R1G280-RC79-02

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-RC79-02**
Motor	**M1G074-CF**

Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Type of data definition		fa
State		prelim.
Speed (rpm)	min^{-1}	1660
Power input	W	92
Current draw	A	4.9
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

EC centrifugal fan - RadiCal

backward curved, single inlet

Technical features

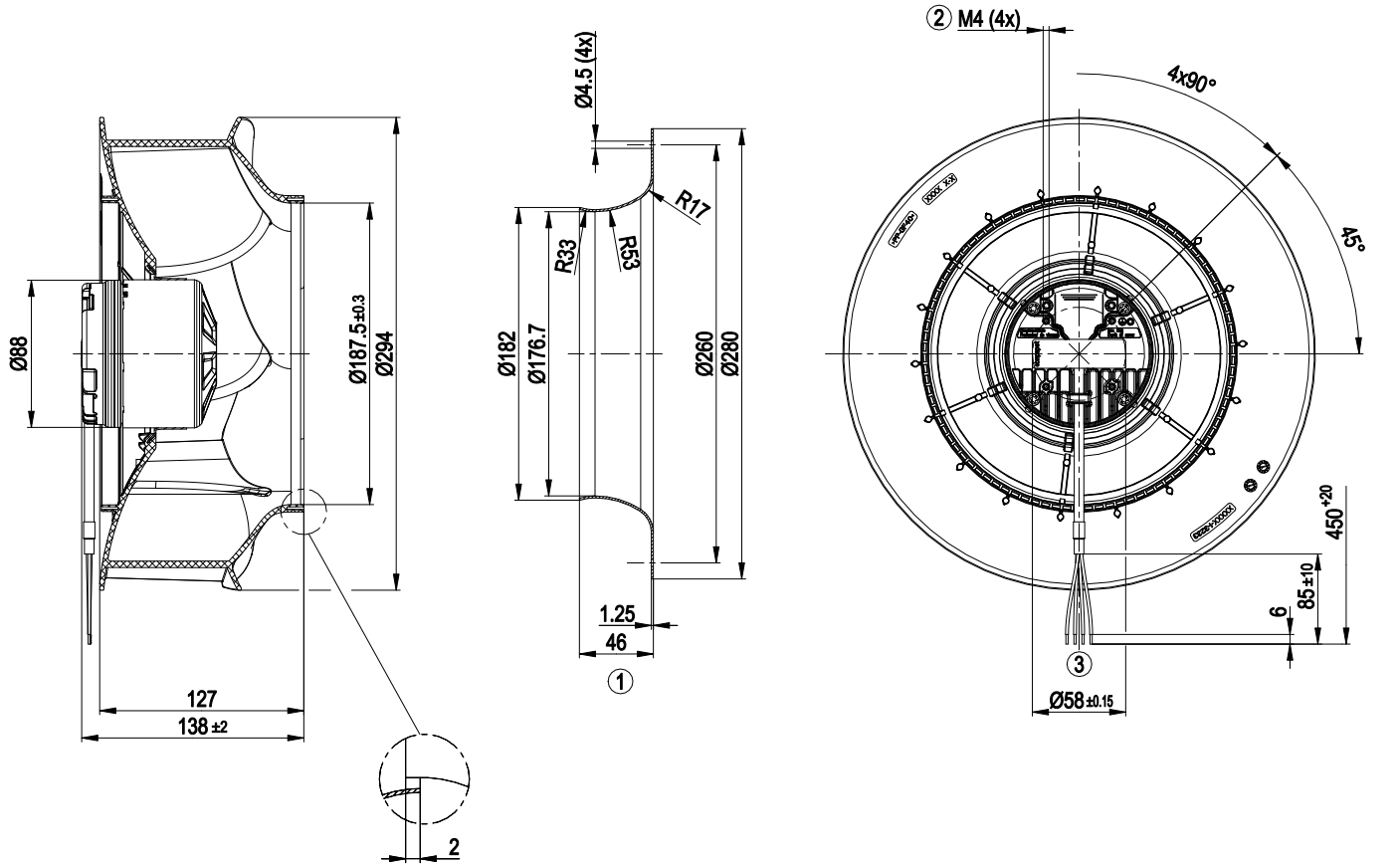
Mass	2.3 kg
Size	280 mm
Surface of rotor	Galvanised
Material of electronics housing	Die-cast aluminium, coated in black
Material of impeller	Plastic, PP (black)
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 24 KM; Electronics IP 66 / 69 K
Insulation class	"B"
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 - Over-temperature protected electronics
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Variable
Approval	UL 507; EAC

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

EC centrifugal fan - RadiCal

backward curved, single inlet

Product drawing



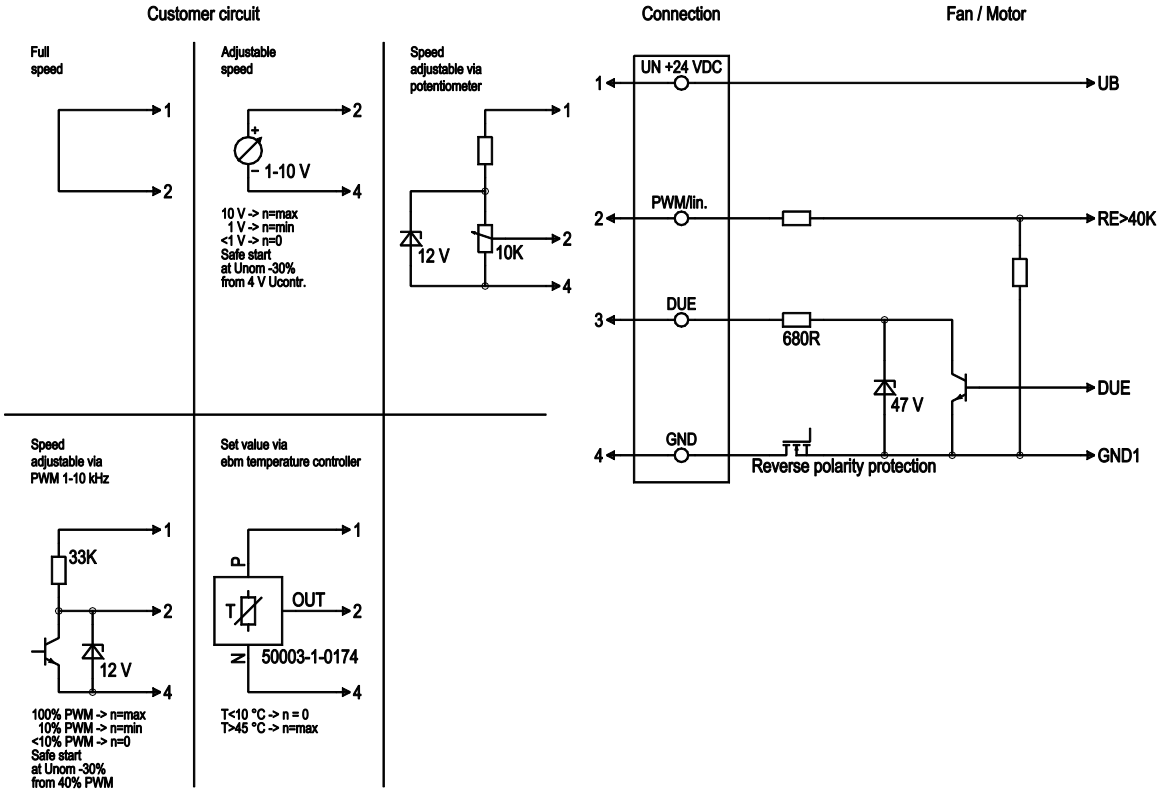
1	Accessory part: Inlet nozzle 28000-2-4013 not included in scope of delivery
2	Thread reach max. 6 mm
3	Connection line PVC 4x AWG18, insulating sleeve, 4x lead tips crimped

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

EC centrifugal fan - RadiCal

backward curved, single inlet

Connection screen



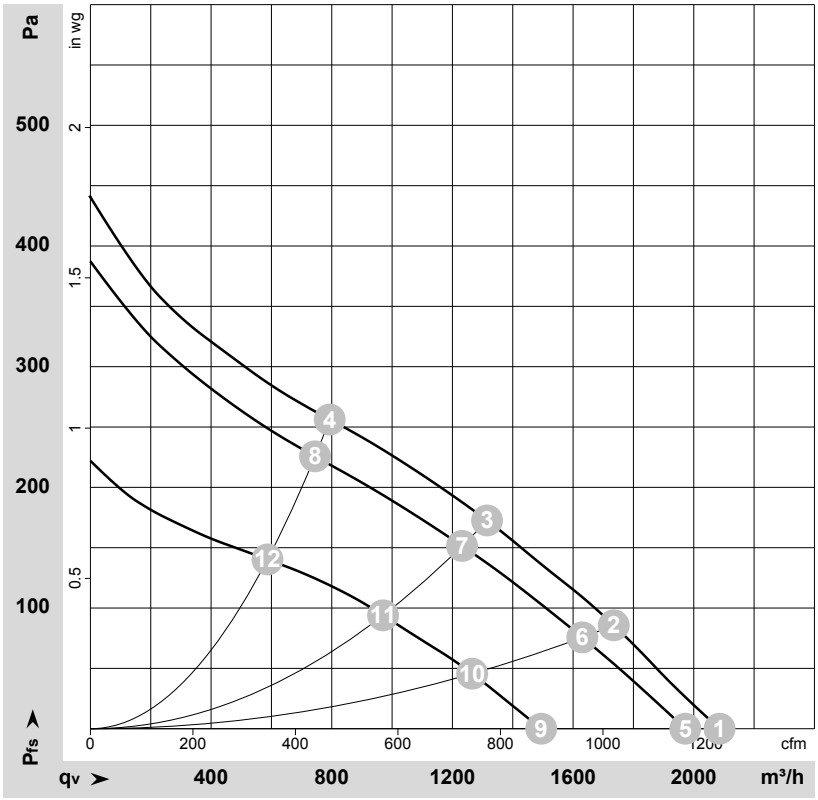
No.	Conn.	Designation	Colour	Function / assignment
	1	UN +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5 %
	2	PWM/LIN	yellow	Control input Re > 40k
	3	DUE	white	Speed monitoring output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference earth

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

EC centrifugal fan - RadiCal

backward curved, single inlet

Charts: Air flow



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-164944-1
Measurement: LU-164881-1
Measurement: LU-164942-1

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	28	1745	111	5.48			2085	0	1225	0.00
2	28	1645	119	5.95			1735	86	1020	0.35
3	28	1605	124	6.22			1315	173	775	0.69
4	28	1640	120	6.00			795	256	465	1.03
5	24	1660	92	4.90	62	69	1970	0	1160	0.00
6	24	1555	97	5.36	58	66	1630	75	960	0.30
7	24	1515	99	5.52	52	60	1230	150	725	0.60
8	24	1545	97	5.38	54	62	745	225	440	0.90
9	16	1285	43	3.32			1495	0	880	0.00
10	16	1230	47	3.69			1265	46	745	0.18
11	16	1210	49	3.83			970	94	570	0.38
12	16	1225	48	3.74			585	140	345	0.56

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

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