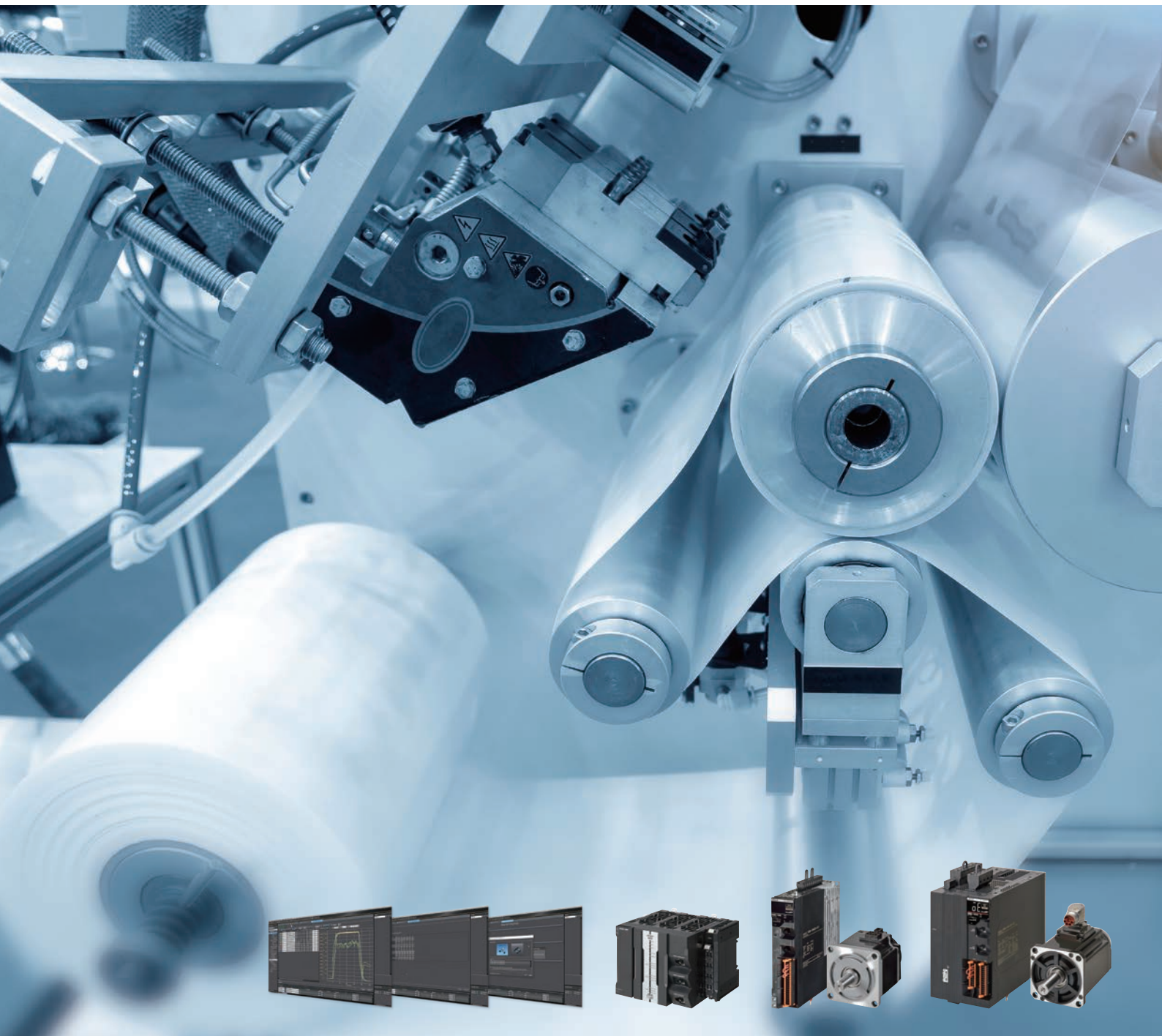


AC Servo System
1S Series/1S Series with Safety Functionality

OMRON

High performance multi-axis motion by simplified setup



Quick and easy multi-axis setup and tuning

Multi-drive setup and monitoring in a single view

Previously, each drive in the machine was configured and monitored with separated configuration windows. Many operations were required to adjust and monitor parameters.

The Drive Setting Table in the Sysmac Studio provides a single view for configuring and monitoring multiple drives.

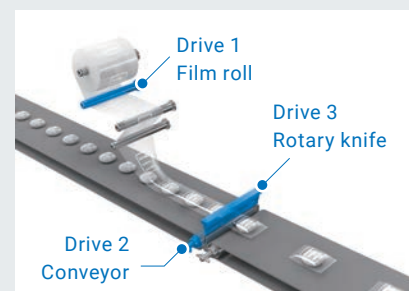
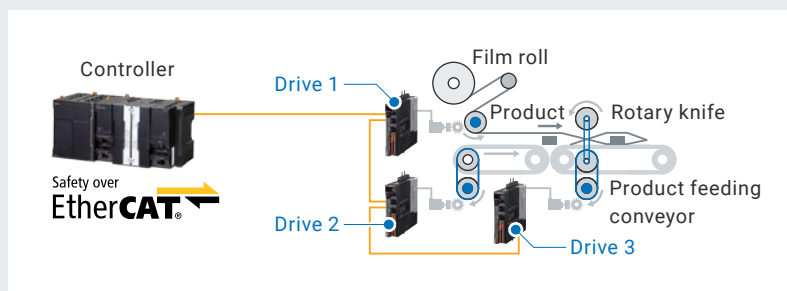
Application example: Wrapping machine

View of Drive Setting Table

Description	Units	Film_feeding	Product_feeding	Rotary_knife
Basic Functions - Motor Rotation Direction Selection		1 : A positive direction c	1 : A positive direction c	1 : A positive direction c
Machine - Inertia Ratio	%	250	250	250
Torque Detection - Torque Actual Value	%	59	46	37
Torque Limit - Max Torque	%	300.0	250.0	200.0
External Latch Input 1 - Port Selection		7 : General Input 7 (IN7)	7 : General Input 7 (IN7)	7 : General Input 7 (IN7)
External Latch Input 1 - Signal Status		True	False	False

Drive 1 Drive 2 Drive 3

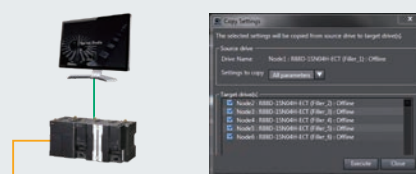
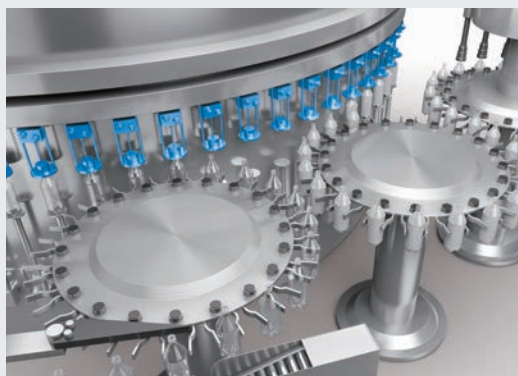
Multi-axis tuning
on
one screen



Easy parameter copy and transfer

For a machine with a large number of axes, the user previously needed to modify parameters manually for each drive, requiring a long time. The Sysmac Studio allows the user to first configure one drive in the machine and then configure all other similar drives in a few seconds just by copying and transferring same parameters.

Application example: Filling machine



Up to 256 axes

Parameter
copy and transfer

Up to 256 axes
Quick
parameter
copy

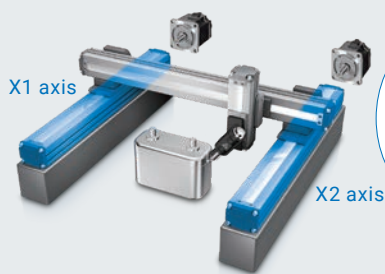
Set parameters for 1 drive → Copy and transfer

Safety over
EtherCAT

Multi-axis gain tuning

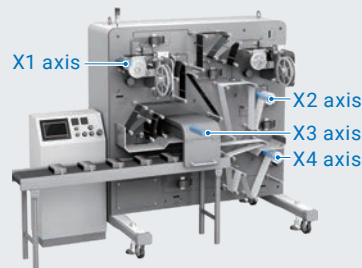
Tuning for a mechanism with mechanically fixed axes is difficult without disassembling the machine because the machine can be damaged. With the multi-axis tuning wizard of the Sysmac Studio, load inertia of the assembled machine can be estimated, facilitating tuning.

Application examples:
Welding machine with gantry mechanism
for rechargeable batteries



Multi-axis
tuning

Roll-to-roll winding machine
with synchronized motion axes



Easy tuning of
up to
4 axes

Automated advanced tuning for high-precision adjustment

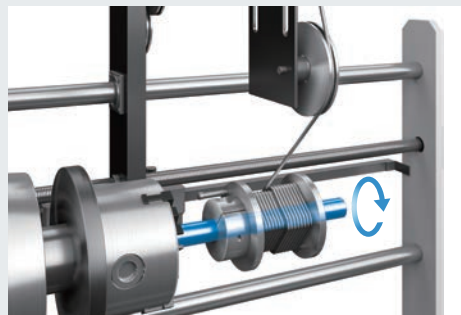
NEW

Based on the frequency characteristics of a machine, advanced tuning optimizes reliable, high-precision machine performance in a short period of time.

Application examples:
High-speed, high-precision
pick and place
(Settling time)



EV motor winding machine
(Path following)



Automatic
tuning
to optimize
performance

PREVIOUS

Try

Check

Adj.

STEP1

STEP2

STEP3

Manual tuning requires trial and error based on knowledge of advanced control engineering.

NEW

Automatic Process

Sysmac Studio automatically optimizes adjustments

Automated advanced tuning enables users without expertise to make expert-level adjustments.

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- Refer to the *1S Series Catalog* (Cat. No. I821) and the *1S Series with Safety Functionality Catalog* (Cat. No. I838) for details of AC servo systems.
- Before you place an order, please read and understand "Agreement for Using the Product" available on Omron's website.

Note: Do not use this document to operate the Unit.

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