Pick and Place Robot

Issues at production sites

Issue 1: Suppression of the machine vibration
Advanced Vibration Suppression Control II

Issue 2: Simpler setting of the suppression function
Machine Analyzer, and Machine Resonance Suppression Filter

Issue 3: Smaller size machine
3-axis Type Amplifier

System Example

Application:
- X-Y table
- Sealing
- Material Loading/Unloading

Setting Procedure

Step 1: System Configuration Setting
Step 2: Parameter Settings
Step 3: Parameter Settings for Vibration Suppression Control
Step 4: Positioning Data Settings
**Solution 1**

**Advanced Vibration Suppression Control II**

Effectively Suppressing Two Types of Low Frequency Vibrations

Due to vibration suppression algorithm which supports three-inertia system, two types of low frequency vibrations are suppressed at the same time. Thus, the vibrations of the robot existing from its hand to base can be effectively suppressed with this function.

**Solution 2**

**Machine Analyzer, and Machine Resonance Suppression Filter**

Easy Suppression of Multiple Vibrations with the Machine Analyzer and Filter Option

First, the “Machine analyzer” function analyzes the machine frequency characteristics. Then the five “Machine resonance suppression filters” suppress the vibration.

**Solution 3**

**3-axis Type Amplifier**

Designed to Cut Cost and Save on Space and Wiring

- SSCNET III/H compatible servo amplifier drastically reduces the wiring compared to the pulse train type.
- In 3-axis servo amplifier MR-J4W3-B, the three axes use the same connections for main and control circuit power, peripheral equipment, control signal wire, etc. Thus, the number of wirings and devices is greatly reduced.
Setup Procedure

**Step 1**
**System Configuration Setting**
Set the servo amplifier.

**Step 2**
**Parameter Settings**
Open the "Compute Basic Parameter 1" screen and enter the mechanical data there. The parameter for electronic gear is calculated using the data automatically.

**Step 3**
**Parameter Settings for Vibration Suppression Control**
Select "Three-inertia mode" to start the "Advanced Vibration Suppression Control II".

**Step 4**
**Positioning Data Settings**
Set the positioning data for each axis.

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The MR-J4W3-B (3-axis type) settings are the same as MR-J4-B (1-axis type).
User-friendly Software for Easy Setup, Tuning and Operation

**Features**

**Easy to Use**

**Easy Data Setting with the Servo Assistance Function**

**Servo Assistant Function**
Complete setting up the servo amplifier just by following guidance displays.

**Using MR Configurator2 via Simple Motion module**
Information such as parameter settings and monitoring for multiple servo amplifiers is consolidated easily just by connecting the Simple Motion module and the personal computer with cables.

**Easy to Use**

**Setting without Manuals via Docking Window**

**Parameter Setting Function**
Display parameter setting in list or visual formats, and set parameters by selecting from the drop down list. The details of the relevant parameters are displayed in a docking window, enabling the parameter setting without referring to the manual.

**Easy to Use**

**Easy Servo Adjustment and Maintenance**

**Graph Function**
The number of measurement channels is increased to 7 channels for analog, and 8 channels for digital. Display various servo statuses in the waveform at one measurement, supporting setting and adjustment.

**Enhanced Function**
Check cumulative operation time and on/off times of inrush relay. This function provides an indication of replacement time for servo amplifier parts such as capacitor and relays.

**Servo Amplifier Life Diagnosis Function**
Check cumulative operation time and on/off times of inrush relay. This function provides an indication of replacement time for servo amplifier parts such as capacitor and relays.

**Solution**

Man, machine and environment in perfect harmony

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MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE: TOKYO BUILDING, 2-7-3, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS: 1-14, YADA-MINAMI 1, HIGASHI-KU, NAGOYA, JAPAN

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