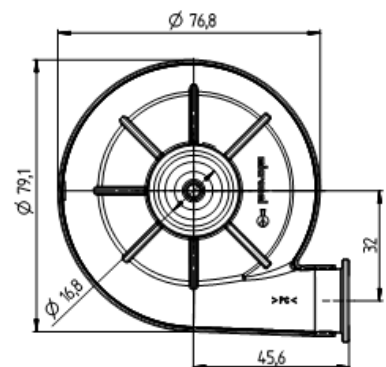
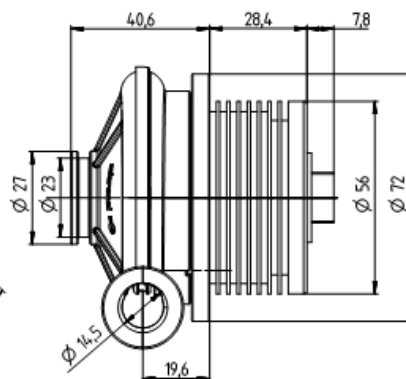
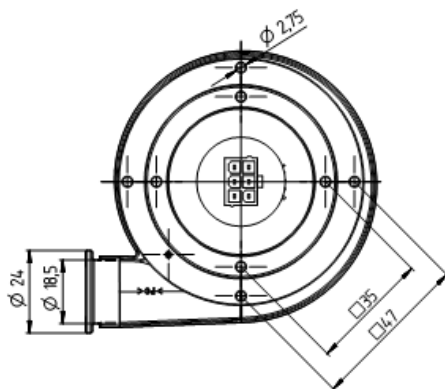
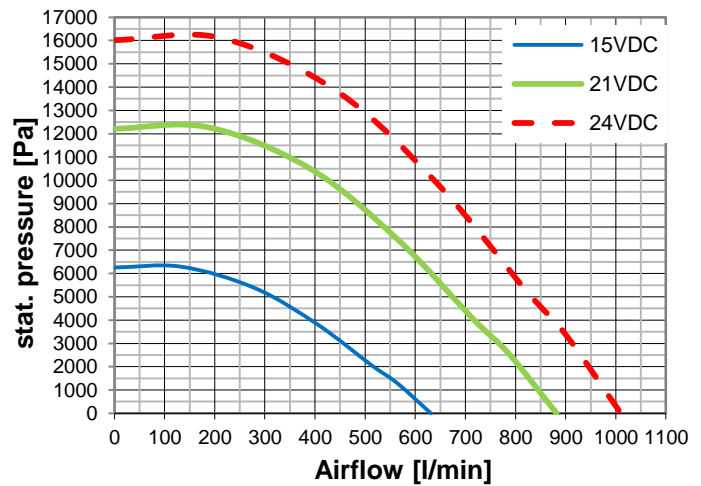
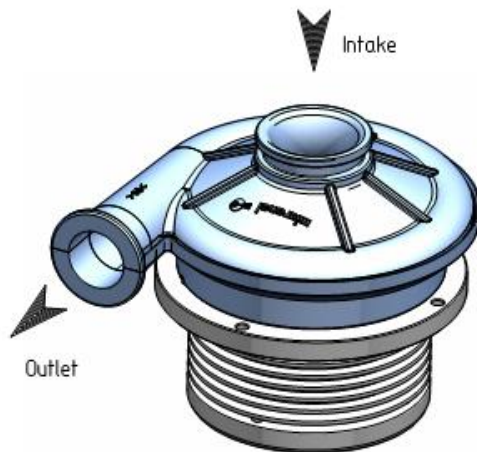


Miniatur Radial Gebläse mit integrierter Elektronik
Miniature Radial Blower with integrated electronic



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 MOLEX-Stecker.

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 MOLEX-connector.

		U85MX-024KX-4
U_N	VDC	21
U	VDC	15.0-24.0
$I_{N \text{ freeblowing}}$	mA	8'500
$I_{N \text{ typ. work. point}}$	mA	5'900
$I_{N \text{ static}}$	mA	2'400
$P_{N \text{ typ. work. point}}$	W	125
$n \text{ freeblowing}$	min^{-1}	39'000
$n \text{ typ. work. point}$	min^{-1}	41'500
$n \text{ static}$	min^{-1}	46'100
$V \text{ freeblowing}$	l/min	885
$V \text{ typ. work. point}$	l/min	390
$p \text{ work. point}$	Pa	10'500
$p \text{ static}$	Pa	12'300
$LpA_{(WP)}$	dB(A)	77
T	°C	-20...+45
m	gr	390
Housing material		PC
Impeller material		PA6
Sleeve Bearing		N/A
Ball Bearing		•
Tacho		•
Speed control SP		•
NTC		NTCG164KF104F TDK


Data's at Density: 1.2kg/m³

Operating Instruction and Warning

U85MX-024KX-4

Electrical connection

Connector type: MOLEX 46015-0603

PIN	Description			
1	GND	3		6
2	Frequency	2		5
3	NTC	1		4
4	Vcc + Power			
5	Set Speed			
6	NTC			

Blower Features

- Integrated speed control input
- FG frequency signal output
- Speed control by analogue or resistive input on SP (set speed)
- Current limitation when locked rotor
- No polarity protection

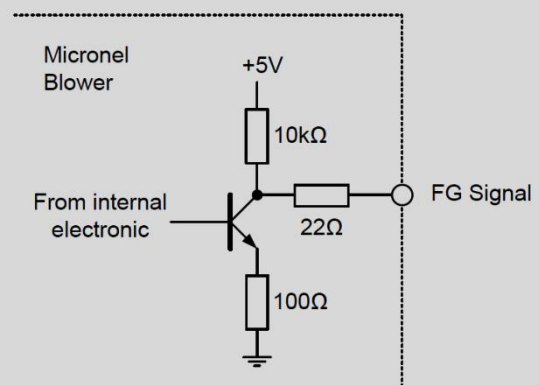
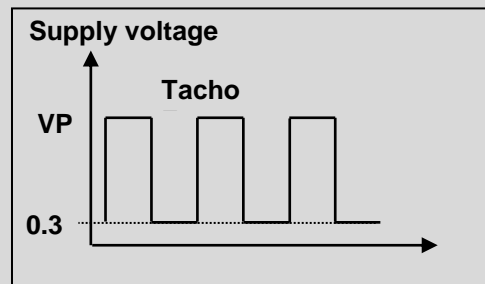
FG Frequency signal (yellow wire)

Speed calculation

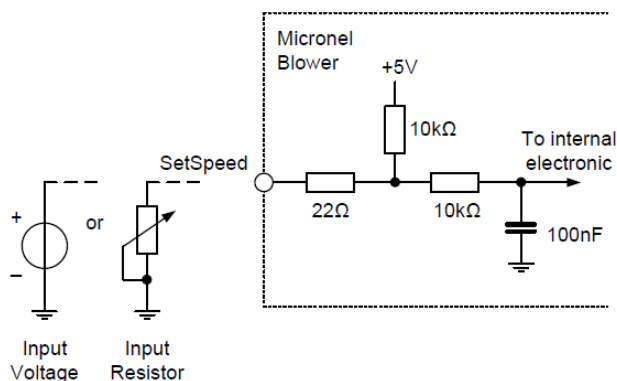
$f \cdot 20 = \text{rpm (3 pulse / rotation)}$

f = FG Frequency Generator [Hz]

rpm = Rotation speed [min⁻¹]



SP Set speed (green wire)



Input voltage	0...0.2VDC	→	Stop
	0.2...1.5VDC	→	Not defined, if blower RUN or STOP
	2.0 VDC	→	min. Start voltage
	1.5-4.0 VDC	→	Fan is running compare to VDC
	4.0-5.0 VDC	→	Fan is running with 100% speed

Negative voltage or >5VDC not allowed

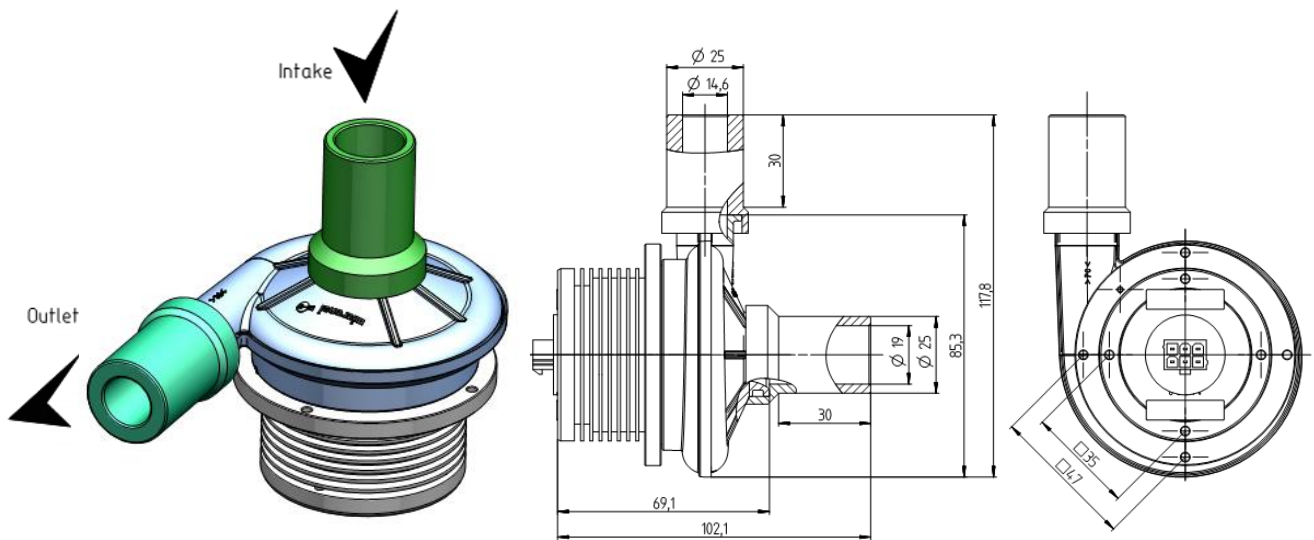
Input resistor	Connect between SP (green) and GND (black)		
	Values at Nominal Voltage 24VDC		
	0...0.5kΩ	→	Stop
	0.5...4.3kΩ	→	Not defined, if blower RUN or STOP
	6.7kΩ	→	Minimum start kΩ
	4.3...39kΩ	→	Fan is running compare to kΩ
	39...∞ kΩ	→	Fan is running with 100% speed

SP not connected	Blower operates at 100% Speed
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Blower limits	- Max. allowed temperature on heat sink surface:	65° C
	- Maximum speed	45'000 1/min
	- Max. Power consumption	160W
	- Orifice diameter at outlet / inlet	diameter > 4mm (Q > 80 l/min)

Power supply requirement	Ripple voltage < 5%
	10000 mA

Options for intake and outlet connections*



Product no. incl. option / Product Nr. inkl. Option	Intake / Einlass	Outlet / Auslass	Description / Beschreibung
U85MX-024KX-4			Without intake / without outlet Ohne Einlass / ohne Auslass
U85MX-024KX-41	•		With intake / without outlet Mit Einlass / ohne Auslass
U85MX-024KX-42		•	Without intake / with outlet Ohne Einlass / mit Auslass
U85MX-024KX-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.

Info

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

Version: 18.06.2019 / DH

Doc: U85MX-024KX-4 with integrated electronics.doc