SANYO DENKI

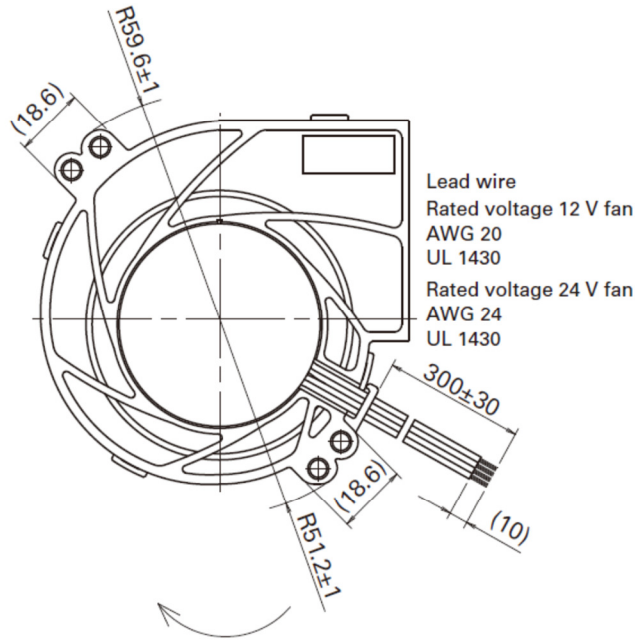
SANYO DENKI San Ace B97
97 x 33 mm 9BMC type
High Performance Blower

Cooling Systems Division
Sanyo Denki America, Inc.

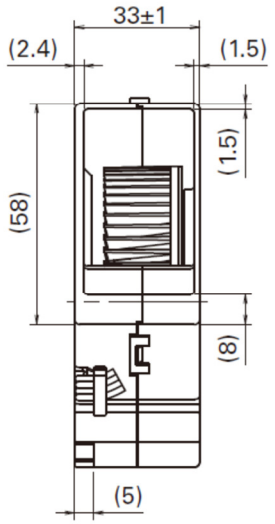
www.sanyodenki.us

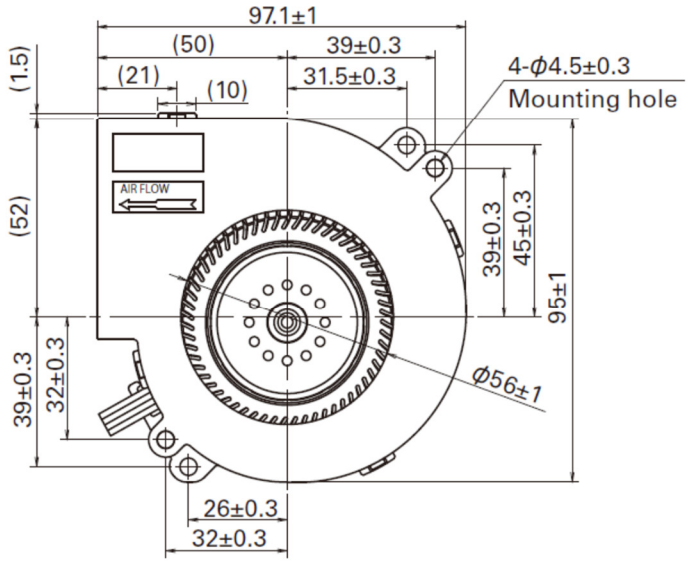
Specifications - 1

Dimensions (unit: mm)



Rotating direction





Airflow direction

Specifications

The following nos. **have PWM controls, pulse sensors.**

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min⁻¹]	Max. airflow [m³/min]	Max. airflow [CFM]	Max. static pressure [Pa]	Max. static pressure [inchH₂O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9BMC12P2G001	12	10.8 to 13.2	100	6.2	74.4	8200	1.85	65.3	1950	7.83	69	-20 to +70	40000/60°C (70000/40°C)
			20	0.38	4.56	2800	0.58	20.4	121.0	0.48	44		
9BMC24P2G001	24	21.6 to 26.4	100	3.1	74.4	8200	1.85	65.3	1950	7.83	69		
			20	0.19	4.56	2800	0.58	20.4	121.0	0.48	44		

* PWM frequency: 25 kHz. Fan does not rotate when PWM duty cycle is 0%.

Models with the following sensor specifications are also available as options: Without sensor Pulse sensor

Please inquire as the availability of these options depends on the model: Lock sensor

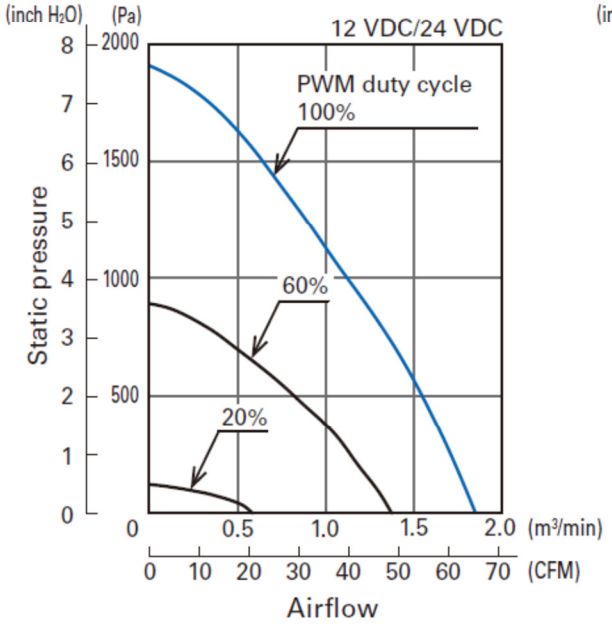
Specifications - 2

Common Specifications

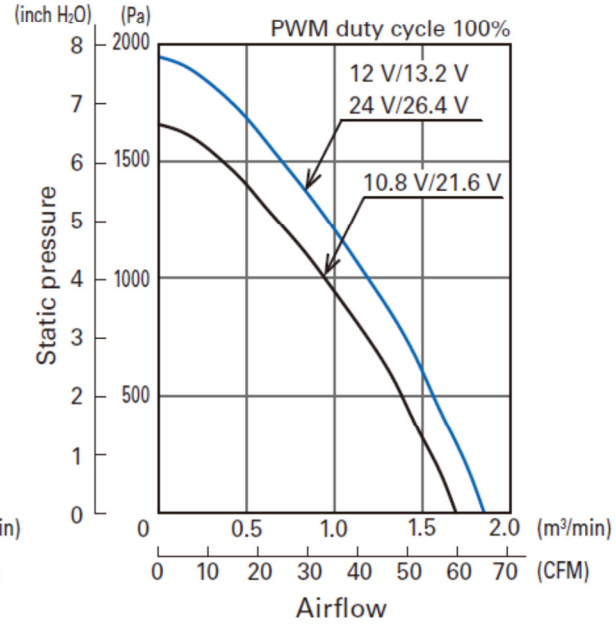
Material	Frame, Impeller: Plastics (Flammability: UL 94V-0)
Expected life	Refer to specifications (L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
Motor protection system	Current blocking function and reverse polarity protection
Dielectric strength	50/60 Hz, 500 VAC, 1 minute (between lead conductor and frame)
Sound pressure level (SPL)	Expressed as the value at 1 m from air inlet side
Operating temperature	Refer to specifications (Non-condensing)
Storage temperature	-30°C to +70°C (Non-condensing)
Lead wire	⊕Red ⊖Black Sensor: Yellow Control: Brown
Mass	Approx. 200 g

Airflow - Static Pressure Characteristics

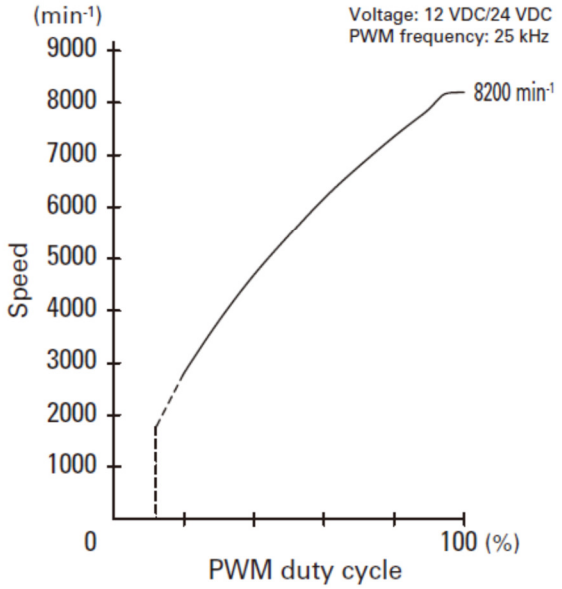
・ PWM duty cycle



・ Operating voltage range



PWM Duty - Speed Characteristics Example



SANYO DENKI *AMERICA, INC.*

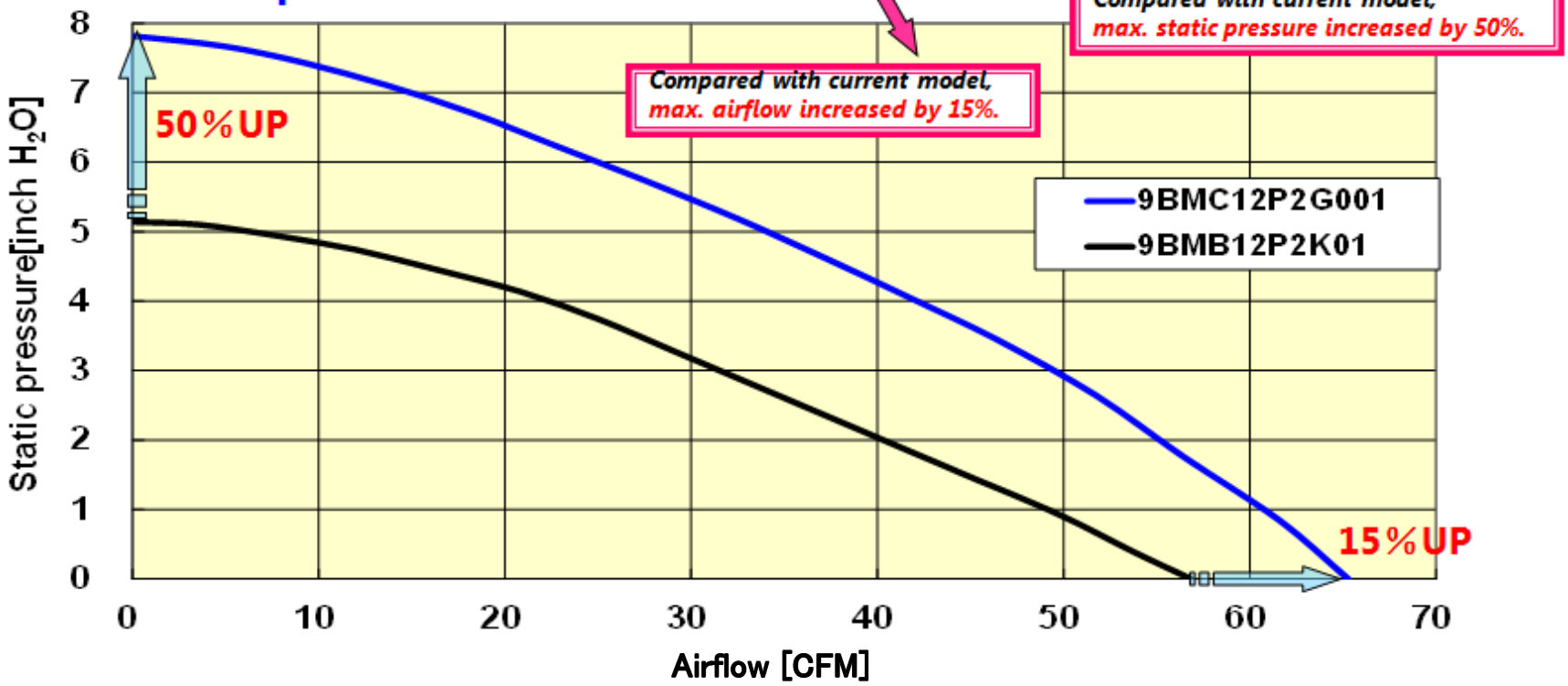
Specification Comparison

□ Specifications

* Rated speed, sound pressure level, power consumption are values at rated voltage in free air.
* Sound pressure level is measured at one meter from the inlet.

New model vs. current model	Rated voltage [DCV]	Rated speed [min^{-1}]	Max. airflow [CFM]	Max. static pressure [inch H_2O]	SPL [dB(A)]	Power consumption [W]
New model 9BMC12P2G001	12	8,200	65.3	7.83	69	74.4
Current model 9BMB12P2K01	12	6,850	56.8	5.14	66	40.8

□ Airflow – static pressure characteristics

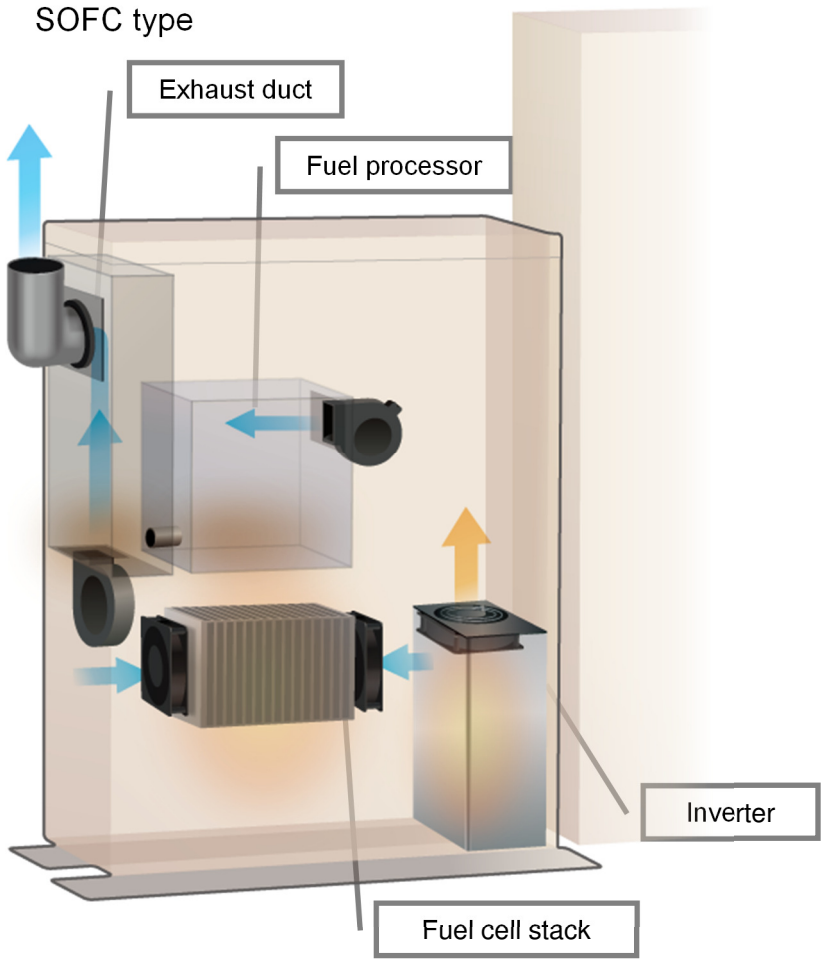


Application Case – Micro CHP

The current trend in household fuel cells is towards the micro combined heat and power (CHP) system known as Ene-Farm. With this brand, Japan has established itself as a tech and market leader.

There are two prevailing types of fuel cells in use. One is the polymer electrolyte type (PEFC/PEMFC) which operates at low temperatures. This type benefits from being relatively inexpensive to manufacture. Another type known as solid oxide (SOFC) operates at high temperatures (above 700˚C). SOFCs can not only generate power at high efficiency, but also drive a turbine with their exhaust to further generate power. In addition, simplification of the reformer used to convert city gas into hydrogen can potentially lead to cost reductions.

Both types are expected to reduce in size and increase density in the coming years, leading to a demand for thermal management.



San Ace B97 Blower (9BMC)

San Ace 120 9GV fan

■ **9BMC24P2K01 / 24 V / PWM control function / 1 unit**
Purpose: To remove the gas by-product and pulling air to the fuel processor

■ **9GV1224P1J001 / 24 V / PWM control function / HumiSeal® and silicon coating / 1-2 units**
Purpose: To remove heat from the inverter and pulling in air into the fuel cell stack. We proposed additional customization to protect fans from dust and corrosion.