This digital monochrome printer is only designed for operation on 24 V DC. Never connect to any outlet or power supply having a different voltage.
CAUTION:
Please review the Installation and Operation manuals for proper product guideline before installing the printer. Both manuals provide vital information.

WARNING:
Use the DC power cord according to the recommendations as below, in order to comply with ANSI/AAMI ES60601-1 and CAN/CSA-C22.2 No. 60601-1. See page 3.

The DC power cord should be UL or CSA approved, for external interconnection of electronic equipment, AWG 18 in size, 2 m or shorter in length, PVC insulated (80°C or higher), and 5.6 to 6.2 mm in outer diameter.

WARNING:
Install and use this appliance in accordance with the instruction manual for safety and EMC (Electromagnetic Compatibility). If it is not installed and used in accordance with the instruction manual, it may cause interference to other equipment and/or other risk.

⚠️ WARNING:
Configure the system so that you can stop the power supply easily.

⚠️ WARNING:
When installing the printer in the system, ensure that only the front panel is exposed and accessible. Touching the outer surface of the printer except for the front panel may cause injury or burns.
1 PRECAUTIONS

In the interest of safety, please observe the following precautions.

INSTALLATION LOCATIONS

SUITABLE LOCATIONS
Avoid shaky places or hot-springs areas where hydrogen sulfide and acidic ions are likely to be generated.

AVOID PLACES WITH HIGH HUMIDITY AND DUST
Do not place the unit at locations with high humidity and/or dust. They can cause extensive damage. Avoid places where the unit is likely to contact oily fumes and vapors.

AVOID PLACES LIKELY TO BE EXTREMELY HOT
Places exposed to direct sunlight, or near heating appliances can attain extremely high temperatures, which may deform the cabinet, or can become a prime cause of damage.

SAFETY TECHNICAL CHECKS

Periode: According to the recommendations of the manufacturer of medical device.
Scope:  
   a) Visual check
       Housing, cables, operator controls, readout device (displays, LED etc.), labels, accessories, instruction manual.
   b) Function test
       Performance check acc. instruction manual, also unity and applicability of set and accessory test.
   c) Electrical check
       Safety electrical test of the configuration in accordance with EN60601-1.

“ In the interest of safety, avoid the handling of liquids beside the set.”

RESPONSIBILITY OF THE MANUFACTURER

The manufacturer, assembler, installer or importer considers himself responsible for the effects on safety, reliability and performance of the EQUIPMENT only if:
– assembly operations, extensions, re-adjustments, modifications or repairs are carried out by persons authorized by him, and
– the electrical installation of the relevant room complies with the IEC requirements
– the EQUIPMENT is used in accordance with the instructions for use.

• Any service after expiration of the warranty period will be chargeable. Consult your dealer for advice.
2 UNPACKING

Take the unit out of the box by the following procedures. Make sure to check the contents.

<table>
<thead>
<tr>
<th>1 Open the top of the box.</th>
<th>3 Take the unit and the thermal paper out of the box carefully.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Open the top of the box." /></td>
<td><img src="image2" alt="Take the unit and the thermal paper out of the box carefully." /></td>
</tr>
<tr>
<td>• Make sure to keep the unit horizontal.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2 Take out the accessories and remove the cushion above the unit.</th>
<th>4 Unwrap the unit.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Take out the accessories and remove the cushion above the unit." /></td>
<td><img src="image4" alt="Unwrap the unit." /></td>
</tr>
</tbody>
</table>

Accessories

Cleaning sheet  
Operation manual  
Installation manual  
Printer driver (1 CD-ROM)  
USB cable  
Core  
Bush  
Cover  
Holder  
Screw for securing the cover  
Thermal paper
3 INSTALLATION OF DC POWER CORD

WARNING: 
Install the DC power cord according to the following procedure. Otherwise, it may cause risk to the safety and EMC (Electro-Magnetic Compatibility).

WARNING: 
Before installing a power cord, turn off the power supply.

Prepare parts, tools, and power supply that comply with the following specifications.

<table>
<thead>
<tr>
<th>Part (commercially available)</th>
<th>Tool (commercially available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power cord</td>
<td>Crimp tool</td>
</tr>
<tr>
<td>- UL2464 (AWM, for external interconnection of electronic equipment)</td>
<td>- Tyco Electronics D-3000 series 91558-1</td>
</tr>
<tr>
<td>- 2 conductors</td>
<td>- Plier</td>
</tr>
<tr>
<td>- AWG 18 (core size 0.75 mm$^2$ or bigger)</td>
<td>- Heyco Bushing Assembly Plier Part No. 0022 (R29)</td>
</tr>
<tr>
<td>- Length 2.0 m or shorter</td>
<td></td>
</tr>
<tr>
<td>- Outer diameter 5.6 to 6.2 mm</td>
<td></td>
</tr>
<tr>
<td>Connector</td>
<td></td>
</tr>
<tr>
<td>- Tyco Electronics D-3000 series 1-178128-2</td>
<td></td>
</tr>
<tr>
<td>- 2 poles</td>
<td></td>
</tr>
<tr>
<td>Contact</td>
<td></td>
</tr>
<tr>
<td>- Tyco Electronics D-3000 series 1-175218-5 (2 pieces)</td>
<td></td>
</tr>
</tbody>
</table>

Prepare parts, tools, and power supply that comply with the following specifications.

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Part (accessory)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Isolated 24 V (+20%/-15%) DC</td>
<td>Bush</td>
</tr>
<tr>
<td>- Capable of providing a current of 3.0 A at 24.0 V</td>
<td>Holder</td>
</tr>
<tr>
<td>3.5 A at 20.4 V (-15% of 24.0 V)</td>
<td>Core</td>
</tr>
<tr>
<td>- Input peak current 4.5 App at 24 V (6.4 ms width at 50% pulse height)</td>
<td>Cover</td>
</tr>
<tr>
<td>- Inrush current 16 App at 24 V (2.5 ms width at 50% pulse height)</td>
<td>Screw for securing the cover</td>
</tr>
</tbody>
</table>

Process the tip of the power cord according to the following procedure.

1. Strip off the sheath of the power cord for the length illustrated below.

   Sheath

   Strip length
   24 mm ± 1 mm

2. Strip off the insulators of the power cord for the length illustrated below.

   Insulators

   Strip length
   4.3 mm ± 0.5 mm
3 Crimp contacts onto the power cord using the crimp tool (91558-1).

1. Crimp the contacts according to the manual supplied with the crimp tool.

2. Measure the crimp height at the position illustrated below and check that the contacts are crimped properly.

![Crimp contacts](image)

4 Attach the connector to the power cord.

![Connector](image)

5 Attach the supplied bush to the power cord.

![Bush](image)

6 Fit the bush into the supplied holder.

1. While holding the bush firmly with pliers, put the power cord through the holder.

2. Release the pliers when the bush comes to the position shown in the figure, and the bush will be engaged in the holder.

![Holder](image)
7 Attach the supplied core to the power cord.

1. Open the core.
2. Wind the power cord two turns on the core.
3. Close the core.

Attach the core as close to the holder as possible.

8 Connect the connector to the power terminal on the rear of the printer.

9 Put the tab of the holder into the hole of the printer.

10 Attach the supplied cover to the printer securely using the supplied screw for securing the cover.

11 Check that the power cord is installed properly.
1. Install the thermal paper. (See the operation manual.)
2. Supply 24V DC from the power supply.
3. Check that all the segments of the indicator on the front panel illuminate and then the indicator displays “ illuminate.
4. Hold down the button for one second or longer to check that the power turns off.
Example of installation in the rack of the equipment system

1. In accordance with the screw hole positions shown on the printer bottom view, make four screw holes (3.5 mm in diameter) in the shelf of the rack.

2. Place the printer on the shelf, align the screw holes of the printer with those of the shelf, and secure the printer by tightening the screws (four M3 screws, 6 mm long) from the bottom.

Ensuring proper grounding of the printer

To ensure that the printer is grounded properly, you are recommended to use either of the following methods.

- Secure the printer on the metal chassis of the system that has been grounded using a screw.
- Connect the printer to the earth part of the system using a wire.
  Attach an M3 ring connector (Ø7.5 mm or less) at the end of a 16 AWG wire and fit the connector to the EARTH part of the printer using an earth screw.
5 EXAMPLE OF CONNECTION

Connecting to various equipment system with USB interface such as medical equipment

Connection

Connecting the digital monochrome printer with medical equipment through a USB cable.

Installing printer driver

Printer driver is required to print the data from a personal computer connected with this printer.
The printer driver for Windows® is supplied with this printer.
Refer to the “Read me” for installing the printer driver in the CD-ROM supplied with this unit.

How to open the ReadMe file

1 Install the CD-ROM in the CD-ROM drive on your PC.
2 Double-click on the CD-ROM icon.
3 Double-click on the ReadMe_E.pdf.
   Acrobat® Reader® or Adobe® Reader® is required to open ReadMe_E.pdf file.
4 Install the printer driver by following the instruction in the file.

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