

EC centrifugal fan

forward-curved, single-intake
with housing (flange)

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Amtsgericht (court of registration) Stuttgart · HRA 590344

General partner Elektrobau Mulfingen GmbH · Headquarters Mulfingen

Amtsgericht (court of registration) Stuttgart · HRB 590142

Nominal data

Type	G1G140-AV17-02	
Motor	M1G055-CF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Method of obtaining data		fa
Speed (rpm)	min ⁻¹	1750
Power consumption	W	54
Current draw	A	2.5
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



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Technical description

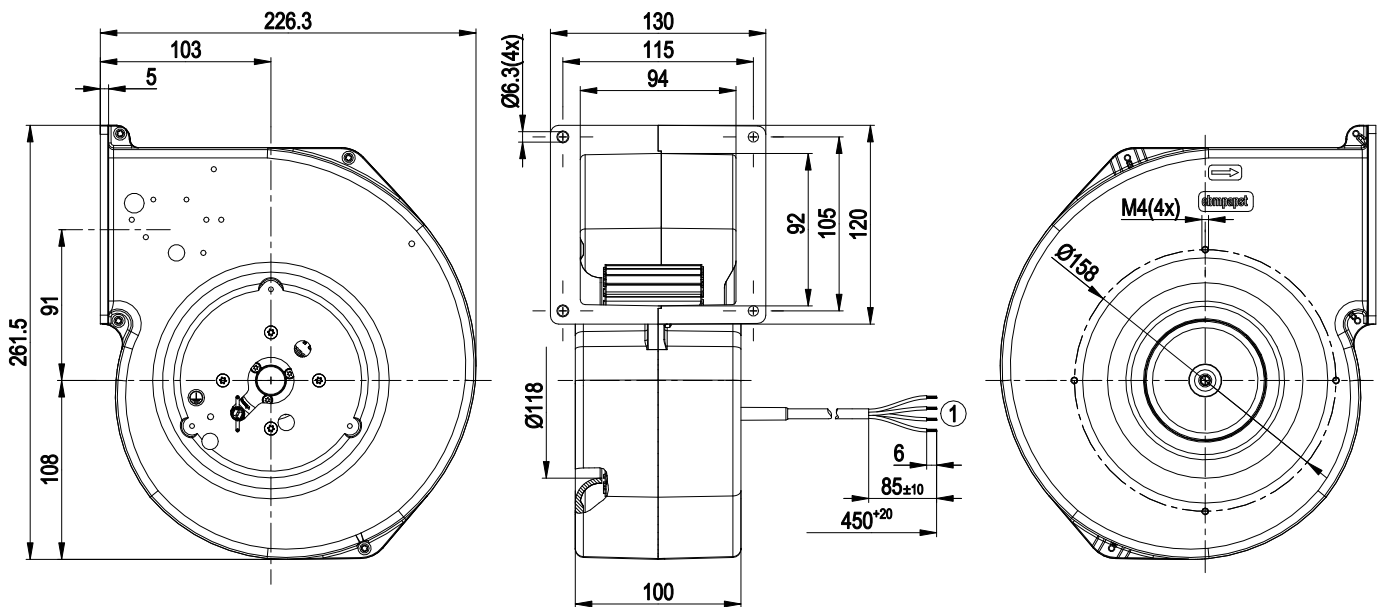
Weight	2.3 kg
Fan size	140 mm
Rotor surface	Painted black
Impeller material	Hot-dip galvanized sheet steel
Housing material	Die-cast aluminum
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	IP22; installation- and position-dependent
Insulation class	"B"
Moisture (F) / Environmental (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
Mode	S1
Motor bearing	Ball bearing
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM
EMC immunity to interference	According to EN 61000-6-2 (industrial environment)
EMC interference emission	According to EN 55022 (Class B)
Motor protection	Reverse polarity and locked-rotor protection
With cable	Axial
Protection class	I (with customer connection of protective earth)
Conformity with standards	EN 60335-1
Approval	EAC



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Product drawing



1 Cable PVC AWG20, 4x crimped splices

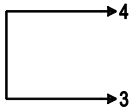
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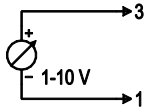
Connection diagram

Customer circuit

Full speed

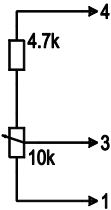


Adjustable speed

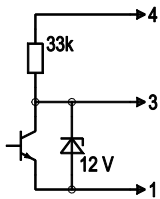


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start
at Unom -30%
from 4 V Ucontr.

Speed adjustable with fixed resistor

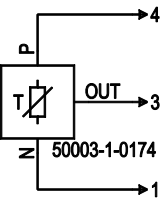


Speed adjustable via PWM 1-10 kHz



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

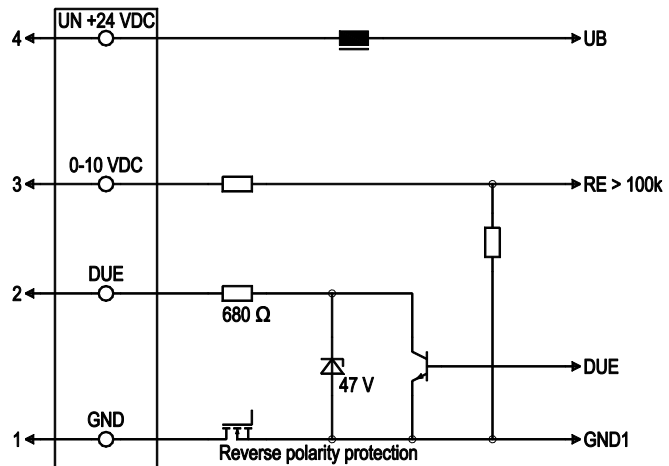
Set value requirement via temperature controller



50003-1-0174

Connection

Fan / Motor

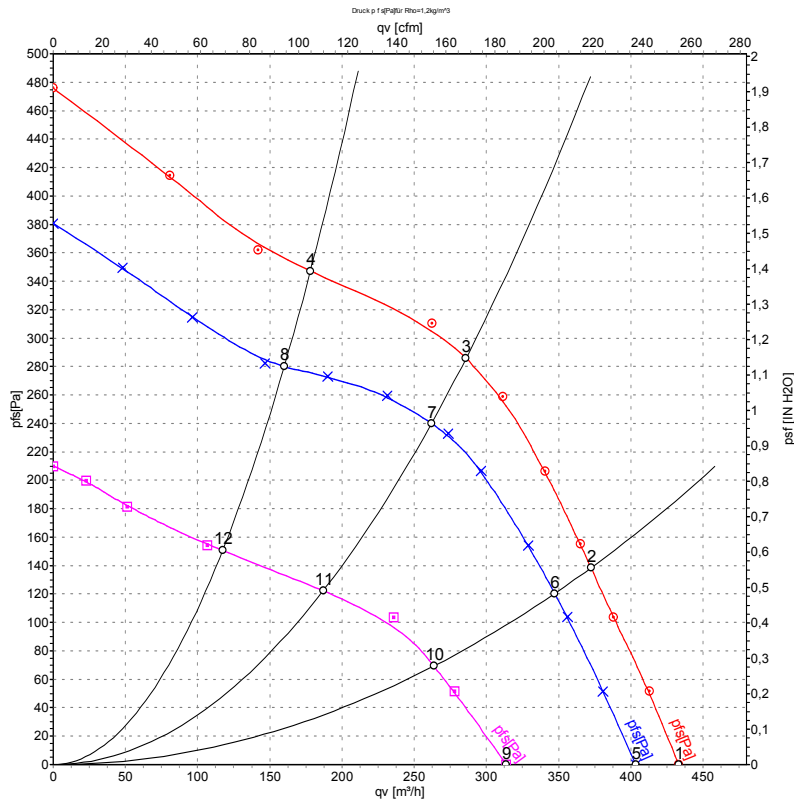


No.	Conn.	Designation	Color	Function/assignment
1	1	GND	blue	Reference ground
1	2	Tach	white	Tach output, 2 pulses per revolution, Isink max = 10 mA
1	3	0-10 VDC	yellow	Control input Re > 100k
1	4	Un +24 VDC	red	Power supply 24 VDC, maximum ripple 3.5%

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Curves: Air performance



Measurement: LU-50746-1
Measurement: LU-50744-1
Measurement: LU-50747-1

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	inH ₂ O
1	28	1875	67	2.80	435	0	255	0.00
2	28	2020	63	2.58	370	138	220	0.55
3	28	2255	58	2.29	285	286	170	1.15
4	28	2525	47	1.85	180	347	105	1.39
5	24	1750	54	2.50	405	0	235	0.00
6	24	1880	51	2.35	345	120	205	0.48
7	24	2055	44	2.02	260	240	155	0.96
8	24	2275	35	1.60	160	280	95	1.12
9	16	1370	26	1.78	315	0	185	0.00
10	16	1445	23	1.60	265	70	155	0.28
11	16	1575	19	1.35	185	123	110	0.49
12	16	1695	15	1.14	115	150	70	0.60

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

