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AMO

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AMOGROUP

Leading Automotive, IT, Energy and Environment Fields
Global Materials and Components Company

AMO
A M O T E C H

AMOTECH
KOSDAQ

Establishment

October 1994

Business

Auto · IT

Products

BLDC Motor · MLCC
EMC & RF Components
RF Antenna

AMO
AMOGREENTECH

AMOGREENTECH
KOSDAQ

Establishment

January 2004

Business

EV · ESS · IT

Products

Thermal Solution
ESS · Nano Membrane
High-efficiency Magnetic Components

AMO
AMOSENSE

AMOSENSE
KOSDAQ

Establishment

November 2008

Business

Auto · IoT · Wireless Charging

Products

Digital Key Module
IoT Device
Wireless Charging Solution

AMO
AMOLIFESCIENCE

AMO LIFE SCIENCE

Establishment

September 2016

Business

Bio · Healthcare

Products

Cell Culture System
Disease Diagnostics
Bio Membrane · Health & Beauty

AMO
A M O - S N e t

AMO-SNet

Establishment

January 2019

Business

IoT Service

Products

IoT Network
(Facility-based Telecommunications
Business)

AMO
AMOECSYSTEMS

AMO ECO SYSTEMS

Establishment

January 2021

Business

Energy · Environment

Products

Water Treatment
Air Ventilation Filter
LED Lighting



AMOTECH

- **Headquarter**
380 Namdongseo-ro, Namdong-gu,
Incheon, Republic of Korea
- **CEO**
Pyung-Kyu Kim
- **Founded**
October 19th, 1994
- **Listed**
August 1st, 2003
- **Industry**
Automotive, IT, Telecom
- **Major Products**
BLDC Motor, MLCC, EMC&RF Components, Antenna
- **Website**
www.amotech.co.kr

AMOTECH is a company specializing in key materials and parts in the automotive and IT fields based on advanced materials. The main business areas of AMOTECH are BLDC Motor, MLCC, EMC & RF Components and RF Antenna.

BLDC Motor

BLDC Motor with eco-friendly design and high-efficiency power

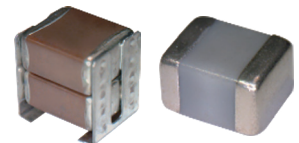
- In-car Sensor · Actuator
- EWP(Electric Water Pump)
- Cooling Fan(for automotive)
- Blower · Mobility Traction Motor



MLCC

A key component that controls constant current flow inside automotive electronics

- High Capacity MLCC(for auto, telecom)
- High Voltage MLCC(for EV, power)
- Broadband Capacitor(for optical communication)
- High Q MLCC(for medical equipment, telecom)



EMC & RF Components

ESD/EMI control components essential for automotive electronics and IT devices

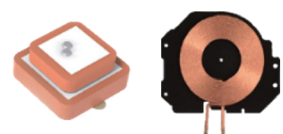
- Disk & Chip Varistors
- Ferrite EMI Filters
- RF Components



RF Antenna

RF Antenna for wireless communication in automobiles and IT devices

- NFC & Wireless Charging
- GPS/GNSS Antenna
- Sub-Antenna(Bluetooth, WiFi, LTE, etc.)



PRODUCT INFORMATION

In-car Sensor



The In-car Sensor is used to detect the temperature inside the vehicle and transmit the data to FATC (Full Automatic Temperature Control), an automatic thermostat. The advantage of detecting temperature through forced inhalation is less chance of errors and faster response time. AMOTECH has the largest market share domestically and internationally.

Features

- Low noise, low vibration, high efficiency and long life by adopting BLDC motors
- Provides accurate and rapid temperature data
- Satisfies automotive environmental and electromagnetic wave tests

Specifications for Representative Models



Item	Connector Type	Lead Wire Type
Size (mm)	35.8 x 42.9 x 61.9	37.8 x 35.8 x 37.0
Nominal Voltage (V)	12	12
Operating Voltage (V)	9 ~ 16	8 ~ 16
Power Current (A)	0.06	0.07
Power Consumption (W)	0.72	0.84
Air Flow (CFM)	0.83	0.65
Pressure (Pa)	6	6
Speed (RPM)	3,100	3,200

Customers



LED Headlamp Cooling Fan



The LED Headlamp Cooling Fan is used to dissipate internal heat and extends the lifespan of the LED headlamp by lowering the internal temperature of the headlamp. AMOTECH exclusively supplies LED headlamp cooling fans for domestic vehicles and also supplies them to global headlamp companies.

Features

- Low noise, low vibration, high efficiency and long life by adopting BLDC motors
- Satisfies automotive environmental and electromagnetic wave tests
- Secures high reliability at high temperatures

Specifications for Representative Models



Item	Axial Type	Radial Type	
Size (mm)	50 x 50 x 15	65 x 65 x 30	
Nominal Voltage (V)	13.5	13.5	
Operating Voltage (V)	9 ~ 16	9 ~ 16	
Power Current (mA)	150	500	
Power Consumption (W)	2.0	6.8	
Air Flow (CFM)	15	15	@ 86% Duty
Pressure (Pa)	40	100	
Speed (RPM)	5,000	4,500	

Customers



PRODUCT INFORMATION

Small Fans



Small fans are fan motors that circulate the air inside the vehicle controller to achieve internal thermal balance in the temperature-increasing areas, thereby maintaining the lifespan and performance of the heat-generating elements.

Features

- Low noise, low vibration, high efficiency and long life by adopting BLDC motors
- Lightweighting
- RoHS compliant
- Satisfies automotive environmental and electromagnetic wave tests

Specifications for Representative Models

Application

AVN, Cluster



ADAS Controller



Item	AVN Cooling Fan	ADAS Controller Cooling Fan
Size (mm)	49.8 x 47.0 x 12.2	60 x 60 x 31
Nominal Voltage (V)	7.1	12
Operating Voltage (V)	4.5 ~ 16	7 ~ 16
Power Current (mA)	150	Max. 150
Power Consumption (W)	1.05	1.8
Air Flow (CFM)	4.8	Min. 15
Pressure (Pa)	17	Min. 34
Speed (RPM)	5,000	3,620 ±10%

Customers



Blower



The Blower is responsible for preventing heat generation that can cause situations such as vehicle battery explosions and degradation of output performance, and is attracting attention as a key component of the battery system of HEVs/PHEVs.

Features

- BLDC motors with integrated controller
- Easy RPM control using PWM
- CAN and LIN communications applicable
- High efficiency, low noise and low vibration
- Outstanding durability compared to DC motors
- Satisfies automotive environmental and electromagnetic wave tests

Specifications for Representative Models



Item	Battery Cooling Fan	Rear Blower
Rated Voltage (V)	12	12
Motor Type	BLDC	BLDC
Motor Size	Ø105 x 65.6h	Ø129 x 106.5h
Rated Load Speed (RPM)	Max. 5,750	Max. 3,100
Air Flow (CMH)	140 at 720 Pa 100 at 430 Pa	215 at 320 Pa 105 at 120 Pa
Noise (dB)	65 at 3,000 RPM	Below 60

Customers



PRODUCT INFORMATION

Actuator



Actuators are used to change the opening/closing function of the valve and the direction of the valve by receiving electrical signals and changing the rotation of the motor into linear motion, and have a built-in controller.

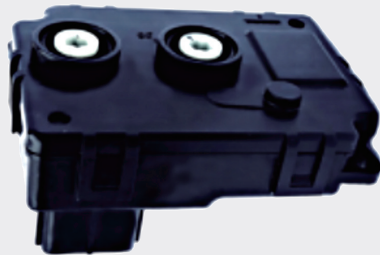
Features

- BLDC motors with integrated controller
- Low noise, high efficiency and long life based on BLDC motors
- Can control valves and transmit position and status through the design of LIN and CAN communications
- Performs open-loop control
- Implementation of fail-safe function against external factors such as ice, dust and stones
- Protects from overvoltage, undervoltage, high temperature, overcurrent, reverse voltage, disconnection and short circuit

Specifications for Representative Models

Application

Active Air Flap



Automotive Valve



Item	AAF Actuator	Valve Actuator
Rated Voltage (V)	12.6	13.5
Motor Type	BLDC	BLDC
Slot / Pole	9 / 10	9 / 10
Motor Size	120 x 55 x 45h	42.9 x 42.8 x 26.8h
Rated Load Speed (RPM)	7	4,800
Torque	Min. 2Nm	Min. 6kgf

Customers



Seat Movement Motor



It adjusts the seat position forward/backward or up/down and the angle of the seatback by operating a switch to improve passenger comfort.

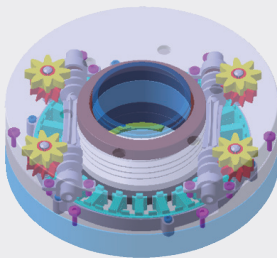
Features

- BLDC motors with integrated controller
- CAN and LIN communications applicable
- Outstanding durability compared to DC motors
- High efficiency, low noise and low vibration
- Satisfies automotive environmental and electromagnetic wave tests

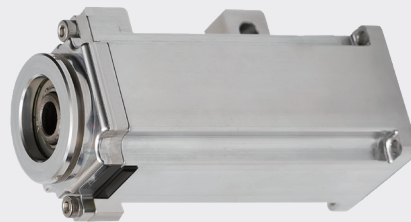
Specifications for Representative Models

Usage

For rotating seats



For moving back and forth between seats



Item	Swivel Module	Long Slide Motor
Rated Voltage (V)	13.5	13.5
Motor Type	BLDC	BLDC
Slot / Pole	24 / 32	6 / 8
Motor Size	∅180 x 60h	35 x 35 x 99h
Rated Load Speed (RPM)	2	1,000
Torque (Nm)	Min. 60	Min. 0.3

Models



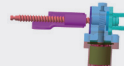
Swivel Module



Long Slide Motor



Leg Rest Slide Motor



Extension Motor



Relaxation Motor



Recliner Motor



Neck Warmer Motor

PRODUCT INFORMATION

Electric Water Pump



AMOTECH's uniquely structured Electric Water Pump is based on a BLDC motor driven by its own power, improving engine efficiency and facilitating cooling of electric vehicle batteries.

Features

- A high-output and high-efficiency BLDC motor based on proprietary patent structure
- Low noise at high speed rotation
- Implementation of future automotive technology by adopting CAN/LIN communication
- Perfect waterproof structure
- Fully operational over a wide high current range
- Excellent price competitiveness through use of non-rare earth (ferrite) magnets

Specifications for Representative Models



Item	50W	130W
Rated Voltage (V)	12	13.5
Motor Type	BLDC	BLDC
Slot / Pole	9 / 6	9 / 12
Motor Size	Ø66 x 68.5h	Ø100 x 83.2h
Rated Load Speed (RPM)	4,200	3,600
Rated Current (A)	3.2	-
Maximum Torque (Nm)	-	0.24
Pump Pressure / Flow Rate	0.5 Bar / 20 LPM	1.0 Bar / 25 LPM

Models



Radial Type (50W)



Axial Type (100W)



Axial Type (130W)

High Power Motor

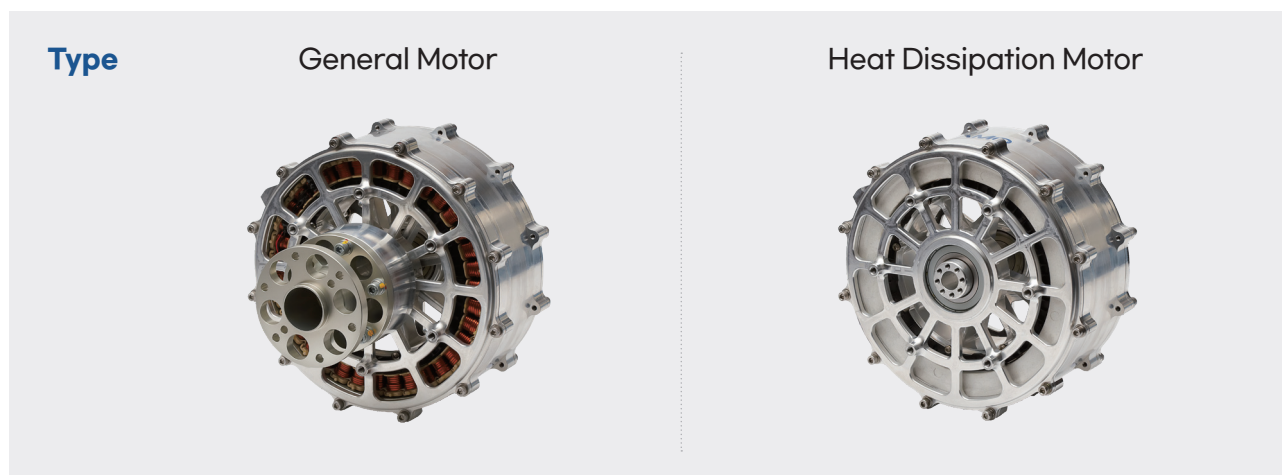


Medium/large-sized motors for automobiles and aircrafts are continuously required to be miniaturized, have higher output, and be more efficient, and medium/large-sized motors and generators have high output specifications and generate a lot of heat even with small losses. Accordingly, AMOTECH used materials with good heat dissipation effects in the stator to produce high output.

Features

- A heat dissipation motor based on proprietary patent structure
- Increased output by more than 20% at the same size by applying our heat dissipation structure
- High efficiency, low noise and low vibration based on BLDC motors
- Optimized for UAM with high output and lightweighting

Specifications for Representative Models



Type	General Motor	Heat Dissipation Motor
Item	65kW	80kW
Rated Voltage (V)	580	580
Motor Type	PMSM	PMSM
Slot / Pole	36 / 32	36 / 32
Motor Size	Ø303 x 104h	Ø303 x 104h
Rated Load Speed (RPM)	3,000 6,000	6,000
Rated Output (kW)	65	80
Weight (kg)	15.8	17
Power Density (kW/kg)	4.1	4.7
Efficiency (%)	96	96
Cooling	Water / Glycol	Water / Glycol

Application



EV Driving Motor



General Aviation



UAM



Generator

DOMESTIC AND OVERSEAS PRODUCTION FACILITIES



COUNTRY	CITY
Korea	Gimpo Tongjin · Gimpo Haseong · Incheon · Pyeongtaek Cheonan Factory 1 / Factory 2 · Cheorwon · Geomdan
China	Zibo Factory 1 / Factory 2
Vietnam	Hanoi Factory 1 / Factory 2 / Factory 3
TOTAL	13

AMOTECH