R1G280-RC77-02

EC centrifugal fan - RadiCal

backward curved, single inlet



ebm-papst Mulfingen GmbH & Co. KG
Bachmühle 2 · D-74673 Mulfingen
Phone +49 7938 81-0
Fax +49 7938 81-110
info1@de.ebmpapst.com
www.ebmpapst.com

Limited partnership · Headquarters Mulfingen
County court Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
County court Stuttgart · HRB 590142

Nominal data

Type	**R1G280-RC77-02**
Motor	**M1G074-CF**

Nominal voltage	VDC	12
Nominal voltage range	VDC	8 .. 16
Type of data definition		fa
State		prelim.
Speed (rpm)	min^{-1}	1490
Power input	W	71
Current draw	A	7.1
Min. ambient temperature	°C	-40
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

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Technical features

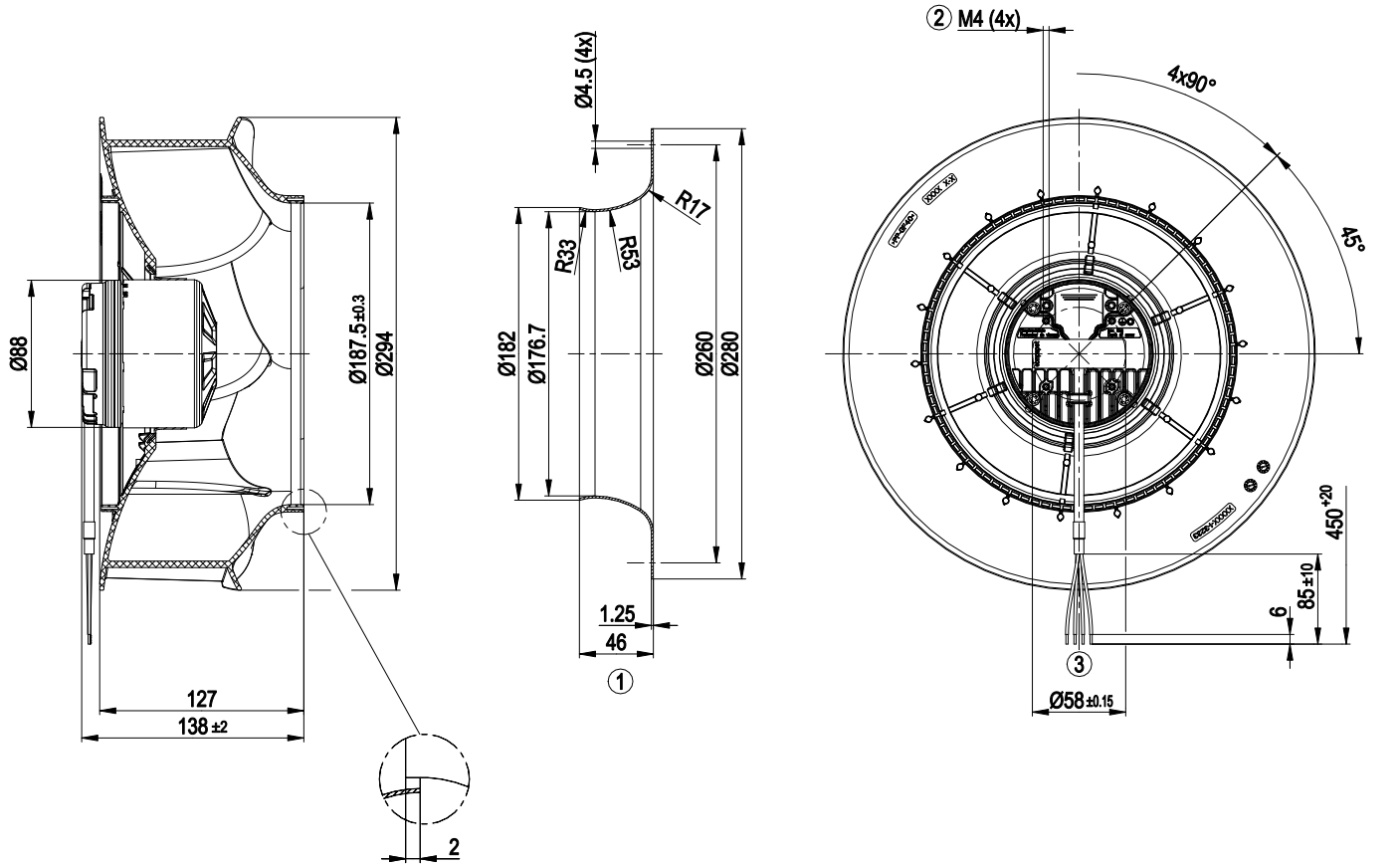
Mass	2.3 kg
Size	280 mm
Surface of rotor	Galvanised
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	Plastic, PP (black)
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 24 KM; Electronics IP 66 / 69 K
Insulation class	"B"
Humidity (F)/environmental protection class (H)	H2+
Note ambient temperature	Occasional start-up between -40°C and -25°C is permissible. For continuous operation at ambient temperatures below -25°C (e.g. refrigeration applications) we recommend our fan version with special low-temperature bearings.
Max. permissible ambient motor temp. (transp./ storage)	+70 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensate discharge holes	Rotor-side
Operation mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Tach output - Motor current limit - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Variable
Approval	UL 507; EAC

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Product drawing



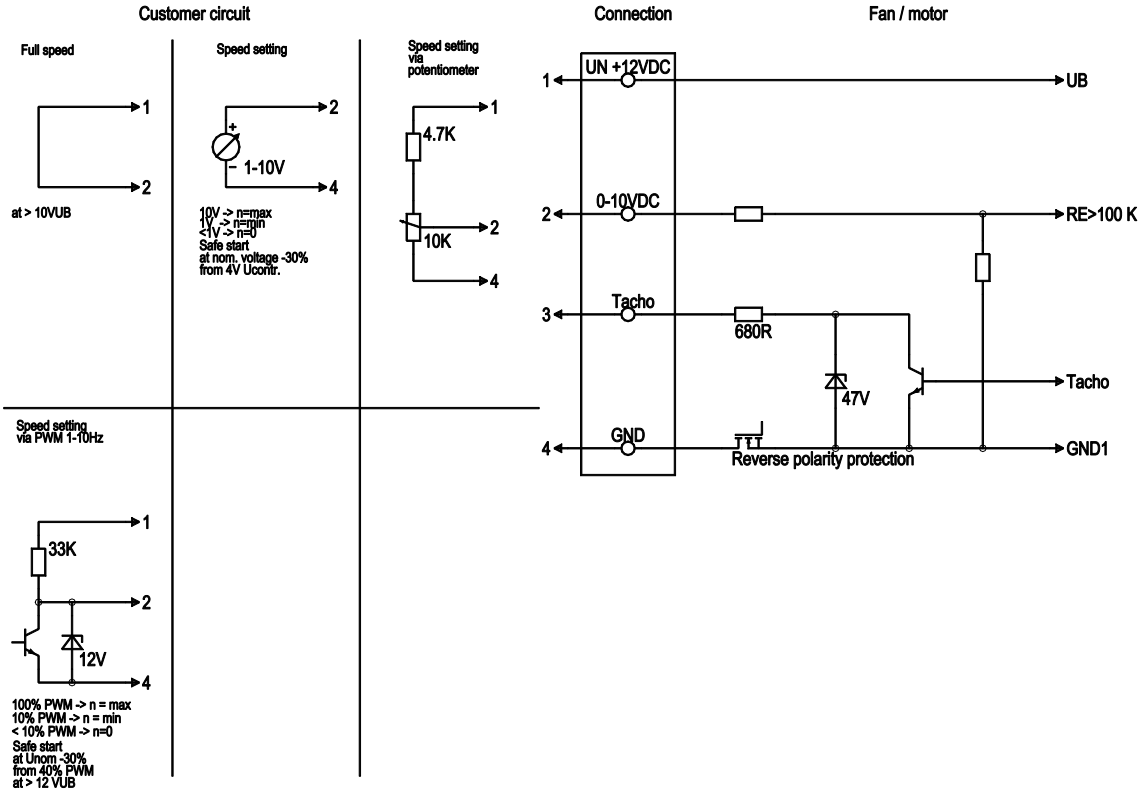
1	Accessory part: Inlet nozzle 28000-2-4013 not included in scope of delivery
2	Thread reach max. 6 mm
3	Connection line PVC 4x AWG18, insulating sleeve, 4x lead tips crimped

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Connection screen



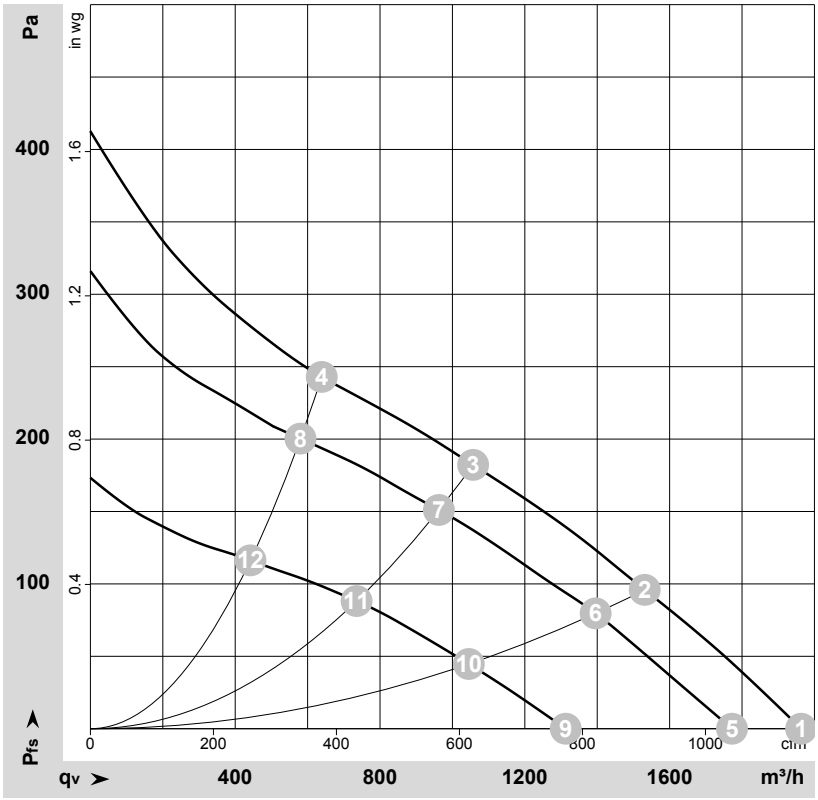
No.	Conn.	Designation	Colour	Function / assignment
	1	Un +12VDC	red	Power supply 12 VDC, see type plate for voltage range, residual ripple 3.5%
	2	PWM/LIN	yellow	Control input Re > 40 k (PWM 1-10 kHz/0-10 V)
	3	Tacho	white	Speed monitoring output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference mass

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Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-166561-1
Measurement: LU-165791-1
Measurement: LU-166559-1

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	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	inH2O
1	16	1655	99	8.22			1965	0	1155	0.00
2	16	1550	108	9.12			1530	96	900	0.39
3	16	1505	113	9.59			1055	182	620	0.73
4	16	1575	106	8.91			640	243	375	0.98
5	12	1490	71	7.10	60	67	1770	0	1045	0.00
6	12	1395	78	7.90	54	62	1395	80	820	0.32
7	12	1375	80	8.14	50	57	965	150	565	0.60
8	12	1435	76	7.63	52	60	580	200	340	0.80
9	8	1135	30	4.47			1315	0	775	0.00
10	8	1065	33	5.05			1045	45	615	0.18
11	8	1060	35	5.28			735	88	435	0.35
12	8	1095	33	4.94			440	116	260	0.47

U = Supply voltage · n = Speed (rpm) · P_{ed} = Power input · I = Current draw · LpA_{in} = Sound pressure level inlet side · LwA_{in} = Sound power level inlet side · q_V = Air flow · p_{fs} = Pressure increase

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