

OACIS

Open Architecture Control Integrated System

Quick Installation Guide for OACIS-2X

Version 01.21

SERVO PRESS | NUT RUNNER | DAQ & ANALYSIS | SPC



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Quick Installation Guide

Package Contents

	S/N	EA	CHECK
● OACIS-P			
01. Servo Press			<input type="checkbox"/>
02. Servo Drive			<input type="checkbox"/>
03. Interface SGA-D Signal Conditioner			<input type="checkbox"/>
04. Power Cable			<input type="checkbox"/>
05. Brake Cable			<input type="checkbox"/>
06. Motor Encoder Cable			<input type="checkbox"/>
07. CN1 Cable			<input type="checkbox"/>
08. Limit Sensor Cables			<input type="checkbox"/>
09. STO Cable			<input type="checkbox"/>
● OACIS-T			
10. Nut Runner			<input type="checkbox"/>
11. Servo Drive			<input type="checkbox"/>
12. Interface SGA-D Signal Conditioner			<input type="checkbox"/>
13. Power Cable			<input type="checkbox"/>
14. Brake Cable			<input type="checkbox"/>
15. Motor Encoder Cable			<input type="checkbox"/>
16. CN1 Cable			<input type="checkbox"/>
17. STO Cable			<input type="checkbox"/>
● SERVO CONTROLLER			
18. OACIS-2X			<input type="checkbox"/>
19. Firmware Download Cable			<input type="checkbox"/>
● ETC			
20. Quick Installation Guide			<input type="checkbox"/>
21. CD-ROM with Setup Software			<input type="checkbox"/>
22. User Manual Book			<input type="checkbox"/>
23. Origin of Certificate			<input type="checkbox"/>

Quick Installation Diagram

Check Up the Package



Hardware Installation



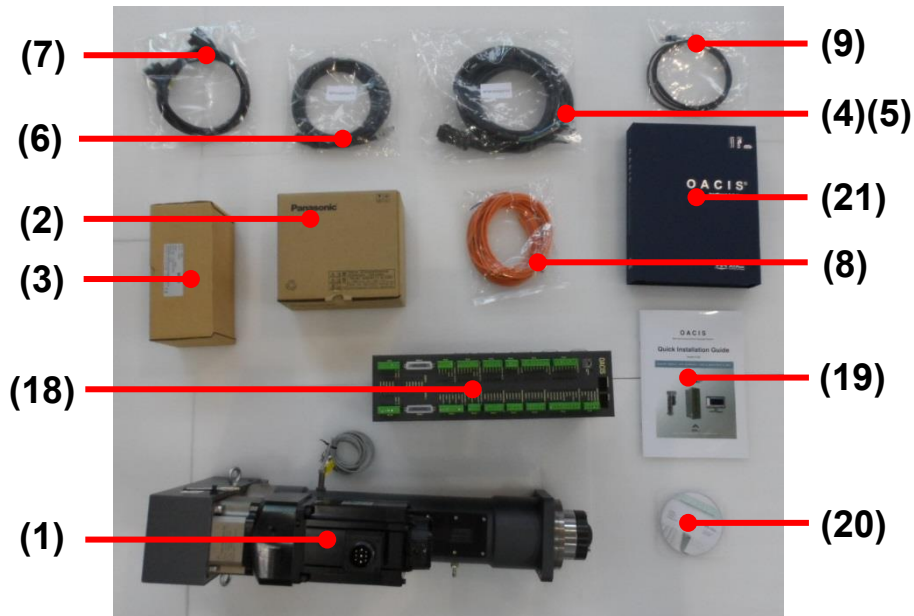
Software Installation



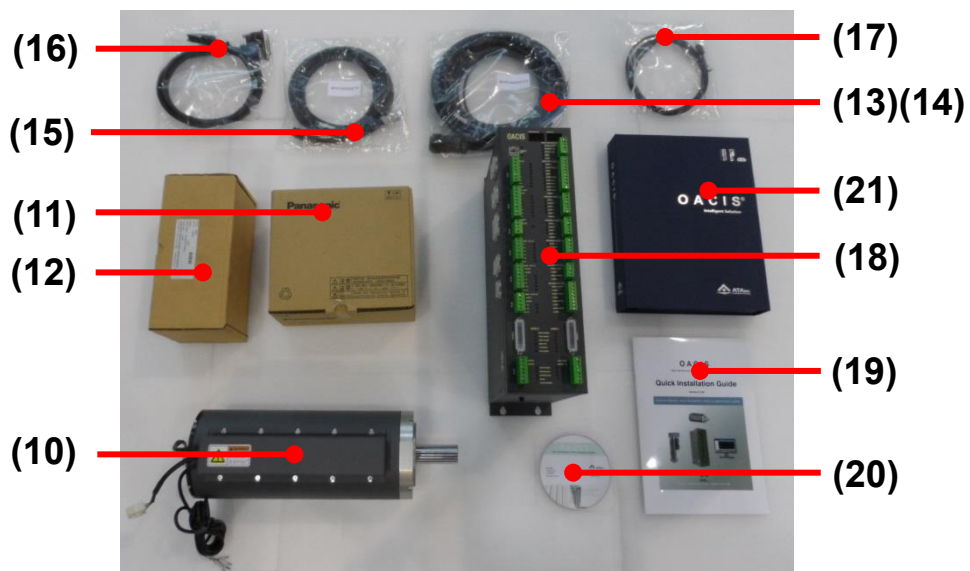
OACIS Power On


I. Check up the Package

Case I. One Servo Press with OACIS-2X



Case II. One Nut Runner with OACIS-2X

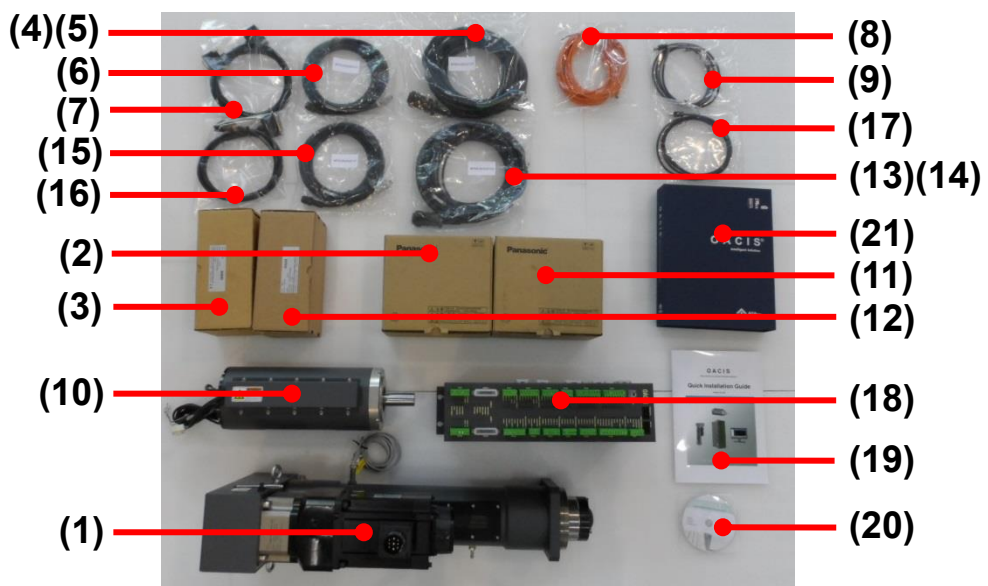


 These pictures can be different from the real one.

□ **Case III.** Two Servo Presses with OACIS-2X



□ **Case IV.** One Servo Press & One Nut Runner with OACIS-2X



⚠ These pictures can be different from the real one.



DO NOT CONNECT ALL THE CABLES WITH POWER ON.

All the wirings should be connected after switch off.

Otherwise severe damage for the devices might happen.

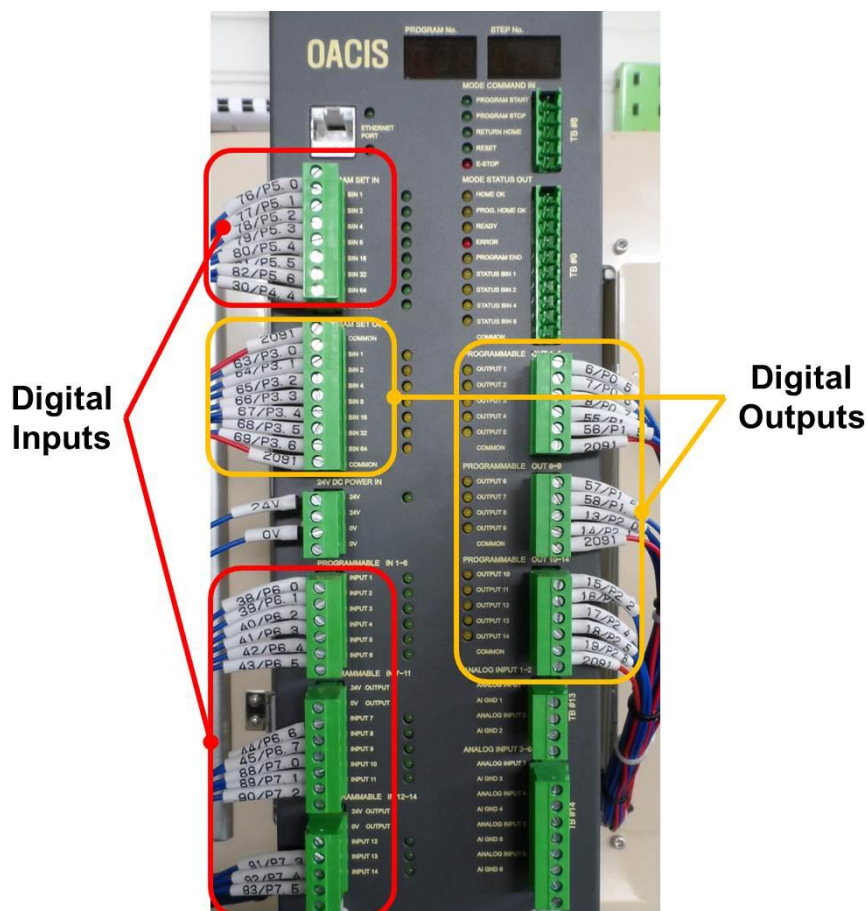
II. Hardware Installation

A. Connect OACIS Power In & Ground.

It is recommended to separate Power In Connection from frequent Turn On and Off circuit like Light Curtain.



B. Connect Digital Inputs & Outputs.



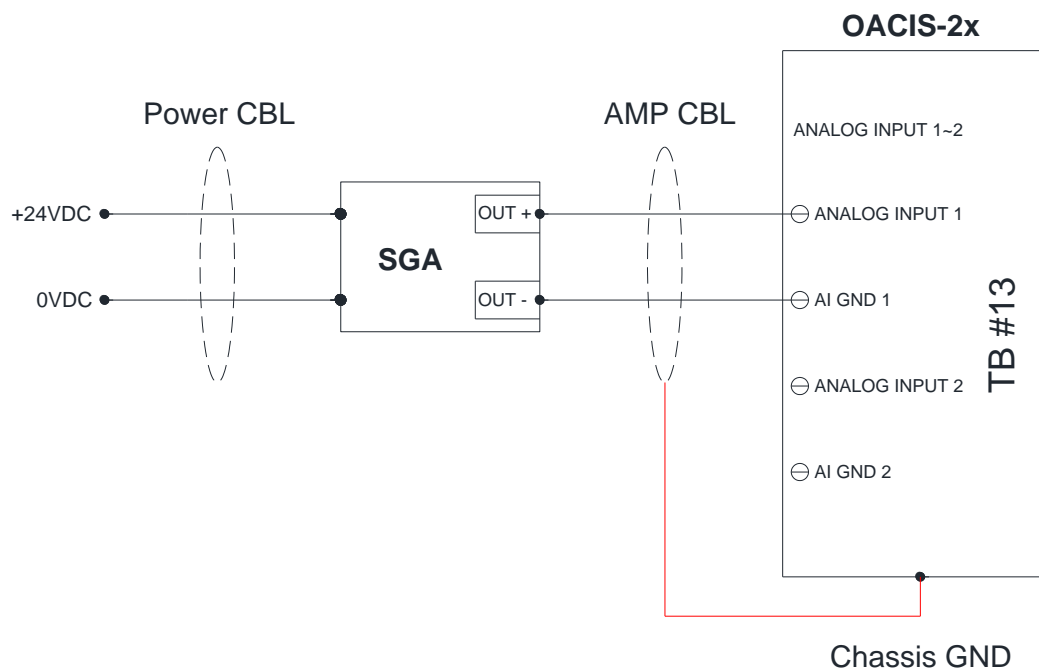
C. Connect Analog Inputs.

Each Analog Input Channel has its own GND terminal. Signal Type Selection Switch needs to be set properly per the input signal type.

- Allowable Signal Range:
 - With Voltage Input Setting: ± 10 V
 - With Current Input Setting: 4 ~ 20 mA
- ⚠ *Over current or voltage input may cause severe damage of OACIS.*
- ⚠ *It should be wired to the OACIS Analog Input Channel directly not through any other Terminal Blocks.*

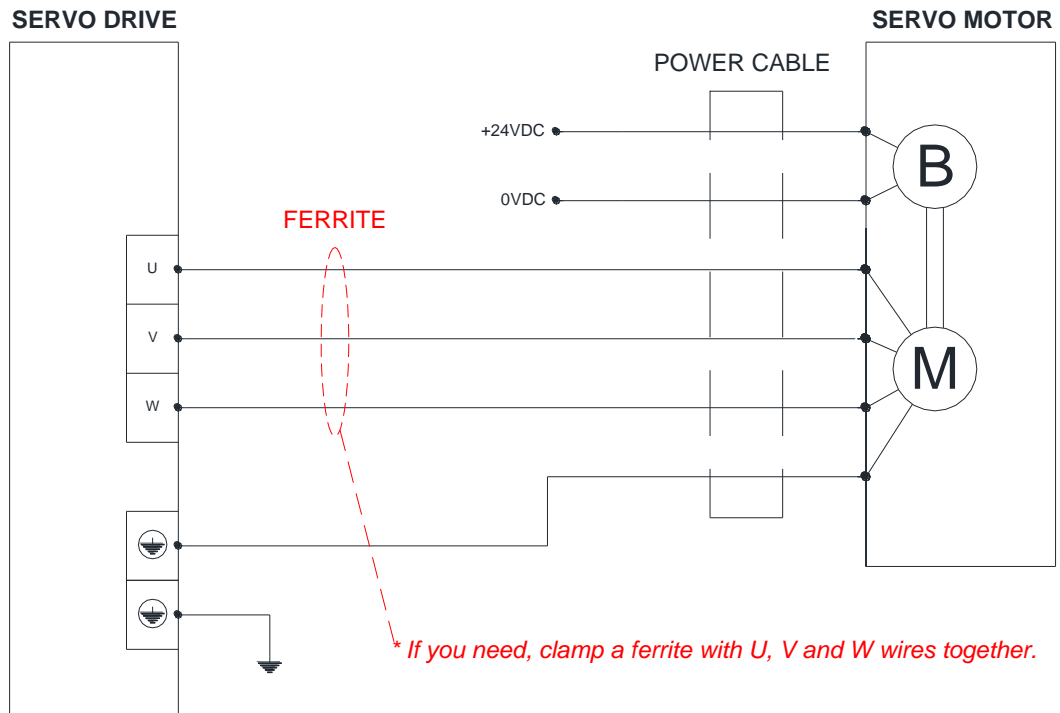


- ⚠ *The power cable and AMP cable should be separated each other. And shield wires in AMP signal cables should be connected to OACIS chassis ground directly to reduce noise levels.*

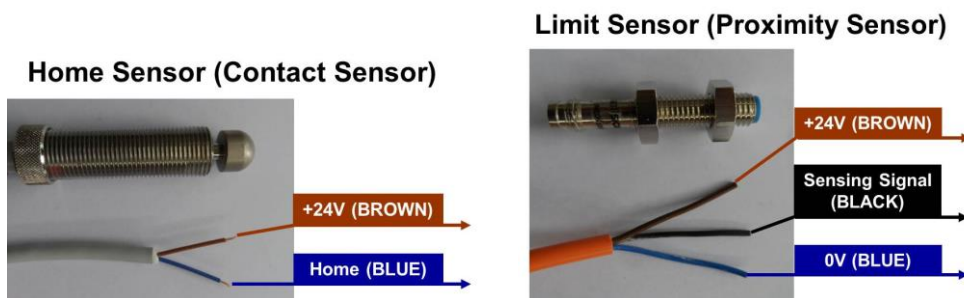


- ⚠ *If the noise signal levels are high due to the unexpected electric interference, it can*

work to clamp a ferrite with U, V and W wires together.



D. Connect Home & Limit Sensors.



E. Connect Servo.

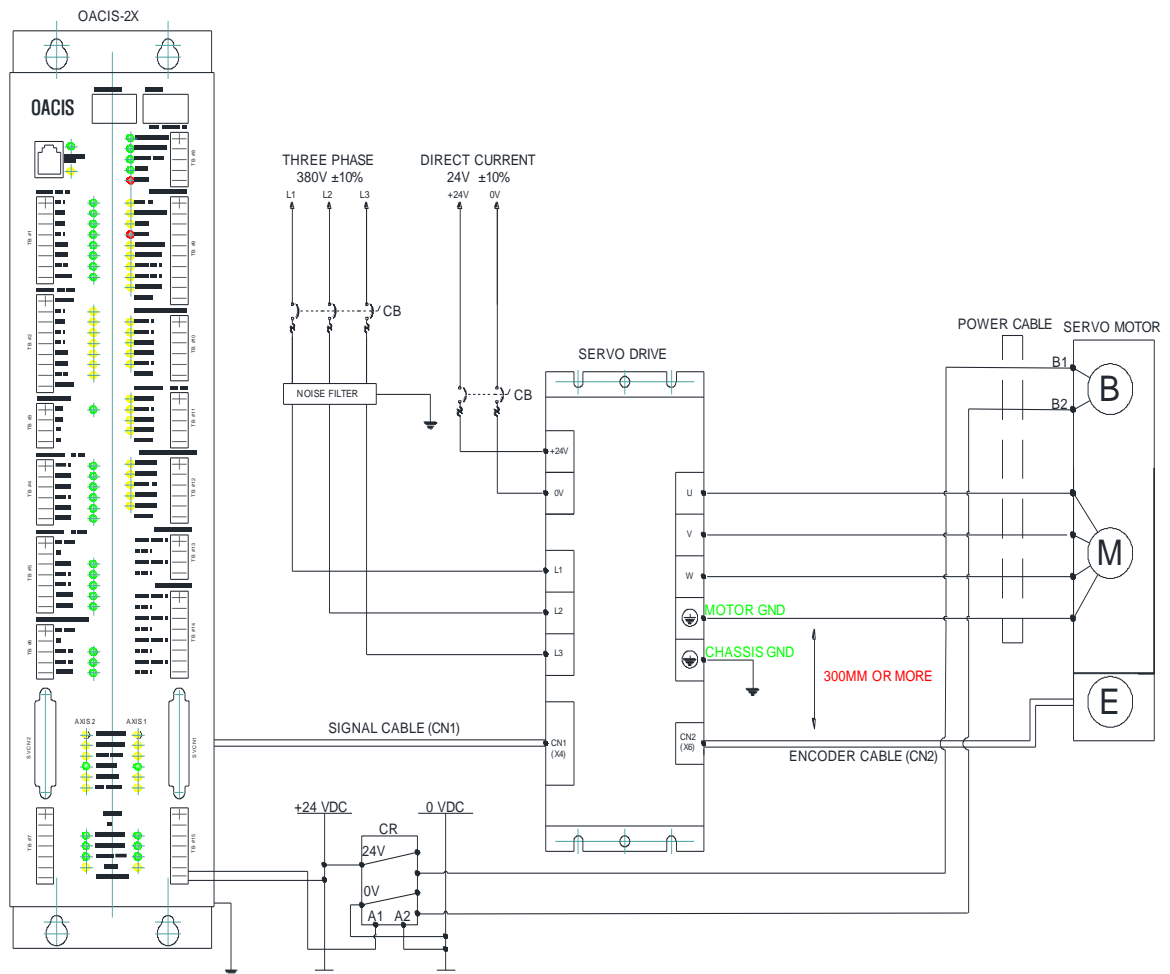
This wiring example is reference only.

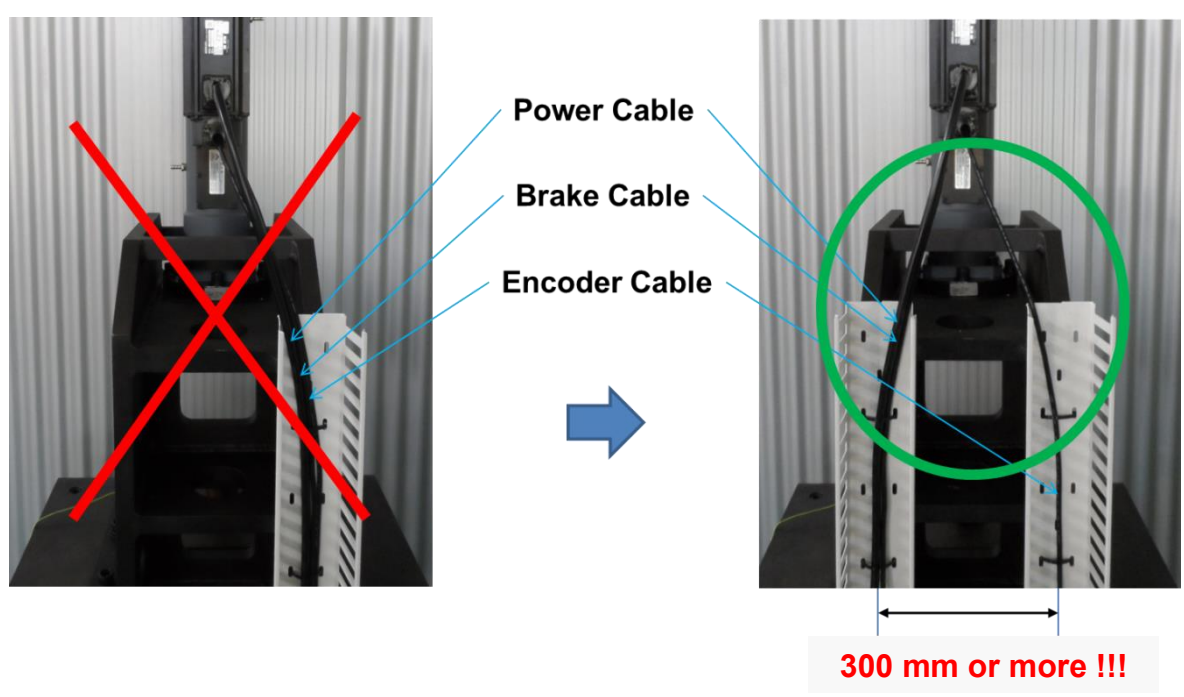
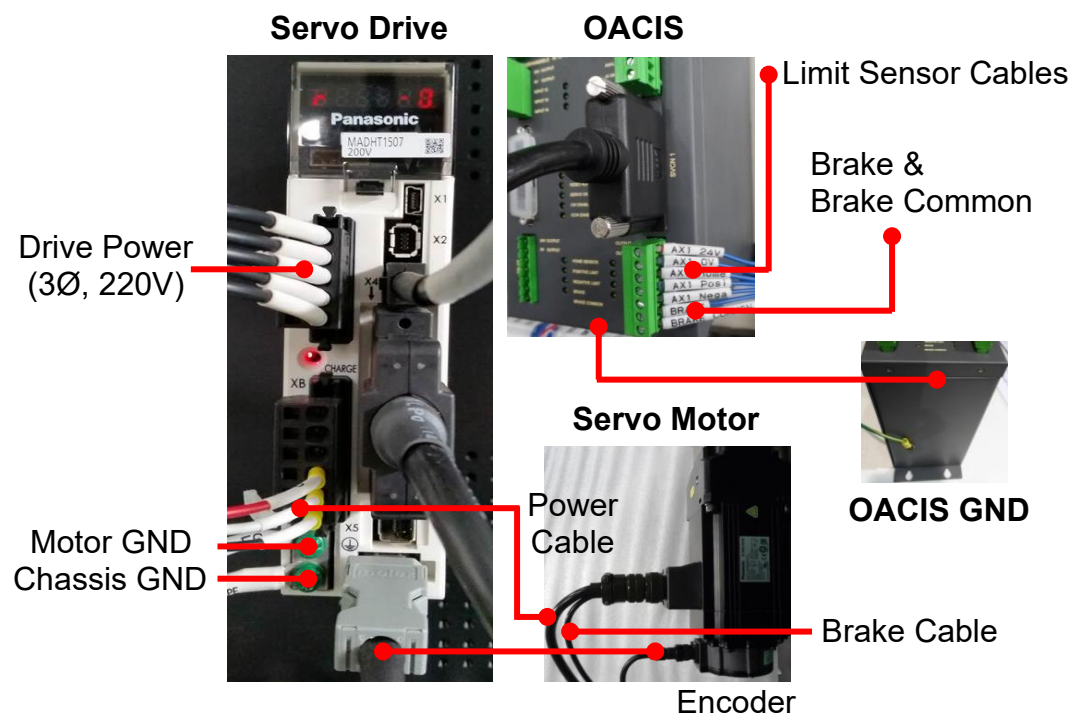
⚠ Make sure that your Circuit Braker for Servo Motor and Drive is set properly. Different Servo Motor requires different circuit.

- Home sensor cable should be connected with power off. All cables should be connected with their own devices.(See the serial numbers)
- When you use only one Servo Axis, make sure to connect CN1 to SVCN1 on OACIS
- Check up the OACIS Ground Connection at the bottom of OACIS.

⚠ Keep the encoder cable away from the power cable wiring by 30 cm or more. Do not guide the encoder cable through the same duct as the power cable, nor bind them together.

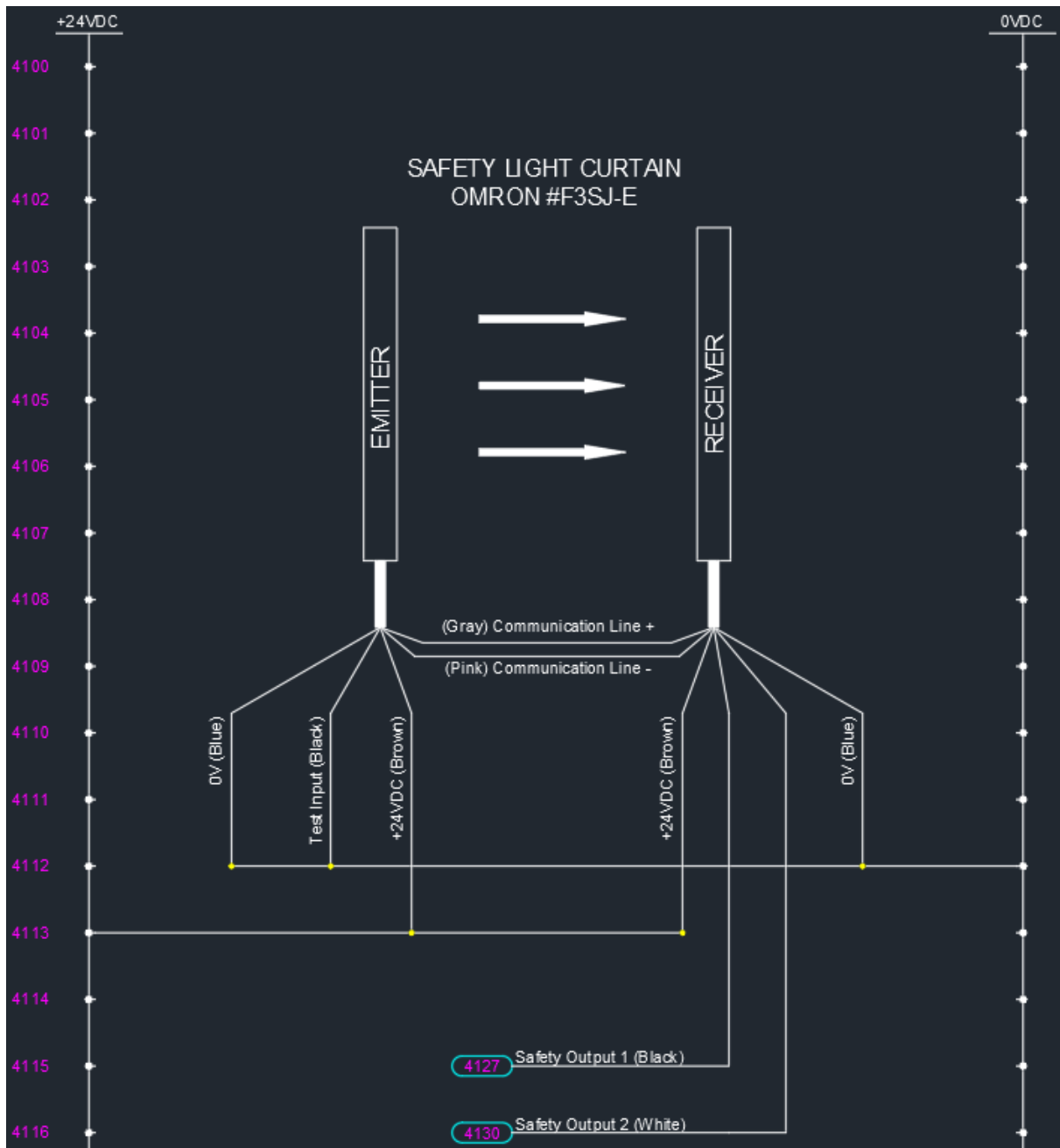
- There are two ground terminals provided on the driver. One of them must be connected to the ground terminal of the control panel and the other is for the motor ground.
- ⚠ *The ground terminal must not be shared with other equipment.*
- ⚠ *Overall pay particular attention to wiring especially in power input and motor output, ground or loose connection.*

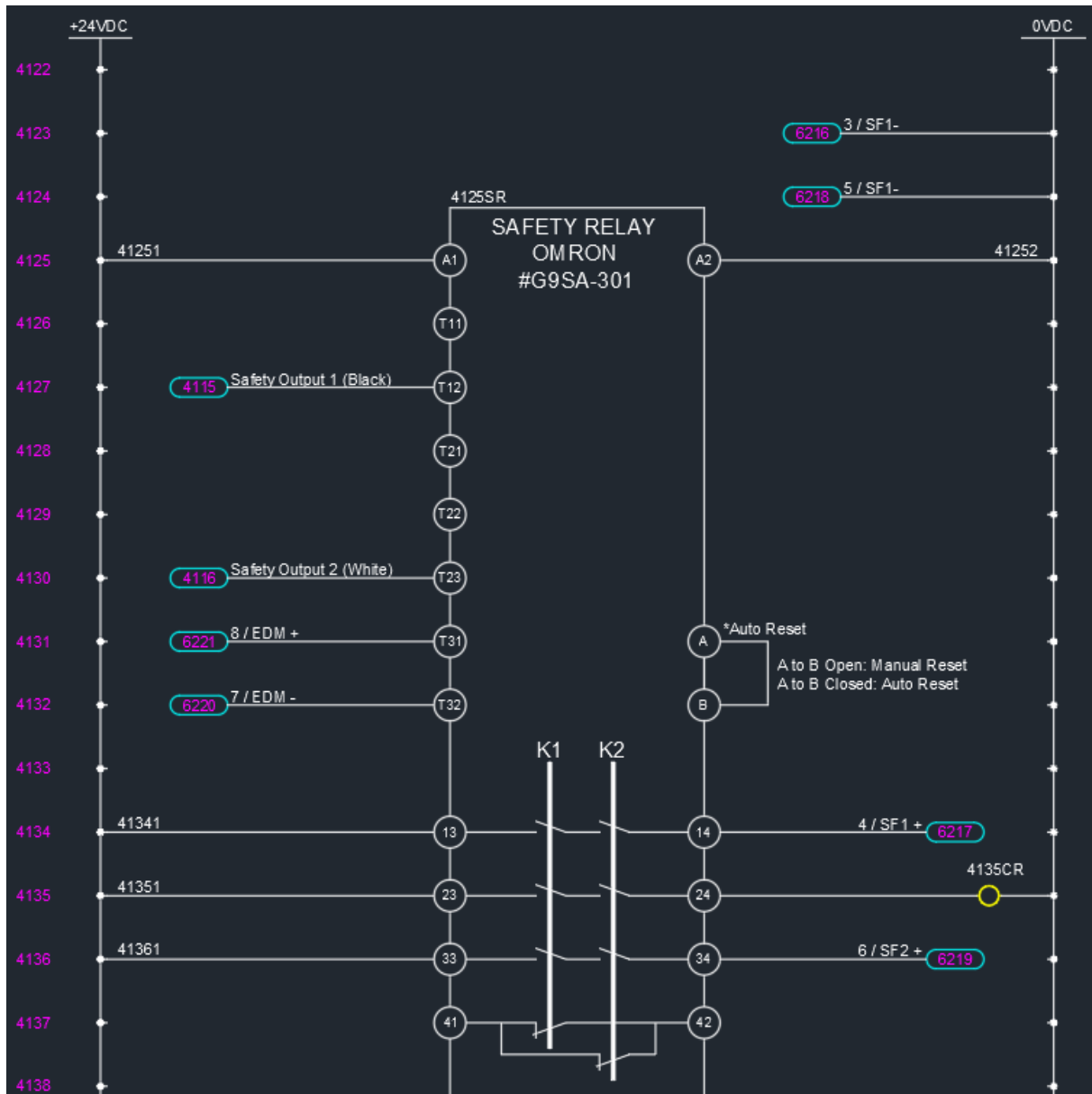




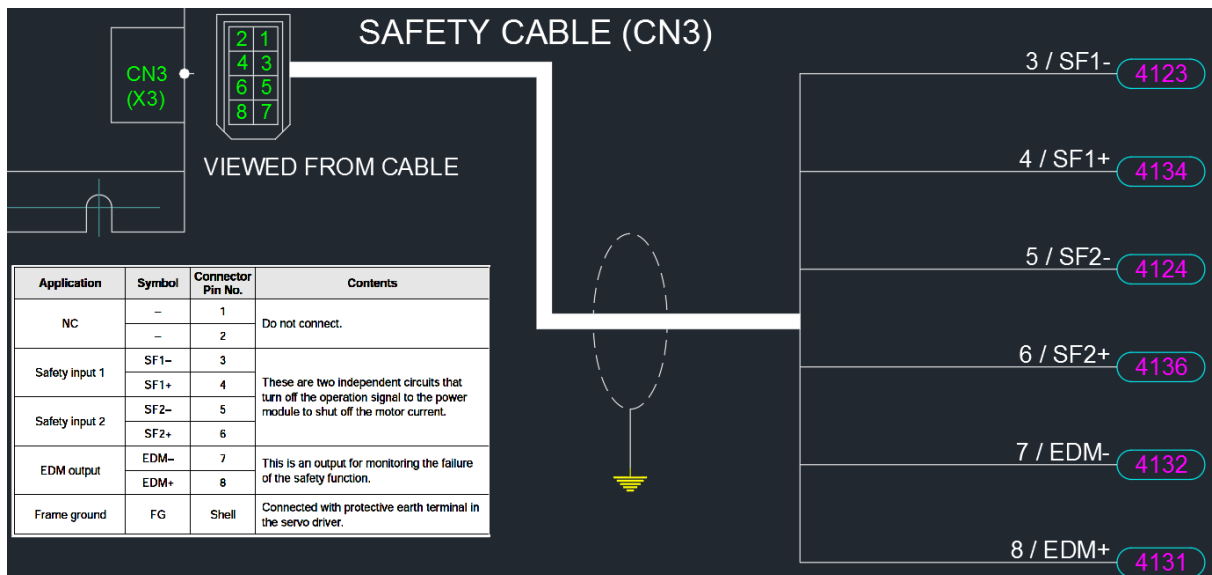
F. Safety Circuits

- ✓ The circuits should meet ISO standard safety requirement.
 - EN ISO 13849-1 / 14121-1
 - EN/IEC 61508
 - EN/IEC 62061
- ✓ Safety circuit example for Cat 3

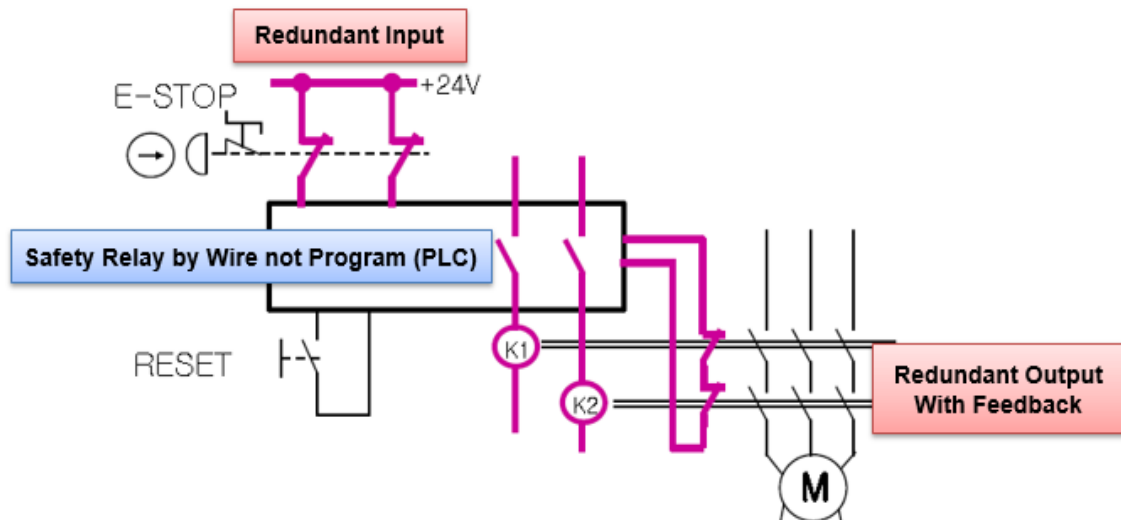




Servo Drive



- ✓ Safety circuit example for Cat 4

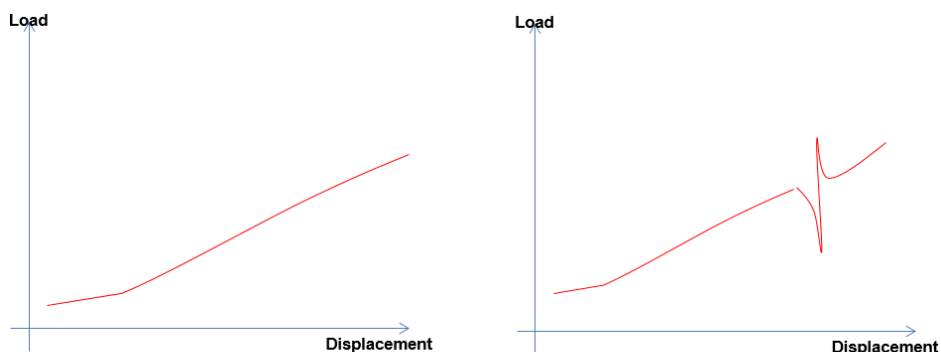


G. Program Stop Mode

- ✓ Stop Option
 - 0 (default), OACIS stops after on-going step is completely done and resumes at the next step
 - 1, OACIS stops on the spot. When it resumes, it restarts the on-going step.
 - 2, It is the same as option 1 except that it restarts after resetting motor drive.

- ⚠ ATA will provide Stop and Resume function instead of Emergency Stop.
- ⚠ But this option is not a safety circuit but only a software stop
- ⚠ This circuit does not meet ISO standard safety requirement.
- ⚠ It can cause severe damage to the operator or people who work for maintenance.
- ⚠ So, any kinds of damage caused by this operation is not responsibility of ATA

- ✓ Potential quality related issues with stop and resume function.



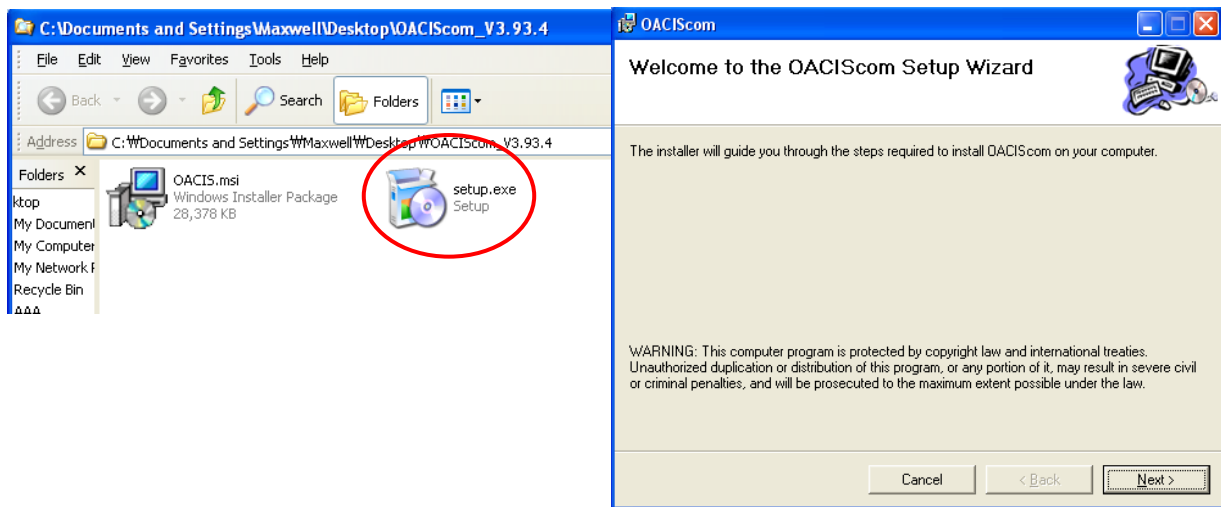
Normal Press Operation

E-Stop -> resume
There will be abnormal spike.

III. Software Installation

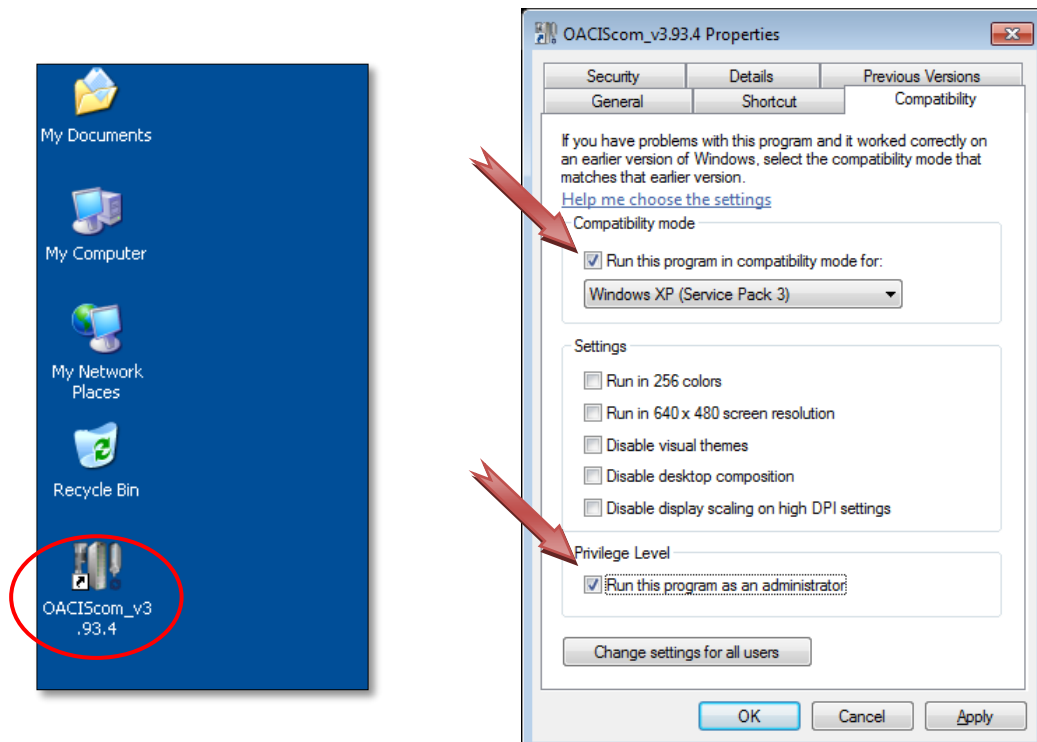
A. Install OACIScom.

Double click "...\OACIScom_V0.00\setup.exe"



B. Special Settings for Window 7

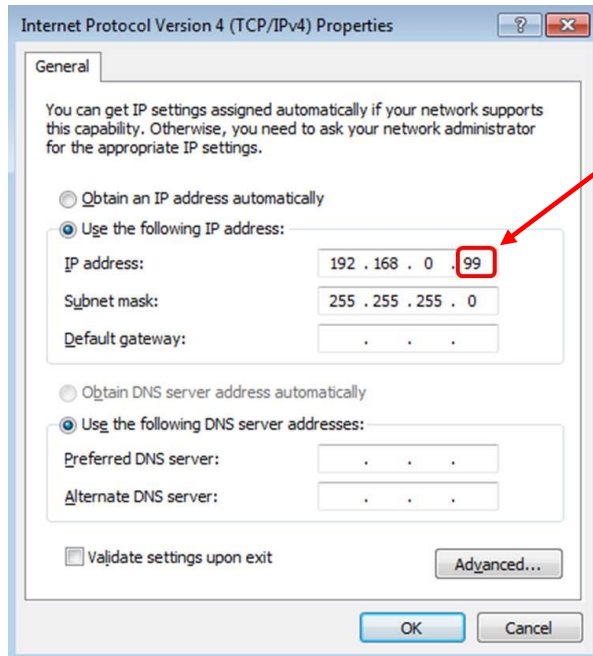
Desktop->OACIScom Icon-> right click-> Properties->Compatibility mode check-> Privilege Level check



C. Connect to OACIS.

PC IP Address needs to be set properly as shown below.

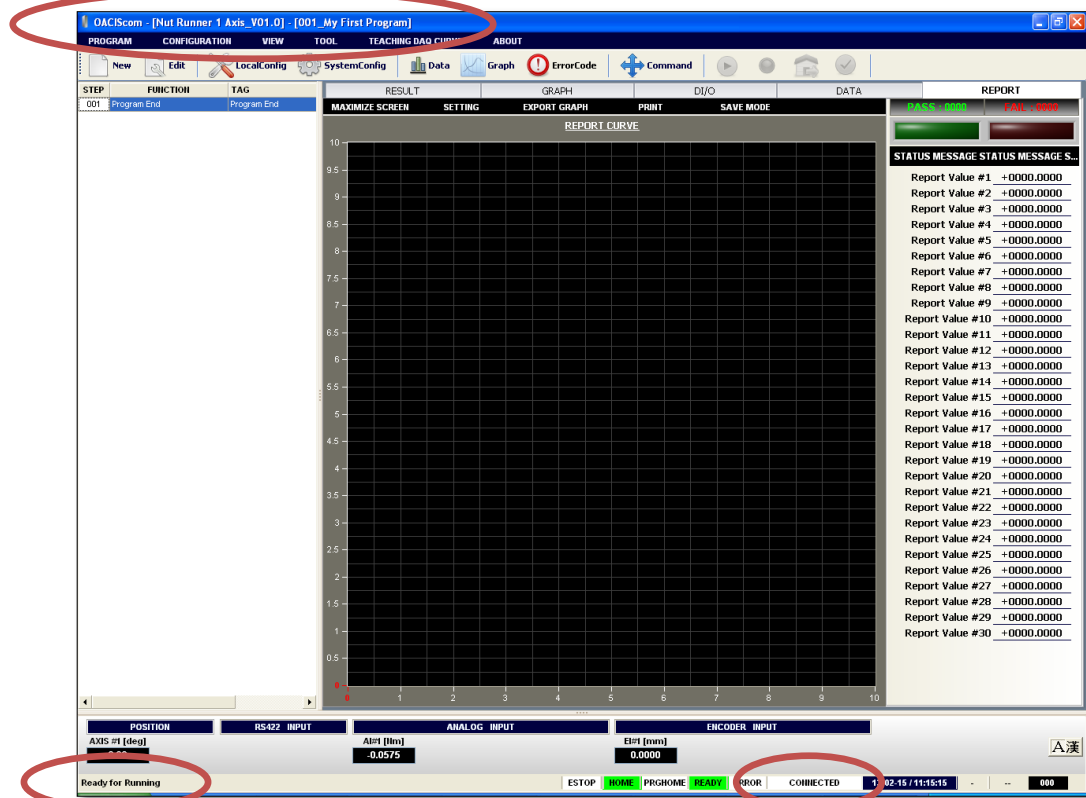
⚠ *It is strongly recommended that the Ethernet cable be directly connected to OACIS without any communication hub. Do not combine the network PLC and OACIS*



1. This number must be different from OACIS IP address

2. Default OACIS IP address is 192.168.0.3

Now, you will see the updated screen with connected status as below.



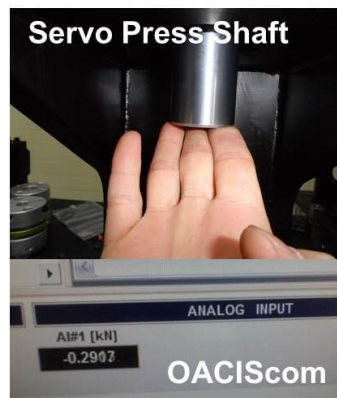
IV.OACIS Power On

- A. Turn ON the Servo Drive & OACIS power after confirming a proper wiring.



- B. Check up the LoadCell

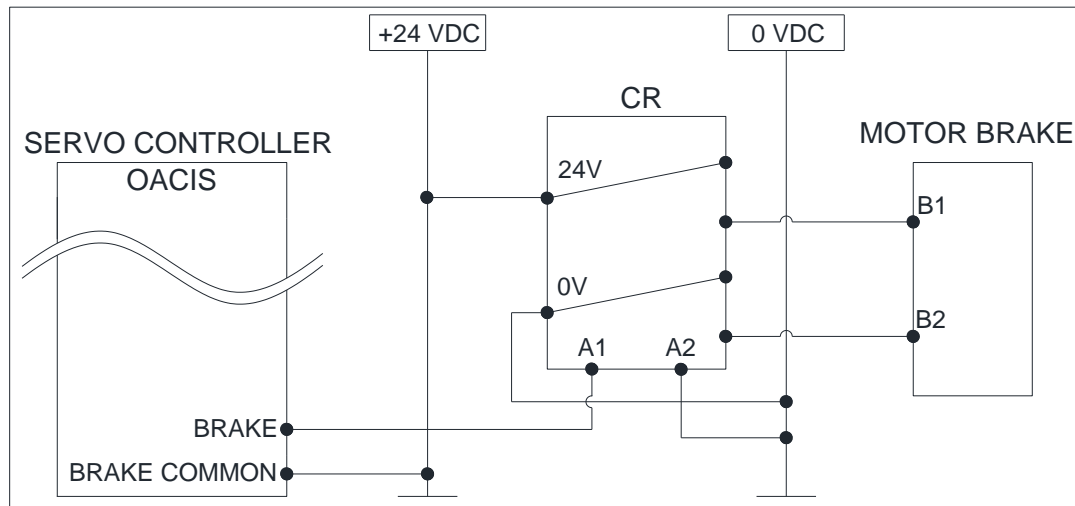
With your hands, please press the shaft of servo press upward and downward. See the value of analog inputs is reasonable.



- C. Confirm the Brake Wiring of Servo Motor.

When you press the Reset button, you can see Servo OK LED on and hear a snapping sound of Brake unlocking. Refer to a brake wiring with a control relay on the next page.




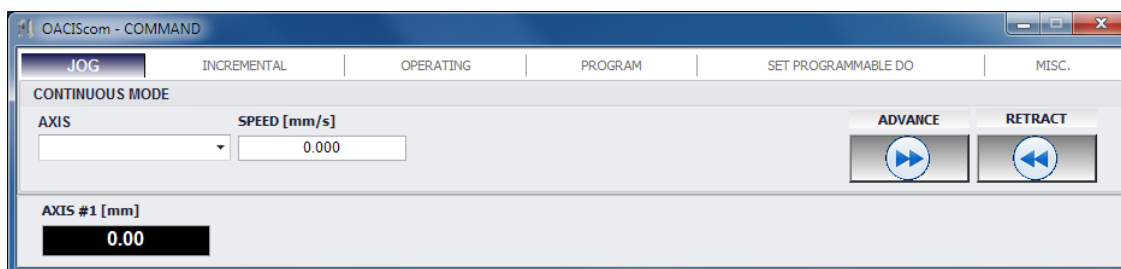


D. Move Jog.

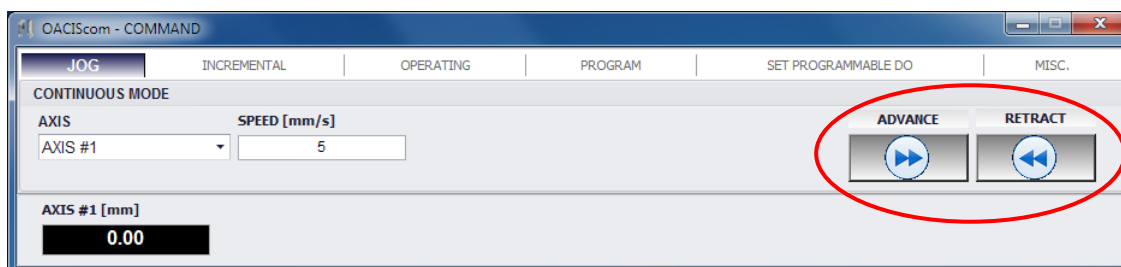
: You can move an axis forward or backward manually by operating COMMAND menu. It comes in quite handy when you build the machine up for the first time or some errors happen with high load.

Note: If a shot pin or air lock system is installed due to heavy tooling, you should pay attention to jogging. You can make COMMAND disable by setting **PROGRAM STOP signal On** when you want to prevent from moving by mistake with locking on.

You can open “ Command” in Buttons or [TOOL] – [Command] button in the Menu Strip.



Select a proper Axis then you can see “ADVANCE” and “RETRACT” buttons are activated in blue



E. Homing.

Select "OPERATING" tab on the Command window.

