

DC BRUSHLESS MOTOR



泰映微信搜一搜
TROY WeChat

Tnet Network Communication

Intelligent **Connect** Operation

Positioning Type
Speed Control Motor

AIO
I/O Type



AIOM
Communication Type



"All IN ONE" AIO

Positioning Type Speed Control Motor

Motor and Controller 2 in 1
Reduce the size · Save space

Same characteristics as brushless motors:

Continuous Operation
Constant Torque
Speed Control

+

Same characteristics as stepper motors:

Positioning Function



◆ I/O Type • Communication Type

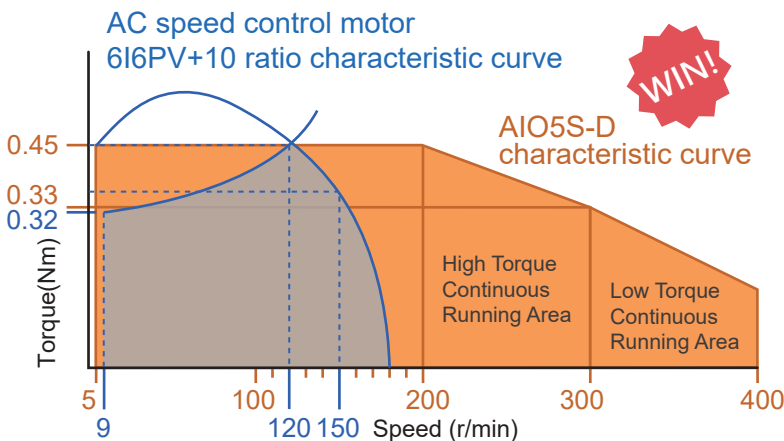
- Two modes of speed and positioning can be set according to needs.
- With positioning completion signal output function, it is easy to understand the current motor operating status.
- Fool-proof terminal design, easy to install and save time for locking screws.



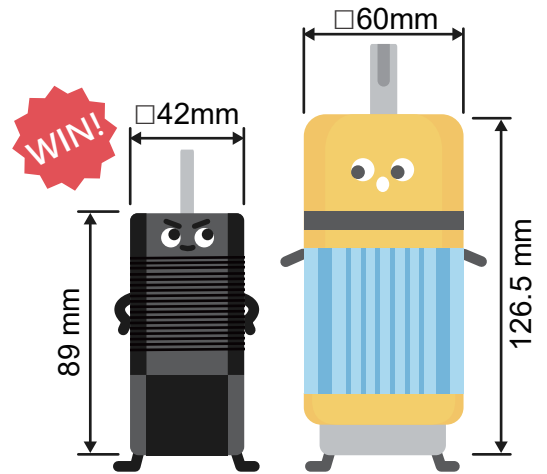
Network Communication Control-AIOM

- Compatible with Modbus RTU communication protocol, serially connected with USB TYPE-C for communication control, simplifying wiring.
- It can be connected with PC, PLC, HMI and other devices for Modbus communication.

The speed changes, the torque remains the same!



Small size, but high torque!

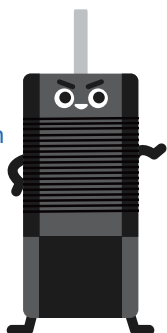


AIO(M)5S-D **V.S.** 6I6PV+10 ratio

Both permissible torque is 0.45Nm

Comparison of temperature rise!

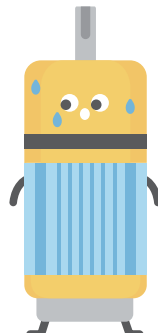
Continuous operation
without heating up.



AIO(M)



Continuous operation
temperature is
about 50°C



AC Speed
Control Motor



Continuous operation
temperature is
about 70~80°C



Stepper Motor



Continuous operation
temperature is
about 100°C

Product Number Code

AIO	M	3	S	-	D
Product Series	Type		Power Output	Shaft Type	Power Input
Motor · Controller All IN ONE	None	I/O Type	3 3W	S Round Shaft Type	D DC24V
	M	Communication Type (Modbus RTU)	5 5W		
			10 10W		
			15 15W		



Motor Specification and Characteristics

Power Output			3W	5W	10W	15W
Motor	Round Shaft Type	I / O Type	AIO3S-D	AIO5S-D	AIO10S-D	AIO15S-D
		Communication Type	AIOM3S-D	AIOM5S-D	AIOM10S-D	AIOM15S-D
Power Input	Rated Voltage	V	DC24 ± 10%			
	Max. Current	A	2			
	Rated Current	A	1.2		1.4	
Max. Torque		Nm	0.31	0.45	0.65	1.3
Rated Torque		Nm	0.25	0.33	0.5	0.7
Permissible Inertia Load GD ²		kgcm ²	2	4	12	30
Max. Speed		r/min	400			200
Rated Speed		r/min	300			150
Speed Control Range		r/min	【 AIO 】 : 5 ~ 400 【 AIOM 】 : 1 ~ 400			【 AIO 】 : 5 ~ 200 【 AIOM 】 : 1 ~ 200
Acceleration and Deceleration Time Setting		Sec	【 AIO 】 : 0.5 ~ 9 ; 【 AIOM 】 : 0.3 ~ 15			
Positioning Angle Setting		°	【 AIO 】 : 0.9 ~ 3600 ; 【 AIOM 】 : 0.1 ~ 65534			
Protection Rating		Dustproof / Waterproof	Motor : IP20			
Protection Mechanism		Power Input	Power input reverse connection protection			

* The torque, permissible inertia load and speed in the specification table are the actual values when the motor is not equipped with a gearbox.

* The permissible inertia load listed in the above table is the allowable value of the round shaft motor.

Please pay attention to the relational expression of GD²=4J when selecting and calculating.

* Torque 1Nm=10.19716 kgcm.

* AIO Relative speed variation is ±2% ; AIOM is ±1%.

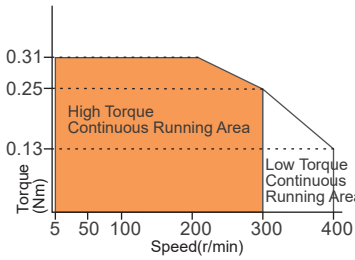
AIOM Communication Specification

Electrical Characteristics	Comply with communication standards—EIA-485.
Transmission Mode	Synchronized half-duplex.
Communication Parameters	【Communication Rate】 9600, 14400, 19200, 28800, 38400, 57600, 115200 bps [Factory default : 19200 bps] 【Data Bit】 8 bits 【Stop Bit】 1 bit 【Parity Check】 None
Communication Protocol	Modbus RTU
Connection Range	Number of connected machines:247 Machine number:[01~F7] (Theoretical Value) * The total connection distance of the work site, environmental conditions... etc. will affect the actual number of units that can be connected (recommended total connection distance <50m).
Connection Object	Connect to PC, PLC, HMI..., and other upper-level controllers with RS485 communication interface.
Connector Specifications	For USB TYPE C, please use a cable with a metal isolation net.

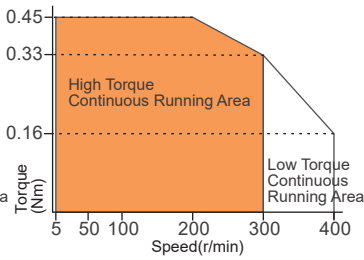
Speed-Torque Characteristic Diagrams

◆ AIO

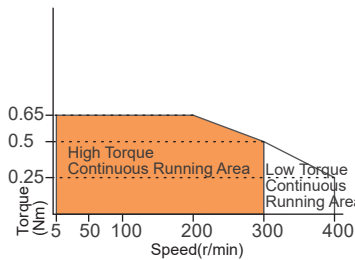
AIO3S-D



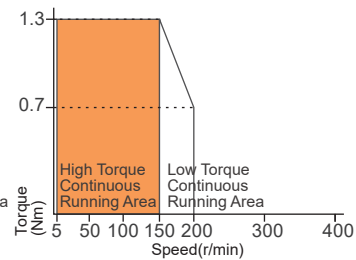
AIO5S-D



AIO10S-D

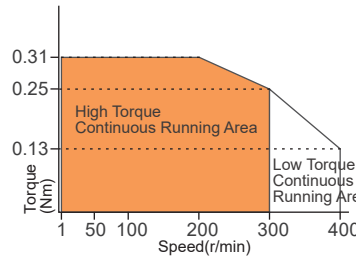


AIO15S-D

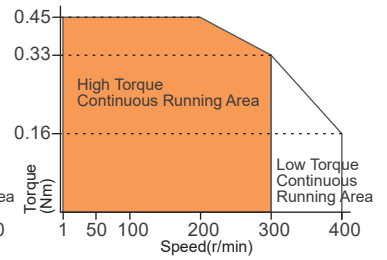


◆ AIOM

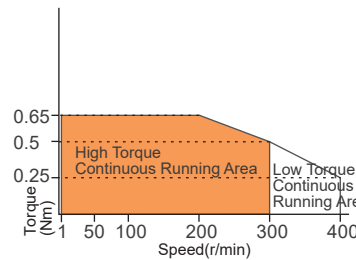
AIOM3S-D



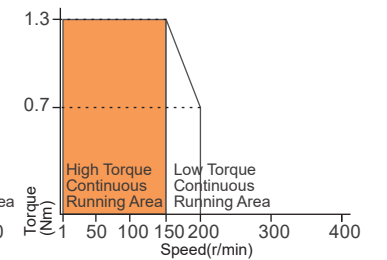
AIOM5S-D



AIOM10S-D



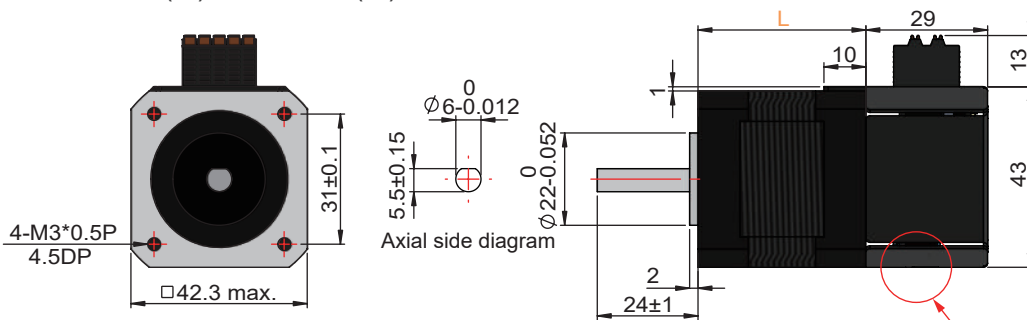
AIOM15S-D



Dimensions

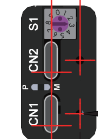
◆ AIO(M)3S-D · AIO(M)5S-D

(Unit : mm)



*The spec of AIO(M)□S-D length L as following:

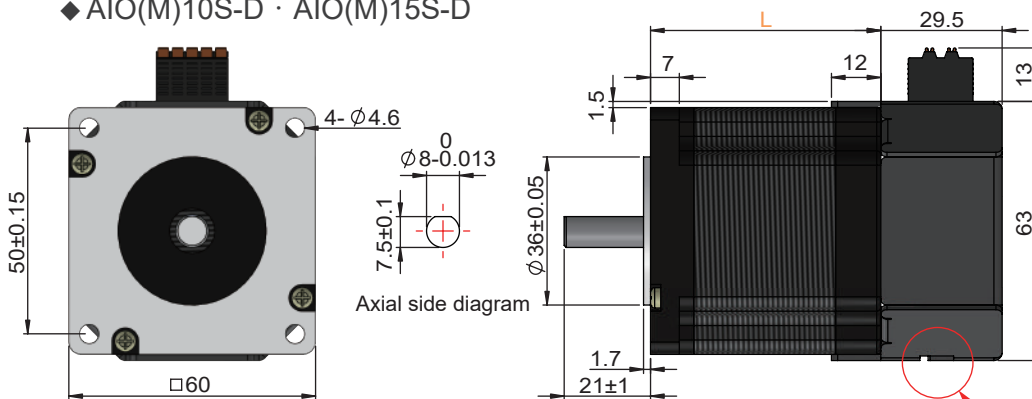
Model	AIO(M)3S-D	AIO(M)5S-D
Length(mm)	40max.	60max.



2-M2*0.4P TYPE-C Screw holes

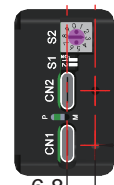
AIOM□S-D TYPE-C Screw holes diagram

◆ AIO(M)10S-D · AIO(M)15S-D



*The spec of AIO(M)□S-D length L as following:

Model	AIO(M)10S-D	AIO(M)15S-D
Length(mm)	56±1	87±1



2-M2*0.4P TYPE-C Screw holes

AIOM□S-D TYPE-C Screw holes diagram

◆ AIO□S-D series accessories "Variable Resistor(DBVR)" should order additionally, If you require any information please contact our distributors in various regions.



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