# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1 - Introduction</td>
<td>1</td>
</tr>
<tr>
<td>General User Information</td>
<td>2</td>
</tr>
<tr>
<td>Unpacking</td>
<td>3</td>
</tr>
<tr>
<td>Placement</td>
<td>3</td>
</tr>
<tr>
<td>Web Links for Additional Information</td>
<td>3</td>
</tr>
<tr>
<td>MPC-E Module Panel Mount Installation</td>
<td>4</td>
</tr>
<tr>
<td>Section 2 - Health and Safety</td>
<td>5</td>
</tr>
<tr>
<td>General Considerations</td>
<td>6</td>
</tr>
<tr>
<td>Plastics Health Notice</td>
<td>7</td>
</tr>
<tr>
<td>Electrical Safety</td>
<td>7</td>
</tr>
<tr>
<td>Section 3 - Standard Connections</td>
<td>8</td>
</tr>
<tr>
<td>Power Grounding</td>
<td>9</td>
</tr>
<tr>
<td>Chassis Grounding Stud</td>
<td>9</td>
</tr>
<tr>
<td>Connecting Cables</td>
<td>10</td>
</tr>
<tr>
<td>Port Descriptions</td>
<td>11</td>
</tr>
<tr>
<td>Section 4 - LED Descriptions</td>
<td>13</td>
</tr>
<tr>
<td>“Status” LED Color Patterns</td>
<td>14</td>
</tr>
<tr>
<td>“Probe” LED Color Patterns</td>
<td>15</td>
</tr>
<tr>
<td>Section 5 - Pairing</td>
<td>16</td>
</tr>
<tr>
<td>Installing iQ Commander™</td>
<td>17</td>
</tr>
<tr>
<td>Pairing with iQ Commander™</td>
<td>18</td>
</tr>
<tr>
<td>Pairing with the Push Button</td>
<td>19</td>
</tr>
<tr>
<td>Section 6 - Specifications</td>
<td>20</td>
</tr>
<tr>
<td>MPC-E Outline Drawing</td>
<td>21</td>
</tr>
<tr>
<td>Operating Environment</td>
<td>22</td>
</tr>
<tr>
<td>Weight</td>
<td>22</td>
</tr>
<tr>
<td>DC Power Requirements</td>
<td>22</td>
</tr>
<tr>
<td>Model Numbers</td>
<td>23</td>
</tr>
<tr>
<td>Regulatory Agency Compliance</td>
<td>24</td>
</tr>
<tr>
<td>Contacting Dukane</td>
<td>25</td>
</tr>
<tr>
<td>Dukane ISO Certification</td>
<td>26</td>
</tr>
</tbody>
</table>
SECTION 1

Introduction
General User Information

Read This Manual First

Before operating your ultrasonic system, read this User’s Manual to become familiar with the equipment. This will ensure correct and safe operation. The manual is organized to allow you to learn how to safely operate this equipment. The examples given are chosen for their simplicity to illustrate basic operation concepts. This manual provides information to set up and interface to a MPC-E. Particular models are listed in Section 6 - Specifications.

Notes, Cautions and Warnings

Throughout this manual we use NOTES to provide information that is important for the successful application and understanding of the product. A NOTE block is shown to the right.

In addition, we use special notices to make you aware of safety considerations. These are the CAUTION and WARNING blocks as shown here. They represent increasing levels of important information. These statements help you to identify and avoid hazards and recognize the consequences. One of three different symbols also accompany the CAUTION and WARNING blocks to indicate whether the notice pertains to a condition or practice, an electrical safety issue or an operator protection issue.

NOTE

Note statements provide additional information or highlight procedures.

CAUTION

Caution statements identify conditions or practices that could result in damage to the equipment or other property.

WARNING

Warning statements point out conditions or practices that could result in personal injury or loss of life.

Condition or Practice Electrical Hazard Hearing Protection
Unpacking

Carefully open your shipping container, and make sure it contains the items shown on the shipping documents.
Inspect all items and report any missing items or damage immediately.

Placement

Make certain the MPC-E placement and cable routing do not interfere with normal operation.
Maintain easy access to your equipment.
The operator should have unobstructed access to cables and wiring.
Mounting brackets can be attached to the MPC-E module for mounting in to a cabinet.
If the MPC-E module is installed inside an enclosure with a door, be sure there is adequate clearance for the system cables with the door closed.
If the MPC-E module is to be used in an active seismic region, secure the unit by rack-mounting it or by securing the unit to a benchtop.

Web Links for Additional Information:

Below is a link to the Auto Plus generator manual:
https://documents.dukane.com/Manuals/403-591.pdf

Below is a link to the Auto Plus Automation Interface Guidelines:
https://documents.dukane.com/AppNote/AN514.pdf

Below is a link to the blank front panel AiM generator manual:
https://documents.dukane.com/Manuals/403-611.pdf

Below is a link to the color front panel AiM generator manual:
https://documents.dukane.com/Manuals/403-610.pdf

Below is a link to the AiM Automation Interface Guidelines:
https://documents.dukane.com/AppNote/AN525.pdf
MPC-E modules are designed for assembly systems where one ultrasonic generator is sequenced to as many as 8 ultrasonic probes.

The MPC-E module is typically supplied as a stand-alone bench-top unit, or as a component that can be mounted in a through-panel configuration.

No special installation is needed for a stand-alone MPC-E module that can be put on a bench top or a shelf.

Use the following installation recommendations for a panel mounted MPC-E module.

**Cut Outs**

For panel mounted modules, use Figure 1-1 below to determine the size of the cut needed for your equipment panel.

Make the appropriate cut and install the MPC-E module securing the mounting flange to the equipment panel before continuing with the cable connections.

![Figure 1-1 MPC-E Module Cutout Guide](image-url)

**Figure 1-1** MPC-E Module Cutout Guide
SECTION 2

Health and Safety
Please observe these **health and safety recommendations** for safe, efficient, and injury-free operation of your equipment.

**Proper Installation** - Operate system components only after they are properly installed.

**No Unauthorized Modifications** - Do not modify your system in any way unless authorized to do so by Dukane. Unauthorized modifications could cause equipment damage and/or injury to the operator. In addition, unauthorized modifications will void equipment warranty.

**Keep the Cover On** - Do not remove any equipment cover unless directed to do so by Dukane. Hazardous electrical voltages are present which could cause injury.

**Grounded Electrical Power** - Operate this equipment only with a grounded electrical connection.

*See Electrical Safety for grounding instructions on Page 7.*

**Comply with Regulations** - You may be required to add accessories to bring the system into compliance with applicable regulations (OSHA in the USA) for machine guarding and noise exposure.

**Use Eye Protection** - Wear ANSI approved safety impact goggles.

**Acoustic Stack Hazard** - When an acoustic stack (transducer, booster, horn and tip) is energized by the ultrasound signal, it presents a potential hazard. Stay clear of an energized stack.

**System Electrical Cabling** - Electrical power must be off when connecting or disconnecting electrical cables.

**Do Not Wear Loose Clothing or Jewelry** - They can become caught in moving parts.

**Stay Alert** - Watch what you are doing at all times. Use common sense. Do not operate the press when you are tired or distracted from the job at hand.

**Do Not Operate the Equipment** - Your judgement or reflexes could be impaired while taking prescription medications. If so, do not operate the equipment. Be familiar with warning labels and recommended activity restrictions that accompany your prescription medications. If you have any doubt, do not operate the equipment.
**System Electrical Cabling** - Electrical power must be off when connecting or disconnecting electrical cables.

**Do Not Wear Loose Clothing or Jewelry** - They can become caught in moving parts.

**Stay Alert** - Watch what you are doing at all times. Use common sense. Do not operate the press when you are tired or distracted from the job at hand.

**Do Not Operate the Equipment** - Your judgement or reflexes could be impaired while taking prescription medications. If so, do not operate the equipment. Be familiar with warning labels and recommended activity restrictions that accompany your prescription medications. If you have any doubt, do not operate the equipment.

### Plastics Health Notice

Certain plastic materials, when being processed, may emit fumes and/or gases that may be hazardous to the operator’s health. Proper ventilation of the workstation should be provided where such materials are processed. Inquiries should be made to the U.S. Department of Labor concerning OSHA regulations for a particular plastic prior to processing with Dukane ultrasonic equipment.

### Electrical Safety

Always connect the included ground wire from the PE ground of the MPC-E to the nearest grounded metal pipe or equivalent earth ground by means of a ground clamp.

In addition to the safety considerations, proper grounding is essential for the effective suppression of RFI (Radio Frequency Interference).

Always connect the included ground wire from the PE ground of the MPC-E to the nearest grounded metal pipe or equivalent earth ground by means of a ground clamp.

---

**WARNING**

Keep head, hands, limbs and body at least six inches (152 mm) away from an operating press/thruster. A vibrating, descending horn can cause burns and/or crushing injuries.

**CAUTION**

When making cable connections to system equipment or disconnecting cables from system equipment, make sure electrical power to the system is turned off, and DC power cords are removed from their receptacles. After the cables have been securely connected and the connections and cable routing checked a final time, the power may be restored.

**CAUTION**

If there is any question about grounding of your equipment and/or its electrical power source, contact a qualified electrician.
SECTION 3

Standard Connections
Standard Connections

Power Grounding

For safety, the MPC-E chassis must be properly grounded. This system ground connection must be attached to an earth ground potential at the electrical box that supplies power to the enclosure or cabinet in which the MPC-E system is installed.

The ground connection should comply with all requirements specified by the National Electrical code and any other local codes or ordinances that are applicable.

Chassis Grounding Stud (PE)

Proper grounding for the MPC-E chassis is essential for the effective suppression of electrical noise or RFI (Radio Frequency Interference). The power line ground is mandatory and must be connected from the grounding PE stud to the nearest grounded metal pipe or equivalent earth ground.

This will improve the chassis ground connection and may be needed in noisy industrial environments.

NOTE

The chassis grounding stud is used to attach a protective earth ground to the MPC-E module. This helps suppress electrical interference or radio frequency interference (RFI) that is common in an industrial environment.

CAUTION

If you have any questions about the grounding your equipment and/or the electrical box, contact a qualified electrician.
Basic Connections

Complete these basic connections for the standard configuration as shown below:

- +24VDC
- Net I/O
- Ultrasound Input (J1)
- Grounding
- Ultrasonic Probe Outputs

Details about the various system connectors and their pin assignments are covered in the next section.

1. Wire the +24VDC connector to an external +24VDC power supply. Attach the connector to the MPC-E +24VDC input, matching the power source “+”, “-”, and ground connections.

2. Connect the Ethernet cable from the generator to the P1 Net I/O input connector.

3. Connect the ultrasonic generator J1 output to the MPC-E ultrasound input J1.

4. Connect the included ground wire from the PE grounding stud to a protective earth ground.

5. Connect ultrasound coax cables from the MPC-E probe outputs to the ultrasonic probes.

Figure 3-1  MPC-E Rear Panel View
Port Descriptions

+24VDC Input Connector

This is the power input for the MPC-E module. The “+” is the positive input for the +24V Power Supply connection. The “-” is the negative input for the +24V Power Supply connection. The Ground symbol under the “+24VDC” is the +24V Power Supply ground connection.

NOTE

The external +24VDC power supply that is connected to the MPC-E power source (+24VDC) shall be listed or labeled with 3rd party North America marking (UL, CSA, TUV, etc.)

USB Input Connector

Connect a Windows PC to this port using the included USB cable in order to use Dukane’s PC interface tool, iQ CommanderTM. This tool allows the user to easily update firmware, set the MPC-E name, perform diagnostics, and view lifetime statistics.

Net I/O Input Connector

This input is used for the Ethernet based communication between a generator supporting the Net I/O MPC-E communication and the MPC-E. The NET I/O input is technically a two port switch. Do not connect both P1 and P2 into the same switch. This would be the same as connecting the two ports of one switch into two ports of another switch which causes conflicts. The intention of the "NET I/O" connections is to allow daisy chaining. The order of P1 and P2 connections is not important.
Distance Input Connector

This is the analog inputs for an MPC-E with a “D” in the model number. Example: MPCEHD8.

Each input connects to an individual distance encoder. A maximum of 8 inputs for ultrasonics probes is supported.

The number of supported analog inputs is equal to the number of distance input connections.

Each individual analog input is configured in the I/O tab of the iQ Commander software.

The “+” row is for the positive input for the analog input.

The GND row is for the ground input for the analog input.

The number columns represent the analog input number. Example: "1" is Analog Input 1.

For additional information on using the analog distance inputs, refer to the “Configuring the Auto Plus/AIM for Distance” section of application note AN528 at the following link below:

https://documents.dukane.com/AppNote/AN528.pdf

Ultrasound Input J1

This is the MPC-E Module ultrasonic input. This is connected to the generator J1 output connector.

CAUTION

Ultrasound Connectors

The ultrasound input and output connectors are a high voltage (5000V) coaxial style SHV-BNC connector. This connector provides superior shielding of electrical noise, compared to other types of connectors. The ultrasound connectors mate with a fully shielded coaxial ultrasound cables that are secured with a simple and reliable quarter-turn bayonet style attachment mechanism.

Do not use the MPC-E if there is any evidence of arcing (black carbon deposits) on either the ultrasound connectors or the ultrasonic cable connectors.
SECTION 4

LED Descriptions
### LED Colors

<table>
<thead>
<tr>
<th>LED Colors</th>
<th>MPC-E Alarms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow - Blinking</td>
<td>Power Not OK</td>
<td>MPC-E +24VDC power supply input is out of range.</td>
</tr>
<tr>
<td>Red to Yellow - Blinking</td>
<td>Hardware/Configuration Fault</td>
<td>See iQ Commander for fault description.</td>
</tr>
<tr>
<td>Orange</td>
<td>Invalid Probe Selection</td>
<td>Example: Generator selects Probe 8 but MPC-E only has 6 outputs.</td>
</tr>
<tr>
<td>White</td>
<td>Unpaired</td>
<td>MPC-E is not paired with a generator.</td>
</tr>
<tr>
<td>White to Yellow - Blinking</td>
<td>No Connection</td>
<td>MPC-E is paired with a generator but not connected.</td>
</tr>
<tr>
<td>White to Red - Blinking</td>
<td>Connection Lost</td>
<td>MPC-E connection with generator was lost.</td>
</tr>
<tr>
<td>White to Blue - Blinking</td>
<td>Awaiting Pairing</td>
<td>MPC-E has sent pairing request and is awaiting response.</td>
</tr>
<tr>
<td>White to Green - Blinking</td>
<td>Pairing in Process</td>
<td>Generator has responded to MPC-E request and pairing is in process.</td>
</tr>
<tr>
<td>White to Orange - Blinking</td>
<td>Invalid Generator Pairing</td>
<td>Generator and MPC-E it is paired with display same pattern.</td>
</tr>
<tr>
<td>White to Violet - Blinking</td>
<td>Visual Pairing Conformation</td>
<td></td>
</tr>
</tbody>
</table>

### Generator Alarms Displayed by MPC-E

<table>
<thead>
<tr>
<th>LED Colors</th>
<th>Generator Alarms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>U104 (Frequency Overload 1)</td>
<td>Frequency Lock Failed (from generator)</td>
</tr>
<tr>
<td>Blue - Blinking</td>
<td>U112 (Frequency Overload 3)</td>
<td>Frequency Limit Exceeded</td>
</tr>
<tr>
<td>Red - Blinking</td>
<td>U106 (Peak Overload)</td>
<td>Generator output current exceeded safe operating level.</td>
</tr>
<tr>
<td>Red</td>
<td>U108 (Average Overload)</td>
<td>Generator output power exceeded rated power of the generator.</td>
</tr>
<tr>
<td>Orange - Blinking</td>
<td>U116 (Over Voltage Overload)</td>
<td>Transducer voltage exceeded the maximum expected value.</td>
</tr>
<tr>
<td>Purple - Blinking</td>
<td>Cycle Start Rejected</td>
<td>Generator was not ready when cycle start was attempted.</td>
</tr>
</tbody>
</table>

**Table 4-1** STATUS LED Color Pattern Descriptions
## “PROBE” LED Color Patterns

<table>
<thead>
<tr>
<th>LED Colors</th>
<th>Probe LED Status Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>MPC-E is ready to operate. No ultrasonics output and no fault detected.</td>
</tr>
<tr>
<td>Red</td>
<td>Valid ultrasonics is detected.</td>
</tr>
<tr>
<td>Orange</td>
<td>Probe switching is in progress.</td>
</tr>
</tbody>
</table>
| Red - Blinking | **A MPC-E Ultrasonics Error**  
The generator indicates ultrasonics are active, but the MPC-E does not detect the ultrasonics.  
The MPC-E detects ultrasonics, but the generator does not indicate it is not idle. |
| Green - Blinking | **MPC-E Power Not OK** |
| Off        | MPC-E is unconnected or unpaired to a NET I/O connection. |

**Table 4-2** STATUS LED Color Pattern Descriptions

![MPC-E Front Panel View](image)

**Figure 4-1** MPC-E Front Panel View
SECTION 5

Pairing
Installing iQ Commander™

Below is a link to download the software:
http://update.dukane.com

1. Download the installation file from (http://update.dukane.com) and save to the desired location on the PC.

2. Double-click on the installation file.

3. Once prompted, click on “Next >” on the “Welcome to the InstallShield Wizard for iQ Commander” page. The executable will start the installation process.

4. When the progress bar is nearly full, a new window will appear asking to install the FTDI CDM Drivers. This window may appear behind the iQ Commander™ installation window. If the FTDI CDM Driver window is not visible, move the iQ Commander™ installation window to the side to see the FTDI CDM Drivers installation window.

5. On the FTDI CDM Drivers installation window, click on “Extract”, “Next >”, accept the agreement, “Next >”, and then “Finish” to install the first set of FTDI drivers.

6. Another window will pop up asking to install another set of FTDI CDM Drivers. Repeat step 5 to install the second set of drivers.

7. Once the drivers are installed, click on “Finish” to complete the process. The user can connect a USB cable from the PC to the generator and start the program.
Pairing with \textit{iQ Commander}™

Connect the Windows PC with iQ Commander installed to the USB port of the iQ Auto Plus using a standard USB cable (Dukane part number 200-1906). Connect the Ethernet port of the iQ Auto Plus to the NET I/O port of the MPC-E using a shielded CAT 5e or better Ethernet cable (Dukane part number 200-1961-XXX).

1. Navigate to the “Communications” tab in iQ Commander™.

2. In the “Communications” tab click on the “Net IO” button.

3. In the “Network Input/Output Configuration” pop-up window click on the “Pair / Settings” button.

4. In the “Netio Partner Settings” pop-up window click on the “Make Pair” button.

5. A “Pairing succeeded” pop-up should appear, click on the OK button in the pop-up.

6. In the “Netio Partner Settings” pop-up window, click on the “Close” button.

7. In the “Network Input/Output Configuration” window under the “Status” column should show “CONNECTED” with a green background for the pair.

8. Wait about ten seconds and then click on the “Refresh All” button in the “Network Input/Output Configuration” window.

9. Verify the “Status” column shows “CONNECTED” with a green background for the pair.

10. Close the “Network Input/Output Configuration” pop-up window by clicking “OK” in the pop-up or the “x” in the upper-right of the pop-up.
Pairing with the Push Button

Connect the Ethernet port of the iQ Auto Plus to the NET I/O port of the MPC-E using a shielded CAT 5e or better Ethernet cable (Dukane part number 200-1961-XXX).

1. Verify the STATUS LED color is White indicating the MPC-E is unpaired. If the STATUS LED is White, then proceed to step 3. If the STATUS LED color is White to Yellow blinking proceed to step 2. See the STATUS LED table on page 14 for more information.

2. Push and hold the Push Button next to the "+24VDC", which is reached through the small hole next to the "+24VDC" for 10 seconds.

3. The STATUS LED color should change to White to Blue blinking indicating that the MPC-E has sent a pairing request and is awaiting a response. This may occur so quickly that it can't be seen.

4. The STATUS LED color should next change to White to Green blinking indicating that the generator has responded to the MPC-E and pairing is in process. This may occur so quickly that it can't be seen.

5. The STATUS LED on the MPC-E should change to Green indicating the generator and MPC-E are paired.
SECTION 6
Specifications
MPC-E Outline Drawing

Figure 6-1 400-2687 MPC-E Outline Drawing

NOTE:
Find additional outline drawings at the following link below:
https://support.dukane.com/layouts/Index/Ultrasonic Welding
Operating Environment

Operate the MPC-E within these guidelines:

<table>
<thead>
<tr>
<th>Temperature:</th>
<th>40°F to 100°F (+5°C to +38°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Particulates:</td>
<td>Keep the equipment dry.</td>
</tr>
<tr>
<td></td>
<td>Minimize exposure to moisture, dust, dirt, smoke and mold.</td>
</tr>
<tr>
<td>Humidity:</td>
<td>5% to 95% non-condensing @ +5°C to +30°C</td>
</tr>
</tbody>
</table>

Nonoperating storage guidelines:

<table>
<thead>
<tr>
<th>Temperature:</th>
<th>-4°F to 158°F (-20°C to +70°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Particulates:</td>
<td>Keep the equipment dry.</td>
</tr>
<tr>
<td></td>
<td>Minimize exposure to moisture, dust, dirt, smoke and mold.</td>
</tr>
<tr>
<td>Humidity:</td>
<td>5% to 95% non-condensing @ 0°C to +30°C</td>
</tr>
</tbody>
</table>

Weight

<table>
<thead>
<tr>
<th>Standard Model:</th>
<th>5 pounds (2.3 kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping:</td>
<td>Add 3.5 pounds (1.6 kg) to unit weight for packing materials.</td>
</tr>
</tbody>
</table>

DC Power Requirements

Operate the MPC-E within these guidelines: +24VDC @ 0.25A Max.
## Model Numbers

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Model Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPCEL02</td>
<td>LO POWER W/O DISTANCE (2 POINTS)</td>
</tr>
<tr>
<td>MPCEL04</td>
<td>LO POWER W/O DISTANCE (4 POINTS)</td>
</tr>
<tr>
<td>MPCEL06</td>
<td>LO POWER W/O DISTANCE (6 POINTS)</td>
</tr>
<tr>
<td>MPCEL08</td>
<td>LO POWER W/O DISTANCE (8 POINTS)</td>
</tr>
<tr>
<td>MPCELD2</td>
<td>LO POWER WITH DISTANCE (2 POINTS)</td>
</tr>
<tr>
<td>MPCELD4</td>
<td>LO POWER WITH DISTANCE (4 POINTS)</td>
</tr>
<tr>
<td>MPCELD6</td>
<td>LO POWER WITH DISTANCE (6 POINTS)</td>
</tr>
<tr>
<td>MPCELD8</td>
<td>LO POWER WITH DISTANCE (8 POINTS)</td>
</tr>
<tr>
<td>MPCEH02</td>
<td>HI POWER W/O DISTANCE (2 POINTS)</td>
</tr>
<tr>
<td>MPCEH04</td>
<td>HI POWER W/O DISTANCE (4 POINTS)</td>
</tr>
<tr>
<td>MPCEH06</td>
<td>HI POWER W/O DISTANCE (6 POINTS)</td>
</tr>
<tr>
<td>MPCEH08</td>
<td>HI POWER W/O DISTANCE (8 POINTS)</td>
</tr>
<tr>
<td>MPCEHD2</td>
<td>HI POWER WITH DISTANCE (2 POINTS)</td>
</tr>
<tr>
<td>MPCEHD4</td>
<td>HI POWER WITH DISTANCE (4 POINTS)</td>
</tr>
<tr>
<td>MPCEHD6</td>
<td>HI POWER WITH DISTANCE (6 POINTS)</td>
</tr>
<tr>
<td>MPCEHD8</td>
<td>HI POWER WITH DISTANCE (8 POINTS)</td>
</tr>
</tbody>
</table>

**NOTE:**
Model numbers with a “L” are for 30kHz frequencies and above and a maximum of 600 Watts. Model numbers with a “H” are for a maximum of 2600 Watts.
FCC
The MPC-E complies with the following Federal Communications Commission regulations.


CE Marking
This mark on your equipment certifies that it meets the requirements of the EU (European Union) concerning interference causing equipment regulations. CE stands for Conformité Européenne (European Conformity). The equipment complies with the following CE requirements.

- The EMC Directive 2014/30/EU for Heavy Industrial —
  - EN 61000-6-4:
    - EN 55011
  - EN 61000-6-2:
    - EN61000-4-2
    - EN61000-4-3
    - EN61000-4-4
    - EN61000-4-5
    - EN61000-4-6
    - EN61000-4-8
    - EN61000-4-11
- The Low Voltage Directive 2014/35/EU.
- The Machinery Directive 2006/42/EC.
- EN ISO 12100: Safety of Machinery - General principles of design, risk assessment, and risk reduction.

IP Rating
The iQ MPC-E has an IP (International Protection) rating from the IEC (International Electrotechnical Commission).

The rating is IP2X, in compliance with finger-safe industry standards.

The iQ MPC-E complies with these standards as verified by TÜV Rheinland.

UL
Tested to Underwriters Laboratories:
UL 61010–1, IEC 61010-1

CAN / CSA
National Standards of Canada: CAN/CSA C22.2 No. 61010-1–12
Contacting Dukane

Identify Equipment

When contacting Dukane about a service–related problem, be prepared to give the following information:

- Model number, line voltage and serial number.
- Fault/error indicators from the Status LED and/or iQ Commander™.
- Software version displayed in the "MAIN" tab in iQ Commander™.
- Problem description and steps taken to resolve it.

Many problems can be solved over the telephone, so it is best to call from a telephone located near the equipment.

Mailing Address:

Dukane IAS
2900 Dukane Drive
St. Charles, IL 60174 USA

Phone: (630) 797–4900
E-mail: ussales@dukane .com
Fax: Main (630) 797–4949
Service & Parts (630) 584–0796

Website

The website has information about our products, processes, solutions, and technical data. Downloads are available for many kinds of literature.

This is the address for the main website:
www.dukane.com

Local Contact

You can locate your local representative at:
www.dukane.com/contact-us/
ISO CERTIFICATION

Dukane chose to become ISO certified in order to demonstrate to our customers our continuing commitment to being a quality vendor. By passing its audit, Dukane can assure you that we have in place a well-defined and systematic approach to quality design, manufacturing, delivery and service. This certificate reinforces Dukane’s status as a quality vendor of technology and products.

To achieve ISO certification, you must prove to one of the quality system registrar groups that you meet three requirements:

1. Leadership
2. Involvement

The ISO standards establish a minimum requirement for these requirements and starts transitioning the company from a traditional inspection-oriented quality system to one based on partnership for continuous improvement. This concept is key in that Dukane no longer focuses on inspection, but on individual processes.

Dukane’s quality management system is based on the following three objectives:

1. Customer oriented quality. The aim is to improve customer satisfaction.
2. Quality is determined by people. The aim is to improve the internal organization and cooperation between staff members.
3. Quality is a continuous improvement. The aim is to continuously improve the internal organization and the competitive position.

View the Dukane ISO certificate of compliance at:

www.dukane.com/support/downloads/
Please refer to our website at:

www.dukane.com/contact-us

to locate your local representative.