

# OACIS

Open Architecture Control Integrated System

## Common Faults and Self-Check List for Installation

Version 01.01



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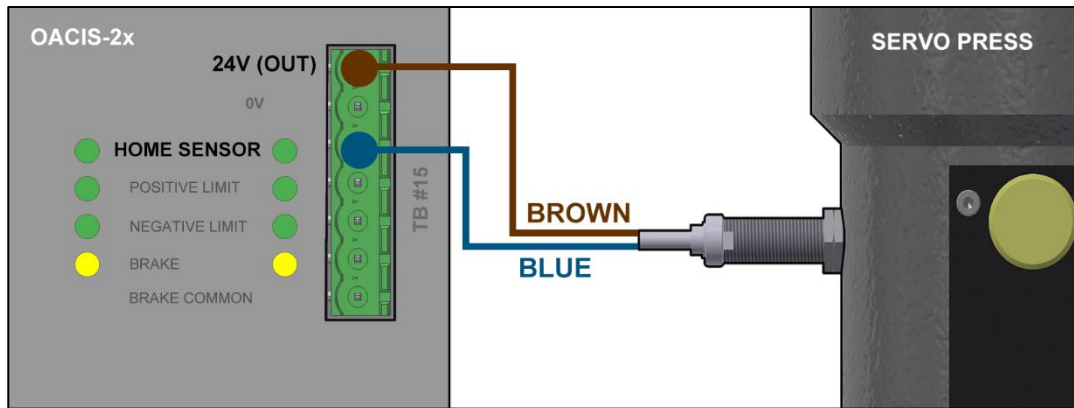
I. COMMON FAULT LIST

This section provides safety information and recommendations to help users prevent OACIS system from being severely damaged by common user faults such as wrong wiring when the machine is powered on. You should strictly follow these instructions below if you are not familiar with installing and operating OACIS system.

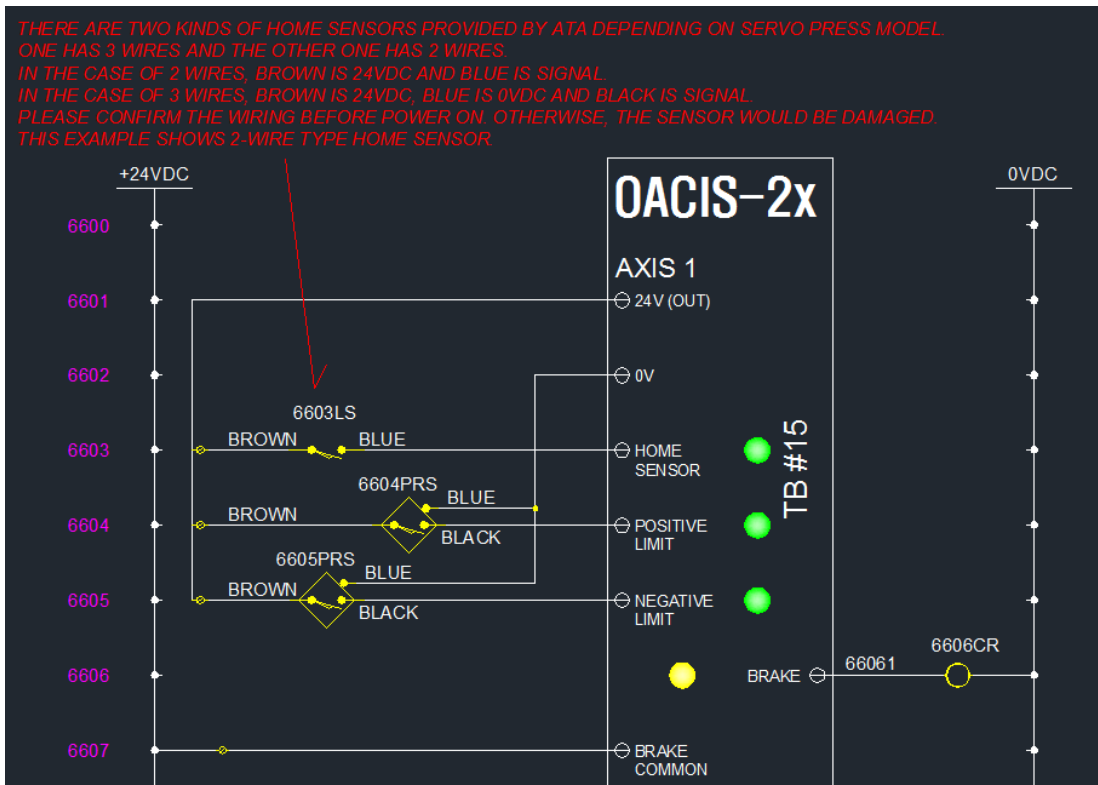
A. Home Sensor

Home Sensors of OACIS Servo Press system are not 3-wired type but just 2-wired as shown below.

1. Sometimes OACIS installers make wrong wirings and then make a damage to Home sensors.
2. Make sure to power off the machine before switching a wiring.
3. Do not connect the wires directly to DC 24V power supply. Max allowable 10mA.



4. Visit the ATA web site at [www.atainc.com](http://www.atainc.com) and click SUPPORT > EXAMPLES > OACIS WIRING.
5. Refer to the latest drawing file, "OACIS-2x Wiring Example / OverAll".



MISC

## B. Servo Driver

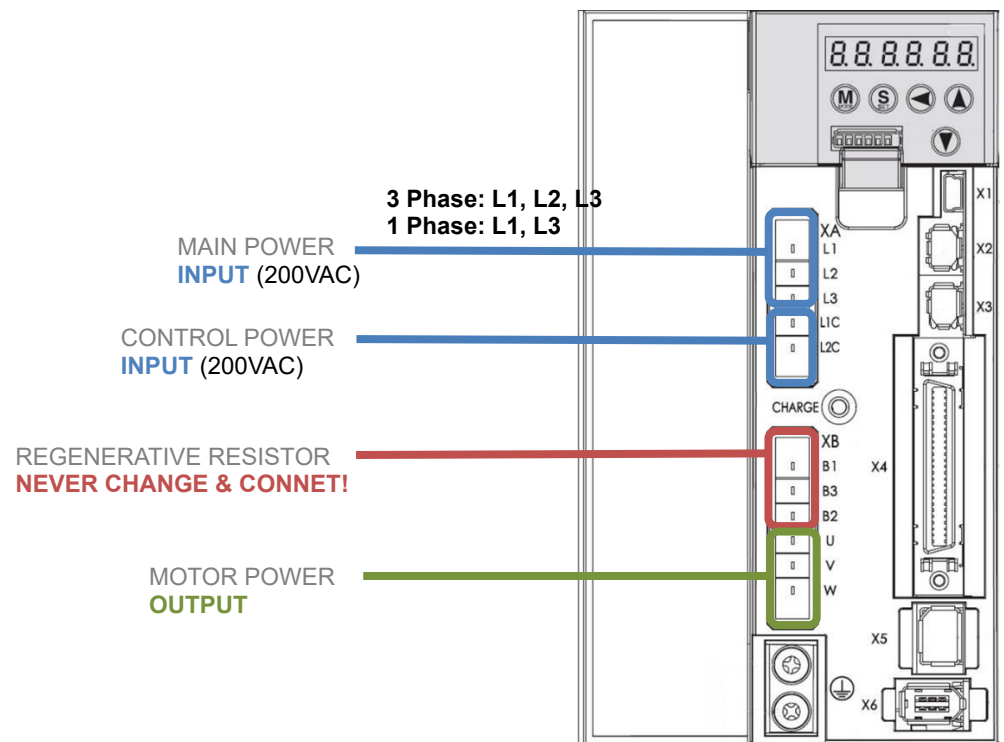
Check wirings of the servo driver before power-on. Or it might be damaged by wrong wirings.

1. Never change and connect B1, B2 and B3.
2. Don't be confused between 24VDC and high voltage AC.
3. Don't be confused between **INPUTs** and **OUTPUTs**.

### 200 VAC / P001 ~ P015

#### SERVO PRESS

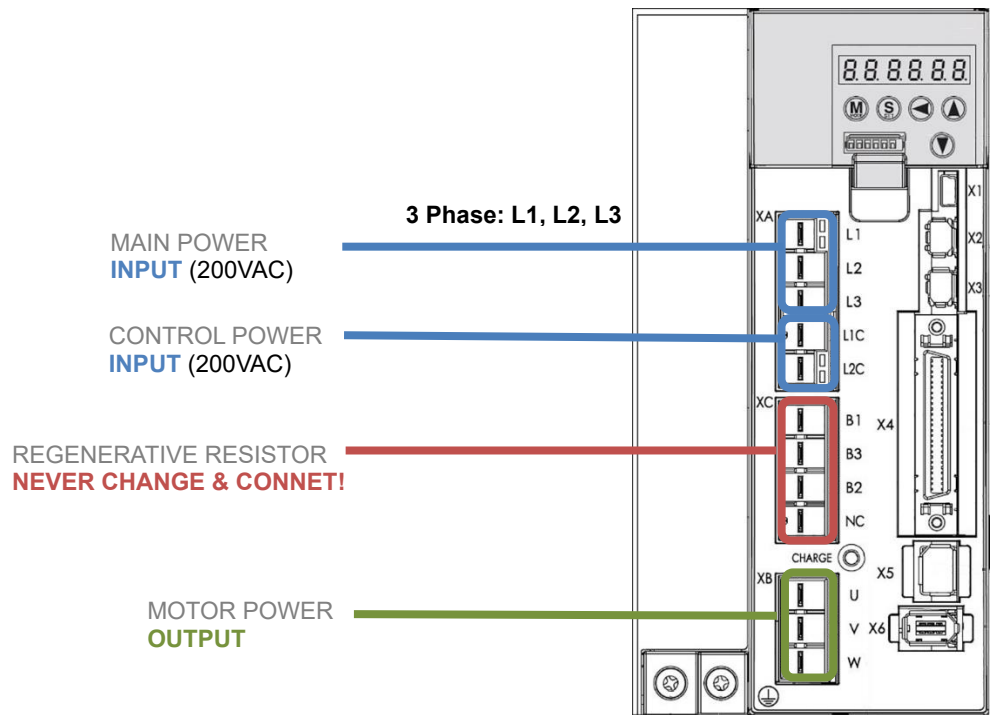
- P001, P002: PANASONIC #MADHT1507
- P003, P005: PANASONIC #MBDHT2510
- P010, P015: PANASONIC #MDDHT5540
- *Servo Driver model can be changed for a special case.*



**200 VAC / P020 ~ P040**

**SERVO PRESS**

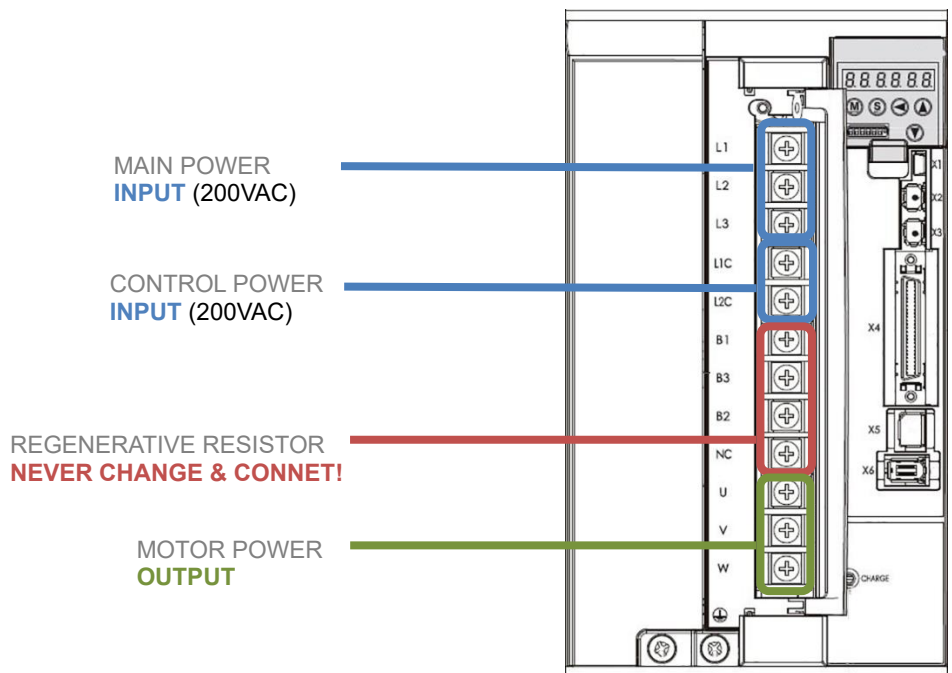
- P020~P040: PANASONIC #MEDHT7364
- *Servo Driver model can be changed for a special case.*



**200 VAC / P050 ~ P100**

**SERVO PRESS**

- P050: PANASONIC #MFDHTA390
- P080, P100: PANASONIC #MFDHTB3A2
- *Servo Driver model can be changed for a special case.*



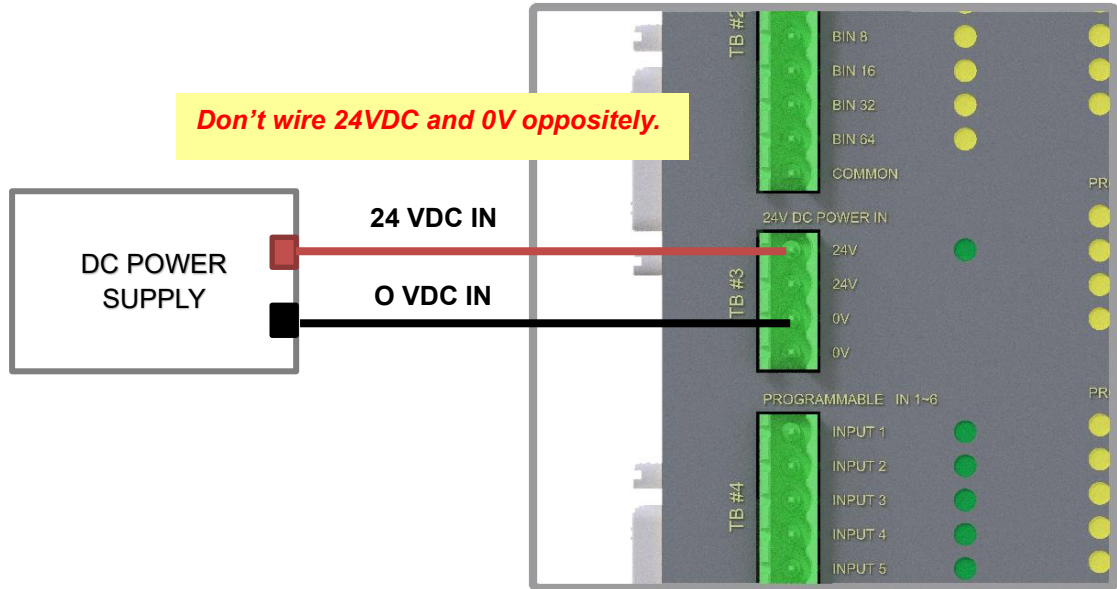
MISC



**C. Power Wiring of OACIS Controller**

OACIS Controllers need 24 VDC power source to energize it. If users connect 24VDC IN and 0V oppositely, the internal fuse will be damaged.

1. Make sure to check up if 24VDC and 0V source wiring is normally connected or not before power-on.
2. If you need to change the internal fuse, you can find a spare fuse inside the controller.



## II. SELF-CHECK LIST

: Make sure that you have fulfilled the items below in order to prohibit abnormal system faults.

### A. Wiring

ITEM	REMARK	√
<p>01. <b>Servo Holding Brake</b> The control relay for servo holding brake should be normally installed before you move the axis manually by using the software jog.</p>	<ul style="list-style-type: none"> <li>Max allowable voltage, current between 'BRAKE' and 'COMMON': 30V, 300mA</li> <li>See the OACIS wiring example. It can be downloaded from <a href="http://www.atainc.com">http://www.atainc.com</a> &gt; support &gt; examples &gt; OACIS wiring</li> </ul>	
<p>02. <b>Ferrite</b> U, V and W wires of servo driver should be clamped with a ferrite.</p>	<ul style="list-style-type: none"> <li>If a ferrite is not installed, analog signal can be unstable according to system environment.</li> <li>See the "Quick installation Guide" manual.</li> </ul>	
<p>03. <b>OACIS chassis GND</b> A machine ground and SGA amplifier GND wire are connected to OACIS chassis GND terminal directly.</p>	<ul style="list-style-type: none"> <li>Users can find the chassis ground at bottom of OACIS controller body.</li> <li>To get a stable analog signal, it should be checked.</li> <li>See the "Quick installation Guide" manual.</li> </ul>	
<p>04. <b>Separate Cables</b> Separate the servo power cable and the encoder cable at least 300 mm away each other.</p>	<ul style="list-style-type: none"> <li>To avoid unexpected noise, it is recommended.</li> </ul>	
<p>05. <b>Safe Power input</b> OACIS 24VDC power should not be cut off frequently like E-Stop switch.</p>	<ul style="list-style-type: none"> <li>A frequent power cut-off may become a cause of damage to the entire OACIS system.</li> </ul>	
<p>06. <b>OACIS 24VDC output</b> OACIS controller has its own 24VDC output terminal.</p>	<ul style="list-style-type: none"> <li>Don't be confused between 24VDC inputs and outputs of OACIS controllers.</li> </ul>	
<p>07. <b>Safety circuit</b> When you operate the servo press installed vertically, you need to design a proper safety circuit to prevent the heavy tooling from dropping.</p>	<ul style="list-style-type: none"> <li>Max allowable tooling weight for servo press installed vertically is 1% of its full capacity.</li> </ul>	



**B. Software**

ITEM	REMARK	√
<p><b>01. Software / OACIScom</b>                      Do not install "OACIS.msi" but "setup.exe".                      And then, it is necessary for Compatibility setting to be checked in OACIScom on windows 7.                      Desktop -&gt; OACIScom Icon -&gt; right click -&gt; Properties -&gt; Compatibility mode -&gt; check Privilege Level.</p>	<ul style="list-style-type: none"> <li>• See the manual for the serial communication, "OACIScom Installation on Windows 7". It can be downloaded from <a href="http://www.atainc.com">http://www.atainc.com</a> &gt; support &gt; manuals &gt; OACIS common.</li> <li>• If you do not check the compatibility setting, you will find OACIScom folder at this location below on PC.                      C:\Users\WINDOWS USER NAME \Program\AppData\Local\VirtualStore\Program Files\ATA\OACIScom_v3.98.22.03 \OACIScom</li> </ul>	

**C. External Device**

ITEM	REMARK	√
<p><b>01. Analog input</b>                      If you need to install additional analog devices, you can select one of allowable signal types of OACIS, ±10V or 4~20mA.</p>	<ul style="list-style-type: none"> <li>• <b>Default Setting: ±10V</b></li> <li>• See the OACIS manual for more details, "Installation Instruction for OACIS-2x". It can be downloaded from <a href="http://www.atainc.com">http://www.atainc.com</a> &gt; support &gt; manuals &gt; OACIS-2x installation.</li> </ul>	
<p><b>02. Encoder Input</b>                      If you need to install additional encoding digital devices like LVDT, see the OACIS manual and example first.                      ex) Signal type</p>	<ul style="list-style-type: none"> <li>• <b>Default Setting: Line Drive / Differential</b></li> <li>• See the wiring example. It can be downloaded from <a href="http://www.atainc.com">http://www.atainc.com</a> &gt; support &gt; examples &gt; OACIS Encoder wiring.</li> </ul>	

## D. Communication

ITEM	REMARK	√
<p><b>01. RS232 Serial Com</b></p> <p>OACIS needs an RS232 cable mapped with only 2, 3 and 5 pin.</p> <p>But different PLC brand needs a different pin mapped cable to communicate with OACIS.</p>	<ul style="list-style-type: none"> <li>Usually PLC serial module needs special short pins per its brand or model.</li> <li>See the manual for the serial communication, "How to Configure". It can be downloaded from <a href="http://www.atainc.com">http://www.atainc.com</a> &gt; support &gt; manuals &gt; OACIS common.</li> </ul>	
<p><b>02. OACIS Ethernet Com</b></p> <p>Normally It is connected between OACIS and a monitoring PC. But if the other devices need Ethernet communication with OACIS, install a separate hub and connect it if possible.</p>	<ul style="list-style-type: none"> <li>Separate a communication socket port.</li> <li>Port #2007 = OACIS ↔ OACIScom, #2008, 2009, 2010 = OACIS ↔ Device</li> <li>See the manual for the serial communication, "How to Configure". It can be downloaded from <a href="http://www.atainc.com">http://www.atainc.com</a> &gt; support &gt; manuals &gt; OACIS common.</li> </ul>	

**REVISION**

v01.00: Engineering Released

v01.01: Page Format Updated