1. To prevent electric shock, note the following:

**WARNING**
- Before wiring or operation, ensure power is turned off for at least 10 minutes. After the charge lamp of the servo amplifier has turned off, confirm the voltage is safe with a万用表. Otherwise, you may get an electric shock.
- Connect the interface unit and servo amplifier and servo motor to ground.
- Any person who is involved in wiring and inspection should be fully competent to do the work.
- Do not attempt to wire the interface unit until they have been installed. Otherwise, you may get an electric shock.
- Do not operate the switches with dry hand to prevent an electric shock.
- The cables should not be damaged, stressed, torched, or pinched. Otherwise, you may get an electric shock.

2. To prevent fire, note the following:

**CAUTION**
- Do not install the interface unit on or near combustibles. Otherwise a fire may occur.

3. To prevent injury, note the following:

**CAUTION**
- Keep the voltage specified in the Instruction Manual should be applied to each terminal. Otherwise, a burn, damage, etc., may occur.
- Connect the terminals correctly to prevent a burn, damage, etc. Otherwise, a burn, damage, etc., may occur.

4. Additional instructions

The following instructions should also be fully noted. Incorrect handling may cause a fault, injury, electric shock, etc.

(1) Transportation and installation

**CAUTION**
- Transport the products correctly according to the weight.
- Shocking in excess of the specified number of products is not allowed.
- Install the interface unit in a load-bearing place in accordance with the Instruction Manual.
- Do not cover or stand on servo equipment. Do not put heavy objects on equipment.
- The interface unit must be installed in the specified direction.
- Do not install or operate the interface unit which has been damaged or has any parts missing.
- Provide adequate protection to prevent screws and other conductive matter, oil and other combustible matter from entering the interface unit.
- Do not drop or strike the interface unit from high places.
- Use the interface unit under the following environmental conditions:

<table>
<thead>
<tr>
<th>Environment Conditions</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage temperature</td>
<td>32</td>
<td>55</td>
</tr>
<tr>
<td>Storage humidity</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>32</td>
<td>65</td>
</tr>
<tr>
<td>Ambient humidity</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Altitude</td>
<td>0</td>
<td>1000</td>
</tr>
<tr>
<td>Vibration</td>
<td>19.4</td>
<td>22.8</td>
</tr>
<tr>
<td>Mass</td>
<td>0.88</td>
<td>0.88</td>
</tr>
</tbody>
</table>

When the equipment has been stored for an extended period of time, consult Mitsubishi.

(2) Usage

**CAUTION**
- Any person involved in installation and repair should be fully competent to do the work.
- Do not modify the equipment.
- Use a noise filter, etc., to minimize the influence of electromagnetic interference.
- Before switching power on, confirm that the internal setting switch (SW1) is set correctly.

(3) Disposal

**CAUTION**
- Dispose of the product as general industrial waste.
4.2.2 When supplying power to the linear scale via the interface unit

- When using the interface unit as the converter of the encoder in the fully closed control system, always set SW1 to the "CLOSED" position.

4.2.3 Connection diagram

5. LINEAR SERVO MOTOR CONTROL SYSTEM

5.1 Setting of internal setting switch (SW1)

When using the interface unit as the converter of the encoder in the linear servo motor control system, always set SW1 to the "LINEAR" position.

5.2 Connection diagram

5.2.1 When the current consumption of the linear scale is 150mA or more

Note 1. For servo amplifier wiring, refer to the servo amplifier specifications guide.
2. 30m(98ft) max. depending on the linear scale specifications.

Also consider that there is no influence of voltage drop when wiring.

5.2.2 When the current consumption of the linear scale is less than 150mA

Note 1. For servo amplifier wiring, refer to the servo amplifier specifications guide.
2. 30m(98ft) max. depending on the linear scale specifications.

Also consider that there is no influence of voltage drop when wiring.

6. NOISE REDUCTION TECHNIQUES

Providing a data line filter in the wiring section of the linear scale side has an effect to prevent noise entry.

For example, the ZCAT305-1305 of TDK make and the ESQ-SR-25 of Takin make are available as data line filters.

As reference example, the impedance specifications of the ZCAT305-1305/TFK make are indicated below.

This impedance is reference values and not guaranteed values.

- Impedance: (0.5 s or more)
- Cable band: (1.34 0.04)
- Cable length: 30m (98ft) max.