**W1G180-AB57-29**

# EC axial compact fan



**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** | **W1G180-AB57-29** | |
| **Motor** | **M1G074-BF** | |
| Nominal voltage | VDC | 24 |
| Nominal voltage range | VDC | 14 .. 28 |
| Method of obtaining data | | fa |
| Speed (rpm) | $min^{-1}$ | 3170 |
| Power consumption | W | 35 |
| Current draw | A | 1.6 |
| 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

# EC axial compact fan

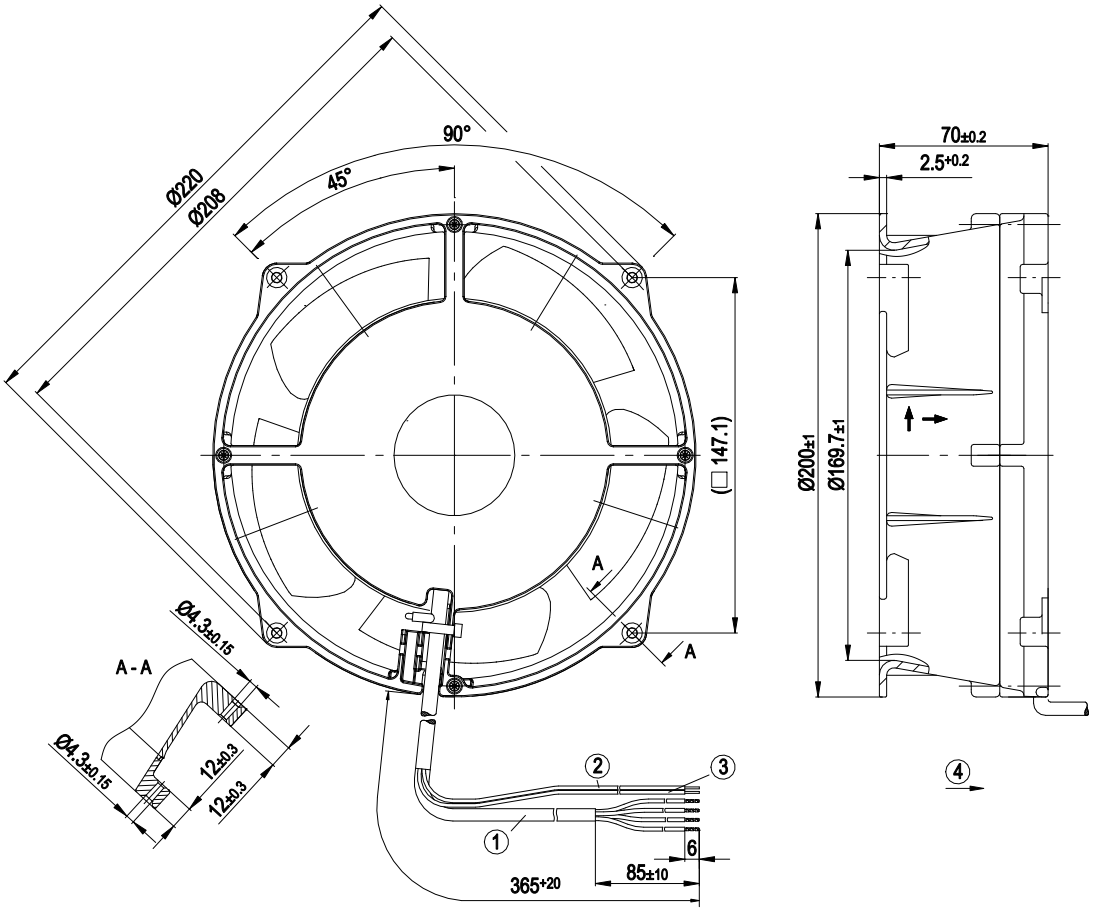
## Technical description

| | |
|---|---|
| **Weight** | 1.74 kg |
| **Fan size** | 180 mm |
| **Rotor surface** | Galvanized |
| **Impeller material** | Glass-fiber reinforced PA plastic |
| **Fan housing material** | Die-cast aluminum, painted black |
| **Number of blades** | 5 |
| **Airflow direction** | "V" |
| **Direction of rotation** | Counterclockwise, viewed toward rotor |
| **Degree of protection** | IP20 |
| **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<br>- Motor current limitation<br>- Soft start<br>- PWM control input |
| **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** | Lateral |
| **Conformity with standards** | EN 60950-1 |
| **Approval** | CSA C22.2 No. 77; UL 1004-1 |



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## Product drawing

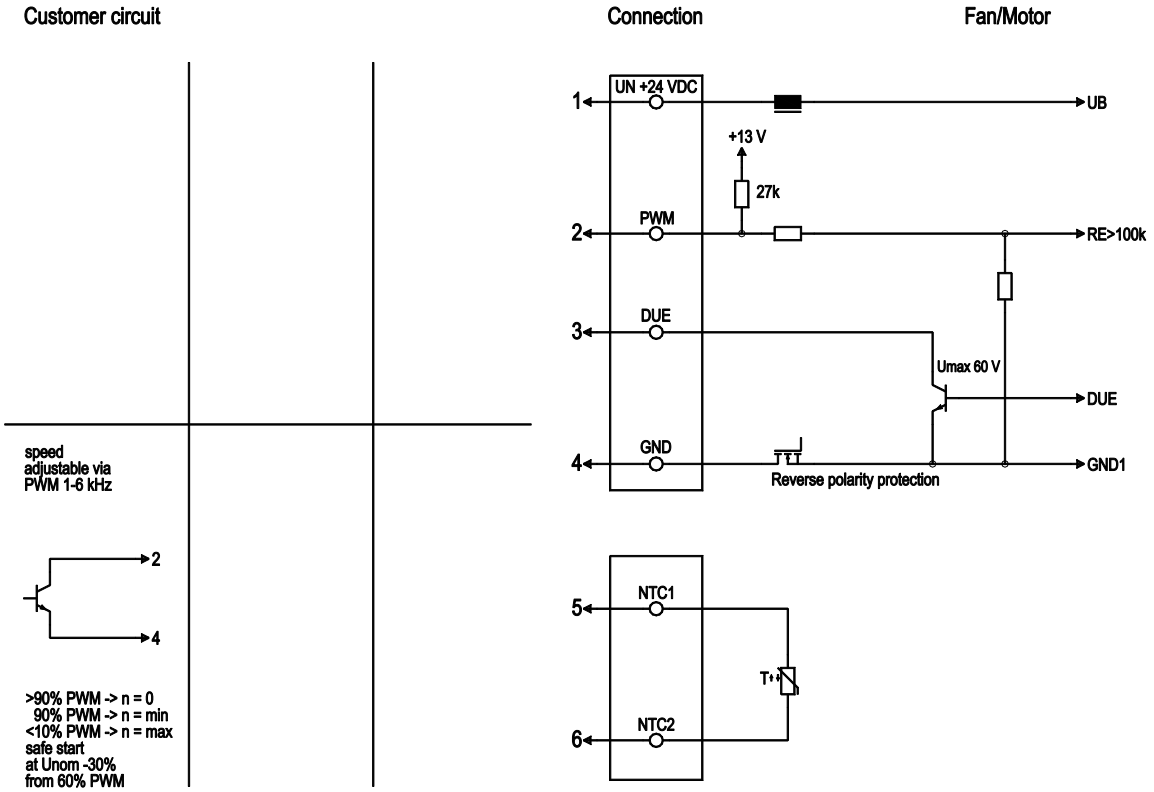



| | |
|---|---|
| 1 | Cable AWG 20, 4x crimped splices |
| 2 | Wire AWG 22 white |
| 3 | Wire AWG 22 white |
| 4 | Airflow direction "V" |



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## Connection diagram



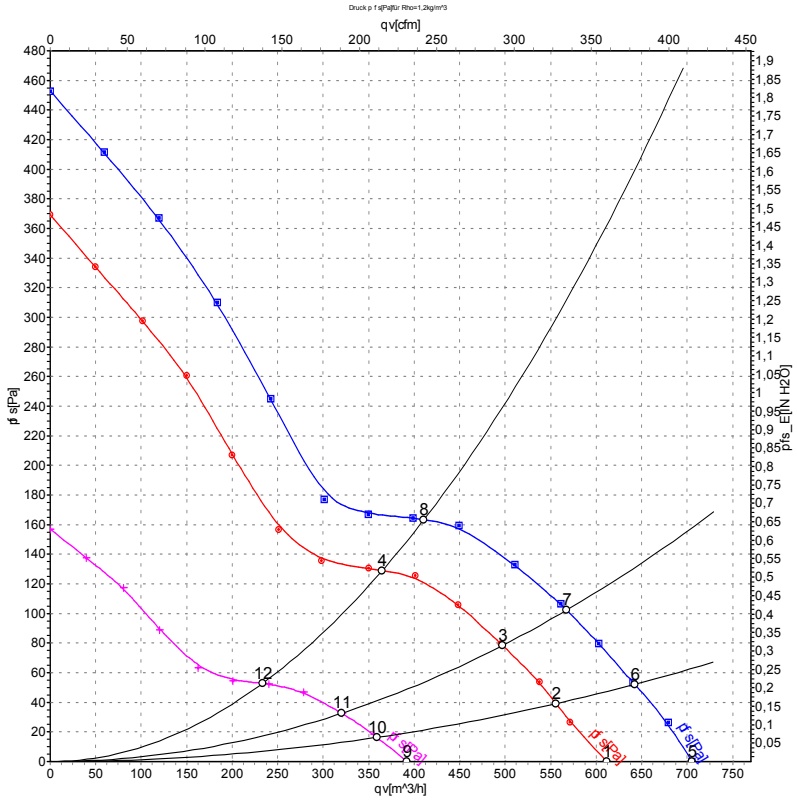

| No. | Conn. | Designation | Color | Function/assignment |
|---|---|---|---|---|
| 1 | 1 | UN +24 VDC | red | Power supply 24 VDC, maximum ripple 3.5% |
| 1 | 2 | PWM | black | Control input Re > 100k |
| 1 | 3 | Tach | white | Tach output, 3 pulses per revolution, Isink max. 25 mA |
| 1 | 4 | GND | blue | Reference ground |
| 2 | 5 | NTC1 | white | NTC not connected to electronics |
| 3 | 6 | NTC2 | white | NTC not connected to electronics |



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## Curves: Air performance




Measurement: LU-106403-1
Measurement: LU-106408-1
Measurement: LU-106410-1

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 | qv | $p_{fs}$ | qv | $p_{fs}$ |
|---|---|---|---|---|---|---|---|---|
| | V | $min^{-1}$ | W | A | $m^3/h$ | Pa | CFM | inH2O |
| 1 | 24 | 3170 | 35 | 1.60 | 610 | 0 | 360 | 0.00 |
| 2 | 24 | 3120 | 37 | 1.72 | 555 | 40 | 325 | 0.16 |
| 3 | 24 | 3080 | 39 | 1.81 | 495 | 80 | 295 | 0.32 |
| 4 | 24 | 3090 | 39 | 1.80 | 365 | 130 | 215 | 0.52 |
| 5 | 28 | 3600 | 48 | 1.89 | 705 | 0 | 415 | 0.00 |
| 6 | 28 | 3530 | 51 | 2.03 | 640 | 52 | 380 | 0.21 |
| 7 | 28 | 3465 | 54 | 2.15 | 565 | 103 | 335 | 0.41 |
| 8 | 28 | 3475 | 54 | 2.13 | 410 | 163 | 240 | 0.65 |
| 9 | 14 | 2050 | 11 | 0.91 | 390 | 0 | 230 | 0.00 |
| 10 | 14 | 2025 | 12 | 0.95 | 360 | 17 | 210 | 0.07 |
| 11 | 14 | 2005 | 12 | 1.01 | 320 | 33 | 190 | 0.13 |
| 12 | 14 | 2000 | 12 | 1.01 | 235 | 53 | 135 | 0.21 |

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



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