Network-Compatible Products, Controller
Overview of Network Compatible Products

Motor control via network communication can detect the status of the motor directly by data. This results in a shorter development period and increased reliability and maintainability of the equipment. By expanding the network compatible product lineup, Oriental Motor meets diversifying network environments of factory automation.

Features

Network-compatible products offer the following benefits:
- Simple wiring achieves space saving for wiring and smaller equipment size.
- Transmission distance can be extended up to several hundred meters. This makes wiring route design easier and enables products to be positioned in appropriate locations.
- Simple wiring achieves a reduction in the man-hours for the wiring process and in the cost of wiring.
- Operating status is monitored by product input/output information, alarm, etc. This achieves improved maintainability via the system.
- Simple wiring makes wiring and checking process easier when replacing the product.

Network Configuration Example

Compatitable Network

Modbus (RTU)

Modbus is the open field network with Modbus Protocol installed. Modbus is used widely in the fields of factory and process automation because its protocol specification is open to the public and it is very simple.

EtherCAT

EtherCAT is an Ethernet (IEEE802.3)-compliant, open, high-speed, industrial network system.

CC-Link

CC-Link (Control&Communication Link) is the open field network promoted by CC-Link Partner Association.

MECHATROLINK

MECHATROLINK-Ⅰ and MECHATROLINK-Ⅱ are motion networks promoted by MECHATROLINK Members Association.
■ Network Compatible Products

● Built-in Controller Type Stepper Motors

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<thead>
<tr>
<th></th>
<th>Stepper Motors</th>
<th>0.72° Stepper Motors</th>
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<tbody>
<tr>
<td>AR Series</td>
<td><img src="image" alt="AR Series" /></td>
<td>AC power supply input ➔ Page A-20  DC power supply input ➔ Page A-136</td>
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<td>AZ Series</td>
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● Brushless Motors

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<tr>
<td><img src="image" alt="BLE Series" /></td>
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● Linear & Rotary Actuators

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<th>Equipped with AR Series</th>
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<td>AC/DC power supply input ➔ Page E-18</td>
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<tr>
<td>EAC Series</td>
<td><img src="image" alt="EAC Series" /></td>
<td>AC/DC power supply input ➔ Page E-56</td>
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<tr>
<td>DGII Series</td>
<td><img src="image" alt="DGII Series" /></td>
<td>AC/DC power supply input ➔ Page E-118</td>
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● Network Converters

|         | | Network Converters |
|---------|---------------------------|
| NETCO1-CC | ![NETCO1-CC](image) | DC power supply input ➔ Page F-8 |
| NETCO1-M2 | ![NETCO1-M2](image) | DC power supply input ➔ Page F-8 |
| NETCO1-ECT | ![NETCO1-ECT](image) | DC power supply input ➔ Page F-8 |
Equipped with Industrial Network Communications for Various Host Systems

FLEX is the collective name for industrial network communication products that support I/O control, Modbus (RTU) control, and FA network control via network converters. These products enable simple connection and simple control, shortening the total lead time for system construction.

Advantages of FLEX Products
FLEX, which has a degree of freedom for selecting various industrial communication systems, not only realizes various design ideas, but also reduces labor and costs.

Simple Wiring  Labor Saving  Time Saving  Low Cost

Recommendation of System Configuration by FLEX for Each Interface
- Use of the Switch
- Use of the I/O Unit of PLC
- Use of the Touchscreen
- Use of the Serial Communication Unit of PLC
- Use of the Touch-Screen Panel Computer and the PC
- Use of the FA Network Unit
Network-Compatible Products, Controller

FLEX Solution

FLEX means simple control, simple connection, and lower costs.

I/O Control
Control from a Touch Screen or Computer
Serial Communication Control
FA Network Control

FLEX-Compatible Products

Position Control

Stepper Motors
AR Series
AZ Series
RK Series

Linear & Rotary Actuators

Electric Linear Slides
EAS Series

Electric Cylinders
EAC Series

Hollow Rotary Actuators
DGII Series

Speed Control

Brushless Motors
BLE Series

Control System Configuration for Each Built-in Controller Type

① Control via I/O

The positioning module (pulse generator) function is built into the driver, so an operation system using I/O can be configured by connecting directly to a switch box or PLC. A positioning module is not necessary on the PLC side, saving space and simplifying the system.

Example of Using a Switch Box
Example of Using PLC
Example of Using PLC and a Touch Screen

② Control via Modbus (RTU)/RS-485 Communication

RS-485 communication can be used to set operating data and parameters, as well as input operation commands. Up to 31 drivers can be connected to 1 serial communication module. There is a function that enables multiple shafts to be started simultaneously. The Modbus (RTU) protocol is supported and can be used to connect to touch screen and computer.

③ Control via FA Network

By using a network converter (sold separately), CC-link, MECHATROLINK or EtherCAT communication are possible. All of these can be used to set operating data and parameters, as well as input operation commands.