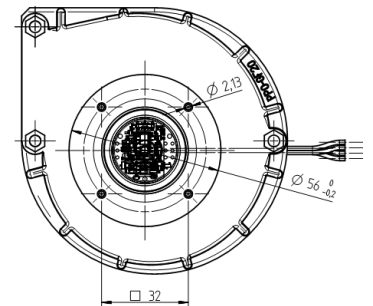
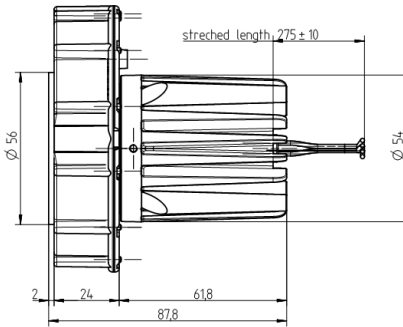
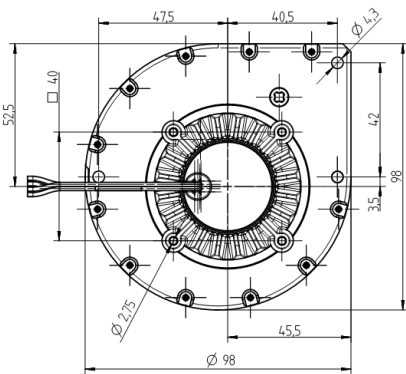
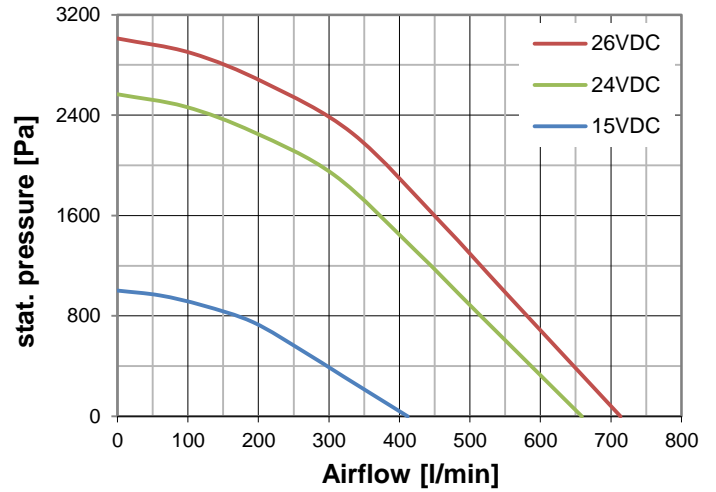
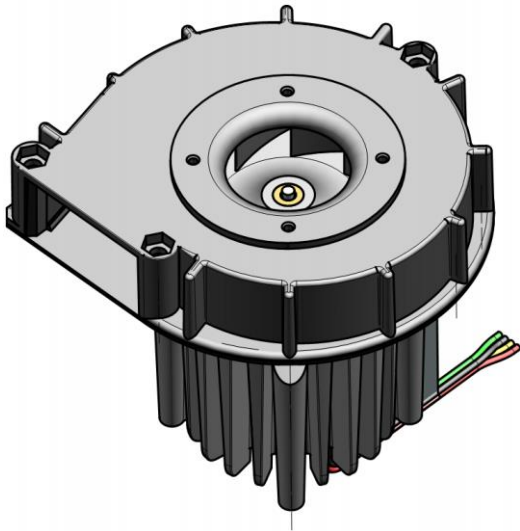


Miniatur Radial Gebläse mit integrierter Elektronik
Miniature Radial Blower with integrated electronic



Direction of rotation CCW



Technische Daten

Allgemeine Beschreibung

Kompakter Lüfter mit effizientem Motor. Eigenschaften: Gehäuse: PSU, Flügelrad: PPE. 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: PSU, impeller: PPE. 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
$n_{\text{ static}}$	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
$p_{\text{ static}}$	Pa	2'600
$LpA_{(WP)}$	dB(A)	73.6 dB(A) at 1000 Pa (10 mbar) and 1m distance
T	°C	-20...+45
m	gr	358
Leads	mm	270 (AWG24)
Housing material		PSU
Impeller material		PPE
Sleeve Bearing		N/A
Ball Bearing		•
Tacho		•

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
- Locked rotor protection
- Power supply overvoltage protection: maximum 28VDC
- ESD Protection 16 kV
- SURGE and burst protection 600W 10/1000 µm
- Polarity protection

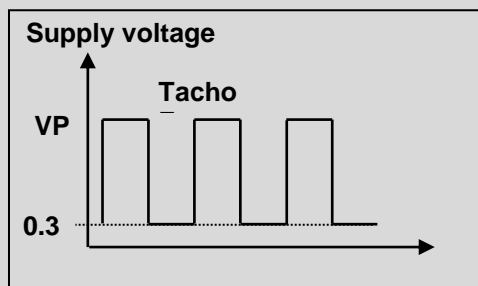
FG Frequency signal (yellow wire)

Speed calculation

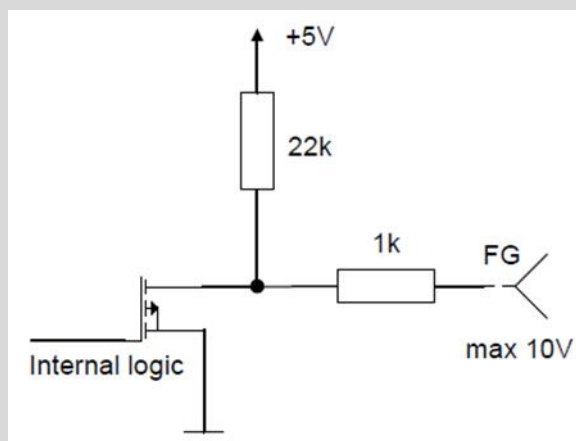
$f * 20 = \text{rpm (3 pulse / rotation)}$

f = FG Frequency Generator [Hz]

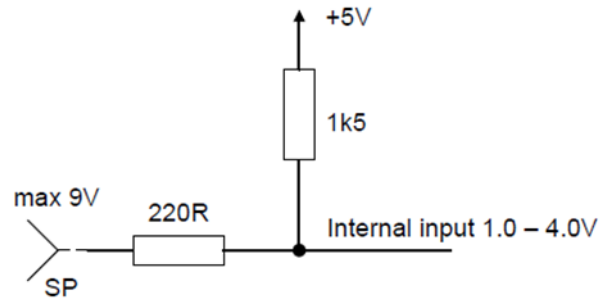
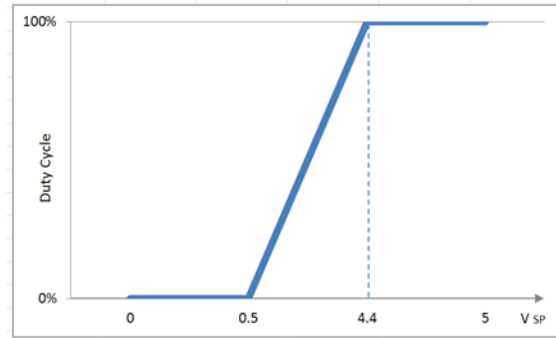
rpm = Rotation speed [min⁻¹]



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	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: 23.10.2014 / CP
	Doc: U97HL-024KM-4 with integrated electronics.doc