

EC axial fan - ESM

sickled blades (S series)

with full round nozzle

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	W1G250-CI37-52	
Motor	M1G074-BF	
Nominal voltage	VDC	24
Nominal voltage range	VDC	16 .. 28
Type of data definition		fa
Speed	min ⁻¹	2750
Power input	W	105
Current draw	A	5.0
Max. back pressure	Pa	140
Min. ambient temperature	°C	-25
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



Technical features

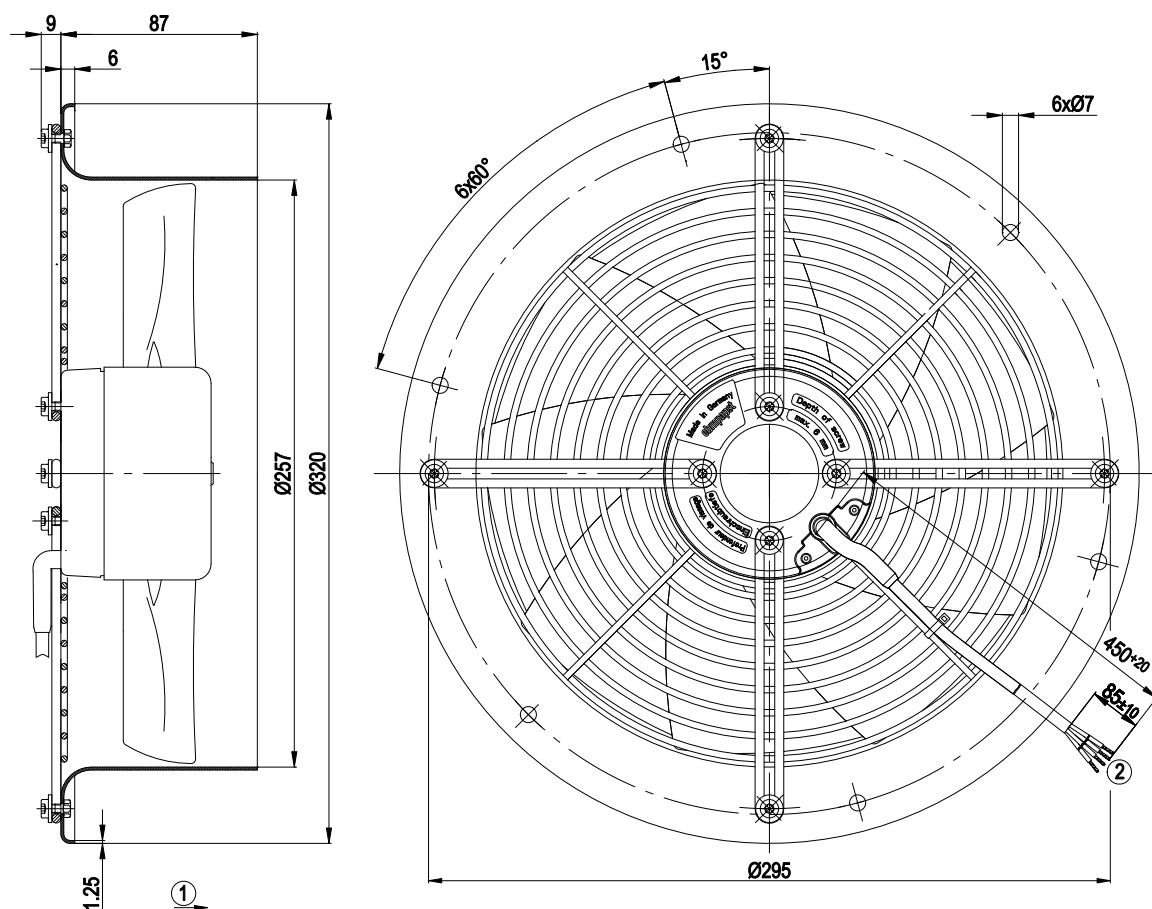
Mass	2.85 kg
Size	250 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium, coated in black
Material of blades	Sheet steel, coated in black
Material of wall ring	Sheet steel, pre-galvanised and coated in black plastic
Material of guard grille	Steel, phosphated and coated in black plastic
Number of blades	9
Direction of air flow	"A"
Direction of rotation	Counter-clockwise, seen on rotor
Type of protection	IP 42
Insulation class	"B"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Any
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Control input 0-10 VDC / PWM - Tach output - Motor current limit - Soft start
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC interference emission	Acc. to EN 55022 (Class B)
Motor protection	Reverse polarity and locked-rotor protection
Cable exit	Lateral
Product conforming to standard	EN 60950-1
Approval	CSA C22.2 Nr.77; EAC; UL 1004-1

EC axial fan - ESM

sickled blades (S series)

with full round nozzle

Product drawing



- | | |
|---|--|
| 1 | Direction of air flow "A" |
| 2 | Connecting cable AWG 20, 4 x brass lead tips crimped |

EC axial fan - ESM

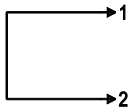
sickled blades (S series)

with full round nozzle

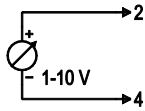
Connection screen

Customer circuit

Full speed

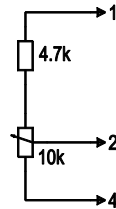


Adjustable speed

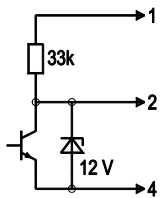


10 V → n = max
1 V → n = min
<1 V → n = 0
Safe start at
Unom -30%
from 4 V Ucontr.

Speed adjustable via potentiometer

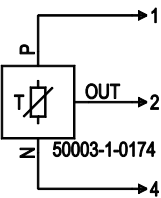


Speed adjustable via PWM 1-10 kHz



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

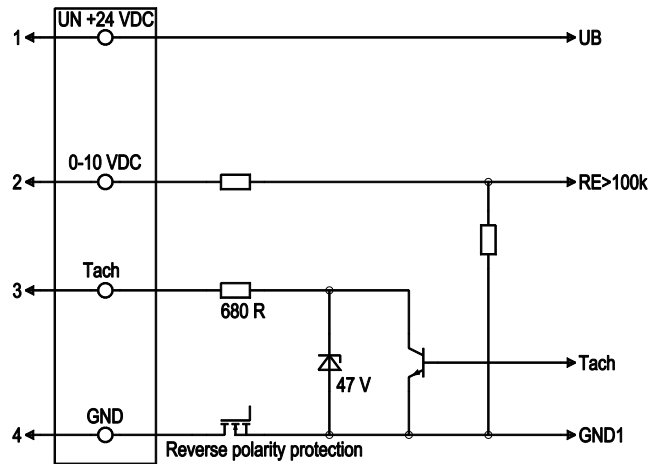
Preset target value via temperature controller



T < 10 °C → n = 0
T > 45 °C → n = max

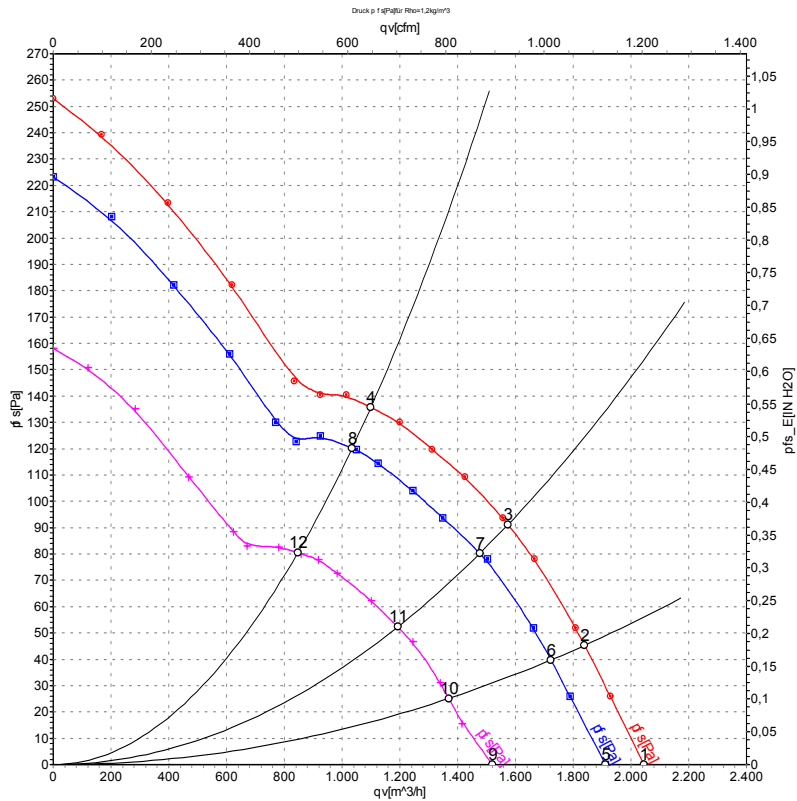
Connection

Fan/Motor



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

Charts: Air flow



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	qv	p _{fs}
	V	min ⁻¹	W	A	m³/h	Pa
1	28	2905	125	5.31	2045	0
2	28	2785	128	5.51	1840	46
3	28	2660	131	5.76	1575	91
4	28	2580	134	5.93	1100	136
5	24	2750	105	5.00	1920	0
6	24	2615	106	5.11	1725	40
7	24	2510	108	5.29	1475	80
8	24	2420	110	5.47	1035	120
9	16	2180	53	3.74	1520	0
10	16	2120	56	3.91	1370	25
11	16	2050	59	4.12	1195	52
12	16	1995	61	4.29	845	80

U = Supply voltage · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ebm-papst:](#)

[W1G250-CI37-52](#)