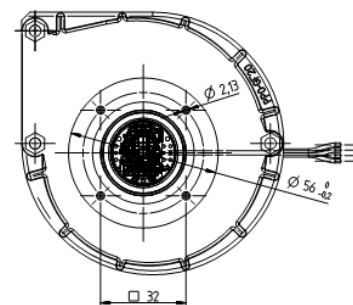
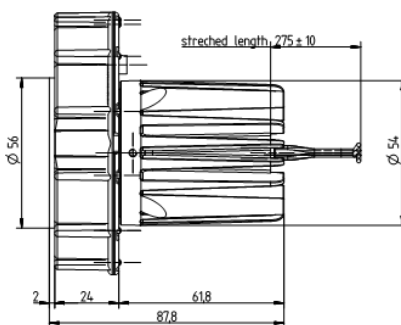
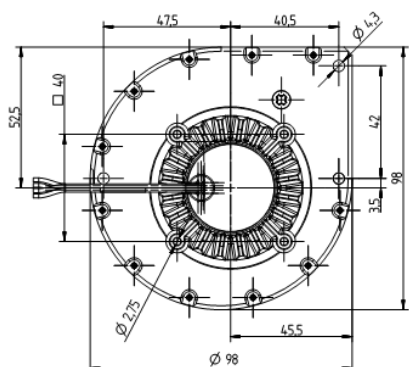
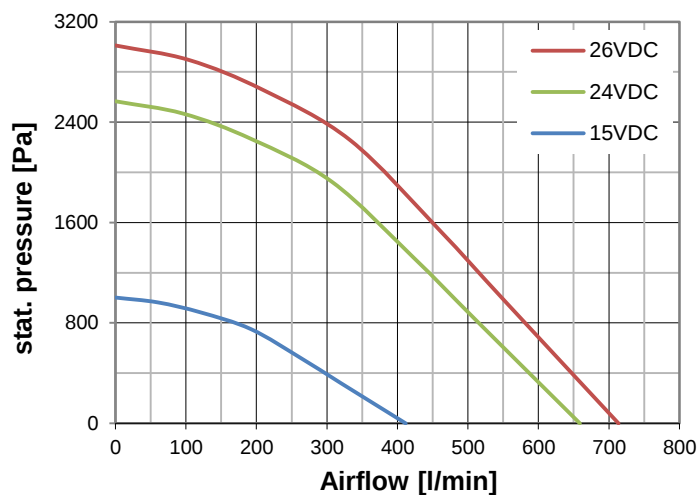
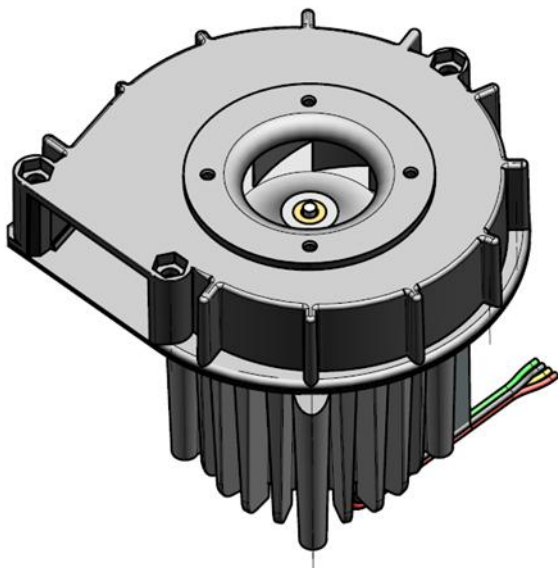


Miniatur Radial Gebläse mit integrierter Elektronik
Miniature Radial Blower with integrated electronic



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

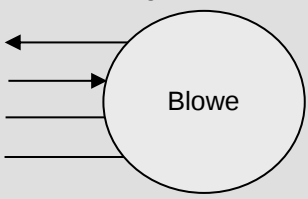
Compact blower with an efficient motor. Features: housing: PC, impeller: PA. Brushless and sensorless 3-Phase motor with integrated driver electronic. Connection via single leads AWG 24.

		U97HL-024KM-4
U_N	VDC	24
U	VDC	15 - 26
$I_{N \text{ freeblowing}}$	mA	1'600
$I_{N \text{ typ. work. point}}$	mA	1'100
$I_{N \text{ static}}$	mA	800
$P_{N \text{ typ. work. point}}$	W	26
$n_{\text{freeblowing}}$	min^{-1}	18'600
$n_{\text{typ. work. point}}$	min^{-1}	19'200
n_{static}	min^{-1}	20'100
$V_{\text{freeblowing}}$	l/min	660
$V_{\text{typ. work. point}}$	l/min	310
$p_{\text{work. point}}$	Pa	1'900
p_{static}	Pa	2'600
$LpA_{(WP)}$	dB(A)	73.6 dB(A) at 1000 Pa (10 mbar) and 1m distance
$MTTF_{(WP)}$	hr	10'000 / 45°C
T	°C	-20...+45
m	gr	358
Leads	mm	270 (AWG24)
Housing material		PSU
Impeller material		PPE
Sleeve Bearing		N/A
Ball Bearing		•
Tacho		•
Speed control SP		•

Data's at Density: 1.2kg/m³

U97HL-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
- Polarity protection

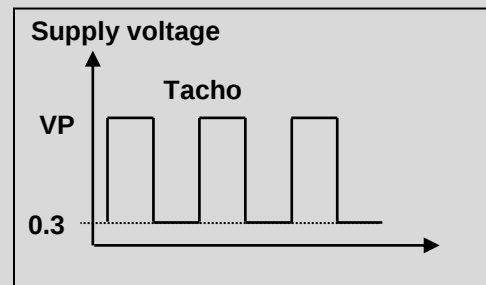
FG Frequency signal (yellow wire)

Speed calculation

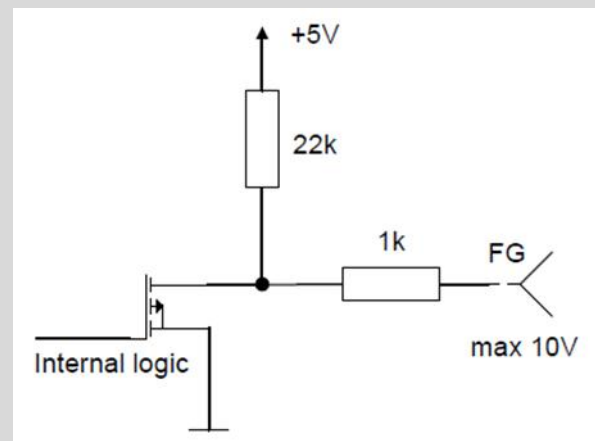
$$f \cdot 20 = \text{rpm (3 pulse / rotation)}$$

f = FG Frequency Generator [Hz]

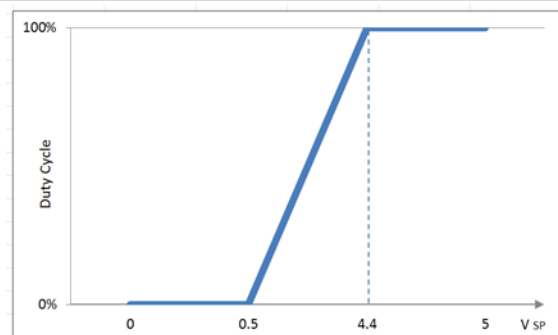
rpm = Rotation speed [min⁻¹]

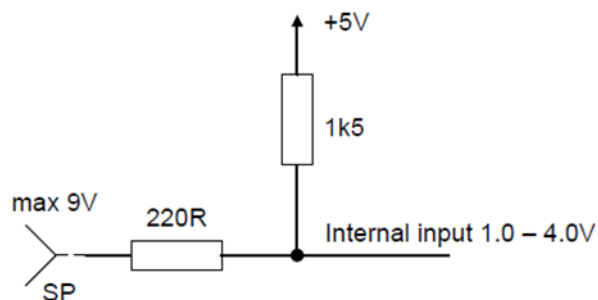


Pull-up resistor (22kOhm) to 5 V is integrated.
Do not connect to V_{CC}!



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 Blower operates at 100% Speed

SP to GND Speed zero → Stop

Blower limits during continuous operation and warning

- Max. allowed temperature on heat sink surface: 65° C
- Maximum speed 25'000 1/min
- Handle only in currentless condition

Power supply requirement

Ripple voltage < 5%
3000 mA

Info

**Specifications are subject to change without notice.
Specifications on this Datasheet are for reference.**

Version: 08.09.2014 / CP

Doc: U97HL with integrated electronics.doc