

A1G200-AH77-52 ebmpapst Datasheet

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Nominal data

| | | |
|--------------------------|--------------------|------|
| Type | A1G200-AH77-52 | |
| Motor | M1G074-BF | |
| Nominal voltage | VDC | 24 |
| Method of obtaining data | | fa |
| Speed (rpm) | min ⁻¹ | 2950 |
| Power consumption | W | 55 |
| Current draw | A | 2.6 |
| Max. back pressure | Pa | 120 |
| Max. back pressure | inH ₂ O | 0.48 |
| Min. ambient temperature | °C | -25 |
| Max. ambient temperature | °C | 60 |

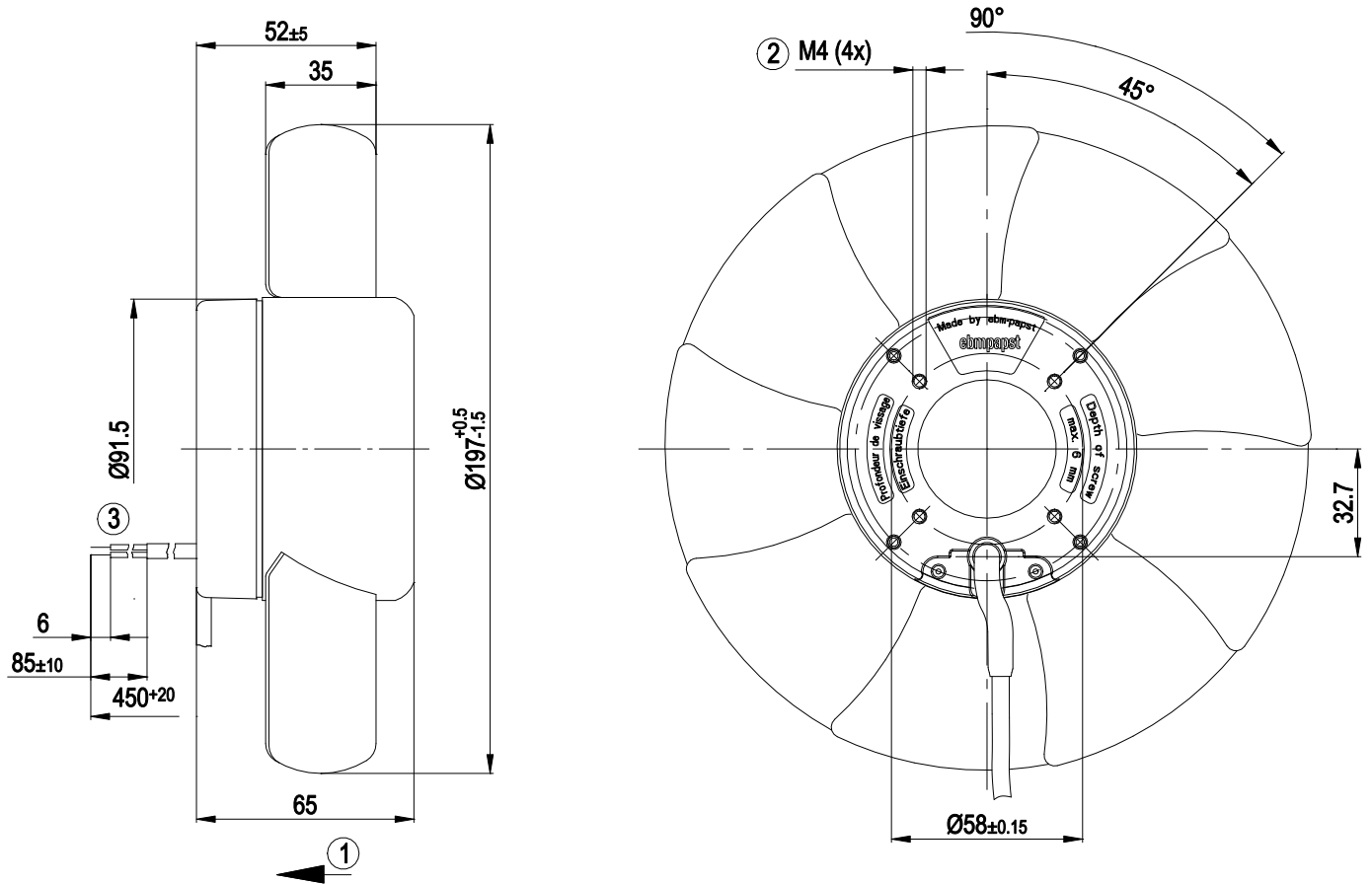
ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change



Technical description

| | |
|---|---|
| Weight | 1.4 kg |
| Fan size | 200 mm |
| Rotor surface | Painted black |
| Impeller material | Sheet steel, painted black |
| Number of blades | 9 |
| Airflow direction | "V" |
| Direction of rotation | Counterclockwise, 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 | <ul style="list-style-type: none"> - 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, household environment) |
| Motor protection | Reverse polarity and locked-rotor protection |
| With cable | Variable |
| Conformity with standards | EN 60950-1 |
| Approval | UL 1004-1; EAC; CSA C22.2 No. 77 |

Product drawing



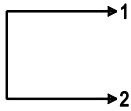
| | |
|---|-------------------------------------|
| 1 | Direction of air flow "V" |
| 2 | Max. clearance for screw 6 mm |
| 3 | Cable PVC AWG20, 4x crimped splices |



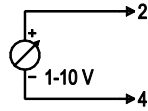
Connection diagram

Customer circuit

Full speed

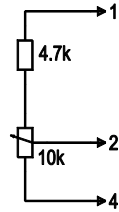


Adjustable speed

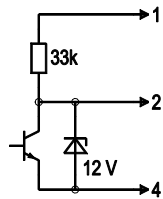


10 V → n = max
1 V → n = min
< 1 V → n = 0
Safe start at Unom -30% from 4 V Ucontr.

Speed adjustable via potentiometer

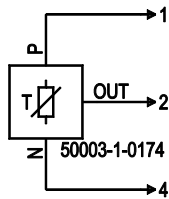


Speed adjustable via PWM 1-10 kHz



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

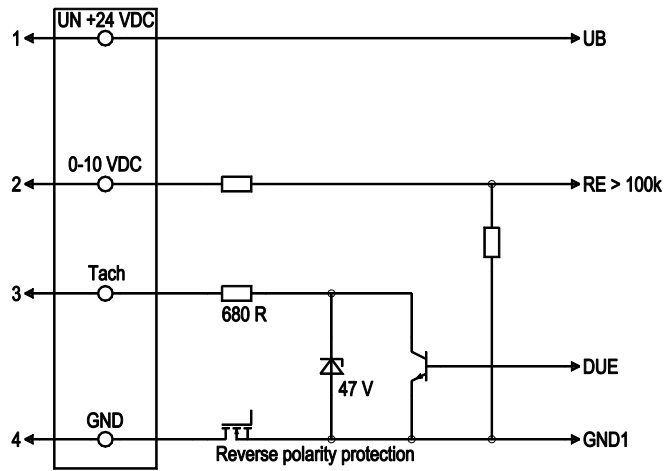
Set value requirement via temperature controller



T < 10 °C → n = 0
T > 45 °C → n = max

Connection

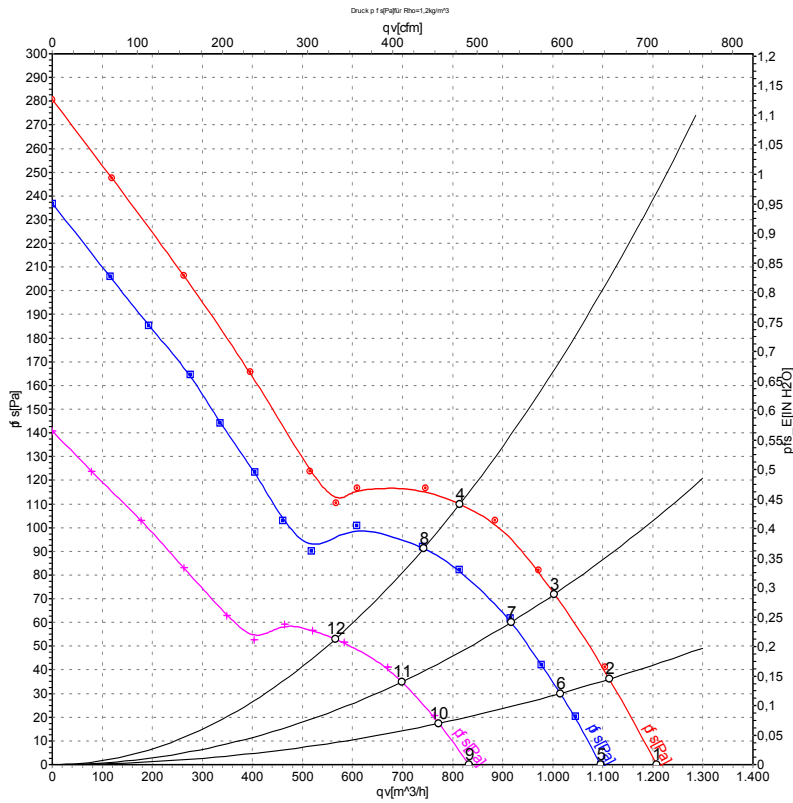
Fan / Motor



| No. | Conn. | Designation | Color | Function/assignment |
|-----|-------|-------------|--------|---|
| 1 | 1 | Un +24 VDC | red | Power supply 24 VDC, maximum ripple 3.5 % |
| 1 | 2 | 0-10 VDC | yellow | Control input Re > 100k |
| 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-48037-1
 Measurement: LU-48036-1
 Measurement: LU-48038-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebmpapst. 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 | qv | p _{fs} | qv | p _{fs} |
|----|----|-------------------|-----------------|------|-------------------|-----------------|-----|--------------------|
| | V | min ⁻¹ | W | A | m ³ /h | Pa | CFM | inH ₂ O |
| 1 | 28 | 3285 | 73 | 2.91 | 1205 | 0 | 710 | 0.00 |
| 2 | 28 | 3190 | 76 | 3.01 | 1115 | 38 | 655 | 0.15 |
| 3 | 28 | 3095 | 78 | 3.10 | 1005 | 72 | 590 | 0.29 |
| 4 | 28 | 3065 | 82 | 3.26 | 815 | 110 | 480 | 0.44 |
| 5 | 24 | 2950 | 55 | 2.60 | 1095 | 0 | 645 | 0.00 |
| 6 | 24 | 2915 | 57 | 2.67 | 1015 | 30 | 595 | 0.12 |
| 7 | 24 | 2860 | 60 | 2.76 | 915 | 60 | 540 | 0.24 |
| 8 | 24 | 2785 | 62 | 2.88 | 740 | 90 | 435 | 0.36 |
| 9 | 16 | 2285 | 28 | 2.08 | 835 | 0 | 490 | 0.00 |
| 10 | 16 | 2245 | 28 | 2.09 | 770 | 18 | 455 | 0.07 |
| 11 | 16 | 2200 | 29 | 2.13 | 700 | 35 | 410 | 0.14 |
| 12 | 16 | 2145 | 30 | 2.18 | 565 | 53 | 335 | 0.21 |

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

