

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	R1G250-AQ37-52	
Motor	M1G074-CF	
Nominal voltage	VDC	48
Nominal voltage range	VDC	36 .. 57
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	2600
Power consumption	W	105
Current draw	A	2.55
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

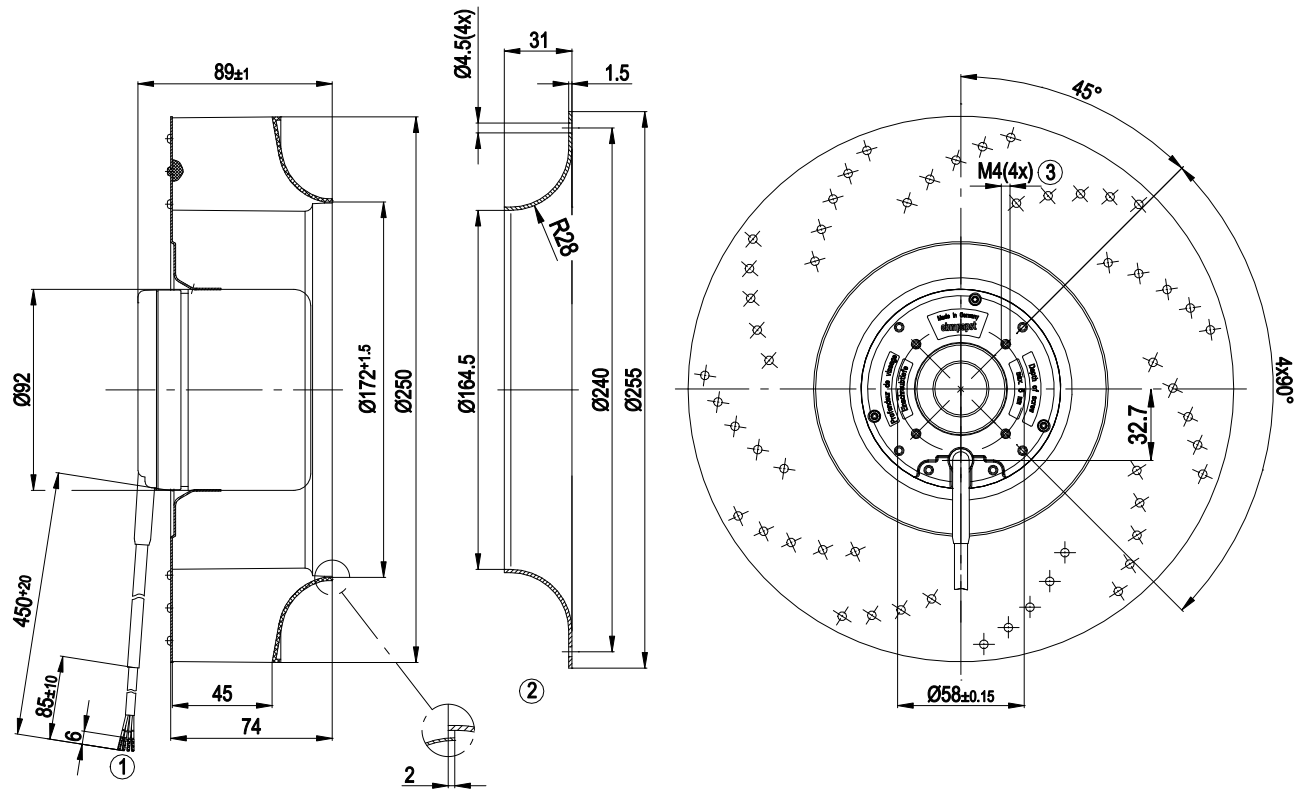
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

Weight	2 kg
Fan size	250 mm
Rotor surface	Painted black
Impeller material	PA66 plastic, glass-fiber reinforced
Number of blades	11
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP42
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	F0
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Any
Condensation drainage holes	None
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
Motor protection	Reverse polarity and locked-rotor protection
With cable	Variable
Conformity with standards	EN 60950-1
Approval	CCC; EAC; UL 1004-1; CSA C22.2 No. 77

Product drawing

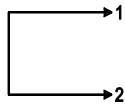


1	Cable AWG 20, 4x crimped splices
2	Accessory part: inlet ring 96359-2-4013 not included in scope of delivery; other inlet rings on request
3	Max. clearance for screw 6 mm

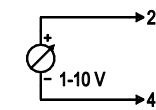
Connection diagram

Customer circuit

Full speed

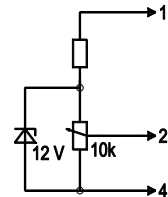


Adjustable speed

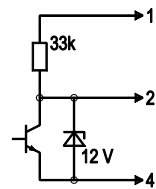


10 V → n = max
 1 V → n = min
 < 1 V → n = 0
 Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

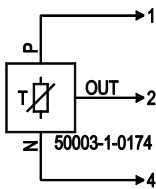


Speed adjustable via PWM 1-10 kHz



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

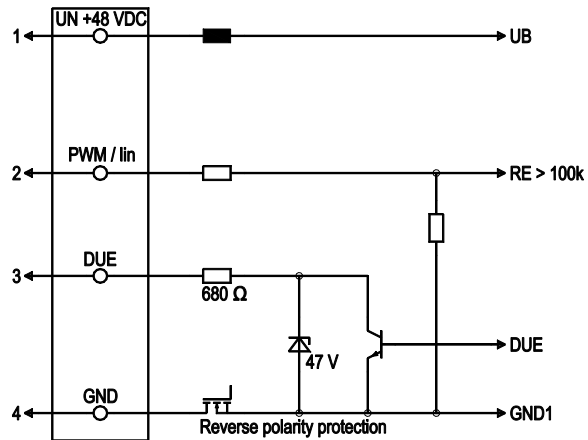
Set value requirement via ebm-papst temperature controller



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

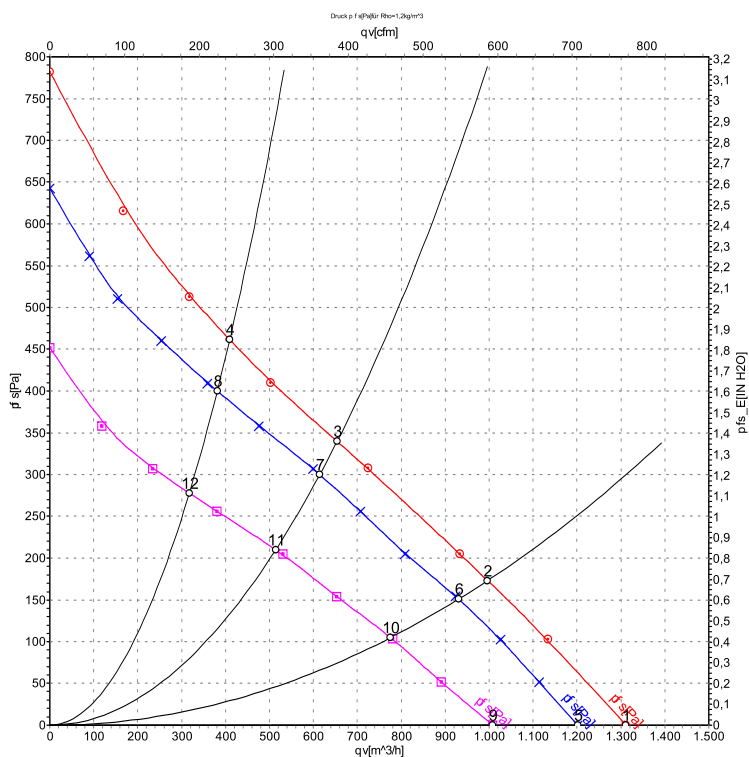
Connection

Fan / Motor



No.	Conn.	Designation	Color	Function/assignment
1	1	Un +48 VDC	red	Power supply 48 VDC, maximum ripple 3.5%
1	2	PWM / lin	yellow	PWM / lin. Control input 0-10 V
1	3	Tach	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
1	4	GND	blue	Reference ground

Curves: Air performance



Measurement: LU-47074-1
 Measurement: LU-47073-1
 Measurement: LU-47075-1

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	m³/h	Pa	CFM	inH2O
1	56	2850	134	2.78	1310	0	770	0.00
2	56	2625	139	2.93	995	173	585	0.69
3	56	2550	141	2.98	655	340	385	1.36
4	56	2650	138	2.91	410	461	240	1.85
5	48	2600	105	2.55	1200	0	705	0.00
6	48	2450	114	2.74	930	150	545	0.60
7	48	2380	116	2.81	615	300	360	1.20
8	48	2460	113	2.71	380	400	225	1.61
9	36	2180	60	1.94	1010	0	595	0.00
10	36	2040	67	2.16	775	106	455	0.43
11	36	2005	70	2.24	515	210	305	0.84
12	36	2060	66	2.13	320	278	185	1.12

U = Power supply · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · q_v = Air flow · p_{fs} = Pressure increase

