

# 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.

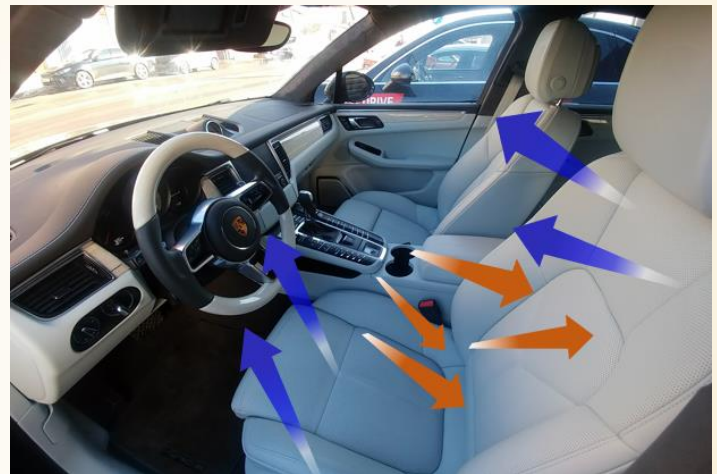
## Seat Cooling and Ventilation:

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 pressurized application. The IP68 rating ensures protection against water and dust, even in harsh road condition. The operating temperature range is -20°C to +70°C. It also provides 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)**



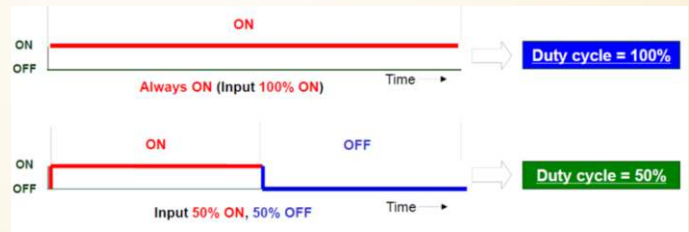
## SANYO DENKI 9WL Splash-Proof Long Life Fans

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