Motion Control Solutions for Robotics
Select Your Motor and Communication Control Systems

Motor:
- Hollow Shaft Flat Gears
- Right Angle FC Gears
- EZS/ EAC Linear Actuators
- Harmonic/Planetary Gears
- Hollow Rotary Actuators
- EH Gripper

Application:
- AGV/ AMR
- Conveyor
- X-Y-Z Gantry
- Changing Loads
- Robot Drivers
Application Examples

**AGV**
A DC input type motor and driver is offered for AGV/AMR robots with speed regulation, high torque and positioning. The FR gear saves space and fits in low floor transport vehicles.

**X-Y-Z Gantry System**
Oriental Motor offer several types of electric linear actuators, slides, cylinders, rotary actuators, and grippers for a wide range of motion requirements.

**Arm Robot**
This 7-axis arm robot consists of 7 AZ Series products. The benefit of the AZ Series with its mechanical absolute sensor is the drivers can remember the positions when the main power is off.

**Parallel Link Robot**
This 3-axis parallel link robot was created by using AZ Series motors and a 3 axis driver. It is controlled by an HMI with a directly connected motion network.
**αSTEP Technology**

αSTEP (AZ and AR Series) is a “hybrid” stepper motor-based motor & driver system that together combines the advantages of “open loop” setup programing with “closed loop” performance. In addition to high-accuracy positioning and speed control, it can perform control that restricts the motor’s generated torque to a set value for push-motion operation.

There are two base motor / driver types within the αSTEP family of products. The AZ Series features an absolute sensor and the AR Series features a resolver based sensor.

**AZ Series**
- No Battery Required
- Built-in multiple rotation absolute sensor

**AR Series**
- Rotor Position Detection Sensor

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**Ideal Applications for αSTEP**

- Complete synchronization with commands
- Complete stop during standby and maintenance of position (No hunting)
- Frequent repetitive starting and stopping
- Low-vibration operation even at a speed near 0 r/min
- Transfer of large inertial load
- Push-Motion Operation

- CCD Camera
- Low Speed
- High Speed
Family of Products

Drivers

Home Setting Method
The home position can be easily set by pressing a switch on the drivers surface, which is saved by the Mechanical Absolute Encoder. In addition, home setting is possible with the MEXE02 support software or external input signal.

Home position is easy to adjust by moving the motor to a desired position manually.

Motor/ Geared Types

Actuator Types

• AC or DC Input
• Stored Data, Pulse Input Type
• Network / RS-485 / Monitoring
• No Additional Sensors Required

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MEXE02: A Tool to Make All Data Setting Easy

Support Software MEXE02 (Free Download)

Fundamental settings, such as editing operation data and parameter settings, can be performed easily from a computer.

Sequence control is possible, which allows for easy system configuration without a host sequence.

Status Monitoring/ Preventative Maintenance

Besides operating speed, motor and driver temperature, load factor, and cumulative rotations, etc., status can also be monitored from the start of use. The desired signals can be output for these items, allowing for efficient maintenance.

Touch Screen (Commercially Available)

Used with stored data drivers, operating data can be directly overwritten from the touch screen, normally used for monitoring. This is useful for monitoring operation status and when settings must be changed due to set-up changes.

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