



Cx-Series Product Manual

UV LED Curing Kit
Wiring Guidelines

DOMINO

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AMENDMENT RECORD

Amendment

All parts at Issue 1

Date

April 2025

PREFACE

This document, Domino Part No. EPT093175, is guidance for the installation of the product that is the subject of this document.

This document should be used to reinforce and complement any training program available with the product. It is not designed to replace any such training program.

Domino will not accept any liability for damage to equipment or injury to personnel caused by unauthorized or improper use of the equipment described in this document.

Only engineers trained by Domino should carry out repairs, adjustments or in any other way alter settings or machine parts. Domino original parts shall always be used to ensure quality and performance.

Users of this equipment are warned that it is essential to read, understand and act according to the information given in Part 1: Health and Safety. This part of the document also specifies a set of symbols which are used elsewhere in the document to convey special warnings or requirements. It is, therefore, essential that users are also familiar with these symbols and act accordingly.

It is important to:

- Keep this document during the lifetime of the equipment.
- Pass this document on to any subsequent holder or user of the equipment.

INTENDED USE

This kit of parts is intended for OEM manufacturers to cure UV ink on production lines.

Do not use this equipment in potentially explosive environments.

FORESEEABLE MISUSE

This equipment should only be used as indicated by Domino.


- Do not use as a germicidal or disinfection device
- Do not use for processing or treatment of food
- Do not use as a sunlamp
- Do not use for curing cosmetics
- Do not use for medical purposes

Personnel should not:

- Deliberately defeat any interlocks/security
- Reach over or around guarding
- Ride on conveyor

- Ignore any no-go areas.
- Do not use the front handle to carry the printer.

WARNING: UV LIGHT

| WARNING | UV Light is emitted from this product. Risk of eye and skin damage. |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>When near the printer, wear personal protective equipment (PPE) such as nitrile gloves, goggles and overalls.</p> <p>Refer to Safety Data Sheet (SDS) for further information about suitable Personal Protective Equipment (PPE).</p> <p>In particular, use goggles:</p> <ul style="list-style-type: none"> • which are designed specifically for use in the workplace. • which are opaque to UV light with a wavelength of 395nm. <p>For example, goggles which comply with EN ISO 16321-1.</p> <p>This product emits UV radiation which is risk group 3.</p> <p>Exposure to UV Light can cause permanent eye or skin damage.</p> |

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PART 1 HEALTH AND SAFETY

INTRODUCTION



To ensure maximum safety, always read this section carefully before doing any work on the equipment or making any adjustments.

Operation

- Ensure the power switch on the controller is OFF before connecting the power supply.
- Switch OFF or disconnect the power before connecting or disconnecting any wiring connections.
- Switch off and do not use the equipment if there are signs of physical damage.
- Switch off and do not use the equipment if any part of the guarding is damaged.


Warnings, Cautions and Notes

The warnings, cautions and notes used throughout this Product Manual are highlighted by the use of international hazard symbols. The following definitions for all three of these notices are described below in the format they are presented in this Product Manual.

| | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| WARNING | What is the hazard. Risk of personal injury. |
|  | A warning is used to alert the reader of hazards which may cause loss of life, physical injury or ill health. |
| CAUTION | Possible hazard. Risk of damage to equipment. |
|  | A caution is used to alert the reader of possible hazards which may cause damage to equipment or the environment. |

Note A note is used to alert the reader to important information

Specific Warnings

| WARNING | | UV Light is emitted from this product. Risk of eye and skin damage. |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  | <p>When near the printer, wear protective equipment such as nitrile gloves, goggles and overalls.</p> <p>Refer to Safety Data Sheet (SDS) for further information about suitable Personal Protective Equipment. (PPE).</p> <p>In particular, use goggles:</p> <ul style="list-style-type: none"> • which are designed specifically for use in the workplace. • which are opaque to UV light with a wavelength of 395nm. <p>For example, goggles which comply with EN ISO 16321-1.</p> <p>This product emits UV radiation which is risk group 3.</p> <p>Exposure to UV Light can cause permanent eye or skin damage.</p> | |

Personnel

Only instructed personnel are allowed to work on the equipment. The manufacturer declines all responsibility for injury or damage if the instructions in this manual are not followed.


Personnel are responsible for:

- The equipment and the work area around the equipment
- All personnel in the vicinity of the equipment
- Making sure that all safety devices are fully operational.

Personnel must regard all electrical equipment as live. Before doing any maintenance or repair work, switch off and disconnect all electrical connections and compressed air to the printer and applicator.

Electricians

Electricians should be certified according to local regulations and have experience of similar types of installations, proven skills in reading and working from drawings and cable lists, and knowledge of local safety regulations regarding automation.

| WARNING | | High voltage electricity. Risk of death or injury from electric shock. |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
|  | <p>Work with the electrical equipment must be performed only by skilled or instructed technicians.</p> | |

According to EN 60204-1, 3.1.36 an instructed person is:

- A person adequately advised or supervised by an electrically skilled person to enable him or her to perceive risks and to avoid hazards which electricity can create.

According to EN 60204-1, 3.1.61 a skilled person is:

- A person with relevant training, education and experience to enable him or her to perceive risks and to avoid hazards associated with electricity.

Legislation and Guidance

This installation must comply with all relevant legislation applicable to the country where it is installed.

The following guidance may be useful:

European Union

European Commission: Non-binding guide to good practice for implementing Directive 2006/25/EC: 'Artificial Optical Radiation'

UK

Health and Safety Executive: Guidance for Employers on the Control of Artificial Optical Radiation at Work Regulations (AOR) 2010.

PART 2 SYSTEM DESCRIPTION

DESCRIPTION

This is a collection of off the shelf parts. They can be integrated into assembly lines by an OEM.

The kit compromises:

- UV lamp
- UV controller
- PSU
- Cables.

Guarding guidelines to be provided.

The control implementation is unique to each install. The following may be used:


- Lamp on/off signal
- Power varying
- The Lamp Controller has a manual toggle to vary power.
- Alerts.

PART 3 INSTALLATION

INSTALLATION SAFETY

- Conduct a risk assessment before starting the installation of this equipment.
- Always wear appropriate Personal Protective Equipment (PPE) as identified during your risk assessment.
- This must include steel toe capped footwear.
- Ensure that you lift the product appropriately using both hands. When securing the unit to the stand or other mounting seek assistance to avoid strain or injury.
- The UV lamp is in excess of the Exempt Risk Group. The viewer related risk depends on how the product is installed and used.
- If a product becomes stationary in front of the lamp, then then excessive heating of the product may occur.
Locate the lamp where this is unlikely to happen.
Domino recommends reducing the maximum lamp on time.
- The equipment is for indoor use only.
- Do not operate the equipment outdoors or in an environment outside of the specified operating range.
- Do not install or operate the equipment in an environment where it can be exposed to water.
- Only use the equipment in a well ventilated area.
- Make sure that all cables are secured away from moving production line components.
- Make sure that all cables are secured and do not cause a trip hazard.
- Make sure that the power supply outlet is off before you connect the power supply to the inkbase or UV Lamp.
- Make sure that the power supply outlet is off before you connect or disconnect any wiring connections.

ELECTRICAL INSTALLATION



| | | |
|-------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------|
| WARNING | | High voltage electricity. Risk of death or injury from electric shock. |
|  | | Electrical installation must be done by a suitably trained and qualified person. |

Only use Domino supplied cables and pipes to interconnect the Display, Base unit and Print Head.

The equipment must be connected to the mains output socket using a removable plug. This is to allow electrical isolation of the printer, when required. The mains power outlet socket must be installed near the printer in an easily accessible position.

Electricians

Electricians should be certified according to local regulations and have experience of similar types of installations, proven skills in reading and working from drawings and cable lists, and knowledge of local safety regulations regarding automation.

| | | |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
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ASSEMBLY

Bill of Materials

The following parts are required to assemble the UV LED Curing Kit:

BOM for EPT092722:

| Part Number | Description | Quantity |
|-------------|--------------------------------------------------------------------------------------------|----------|
| EPT083697 | UV LED curing lamp UVSN-2L1 | 1 |
| EPT026722 | MAINS CABLE 2.0M IEC CHINA | 1 |
| EPT028061 | Connector Housing, Mounting Ears, UL 94V-0, Mini-Fit Jr. Series, Plug, 6 Ways, 4.2 mm | 1 |
| EPT051058 | Contact PIN Crimp ST Cable Mount 18-24AWG Mini-Fit® | 6 |
| EPT062422 | D-SUB CONNECTOR, 15-PIN MALE, CABLE ENTRY < 35° | 1 |
| EPT070164 | SAFETY CRITICAL Wire Ferrule, Single Wire, 24 AWG, 0.25 mm ² , 8 mm, Light Blue | 4 |
| EPT091211 | SAFETY CRITICAL AC-DC Power Supply, 85 - 264V AC Input, 24V DC Output, 15A Output, 360W | 1 |
| EPT087606 | "PSU and I/O to UVSN-2LI Controller cable (MPN: 3.14.00082) | 1 |
| EPT087600 | "UVSN-2LI Controller to UVSN-2LI Lamp" cable (MPN: 3.14.00041) | 1 |

Modify the Signal/Power Cable

Signal/Power cable:

| Part Number | Description | Quantity |
|-------------|-------------------------------------------------------------|----------|
| EPT087606 | "PSU and I/O to UVSN-2LI Controller cable (MPN: 3.14.00082) | 1 |

It is necessary to modify the Signal/Power cable. The four fork terminals must be replaced with two connectors:

- 15 way D-sub
- 6 way power plug.

Tools required:

- Moles crimp tool.

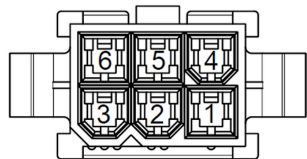
Fit the 6 way Power Plug

Power Plug parts:

| Part Number | Description | Quantity |
|-------------|---------------------------------------------------------------------------------------|----------|
| EPT028061 | Connector Housing, Mounting Ears, UL 94V-0, Mini-Fit Jr. Series, Plug, 6 Ways, 4.2 mm | 1 |
| EPT051058 | Contact PIN Crimp ST Cable Mount 18-24AWG Mini-Fit® | 6 |

- Notes
1. There are three wires V+(24VDC) connected to a red fork terminal. They are black with a white trace.
 2. There are three wires V-(GND) connected to a black fork terminal. They are black with no trace.

1. From the fork terminals end, adjust the six the wires to the desired length.
2. Use the Molex Crimp tool to crimp a contact pin to the end of each wire.



3. Fit the three V+ wires (Black with white trace) in locations 1, 2 and 3 of the connector housing.
4. Fit the three V- wires of (Black no trace) in location 4,5 and 6 of the connector housing.

Fit the 15 way D-sub connector

D-Sub connector parts:

| Part Number | Description | Quantity |
|-------------|--------------------------------------------------------------------------------------------|----------|
| EPT062422 | D-SUB CONNECTOR, 15-PIN MALE, CABLE ENTRY < 35° | 1 |
| EPT070164 | SAFETY CRITICAL Wire Ferrule, Single Wire, 24 AWG, 0.25 mm ² , 8 mm, Light Blue | 4 |

Fit ferrules to the signal wires:

1. From the fork terminals end, adjust the yellow and green wires to desired length.
2. Remove and DO NOT CONNECT the two DIM wires (white and black wires)
3. Strip approximate 45mm from the wires to expose the two wires (yellow and green wires).
4. Crimp a 0.25mm² wire ferrule on each wire. (yellow, green)
5. Adjust the size of the ferrules to approximate 5mm length.

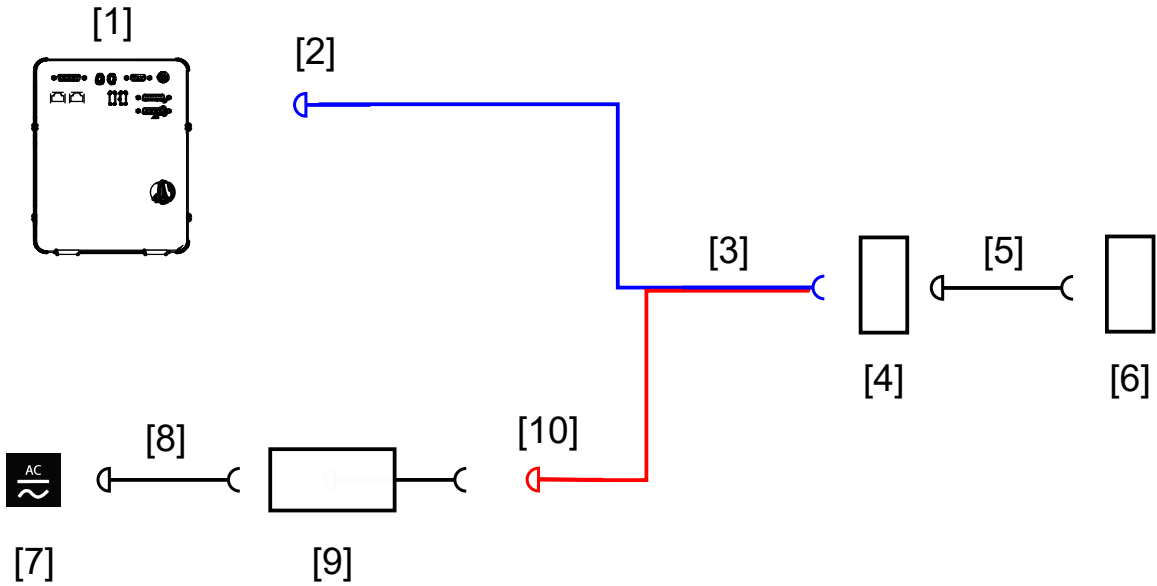
Make a link wire:

1. Reuse 40mm from the black wire to make a link wire.
2. Crimp a 0.25mm² wire ferrule on each end of the link wire.
3. Adjust the size of the ferrules to approximate 5mm length after crimping.

Connect the 15 way D-Type as follows:

| | | PSU and I/O to Controller cable | | 15 way D-Type connector | | |
|------------|------------------|---------------------------------|----|-------------------------|----|--------|
| Connection | Function | | | | | |
| 1 | 24 V lamp On/Off | Yellow wire | to | Pin 10 | | |
| 2 | Ground | Green wire | to | Pin 9 | | |
| 3 | Link | Black | | Pin 1 | to | Pin 13 |


Connections



- [1] Cx150i Printer
- [2] Connector - 15 way D-Sub
- [3] Cable - Signal/Power to Controller
- [4] Lamp Control box
- [5] Cable - Controller to Lamp
- [6] UV LED curing lamp
- [7] 230 V AC mains outlet
- [8] Mains Cable
- [9] AC-DC Power Supply
- [10] Connector - 6 way

PART 4 OPERATION

WARNING: UV LIGHT

| | |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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OPERATION

- Ensure the power switch on the controller is OFF before connecting the power supply.
- Switch OFF or disconnect the power before connecting or disconnecting any wiring connections.
- Switch off and do not use the equipment if there are signs of physical damage.
- Switch off and do not use the equipment if any part of the guarding is damaged.

GUIDANCE

Only use the kit of parts with guarding.

Mount lamp face about 5mm from product.

The OEM must implement suitable Lamp control.

Use in an area with minimal foot traffic.

Do not wash down without a cover.

Do not clean/remove guarding unless the unit is unpowered.



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