

# IP68 Protection to Provide Off-Road Driver Comfort by SANYO DENKI

SANYO DENKI's IP68 Cooling Fan and Blower are suitable to be used in various Off-Road applications where robust protection of the fan from dust, humidity or debris ingress is vital for high reliability, rider comfort and low maintenance.

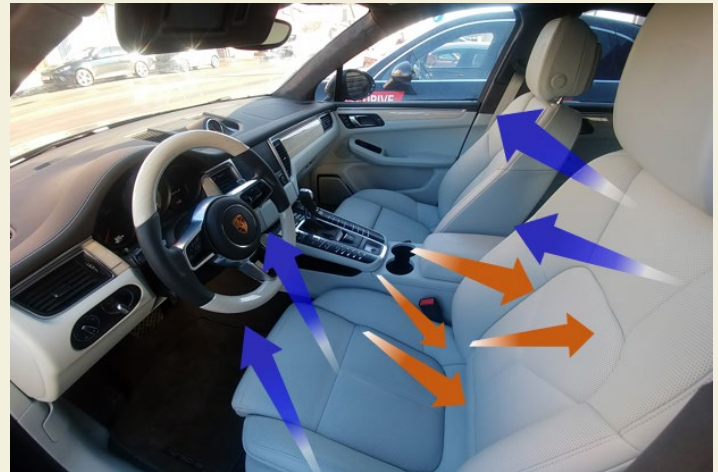
## Seat Cooling and Ventilation:

Cooling Unit to circulate, push or pull air to the surface of the driver seat

Used in: Tractor canopy, lawn mowers, tractor cab, ATV, construction machinery and other agricultural machinery

Seat Ventilation Blower and Axial Fan Features:

- High Static Pressure and Air Flow
- Low noise and vibration
- IP68 ingress protection
- Corrosion resistance
- PWM speed control
- Robust electrical design and high reliability



## Dust-Off Applications:

Blower to push air directly to blow off dust from near driver

Used in: ATV, lawn mower canopy, tractor canopy, tractor cab, construction machinery and other agricultural machinery

Dust-Off Blower and Axial Fan Features:

- High Static Pressure and Air Flow
- Low noise and vibration
- IP68 ingress protection
- Corrosion resistance
- PWM speed control
- Robust electrical design and high reliability



## Strong Technical Support for customized design:

Our experienced FAE can provide local engineering support

- Harness customization – Flexible design to meet customer's needs
- Special conformal coatings
- Optimization of fan noise and vibration
- Offering various testing at our engineering lab in California, and beyond

# IP68 Axial Fan and Blower for Driver Comfort Applications



## SANYO DENKI San Ace 97W 9W1B Type Splash-Proof Blower

97W Splash-Proof Blower features 12 or 24VDC nominal voltage rating, 0.1 to 1.3A current range. Max static pressure 2.17 inchH<sub>2</sub>O and max airflow 38.5 CFM. It is suitable for the pressurized application. The IP68 rating ensures protection against water and dust, even in harsh road conditions. The operating temperature range is -20°C to +70°C. It also provides a PWM control function to control the fan speed, noise, and energy efficiency.

*Available size: 97x33 (mm)*



## SANYO DENKI 9WPA San Ace 60W, 80W, & 92W Splash-Proof Fans

9WPA Splash-Proof Fans feature 12 or 24VDC nominal voltage rating, 0.04 to 0.9A current range. IP68 water and dust resistance, industry-leading airflow of 53.67 CFM, and max static pressure 1.43 inchH<sub>2</sub>O. It is suitable for cooling and ventilation applications that require high reliability in harsh environments. The operating temperature range is -20°C to +70°C. It also provide a PWM control function to control the fan speed, noise and energy efficiency.

*Available sizes: 60x25, 80x25, 92x25 (mm)*

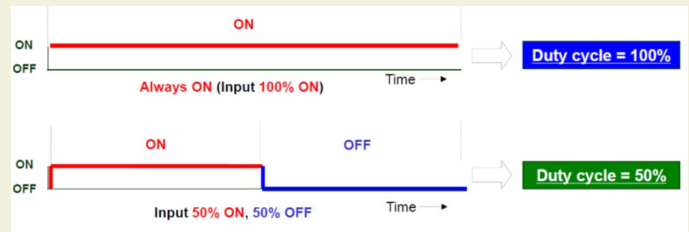


## SANYO DENKI 9WL Splash-Proof Long Life Fans

9WL Splash-Proof Long Life Fans feature 12/24/48VDC nominal voltage rating, max. airflow 318 CFM, max. static pressure 2.63 inchH<sub>2</sub>O, with industry's longest service life of 100,000 up to 180,000 hours at 60° C. It's equipped with PWM control function to control speed, noise, and energy efficiency. The 9WL fans are IP68-rated water and dust protected to ensure stable fan operation in harsh environments. The operating temperature range is -20°C to +70°C. *Available sizes: 40x28, 60x25, 80x25, 92x25, 92x38, 140x38, 140x51 (mm)*

## PWM Control Feature:

- Input of pulse width is also known as PWM duty cycle. Pulse signals are repeatedly turned ON and OFF within a set time. The ratio of ON time is known as duty cycle.
- By controlling duty cycle, fan rotation speed is adjusted, so are the noise and energy consumption.



## IP68-rated water and dust resistance:

- Resin coating provides high protection of active parts (electronic components and motor coils.)

According to Ingress Protection Rating per IEC 60529  
 First Digit = 6 Complete protection against dust  
 Second Digit = 8 Protection against submersion in water



Standard



Resin coating

- Magnet with excellent waterproof performance is used
- Water drain holes added to Frame
- Aluminum Die Cast Frame



Epoxy resin coating of motor (IP68)



Outlet Drain Holes