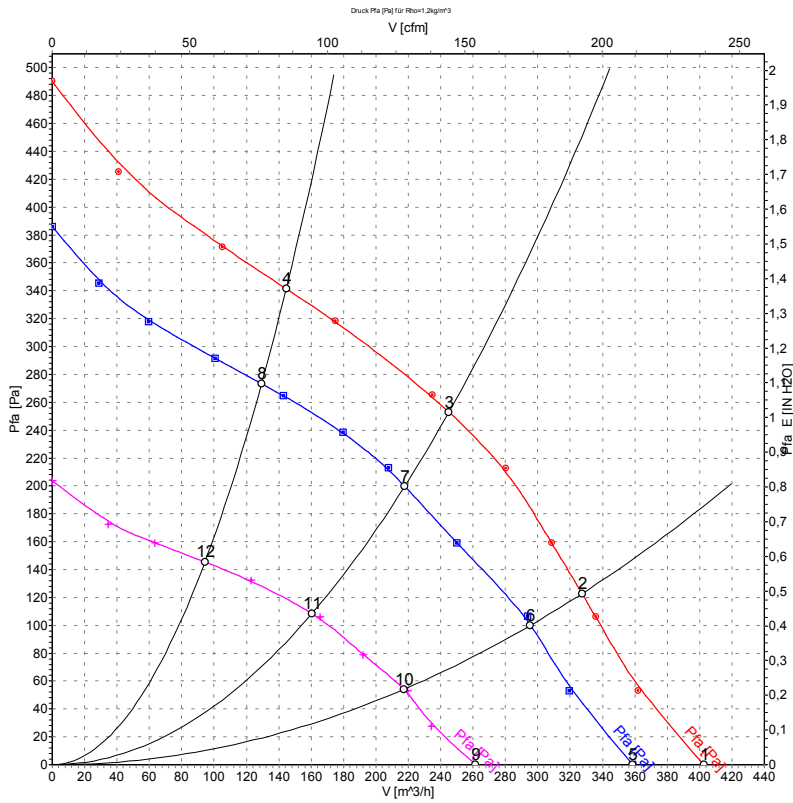
Connection

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 %

Charts: Air flow



Measurement: LU-54690
 Measurement: LU-54689
 Measurement: LU-54691

Measured values

	U	n	P ₁	I	\hat{V}	p _{fa}
	[V]	[min ⁻¹]	[W]	[A]	[m ³ /h]	[Pa]
1	28	4345	36	1.43	405	0
2	28	4170	40	1.60	325	123
3	28	4155	41	1.61	245	253
4	28	4255	38	1.51	145	342
5	24	3900	28	1.30	360	0
6	24	3725	30	1.39	295	103
7	24	3710	30	1.40	220	200
8	24	3800	28	1.32	130	274
9	16	2830	11	0.88	260	0
10	16	2750	13	0.95	215	55
11	16	2745	13	0.95	160	109
12	16	2795	12	0.91	95	145