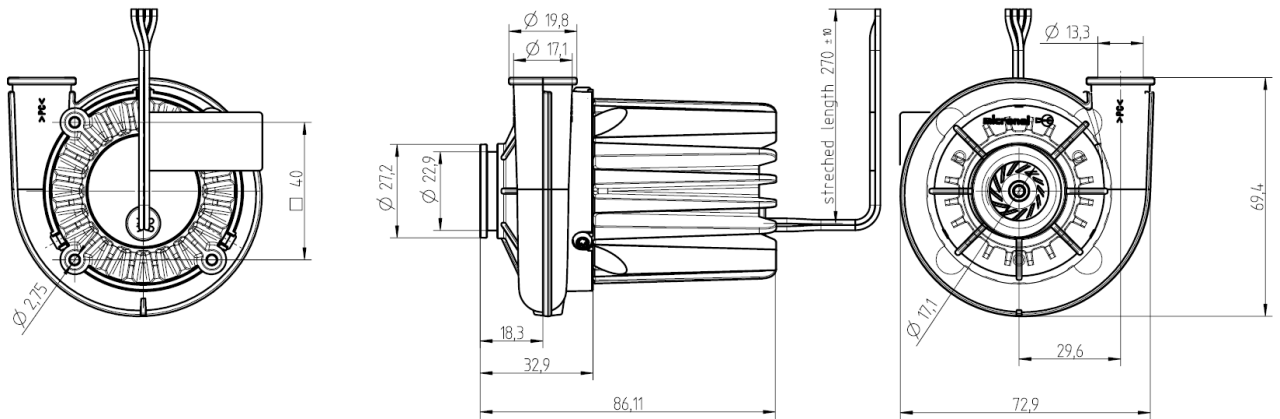
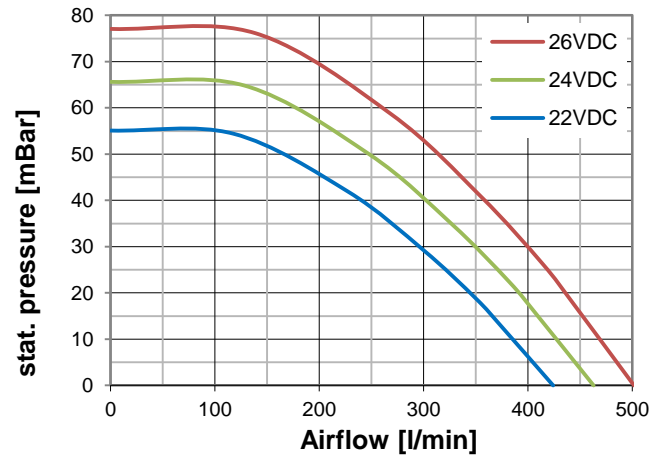
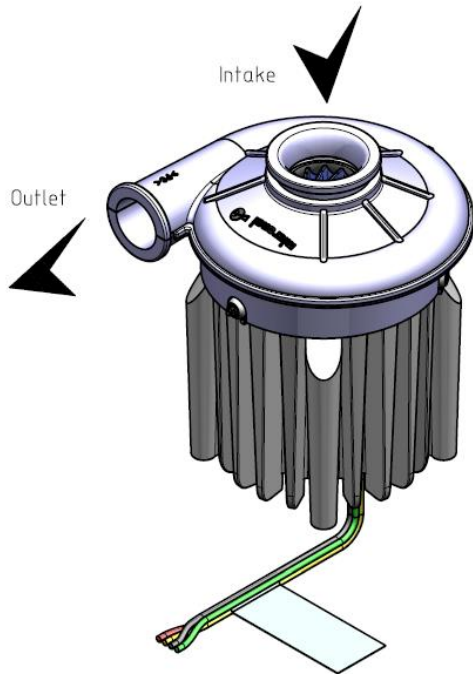


Miniatur Radial Gebläse mit integrierter Elektronik
Miniature Radial Blower with integrated electronic



Direction of rotation CCW



Technische Daten

Allgemeine Beschreibung

Kompakter Lüfter mit effizientem Motor. Eigenschaften: Gehäuse: PC, Flügelrad: PA. Bürstenloser und sensorloser 3-Phasen Motor mit integrierter Treiber Elektronik. Anschluss über Einzelleitungen (AWG24).

Technical data

General description

Compact blower with an efficient motor. Features: housing: PC, impeller: PA. Brushless and sensorless 3-Phase motor with integrated driver electronic. Connection via single leads AWG 24.

| | | U71HL-024KM-4 |
|------------------------|-------------------|---------------------------------------|
| U_N | VDC | 24 |
| U | VDC | 15 – 26.4 |
| I_N freeblowing | mA | 2'900 |
| I_N typ. work. point | mA | 2'500 |
| I_N static | mA | 1'350 |
| P_N typ. work. point | W | 70 |
| n freeblowing | min ⁻¹ | 36'600 |
| n typ. work. point | min ⁻¹ | 37'000 |
| n static | min ⁻¹ | 39'000 |
| V freeblowing | l/min | 460 |
| V typ. work. point | l/min | 330 |
| p work. point | mBar | 35 |
| p static | mBar | 65 |
| $LpA_{(WP)}$ | dB(A) | 62.7 dB(A) at 10 mbar and 1m distance |
| T | °C | -20...+45 |
| m | gr | 360 |
| Leads | mm | 270 (AWG24) |
| Housing material | | PC |
| Impeller material | | PA6 |
| Sleeve Bearing | | N/A |
| Ball Bearing | | • |
| Tacho | | • |
| Speed control SP | | • |

Data's at Density: 1.2kg/m³

U71HL-024KM-4

Electrical connection

| | Description | Lead wire | Diagram |
|-----------------|------------------------------|-----------|---|
| FG | Frequency Generator (output) | yellow |  |
| SP | Set speed (input) | Green | |
| V _{CC} | + Power | Red | |
| GND | Ground | Black | |

Blower Features

- Integrated speed control input
- FG frequency signal output
- ON / OFF control by logic signal
- Locked rotor protection
- Power supply overvoltage protection: maximum 28VDC
- ESD Protection 16 kV
- SURGE and burst protection 600W 10/1000 µm
- Polarity protection

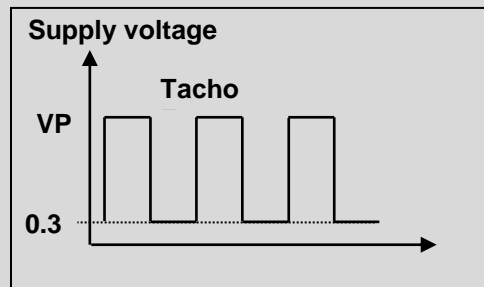
FG Frequency signal (yellow wire)

Speed calculation

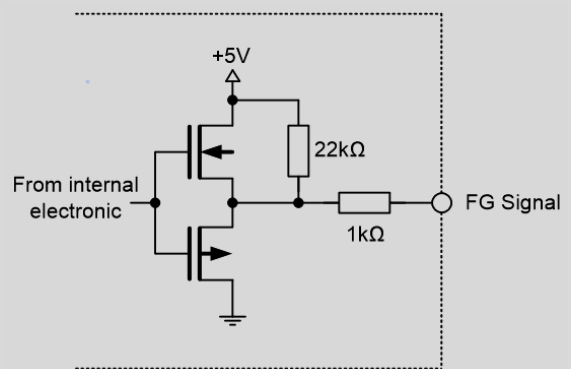
$f * 20 = \text{rpm (3 pulse / rotation)}$

f = FG Frequency Generator [Hz]

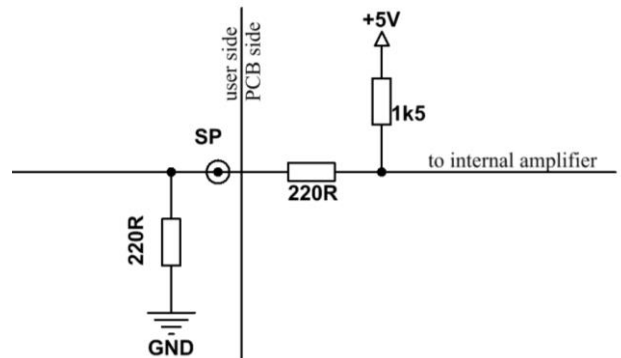
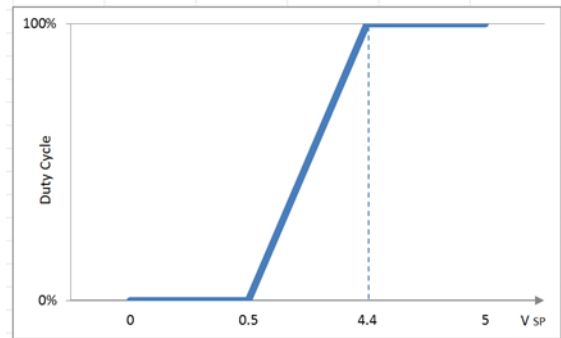
rpm = Rotation speed [min-1]



Pull-up resistor (22kOhm) to 5 V is integrated. Do not connect to Vcc!



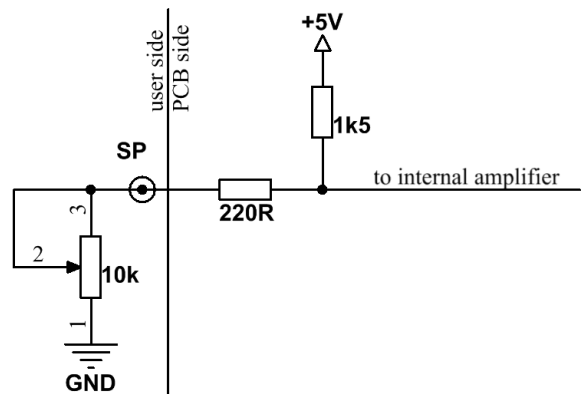
**SP Set speed
 (green wire)**



Input voltage

- 0 – 0.5 VDC → Stop
- 0.5 – 2.0 VDC → Starting (not guaranteed)
- 2.0 – 4.4 VDC → Fan is running compare to VDC
- 4.4 – 5.0 VDC → Fan is running with 100% speed

>> or >>



Input resistor

- Connect between SP (green) and GND (black)
- < 0.4 kΩ → Stop
- 0.4 – 1.2 kΩ → Starting (not guaranteed)
- 1.2 – 7.5 kΩ → Fan is running compare to VDC
- > 7.5 kΩ → Fan is running with 100% speed

**SP not connected
 SP to GND**

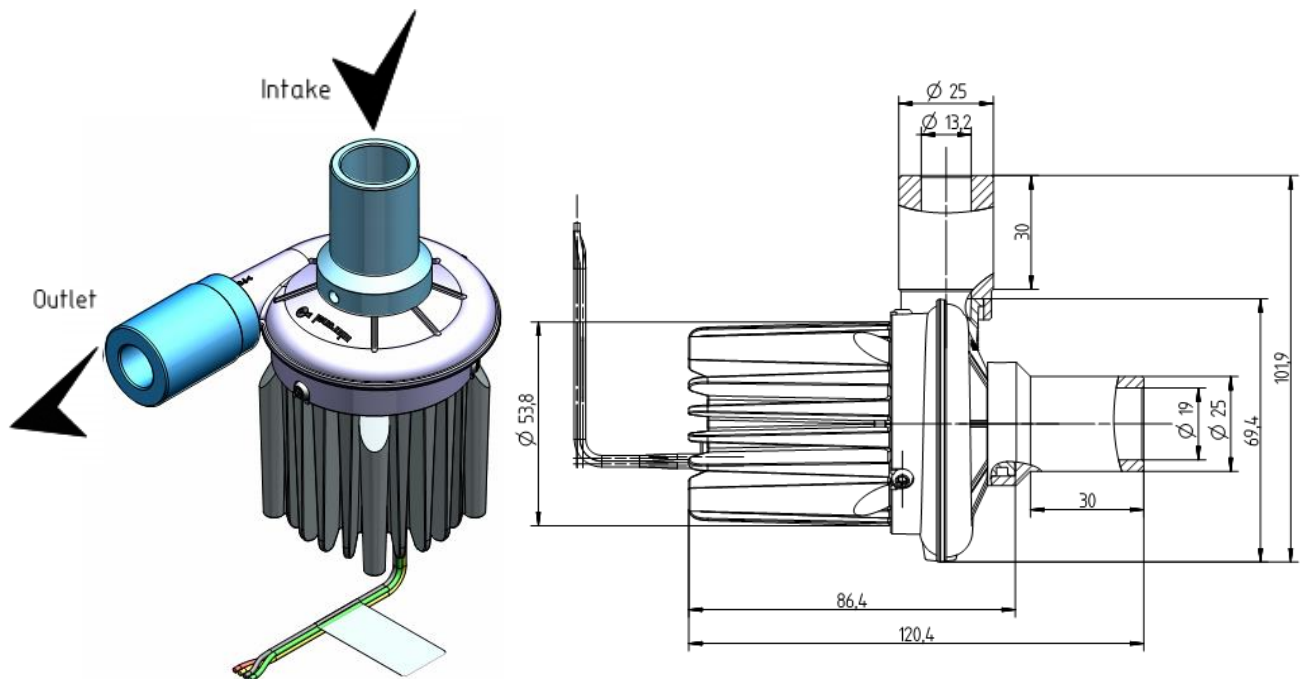
- Blower operates at 100% Speed
- Speed zero → Stop

| | | |
|--|--|--------------|
| Blower limits during continuous operation and warning | - Max. allowed temperature on heat sink surface: | 65° C |
| | - Maximum speed | 45'000 1/min |
| | - Handle only in currentless condition | |

Power supply requirement Ripple voltage < 5%
4000 mA

| | | |
|-------------|---|---|
| Info | Specifications are subject to change without notice. Specifications on this Datasheet are for reference. | |
| | Version: | 07.06.2019 / RZ |
| | Doc: | U71HL-024KM-4 with integrated electronics.doc |

Options for intake and outlet connections*



| Product no. incl. option / Product Nr. inkl. Option | Intake / Einlass | Outlet / Auslass | Description / Beschreibung |
|---|------------------|------------------|--|
| U71HL-024KM-4 | | | Without intake / without outlet Ohne Einlass / ohne Auslass |
| U71HL-024KM-41 | • | | With intake / without outlet Mit Einlass / ohne Auslass |
| U71HL-024KM-42 | | • | Without intake / with outlet Ohne Einlass / mit Auslass |
| U71HL-024KM-43* | • | • | With intake / with outlet Mit Einlass / mit Auslass |

* The drawings show intake and outlet connections. Both options are independent of each other.
Die Zeichnungen stellen beide Anschlussmöglichkeiten (Ein-und Auslass) dar.