R1G175-RB33-10

EC centrifugal fan

backward-curved, single-intake

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
Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen
Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	**R1G175-RB33-10**	
Motor	**M1G055-BI**	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 60
Method of obtaining data		fa
Speed (rpm)	min^{-1}	3950
Power consumption	W	75
Current draw	A	1.85
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	70

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

EC centrifugal fan

backward-curved, single-intake

Technical description

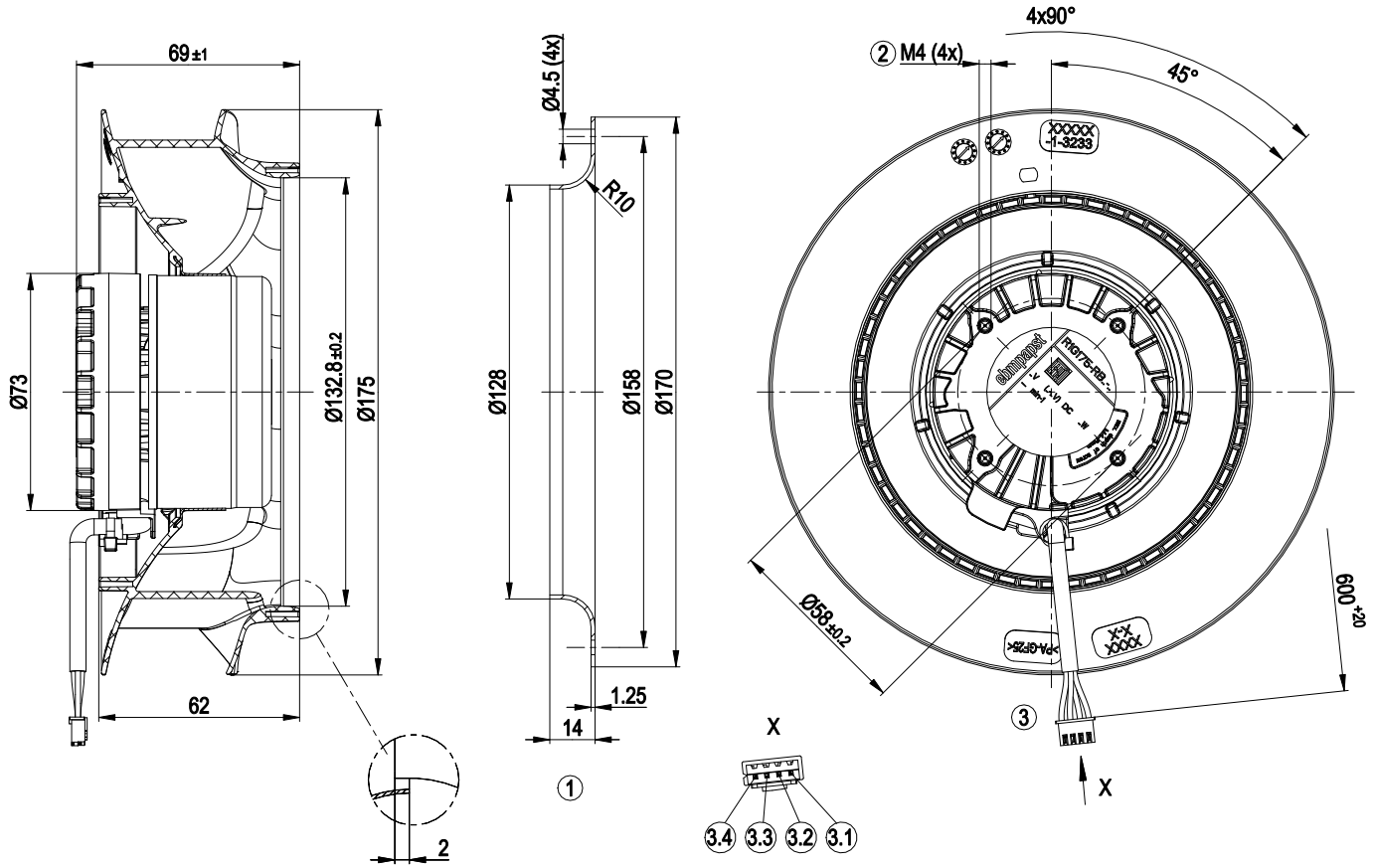
Weight	0.94 kg
Fan size	175 mm
Rotor surface	Painted black
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA66 plastic, sheet-metal plate painted black
Number of blades	7
Balancing grade according to DIN ISO 1940-1	G 6.3
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP24; Electronics IP 54
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H2+
Max. permitted ambient temp. for motor (transport/storage)	+ 80 °C
Min. permitted ambient temp. for motor (transport/storage)	- 40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	None
Cooling hole/opening	On rotor side
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Cable break detection with control line - Motor current limitation - Soft start - PWM control input
Electrical hookup	With plug
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Approval	UL 507; VDE

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

backward-curved, single-intake

Product drawing



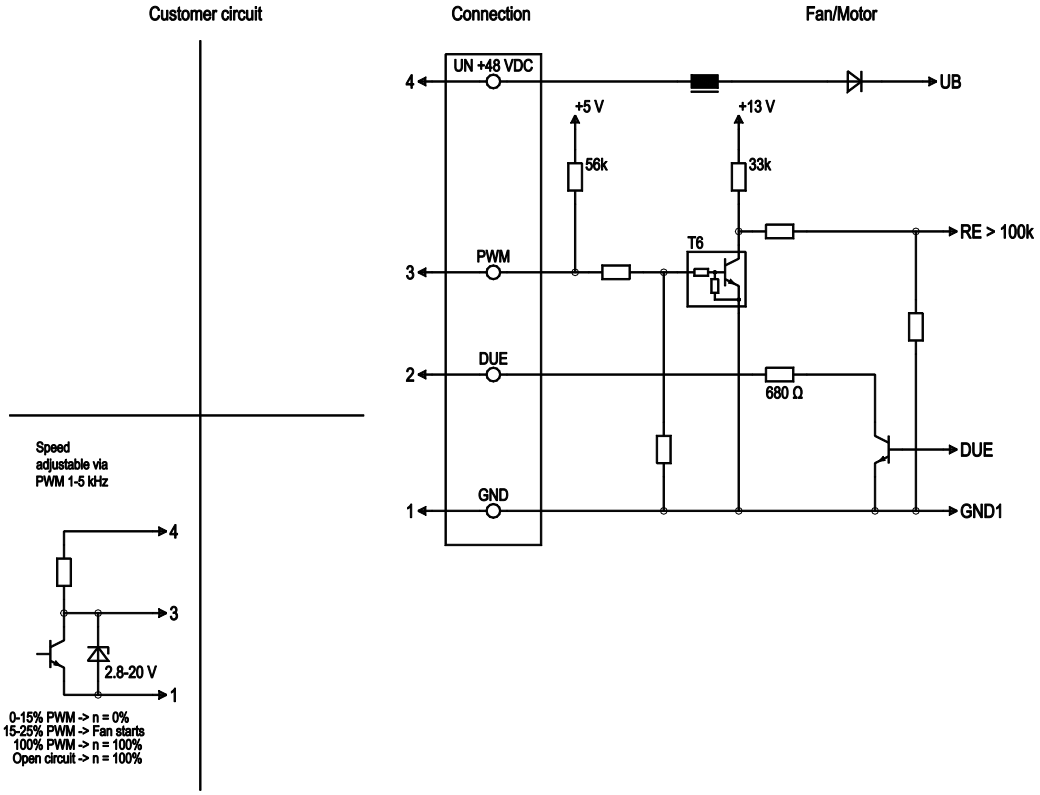
1	Accessory part: inlet ring 09576-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Cable PVC AWG20, 4-pole connector housing JST XHP-04, 4x crimped socket JST SXH-001T-P0.6
3.1	UN +48 VDC (red)
3.2	PWM (black)
3.3	Tach (white)
3.4	GND (blue)

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

backward-curved, single-intake

Connection diagram



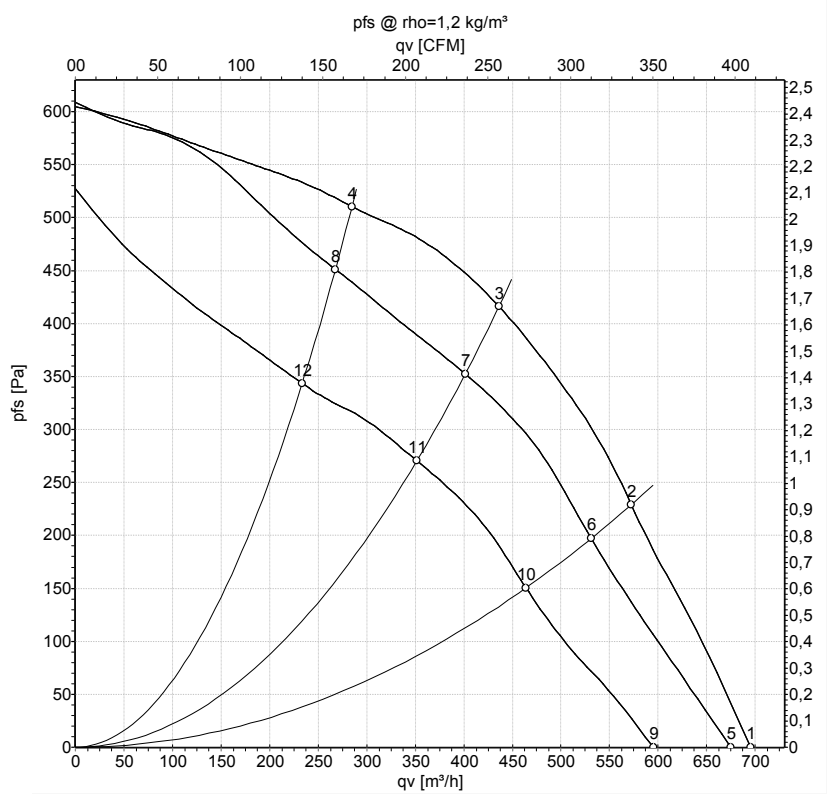
No.	Conn.	Designation	Color	Function/assignment
	1	GND	blue	Reference ground
	2	DUE	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
	3	PWM	black	Control input PWM, 1-5 kHz, 2.8-20 V
	4	UN +48 VDC	red	Power supply 48 VDC, see nameplate for voltage range, maximum ripple 3.5%

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

backward-curved, single-intake

Curves: Air performance



Measurement: LU-162002-1
Measurement: LU-161951-1
Measurement: LU-161999-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	n	P_{ed}	I	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	m^3/h	Pa	cfm	inH2O
1	60	4005	83	2.00	695	0	410	0.00
2	60	4010	98	2.28	570	229	335	0.92
3	60	4005	104	2.38	435	417	255	1.67
4	60	4010	96	2.24	285	510	170	2.05
5	48	3950	75	1.85	675	0	395	0.00
6	48	3735	78	2.00	530	200	315	0.80
7	48	3700	79	2.03	400	350	235	1.41
8	48	3765	78	1.98	270	450	160	1.81
9	36	3425	49	1.52	595	0	350	0.00
10	36	3265	52	1.63	465	150	275	0.60
11	36	3240	53	1.65	350	270	205	1.08
12	36	3300	52	1.61	235	343	140	1.38

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · 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