



*The Power of Reliability*



ICT DIN Series Power Distribution Unit  
Instruction Manual  
855-353-000

## SAFETY GUIDELINES

### Principles of Safe Operation and Maintenance

Safety must always be the top priority of all personnel involved in the installation, operation, and maintenance of this unit as it operates at high voltages that could be potentially lethal. Technicians must adhere to the appropriate standards and manufacturer's recommendations to minimize hazards.

Do not attempt to perform the tasks described in this manual if you are not a qualified professional.

It is essential that all safety devices and emergency response systems be fully operational and within their certification periods before starting any service.

### Visual Communication

This manual uses extensive visual aids and tries to adhere to ANSI and ISO safety symbol standards. These symbols describe the following situations:



**WARNING** indicates a hazardous situation that, if not avoided, may result in death or severe injury or damage to equipment and property.



**CAUTION** indicates a hazardous situation that, if not avoided, may result in minor or moderate injury or damage to equipment and property.



**NOTICE** indicates practices not related to physical injury but may result in equipment damage, environmental hazards, loss of data, and other undesirable consequences.

## General Alerts



### **Risk of serious personal injury or damage to equipment and property. Always observe the following:**

- Installation must be done by qualified technicians.
- Shut off or disconnect all DC power sources before connecting or disconnecting wiring.
- Carefully observe wiring polarity when making input and output connections.
- Securely tighten all connections.
- Do not attempt to service any internal parts. Refer all product service to an authorized ICT Ltd. service facility.



### **Risk of personal injury or damage to equipment and property. Always observe the following:**

- Use wire and connectors rated for the maximum load current and size of fuse or circuit breaker in accordance with NEC Section 210.20(A) and keep cable lengths as short as practical.
- Install unit in a restricted access location (such as an equipment rack) to limit unintentional contact with terminals and wiring.
- Keep sources of moisture away from unit.
- Do not energize the unit before the chassis ground is connected.
- DC-AC inverters should not be connected to the outputs of these ICT units. DC-AC inverters create significant inrush current and may damage the circuitry or interfere with the operation of power distribution panels that they are connected to. Connecting a DC-AC inverter in this way may void the product warranty.



### **Risk of damage to equipment, environmental hazards, loss of data and other undesirable consequences. Always observe the following:**

- The unit must be properly handled, mounted, and installed.
- Do not block air inlet or outlet openings.
- Due to environmental factors which are common at outdoor communications sites, power surges from lightning strikes, electrostatic discharge, and utility power feeds can occur. These surges can damage connected equipment.



NOTICE

- Third-party surge suppression devices must be utilized to protect exposed DC power conductors and data cables. These protection devices must be installed at both ends of the exposed conductor, in close proximity to installed equipment.
- Consult with manufacturers of surge suppression devices to select appropriately rated protection device(s) and proper installation methods.
- ICT's product warranty does not cover damage caused by power surges and electrostatic discharge events including lightning.

**NOTE:** Due to the fuse-detection circuitry internal to the unit, it may be possible to measure a voltage on the terminal(s) with no load connected, even if that terminal's fuse is open circuit. This is normal operation. The fuse-detection circuitry is a high-impedance circuit, and while a voltage may be present on the output terminal, it is a signal voltage and does not support loading. A load device connected to the output will immediately pull this voltage to zero volts.

## Product Alerts



CAUTION

### **Risk of personal injury or damage to equipment and property. Always observe the following:**

- Fuses may be hot to touch. Disconnect power and allow to cool before removing or replacing.
- Wiring terminals may be hot to touch. Disconnect power and allow to cool before disconnecting load wires.
- Ensure continuous load current through each output channel does not exceed 80% of the maximum output ratings in accordance with NEC Section 210.20(A).

## GENERAL INFORMATION

**Document Number:** 855-353-000

**Model:** ICT-DIN-PDU6

**Date and Revision:** September 2024, Revision 2.00

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### Disclaimer

ICT shall not be held liable for any damage or injury involving this product if it has been subjected to misuse and exposure to environmental conditions not conforming to the product's limits of operation, improper installation, or maintenance.

The illustrations in this manual are for illustrative purposes only. Review the drawings before proceeding. If there are questions and concerns regarding the product, refer to the FAQs section or contact ICT.

### Contact Information

- North America toll-free: +1 877.930.0717 ext. 810
- International: +1 604.856.6303 ext. 810
- E-mail: [technical@ictcorporate.com](mailto:technical@ictcorporate.com)

## **ICT LIMITED WARRANTY**

The warranty period on ICT products is two (2) years from date of purchase from an authorized ICT reseller or OEM with valid proof of purchase, or from date of shipment from the ICT manufacturing facility. The warranty period for a repaired product or part is ninety (90) days or the remainder of the unexpired term of the new product warranty period, whichever is greater. Repair or replacement of a defective product or part does not extend the original warranty coverage period.

The ICT Limited Warranty is only intended for the benefit of the original purchaser and user of this product. This Warranty is not transferable or assignable without the prior written permission of ICT. ICT's sole obligation and liability under this warranty is limited to either repairing or replacing defective products at the sole discretion of ICT. When repairing or replacing the products, ICT may use products or parts that are new, equivalent to new or re-conditioned. Parts repaired or replaced during the warranty period will be under warranty for the remainder of the warranty period.

No claim will be accepted unless written notice of the claim is received by ICT in accordance with ICT's Return Material Authorization (RMA) procedure, as soon as reasonably possible after the defect is discovered. A valid product serial number must be provided with the RMA claim to prove eligibility. The RMA procedure is available on the ICT website at [www.ict-power.com/support/warranty-repair/](http://www.ict-power.com/support/warranty-repair/).

The Purchaser shall at their own risk and cost return the defective product to ICT's factory or designated repair center once an RMA is issued by ICT. Return of the products to the customer after repair is completed shall be prepaid by ICT unless otherwise mutually agreed between the parties. Products shipped to ICT which have incurred freight damage will not be covered by this Warranty and any repairs or replacement parts, components or products needed will be invoiced in the full current price amount and returned freight collect to the Purchaser. It is the Purchaser's responsibility to check the product upon receipt for any damage during shipping and to contact the carrier or shipper regarding such damage. Product that is returned as defective, which is determined to operate within published specifications will be returned to the Purchaser freight collect.

ICT assigns to the Purchaser any warranties which are made by manufacturers and suppliers of components of, or accessories for, the ICT product and which are assignable. ICT makes no representations as to the effectiveness or extent of such warranties, assumes no responsibility for any matters which may be warranted by such manufacturers or suppliers and extends no additional coverage under this Warranty to such components or accessories.

In no event shall ICT be liable for any special, indirect, or consequential damages such as, but not limited to, loss of use, business or goodwill, loss of revenue, or loss of profits, which may result, either directly or indirectly, from defects in products provided by ICT.

This Warranty will be void if the product has been subjected to misuse, neglect, accident, exposure to environmental conditions not conforming to the products' limits of operation, improper installation or maintenance, improper use of an electrical source, defects caused by sharp items or by impact pressure, a force majeure event, has been modified or repaired by anyone other than ICT or its authorized representative, has been subjected to unreasonable physical, thermal or electrical stress, improper maintenance, or causes external to the unit including but not limited to general environmental conditions such as rust, corrosive atmospheres, sustained temperatures outside the specified operating range of the equipment, exposure to power surges and/or electrical surges, improper grounding, mold or dust, animal or insect damage, water damage or immersion in liquid of any kind, or if the serial number has been altered, defaced, or removed.

ICT does not control the installation and use of any ICT product. Accordingly, it is understood this does not constitute a warranty of performance or a warranty of fitness for a particular purpose. This Warranty represents the entire agreement between ICT and Purchaser with respect to the subject matter herein and supersedes all prior verbal or written communications, representations, understandings, or agreements relating to this subject.

### **Return Material Authorization Procedure**

1. Request RMA number from ICT through telephone, e-mail, or website from Monday to Friday between 8:00am and 4:30pm Pacific Time.
  - North America toll-free: +1 877.930.0717 ext. 810
  - International: +1 604.856.6303 ext. 810
  - E-mail: [technical@ictcorporate.com](mailto:technical@ictcorporate.com)
  - ICT website: <https://ict-power.com/support/warranty-repair>
  
2. Provide the following information when requesting an RMA:
  - ICT model number
  - Serial number
  - Return ship-to address
  - The preferred shipping courier and account number, if applicable
  - An estimate of what the possible failure cause might be

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## 1.0 INTRODUCTION

The ICT DIN Series Power Distribution Unit (PDU) is a DIN-rail mount DC distribution unit which supports 60 amps (maximum) input; with six independently controlled and monitored output channels. Overcurrent protection for each output is available on the front panel with GMT-type fuses that are orderable separately.

The unit can accommodate a supply voltage from 10 to 60 volts DC, either positive or negative polarity, with a maximum input current of 60 amps to be distributed at 15 amps maximum on each of the six output channels. Each channel has independent current sensing, overcurrent protection, alarms, and output on/off control.

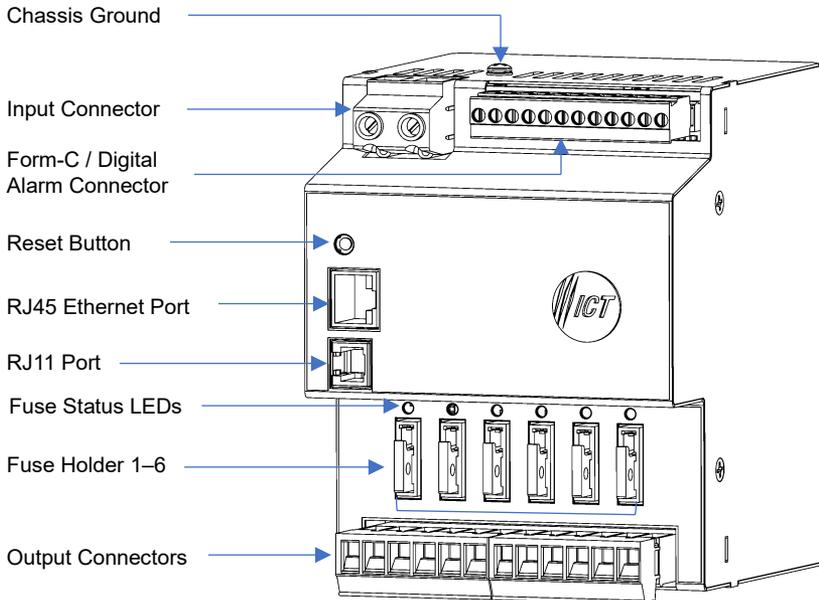


Figure 1. ICT DIN Series Power Distribution Unit

Form-C contact alarm outputs (C/NO/NC) are provided on the front panel to indicate all PDU alarms, while the digital alarm inputs can be used to monitor up to four external devices such as smoke, door or water sensors. The fuse status is displayed by an LED indicator located over each fuse.

Remote monitoring and control are available through the integrated security-protected Ethernet communications port on the front of the unit. The unit has a built-in web server with an embedded web-based Graphical User

Interface (GUI) that can be accessed using any standard commercial web browser. The GUI displays all unit information; allows full access to channel configuration settings; provides remote channel on/off control; and can be set up to send an alarm to user-defined e-mail accounts in the event a fault occurs. The GUI can also be used to configure and download a data log of up to 30 days of time-stamped event information. Full monitoring and control are also available using an SNMP-based management system for larger installations.

When combined with the ICT DIN Series Power Supply Unit, remote monitoring and control of battery current, voltage and temperature, low voltage disconnect setpoints, and battery charge current settings are available through the Ethernet controller and Graphical User Interface (GUI).

## 1.1 Common Features

- Output voltage range of 10 to 60 volts DC
- 60 amps system current rating
- Six independently controlled and monitored output channels
- Each output is GMT fuse-protected
- $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  operating temperature range
- Form-C contacts
- 2-year warranty

## 1.2 Intelligent Model

- TCP/IP remote management and power control of system and individual outputs
- On-board web server means no software to maintain
- Easy to use GUI
- Remote firmware update capability
- HTTPS, SMTP, SNMP (v1, v2c, v3), TLS 1.2 protocols supported
- Monitoring and alarm reporting of each output
- Alarms can be sent to multiple e-mail accounts
- Each output has adjustable load-shedding settings
- Network watchdog
- Four digital inputs for site monitoring sensors
- Data logging
- Password protection
- Serial port for connecting to ICT DIN Series Power Supply

## 2.0 INSTALLATION



**Risk of serious personal injury or damage to equipment and property. Always observe the following:**

- Shut off or disconnect all DC power sources before connecting or disconnecting wiring.
- Carefully observe wiring polarity when making input and output connections.
- Securely tighten all connections.



**Risk of personal injury or damage to equipment and property. Always observe the following:**

- Use wire and connectors rated for the maximum load current and size of fuse or circuit breaker in accordance with NEC Section 210.20(A) and keep cable lengths as short as practical.
- Channel output fuses must not exceed 15 amps max rating.
- Install unit in a restricted access location (such as an equipment rack) to limit unintentional contact with terminals and wiring.
- Keep sources of moisture away from unit.
- Do not energize the unit before the chassis ground is connected.
- Ensure the total power consumption of the loads does not exceed the 60-amp (peak) rated capacity of the unit.

### 2.1 Unpacking and Inspection

Perform a physical check of the unit as it is being taken out of the box to ensure it has not been damaged during shipping. Check that the accessories under the package contents section were shipped with the unit.

**NOTE:** In case of shipping damage, your freight carrier should be notified immediately.

### 2.2 Package Contents

- Power distribution unit
- Instruction Manual (USB drive)
- Two removable 6-pin DC output wire clamp connectors (in bag)
- One removable 12-pin alarm wire clamp connector (in bag)

#### 2.2.1 Tools and Parts Needed

- 1/8-inch slotted screwdriver
- Wire stripper

## 2.2.2 Other Requirements

To complete the installation, appropriate fuses (available from ICT) are needed for each output channel that the user plans to use. Fuses must be ordered separately for the use on the ICT-DIN-PDU6 (PDU) unit.

Table 1. Fuses

ICT Model	Rating (60 VDC)
ICT-GMT5	5 A
ICT-GMT10	10 A
ICT-GMT15	15 A

NOTE: Standard GMT fuses with current ratings up to 15 amps may also be used.

## 2.3 Quick Install Guide

- Unpack and check that the unit and all materials have been delivered.
- Obtain the recommended tools.
- Mount the unit on a standard DIN rail.
- Connect the chassis ground according to the site design, and in accordance with local electrical code standards.
- Connect the sensors and alarms (if required).
- Connect the network cable.
- Connect and energize the DC inputs.
- Configure the software settings.
- De-energize the DC source and insert the fuses.
- Connect the loads.
- Verify the system wiring.
- Energize the loads.

## 2.4 DIN Rail Mounting and Demounting

Mount the unit on a standard TS35 (EN 50022).

1. Push the unit towards the rail to engage the spring-loaded clip. Then push up as illustrated in the first drawing of Figure 2.
2. Pivot the device towards the rail so that the hook clips into the mounting rail as illustrated in the second drawing of Figure 2.

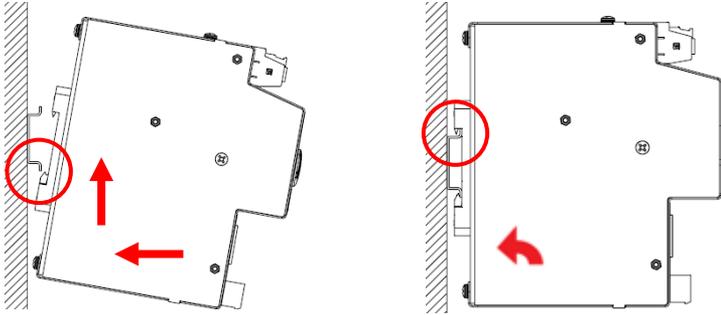


Figure 2. Mounting Unit on DIN Rail

To demount the unit from the standard DIN rail, do the following:

1. Push up and pivot the top of the unit away from the rail as illustrated in the first drawing of Figure 3.
2. When the top hook is detached, slightly lower the unit to disengage the spring-loaded clip and pull the unit away from the rail as illustrated in the second drawing of Figure 3.

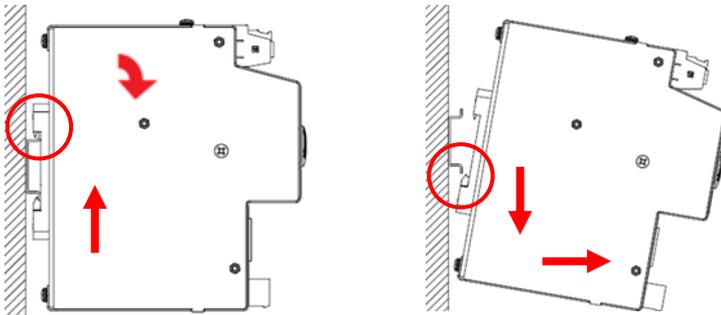


Figure 3. Demounting Unit from DIN Rail

## 2.5 Ground Connection

Connect a ground bonding wire from the chassis ground stud to a nearby common grounding point. Use a ground bonding wire that is sized in accordance with NEC Table 250.122 (see Table 2). Ensure that the selected ground bonding wire is rated to handle the maximum current rating of the unit.

Table 2. Minimum Size Equipment Grounding Conductors for Grounding Raceway and Equipment

Maximum Circuit Breaker Size	Conductor Size (AWG or kcmil)	
	Copper	Aluminum or Copper-Clad Aluminum
15	14	12
20	12	10
30	10	8
40	10	8
60	10	8
100	8	6

This is sourced from "National Electrical Code 2005 Edition", p. 70-112.



NOTICE

All DC inputs and outputs of ICT's DC distribution units are isolated from chassis ground (floating). DC input and output returns can remain isolated from ground (DC-I) or can be grounded (DC-C), as per site grounding requirements and/or local or national electrical codes. Ensure that all relevant electrical code standards are followed.

## 2.6 Sensor and Alarm Connections

1. Install the 12-pin alarm wire clamp connector.
2. The ALARM connector allows the unit to report faults to an external monitoring device through a form-C contact. If needed, connect form-C contact monitoring wiring to the "ALARM" on the 12-pin alarm wire clamp connector. Use 12–30 AWG wire. Refer to Table 5 for which conditions will trigger a form-C alarm.
3. Connect up to four external devices such as smoke, door or water sensors through the digital alarm inputs by stripping and terminating 12–30 AWG alarm wiring and connecting to the four "ALARM INPUT" terminals on the 12-pin alarm wire clamp connector, if desired. Each alarm input can be connected to a form-C/dry contact output on the external device. If the alarm state changes on the device being monitored, the GUI will report the alarm. The GUI

allows each of the four alarm inputs to be labelled with a unique name (see Section 4.9).

Table 3. Alarm Output/Input Connector

Pin	Alarm Input Function
1	Input 1
2	Common
3	Input 2
4	Common
5	Input 3
6	Common
7	Input 4
8	Common
9	X (unused)
10	Common
11	Alarm NO (alarm state)
12	Alarm NC (alarm state)

## 2.7 Network Cable Connection

1. Connect a 10/100 Base-T Ethernet cable to the RJ45 LAN port on the front of the PDU to allow for remote monitoring and control of the unit.

**NOTE:** See the Network Monitoring and Control section for information on configuring and using the built in GUI, e-mail, or SNMP functions (see Section 4.7).

2. If the PDU is used in combination with the ICT DIN Series Power Supply (PSU), a serial data cable (provided with the power supply unit) can be installed to allow the PDU to monitor the status of the power supply. Install the PDU and PSU side by side, then connect the two RJ11 COMM ports together using the supplied data cable. The green "DC OK" LED on the PSU will blink once every 10 seconds if the data connection is functioning properly.

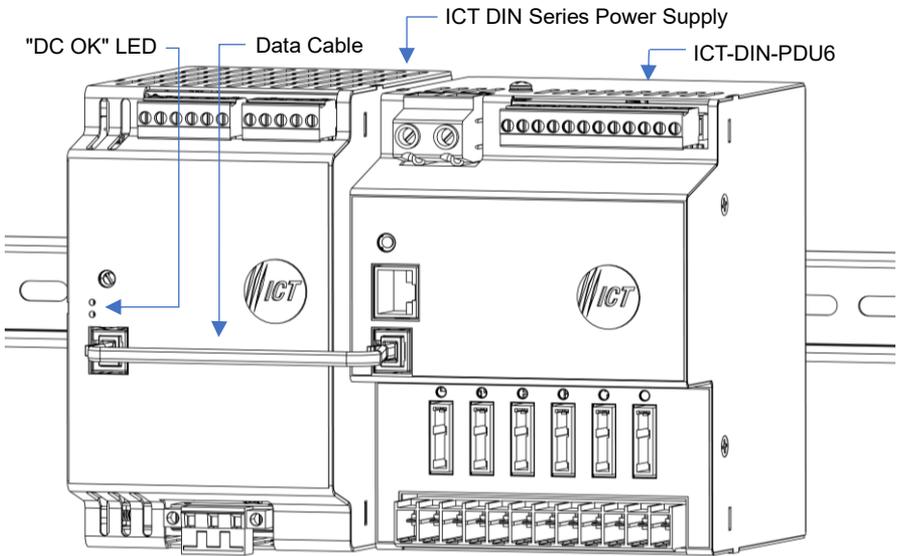


Figure 4. ICT DIN Series Power Supply and ICT-DIN-PDU6

## 2.8 Input Connections

1. De-energize the DC source and open any disconnect switches.
2. Connect the "+" output terminal of the power supply unit (PSU) to either the PDU "INPUT" terminal for a positive voltage system or "RTN" terminal for a negative voltage system. Use 6–20 AWG wire.
3. Connect the "-" output terminal of the PSU to the other input terminal on the PDU. Use 6–20 AWG wire.
4. Energize the DC source and close any disconnect switches.

**NOTE:** The unit will support either a negative or positive ground connection.

## 2.9 Software Configuration

Configure the software (see Section 4).

## 2.10 Installation of Fuses

1. De-energize the DC source and open any disconnect switches.

2. Install appropriately rated fuse into the fuse holder for each output terminal block to be used by carefully inserting a GMT-type fuse, where the side of the fuse that has the color-coded flag is facing upwards. The fuse only fits in one direction — do not force wrong orientation.



Fuses must not exceed 15 amps maximum rating.

The fuse can be removed from the fuse holder by pulling out using a fuse puller. Do not use inappropriate tools as they may damage the fuse.

## 2.11 Load Connections



**Risk of personal injury or damage to equipment and property. Always observe the following:**

- DC-AC inverters should not be connected to the outputs of these ICT units. DC-AC inverters create significant inrush current and may damage the circuitry or interfere with the operation of power distribution panels that they are connected to. Connecting a DC-AC inverter in this way may void the product warranty.
- Ensure that the combined current draw on all six outputs does not exceed the output capacity of the unit (60 amps).
- Ensure continuous load current through each output channel does not exceed 80% of the maximum output ratings in accordance with NEC Section 210.20(A).

Make connections to the load using wire and connectors appropriately rated for the maximum output current capability of the unit.

An output (labelled OUT) and return (labelled RTN) are provided for each channel.

The unit provides six remotely controlled and monitored outputs, with front panel overcurrent protection provided by GMT-type fuses.

The maximum current rating for the unit is 60 amps. Each output can accept 12 amps maximum current.

1. Install the two 6-pin DC output wire clamp connectors.
2. Verify the polarity of the unit.

3. Connect up to six external loads using appropriately rated wire inserted and secured into the six cage-clamp output connector pairs on the front of the unit. The terminals will accept 10–30 AWG wires.

## 2.12 System Wiring Final Verification

Check that all connections to the distribution unit are correct and properly tightened.

## 2.13 Energize Loads

Re-energize DC source and close any disconnect switches to energize any loads connected to the unit.

## 2.14 Mixed Polarity or Voltage Installation (not applicable)

# 3.0 OPERATION: FRONT PANEL

## 3.1 Password Reset

Reset the Administrator password, the network, and web server settings to the original factory default values by doing the following (the standard user password and other settings are not affected):

1. Press and hold the recessed "RESET" button on the front panel for approximately 10 seconds.
2. Release the button.
3. Log in to the unit as username "admin", no password is required. Set a new password as desired and reconfigure the network settings.

The unit may also be restored to factory settings through the GUI (see Section 4.11)

## 3.2 Status Indicators and Alarms

The LEDs located over each fuse and the form-C Alarm contacts on the front of the unit are used to indicate an alarm condition.

Table 4. Fuse Status LED

LED	Fuse Status
ON	Blown
OFF	Good

Table 5. Distribution Unit Alarms

NC/C PINS	NO/C PINS	Condition
Open	Closed	Fuse Alarm <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• One or more blown or missing fuse</li> </ul>
		System Under-Voltage Alarm <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• System voltage is below the set value.</li> </ul>
		System Over-Voltage Alarm <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• System voltage is above the set value.</li> </ul>
		System Over-Current Alarm <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• System current is above the set value.</li> </ul>
		Alarm Input # 1–4 <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• Digital alarm is triggered.</li> </ul>
		Output Over-Current Alarm # 1–6 <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• Output current is above the set value.</li> </ul>
		Output Under-Current Alarm # 1–6 <ul style="list-style-type: none"> <li>• Activate Alarm Form-C contact is checked.</li> <li>• Output current is below the set value.</li> </ul>
		No power to unit.
Closed	Open	Activate Alarm Form-C contact is checked, and no fault occurred.
		All Activate Alarm Form-C Contact is not checked.

## 4.0 OPERATION: GRAPHICAL USER INTERFACE

Connect to the ICT DIN Series Power Distribution Unit via Ethernet for full remote monitoring and control using any standard web browser on a network connected computer or phone. No additional software is required.

### 4.1 Log In/Log Out

1. Connect to the ICT DIN Series Distribution Unit (PDU) by entering the IP address of the unit in the location/address field of the browser as shown below.

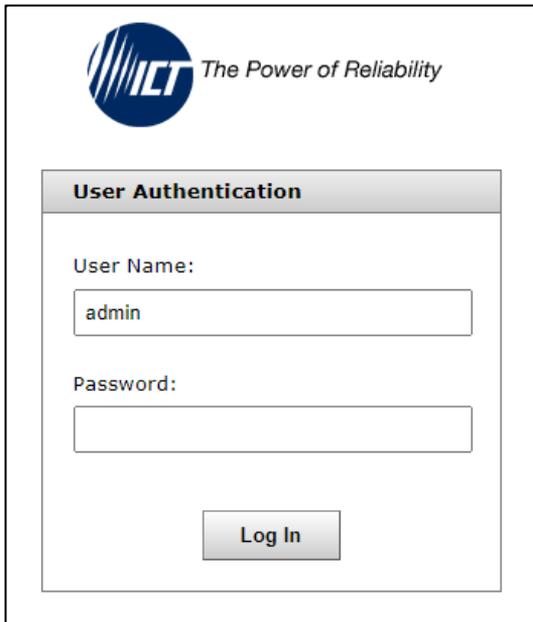


The default IP address of the unit is "192.168.0.180", but any unit connected to a network with a DHCP server will be assigned a different IP address automatically.

**NOTE:** If connecting directly from the computer to the ICT DIN Series Power Distribution Unit, the computer must be configured with an IP address on the same network subnet as the unit. This is not required for a network connection (See Section 4.7).

The IP address of any ICT unit on a local network can be found by running the ICT "IP Address Discovery tool", after installing it on a Windows computer connected to the same network (tool available for download from ICT <http://www.ict-power.com/resources/tools-utilities/>). This tool does not support macOS.

2. Log into the unit's built-in server when prompted with the username and password. The default username is "admin", and no password is required as the factory default.

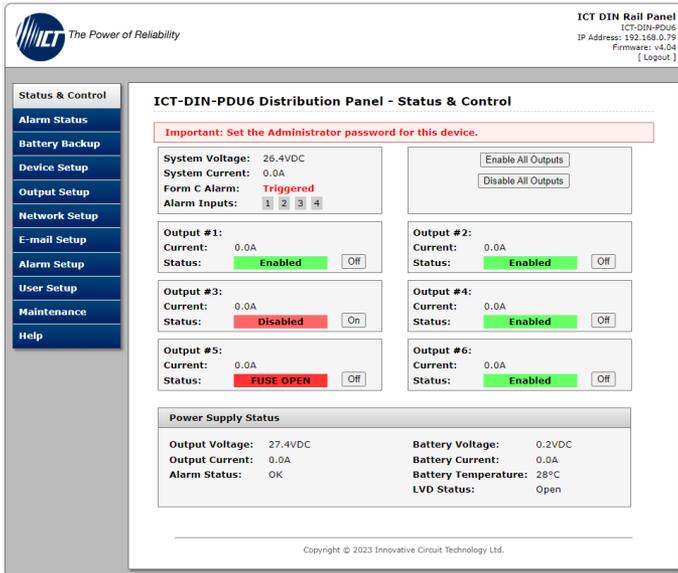


The screenshot shows a web-based user authentication interface. At the top left is the ICT logo with the tagline "The Power of Reliability". Below the logo is a grey header bar with the text "User Authentication". Underneath the header, there are two input fields: "User Name:" with the text "admin" entered, and "Password:" with an empty field. At the bottom center of the form is a "Log In" button.

To log out of the ICT DIN Series Power Distribution Unit GUI, click on the Logout link on the top right of the browser window. The system will also automatically log off the user after 20 minutes of inactivity.

## 4.2 Status & Control

Once successfully logged in, the "Status & Control" tab will be shown in the browser.



The screenshot displays the "ICT-DIN-PDU6 Distribution Panel - Status & Control" interface. It features a navigation menu on the left with options like "Status & Control", "Alarm Status", "Battery Backup", "Device Setup", "Output Setup", "Network Setup", "E-mail Setup", "Alarm Setup", "User Setup", "Maintenance", and "Help". The main content area shows system parameters: System Voltage (26.4VDC), System Current (0.0A), Form C Alarm (Triggered), and Alarm Inputs (1, 2, 3, 4). There are buttons for "Enable All Outputs" and "Disable All Outputs". Six output channels are listed, each with its current (0.0A) and status (Enabled, Disabled, or FUSE OPEN). A "Power Supply Status" section at the bottom provides details on output voltage (27.4VDC), battery voltage (0.2VDC), output current (0.0A), battery current (0.0A), alarm status (OK), battery temperature (28°C), and LVD status (Open). The copyright notice at the bottom reads "Copyright © 2023 Innovative Circuit Technology Ltd."

This tab provides the operating status of the unit.

### Unit Status

**System Voltage:** Shows output DC voltage of the distribution unit. This value does not specify polarity.

**System Current:** Shows total amps being supplied by the unit.

**Form C Alarm:** Shows whether the unit is broadcasting a form-C alarm (Triggered or Inactive).

**Alarm Inputs:** Shows the status of any of the four Input Alarms that have been enabled (see Section 4.9). Will show grey if inactive or red if an alarm is active. An alarm input indicator box will not be displayed if the alarm is not enabled.

### Output Buttons

**Enable All Outputs:** Use this to close the six channel relays on the unit, applying power to all external loads. The outputs will be enabled in a timed sequence if the "Sequence/Cycle Delay" has been set on the Device Setup page (see Section 4.5).

**Disable All Outputs:** Use this to open the six channel relays on the unit, disabling power to external loads.

### **Output Status**

Each output on the unit will be displayed with name and status (Enabled, Disabled, FUSE OPEN). A status "Enabled (green)" indicates that the internal electronic relay on that output channel is closed or turned on. A status "Disabled (orange)" indicates that the internal electronic relay is open or turned off. A status "FUSE OPEN (red)" indicates that the fuse is blown.

**NOTE:** "FUSE OPEN" only displays when a fuse is installed.

Select the "On" or "Off" buttons to turn the output on or off. The default setting is Enabled.

If the "COMM" port on the PDU is connected to an ICT DIN Series Power Supply, the "Power Supply Status" section will display the information of the output voltage, output current, alarm status, battery voltage, battery current, battery temperature, and LVD status.

### **Power Supply Status**

**Output Voltage:** Shows output DC voltage of the power supply.

**Output Current:** Shows total amps being supplied by the power supply. This includes loads and battery charging.

**Alarm Status:** Shows status of the monitored form-C contacts (Alarm or OK).

**Battery Voltage:** Shows voltage of the battery.

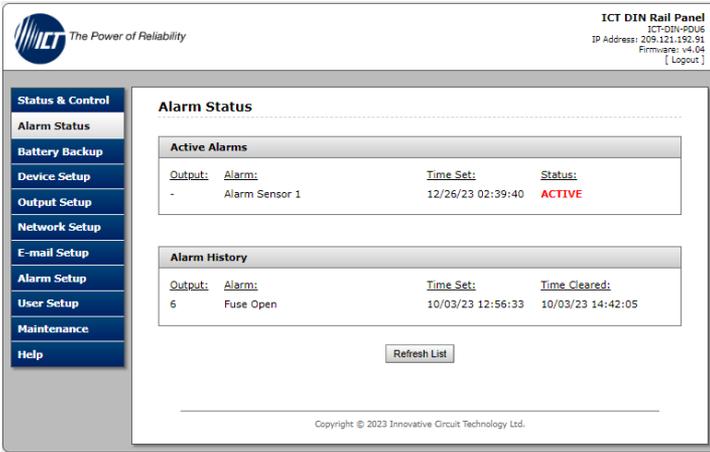
**Battery Current:** Shows the current that is passing from, or to the batteries. This number is negative if the battery is discharging; positive if the battery is being charged; and shows 0.0 A if the battery is fully charged.

**Battery Temperature:** Shows the temperature measured on the ICT Battery Temperature Probe (ICT-TMP).

**LVD Status:** Shows status of the LVD (Open or Closed).

## **4.3 Alarm Status**

Use this tab to monitor all active alarms and up to 100 historic alarms. The history will be cleared after the unit is rebooted.



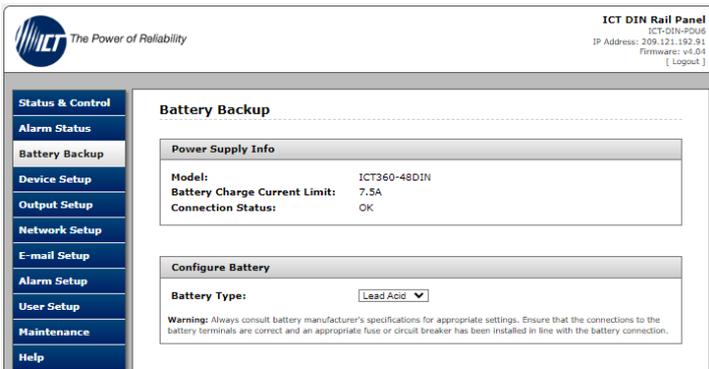
### Active Alarms

Shows the output that the alarm is on; the name of the alarm; the time that the alarm started and the status of the alarm (ACTIVE).

### Alarm History

Shows the output that the alarm is on; the name of the alarm; the time that the alarm started; and the time that the alarm cleared.

## 4.4 Battery Backup (if ICT DIN Series Power Supply is connected)



The "Battery Backup" page is only accessible if the "COMM" port on the PDU is connected to an ICT DIN Series Power Supply. Use this tab to see the connection status and configure the settings of the power supply.

## Power Supply Info

**Model:** Shows the model number of the ICT DIN Series Power Supply.

**Battery Charge Current Limit:** Shows the maximum battery current that can be provided through the battery terminals of the power supply. This threshold is set using the selector dial on the ICT DIN Series Power Supply.

**Connection Status:** Shows the status of the data connection between the PDU and DIN Series Power Supply Unit (PSU). "OK" will be displayed if connection is good while "Comm Bus Error" will be displayed after 30 seconds if there is a wiring fault or hardware issue preventing communications. If the data cable is removed, the connection status message would not change but there will be a "Power Supply Offline" alarm triggered and shown in the Alarm Status.

NOTE: This page does not auto-refresh, it needs to be manually reloaded for the connection status message to change.

## Configure Battery



**Always consult battery manufacturer's specifications when selecting battery type. Incorrect battery type setting may damage the battery.** If a lithium-ion battery is used, it must utilize an integrated battery management system (BMS) to protect the battery cells from inappropriate voltage or current levels.

**Battery Type:** Configure the Battery Type of the battery used with the ICT DIN Series Power Supply (Lead Acid or Lithium Ion).

If Lithium-ion type battery is selected, the "Temperature Coefficient/cell" setting will be unavailable.

## Output Voltage Control

**Output Voltage:** Set the DC output voltage of the ICT DIN Series Power Supply to match the float voltage requirement for the external battery. The default setting varies based on the power supply used.

Table 6. Default Output Voltage Setting

Model	Output Voltage	
	Lead-acid	Lithium-ion
ICT360-24DIN	27.3 VDC	27.0 VDC
ICT360-48DIN	54.6 VDC	54.0 VDC

**Temperature Coefficient / cell (only available on lead-acid batteries):** Set the battery voltage Temperature Coefficient / Cell to optimize the automatic control of the lead-acid battery charging voltage, to keep the battery in a good state of health. This setting is only available if the ICT DIN Series Power Supply is configured for use with a lead-acid type battery.

Adjust this setting to match the battery manufacturer's recommended compensation value in  $-mV/^{\circ}C$  per cell. This value will typically be  $-4 mV/^{\circ}C$  for a flooded lead-acid battery (i.e., will compensate output voltage  $-24 mV/^{\circ}C$  for a six cell 12 V battery) to help ensure the battery is fully charged in cold locations, and is not overcharged when warm. The numbers in the drop-down field are absolute values. The default setting is  $-5 mV/^{\circ}C$ .

NOTE: The ICT DIN Series Power Supply must have the battery temperature sensor (ICT-TMP) installed on the battery for this setting to have an effect (default setting is  $-5 mV/^{\circ}C$ , assumes  $25^{\circ}C$  operation).

### Alarm Reporting

**Send E-mail:** Select the check box to have an e-mail sent to the e-mail addresses set up on the E-mail Setup page for an alarm condition (see Section 4.8). The default setting is Disabled.

### LVD Settings

The low voltage disconnect (LVD) protects the battery from excessive discharge by disconnecting the battery when the battery reaches a preset voltage. The battery is reconnected when AC power is restored or after recharging to a preset threshold.

**Disconnect Voltage:** Set the threshold to a level that will protect the battery from excessive discharge (as recommended by the battery manufacturer). The LVD contactor will open when the battery discharges to this level for at least 3 seconds (see Table 6).

**Reconnect Voltage:** Set the level where the unit will reconnect to the battery after it has recharged (as recommended by the battery manufacturer). The "Reconnect Voltage" must be higher than the Disconnect Voltage to prevent the LVD contactor repeatedly cycling on and off (see Table 7).

Table 7. Default LVD Settings

LVD Setting	ICT360-24DIN	ICT360-48DIN
Disconnect Voltage	22.0 VDC	44.0 VDC
Reconnect Voltage	25.0 VDC	50.0 VDC

### **Battery Over-Current Alarm**

**Over-Current Threshold:** Set the threshold to receive an alarm notification when the battery discharge or charge current exceeds a set overcurrent level. Set the threshold to 0 amps to disable this alarm. The default setting is 0 (Disabled).

NOTE: Save Settings to enable any changes made.

## **4.5 Device Setup**

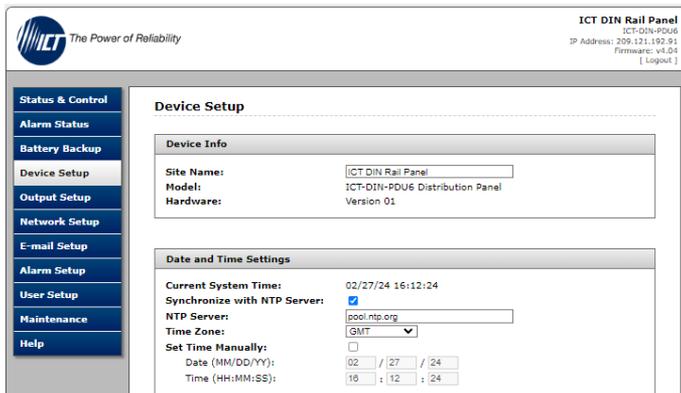
Use this tab to configure the unit's name, set the date and time and enable the watchdog timer and data logging features.

### **Device Info**

**Site Name:** Enter a descriptive name for the system. This name will be used in all e-mail messages.

**Model:** Shows the model number and name of the unit.

**Hardware:** Shows the hardware version of the unit.




The Power of Reliability

**ICT DIN Rail Panel**  
 ICT-DIN-PDU6  
 IP Address: 209.151.199.81  
 Firmware: v4.04  
[\[ Logout \]](#)

Status & Control

Alarm Status

Battery Backup

Device Setup

Output Setup

Network Setup

E-mail Setup

Alarm Setup

User Setup

Maintenance

Help

#### Device Setup

---

**Device Info**

Site Name:

Model: ICT-DIN-PDU6 Distribution Panel

Hardware: Version 01

**Date and Time Settings**

Current System Time: 02/27/24 16:12:24

Synchronize with NTP Server:

NTP Server:

Time Zone: GMT

Set Time Manually:

Date (MM/DD/YY):  /  /

Time (HH:MM:SS):  :  :

### **Date and Time Settings**

**Current System Time:** Shows the current system date and time.

**Synchronize with NTP Server:** Select the check box to synchronize with NTP Server. The default is Enabled.

**NTP Server:** Set an NTP server address here (i.e., time.nist.gov) to automatically load network time.

**Time Zone:** Set the time zone this unit will be using.

**Set Time Manually:** Select the check box to enable manually setting the time and date. The default is Disabled.

## Power-On Sequencing/Cycling

Power-On Sequencing/Cycling	
Sequence/Cycle Delay:	<input type="text" value="1"/> second(s)
Reverse Sequence Order:	<input type="checkbox"/>

**Sequence/Cycle Delay:** Set the time in seconds (0–60 seconds) that will be used as the delay between energizing outputs. Will affect all outputs. Set to 0 to disable. Use this feature to allow a delay between energizing loads to reduce inrush current. The default setting is 0 (Disabled).

The "Sequence Delay" time will also be used as the "Power Cycling" time delay for each output that has the "Power Cycling" feature enabled on the "Output Setup" page (see Section 4.6).

**Reverse Sequence Order:** Select the check box to cause the power-on sequence to run in reverse order with output 6 on first, ending with output 1, when the "Enable All Outputs" button is clicked on the Status & Control page.

## Network Watchdog

Network Watchdog	
Watchdog Timeout:	<input type="text" value="10"/> minute(s)
Maximum Cycle Attempts:	<input type="text" value="0"/>
Set Maximum Cycle Attempts to 0 for no limit.	
Select a Watchdog to edit:	
<input checked="" type="radio"/> #1: (Disabled)	
<input type="radio"/> #2: (Disabled)	
<input type="radio"/> #3: (Disabled)	
<input type="radio"/> #4: (Disabled)	
<input type="radio"/> #5: (Disabled)	
<input type="radio"/> #6: (Disabled)	
Watchdog Enabled:	<input type="checkbox"/>
Primary IP Address:	<input type="text"/>
Secondary IP Address:	<input type="text"/>
Cycle Outputs:	1: <input type="checkbox"/> 2: <input type="checkbox"/> 3: <input type="checkbox"/> 4: <input type="checkbox"/> 5: <input type="checkbox"/> 6: <input type="checkbox"/>

**Watchdog Timeout:** Set a time in minutes (1–80 minutes) for the unit to wait with no ping response from IP address before initiating a reset. Ensure this time is greater than the normal start-up time for the network hardware to prevent nuisance power cycle events at system start up. The default is 10 minutes.

**Maximum Cycle Attempts:** This setting will limit the maximum number of times the unit can attempt to cycle power to the output(s). If network connectivity is restored the attempts counter is reset. Rebooting the unit will also reset the counter. Set Maximum Cycle Attempts to zero for no limit. The default is 0.

**Select a Watchdog to edit:** Select one of the six independent watchdogs to configure. Each watchdog, if enabled, will cause the unit to periodically ping up to two remote IP addresses to verify network connection status. If there is no response from either address, the unit will cycle power on all outputs that are configured in the "Cycle Outputs" setting below. This feature is useful for re-booting a modem or other network device that is powered by one of the distribution panel outputs, to help recover the network IP connection when one of these devices becomes unresponsive. A delay time must be entered in the "Sequence/Cycle Delay" field for this function to work. Power for a cycled channel will be held in the off state for the duration set by the Sequence/Cycle delay time, then will be turned back on.

**Watchdog Enabled:** Select the check box to enable the selected network watchdog. The default is Disabled.

**Primary IP Address:** Set a primary IP address for the selected watchdog to monitor. If left blank the unit will monitor the Gateway IP address listed in the Network Setup page.

**Secondary IP Address:** Set a secondary IP address for the unit to monitor to verify network status. This is optional if the primary IP address is set.

**NOTE:** The Network Watchdog will only trigger if both the Primary and Secondary IP addresses fail to respond.

**Cycle Outputs:** Set which output(s) to power cycle when the Network Watchdog triggers.

## Data Logging

Data Logging	
Data Logging:	<input type="button" value="Enabled"/> <input type="button" value="Download Log (CSV)"/>
Log Start Date:	01/29/24 12:30:10

**Data Logging:** Set the check box to Enable data logging. This will keep a running record of the system voltage, system current, channel output currents, fuse status, and alarm inputs, recorded once per minute for the last 30 days. The default is Enabled.

**Log Start Date:** Shows date and time that the data log started.

**Download Log (CSV):** Click on the Download Log (CSV) button to store the CSV format log file on the computer for further analysis.



NOTICE

Updating the firmware will delete the current log file. Download the log before updating the firmware.

**NOTE:** Save Settings to enable any changes made.

## 4.6 Output Setup

Use this tab to configure the settings for each output channel on the PDU.

The Power of Reliability		ICT DIN Rail Panel
		ICT-DIN-POU6 IP Address: 209.121.192.91 Firmware: v4.04 [ Logout ]
<ul style="list-style-type: none"> <li>Status &amp; Control</li> <li>Alarm Status</li> <li>Battery Backup</li> <li>Device Setup</li> <li><b>Output Setup</b></li> <li>Network Setup</li> <li>E-mail Setup</li> <li>Alarm Setup</li> <li>User Setup</li> <li>Maintenance</li> <li>Help</li> </ul>	<h3>Output Setup</h3> <p>Select an Output to edit (Click "Save Settings" when finished)</p> <p> <input checked="" type="radio"/> #1: Radio 1                      <input type="radio"/> #4: RF Amplifier  <input type="radio"/> #2: Radio 2                      <input type="radio"/> #5: Camera  <input type="radio"/> #3: Repeater                      <input type="radio"/> #6: Auxiliary         </p> <hr/> <h4>Output #1 Settings</h4> <p>Output Label: <input type="text" value="Radio 1"/></p> <p>Output State after Panel Reset: <input type="text" value="Restore Last State"/></p> <p>Ignore Fuse Status: <input type="checkbox"/></p> <p>Enable Power Cycling: <input type="checkbox"/></p> <p><small>If Power Cycling is enabled, "Sequence/Cycle Delay" must be set on the Device Setup page.</small></p>	

### Select an Output to edit

Select the output to be edited in this section. Make any required changes, and then click on the "Save Settings" button at the bottom of the page to save any edits.

## Output Settings

**Output Label:** Enter a descriptive label for the selected output channel. The default setting is blank.

**Output State after Panel Reset:** Sets the state for the output after an input power failure, or soft reset of the unit. The default setting is Restore Last State. Select one of the following:

- **Restore Last State:** This will return the output relay to the state prior to the reset event (default).
- **Enable Output:** This will turn the output on, regardless of its previous state.
- **Disable Output:** This will turn the output off, regardless of its previous state.

**Ignore Fuse Status:** Select to disable alarms from this output. Will prevent false alarms on an unused channel. The default setting is Disabled.

**Enable Power Cycling:** Select this box to enable output power cycling for the selected output. Enabled outputs will automatically be re-enabled after the "Sequence/Cycle Delay" time whenever the output is disabled using the "Output Off" button on the "Status & Control" page, or when the Network Watchdog is triggered. This feature is useful for remotely resetting power to a router or other hardware required for the network connectivity of the unit. The default setting is Disabled.

NOTE: The "Sequence/Cycle Delay" time must be set on the "Device Setup" page with duration long enough for the connected network hardware to fully reset for this function to be effective. Multiple outputs that are disabled using Power Cycling will be re-enabled in sequence from output #1 to output #6.

## Output Load-Shedding

Output #1 Load-Shedding	
Enable Load-Shedding:	<input checked="" type="checkbox"/>
Load-Shedding Threshold:	<input type="text" value="42.00"/> VDC
Load-Shedding Auto Recovery:	<input checked="" type="checkbox"/>
Auto Recovery Threshold:	<input type="text" value="46.00"/> VDC

If enabled, Load-Shedding will disable this output if the system voltage drops below the threshold for at least 30 seconds.

Load shedding will disable specified outputs when the system DC voltage reaches a preset threshold for at least 30 seconds. This will save battery capacity for mission-critical load devices by turning off non-critical load

devices. Loads will be reconnected if "Load-Shedding Auto Recovery" is enabled, and the DC voltage exceeds the "Recovery Threshold" for 60 seconds.

**Enable Load-Shedding:** Select this box to enable load-shedding on this output. The default setting is Disabled.

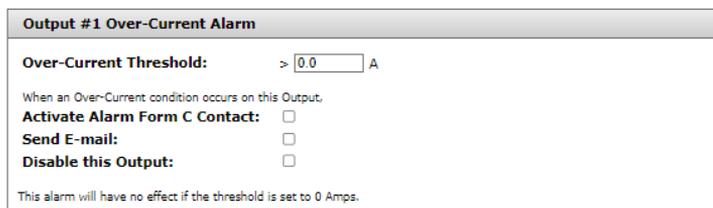
**Load-Shedding Threshold:** Set the voltage (1.0–60.0 VDC) at which the selected output will be disabled. The default setting is 21.00 VDC.

**Load-Shedding Auto Recovery:** Select this box to allow the output to be automatically reconnected when the system voltage is above the "Auto Recovery Threshold". The default setting is Disabled.

**Auto Recovery Threshold:** Set the voltage (1.5–60.5 VDC) at which the selected output will automatically be reconnected. This value must be at least 0.5 V above the "Load-Shedding Threshold" voltage. The default setting is 24.00 VDC.

**NOTE:** Output that has been disabled on the "Status & Control" page will reconnect automatically if "Load-Shedding Auto Recovery" is enabled for that output. To prevent this, ensure that "Load-Shedding Auto Recovery" is not enabled.

## Output Over-Current Alarm



**Output #1 Over-Current Alarm**

**Over-Current Threshold:** > 0.0 A

When an Over-Current condition occurs on this Output,

**Activate Alarm Form C Contact:**

**Send E-mail:**

**Disable this Output:**

This alarm will have no effect if the threshold is set to 0 Amps.

**Over-Current Threshold:** Set the current (1.0–26.3 A) that will trigger an overcurrent alarm on this output. Output current above this level for at least 5 seconds will trigger the Over-Current Alarm. Disable this alarm by setting the threshold to 0 amps. The default setting is 0 (Disabled).

**Activate Alarm Form C Contact:** Set the check box for the Alarm relay to trigger for an overcurrent condition. The default setting is Disabled.

**Send E-mail:** Set the check box to have an output Over-Current alarm e-mail sent to the e-mail addresses set up on the "E-mail Setup" page (see Section 4.8). The default setting is Disabled.

**Disable this Output:** Set this box to disable the output if an overcurrent alarm occurs. This function may be used as an electronic circuit breaker which can then be remotely reset by clicking the "Output ON" button on the Status & Control page. The default setting is Disabled.

## Output Under-Current Alarm

**Output #1 Under-Current Alarm**

**Under-Current Threshold:** <  A

When an Under-Current condition occurs on this Output.

**Activate Alarm Form C Contact:**

**Send E-mail:**

This alarm will have no effect if the threshold is set to 0 Amps.

**Under-Current Threshold:** Set the current (0.0–26.3 A) that will trigger an undercurrent alarm on this output. Output current below this level for at least 5 seconds will trigger the Under-Current Alarm. Disable this alarm by setting the threshold to 0 amps. The default setting is 0 (Disabled).

**Activate Alarm Form C Contact:** Set the check box for the Alarm relay to trigger for an undercurrent condition. The default setting is Disabled.

**Send E-mail:** Set the check box to have an output Over-Current alarm e-mail sent to the e-mail addresses set up on the "E-mail Setup" page (see Section 4.8). The default setting is Disabled.

**NOTE:** Save Settings for each channel and then repeat the setup process for all output channels to be used, or Copy Settings to All.

## 4.7 Network Setup

Use this tab to configure the unit's network settings.



NOTICE

Saving any changes to the network settings will cause the unit to re-start, output power will be unaffected.

### Network

**MAC Address:** Shows the MAC address assigned to the unit.

**Enable DHCP:** Set the check box if the network uses a DHCP server to automatically assign IP addresses. The default is Enabled.

To manually assign a static IP address to the unit uncheck this box, then set the following parameters.

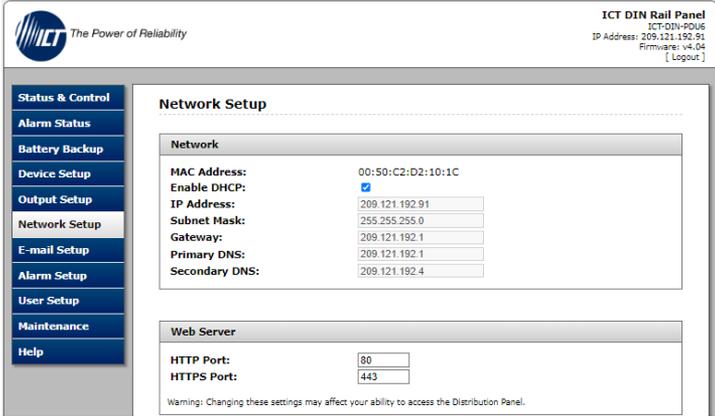
**IP Address:** Set a unique IP address for the unit.

**Subnet Mask:** Set the mask for the subnet the unit is located on.

**Gateway:** Set the IP address of the default router (Gateway) used for connecting attached devices to different networks.

**Primary DNS:** Set the IP address of the Primary DNS Server for the network.

**Secondary DNS:** Set the IP address of the Secondary DNS Server for the network.



The screenshot shows the web interface for the ICT DIN Rail Panel. The top right corner displays the unit's IP address (209.121.192.91) and firmware version (v4.04). A sidebar on the left contains navigation links: Status & Control, Alarm Status, Battery Backup, Device Setup, Output Setup, Network Setup (highlighted), E-mail Setup, Alarm Setup, User Setup, Maintenance, and Help. The main content area is titled "Network Setup" and contains two sections: "Network" and "Web Server".

Network	
MAC Address:	00:50:C2:D2:10:1C
Enable DHCP:	<input checked="" type="checkbox"/>
IP Address:	209.121.192.91
Subnet Mask:	255.255.255.0
Gateway:	209.121.192.1
Primary DNS:	209.121.192.1
Secondary DNS:	209.121.192.4

Web Server	
HTTP Port:	80
HTTPS Port:	443

Warning: Changing these settings may affect your ability to access the Distribution Panel.

## Web Server



NOTICE

Changing the web server port numbers may cause loss of communication with the unit.

The following ports may be changed within a range of 1 to 65,565, if required:

**HTTP Port:** Set the port used for HTTP traffic between the unit and the browser. The default HTTP port is "80", and if this is changed, the new HTTP port number must be appended to the URL used to access the unit (e.g., use URL "http://192.168.0.180:8000" for IP address "192.168.0.180", port "8000").

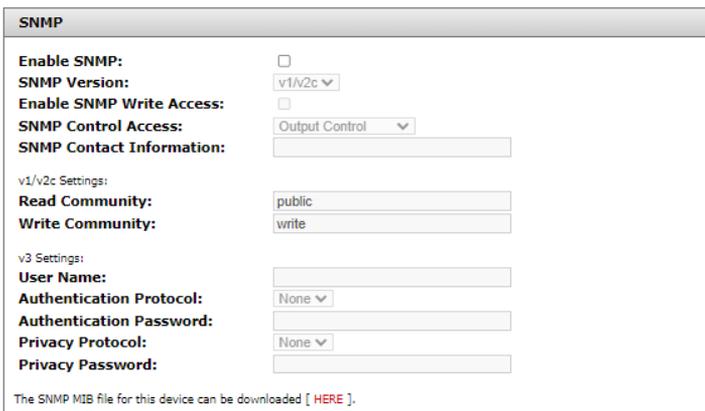
**HTTPS Port:** Set the power used for HTTPS traffic between the unit and the browser. The HTTPS (HTTP Secure) protocol uses encrypted data transfer between web browsers and servers for higher security. The default HTTPS port is "443". Append any changed HTTPS port to the end of the URL for the unit.

To access the unit through a secure HTTPS connection, use "https://" at the start of the unit's URL (e.g., "https://192.168.0.180:8888" for IP address "192.168.0.180", HTTPS port "8888").

## **SNMP**

SNMP (Simple Network Management Protocol) is an industry standard protocol for network management software. Enabling the SNMP function on the PDU will allow standard SNMP management software to connect to the SNMP agent running on the PDU and read real-time system information such as system voltage, and channel currents. The SNMP is for the PDU functions only, and it does not monitor and control the PSU functions. The PDU can send SNMP traps to the external management software when an alarm or fault occurs. Only PDU alarms are reported via SNMP.

The information available from the SNMP agent is described in a MIB (Management Information Base) file, which can be downloaded from the ICT website: <https://ict-power.com/resources/tools-utilities/>. Use the ICT Distribution Series MIB files. The MIB file can also be downloaded from within the GUI. There are links in the SNMP section of the Network Setup tab and on the Help tab. The unique unit MIB file must then be imported into the external SNMP management software.



The screenshot shows the SNMP configuration interface. It includes the following fields and controls:

- Enable SNMP:** A checkbox that is currently unchecked.
- SNMP Version:** A dropdown menu set to "v1/v2c".
- Enable SNMP Write Access:** A checkbox that is currently unchecked.
- SNMP Control Access:** A dropdown menu set to "Output Control".
- SNMP Contact Information:** An empty text input field.
- v1/v2c Settings:**
  - Read Community:** A text input field containing "public".
  - Write Community:** A text input field containing "write".
- v3 Settings:**
  - User Name:** An empty text input field.
  - Authentication Protocol:** A dropdown menu set to "None".
  - Authentication Password:** An empty text input field.
  - Privacy Protocol:** A dropdown menu set to "None".
  - Privacy Password:** An empty text input field.

At the bottom of the form, there is a note: "The SNMP MIB file for this device can be downloaded [ [HERE](#) ]."

**Enable SNMP:** Select this check box to enable the SNMP agent. The default setting is Disabled.

**SNMP Version:** Set the SNMP version (v1/v2c, v3, or All) supported by the SNMP agent. If "All" is selected, all SNMP versions will be supported simultaneously. The appropriate settings for the selected SNMP version will need to be configured.

**Enable SNMP Write Access:** Select this check box to enable DC power to individual outputs through SNMP. If this box is unchecked, all information available from the SNMP agent will be read-only.

**SNMP Control Access:** Set the level of unit control that is allowed through SNMP. This setting is only available if Enable SNMP Write Access is enabled.

- **Output Control:** Allows remote SNMP control of the system output and channel outputs only.
- **Full Device Control:** Allows SNMP client to set all unit settings through SNMP. This setting requires a different MIB file which can be downloaded from the ICT Website: <https://www.ict-power.com/resources/tools-utilities/>.

**SNMP Contact Information:** Set contact information, such as an operator name and phone number for the unit, which can be read via SNMP queries (this information is optional).

### v1/v2c Settings

**Read Community:** Enter the community string/password here for read-only SNMP access. The default read community string is "public".

**Write Community:** Enter the community string/password here for read/write SNMP access. The default write community string is "write".

NOTE: The community strings should be changed to unique passwords before enabling SNMP, as the defaults are well known.

### v3 Settings

**User Name:** Set the username for SNMPv3 access.

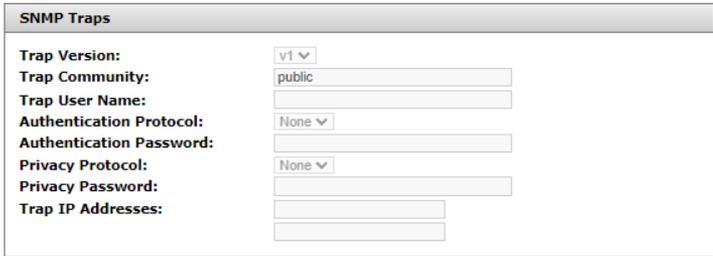
**Authentication Protocol:** Set the SNMPv3 authentication protocol (None, MD5, or SHA).

**Authentication Password:** If an authentication protocol is selected, set the authentication password.

**Privacy Protocol:** Set the SNMPv3 privacy protocol (None, or AES).

**Privacy Password:** If a privacy protocol is selected, set the privacy password.

## SNMP Traps:



<b>Trap Version:</b>	v1 ▾
<b>Trap Community:</b>	public
<b>Trap User Name:</b>	
<b>Authentication Protocol:</b>	None ▾
<b>Authentication Password:</b>	
<b>Privacy Protocol:</b>	None ▾
<b>Privacy Password:</b>	
<b>Trap IP Addresses:</b>	

**Trap Version:** Set the SNMP version (v1 or v3) for SNMP traps sent from the system. The appropriate settings for the selected SNMP version will need to be configured.

**Trap Community:** Set the community string/password that will be sent with all SNMPv1 traps. Some trap receivers can filter based on Trap Community. This field is only used for v1 traps.

**Trap User Name:** Set the username for SNMPv3 traps. This field is only used for v3 traps.

**Authentication Protocol:** Set the authentication protocol for SNMPv3 traps (None, MD5, or SHA)

**Authentication Password:** If an authentication protocol is selected, set the authentication password for SNMPv3 traps.

**Privacy Protocol:** Set the privacy protocol for SNMPv3 traps (None, or AES)

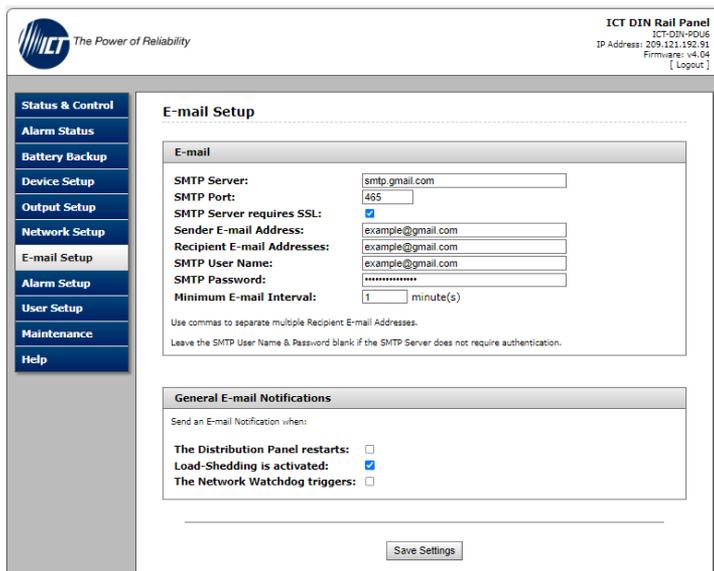
**Privacy Password:** If a privacy protocol is selected, set the privacy password for SNMPv3 traps.

**Trap IP Addresses:** Set the IP addresses for up to two devices that will receive SNMP traps from the unit.

**NOTE:** Save Settings to enable any changes made.

## 4.8 E-mail Setup

Use this tab to configure all e-mail settings to enable automatic e-mail notifications directly from the unit. The information required for this is available from the Network Administrator, or Internet Service Provider (ISP).



The screenshot shows the 'E-mail Setup' configuration page for the ICT DIN Rail Panel. The page includes a navigation menu on the left with options like Status & Control, Alarm Status, Battery Backup, Device Setup, Output Setup, Network Setup, E-mail Setup (selected), Alarm Setup, User Setup, Maintenance, and Help. The main content area is titled 'E-mail Setup' and contains the following fields:

- E-mail**
  - SMTP Server:
  - SMTP Port:
  - SMTP Server requires SSL:
  - Sender E-mail Address:
  - Recipient E-mail Addresses:
  - SMTP User Name:
  - SMTP Password:
  - Minimum E-mail Interval:  minute(s)
- General E-mail Notifications**
  - Send an E-mail Notification when:
    - The Distribution Panel restarts:
    - Load-Shedding is activated:
    - The Network Watchdog triggers:

Below the fields, there is a note: "Use commas to separate multiple Recipient E-mail Addresses. Leave the SMTP User Name & Password blank if the SMTP Server does not require authentication." A "Save Settings" button is located at the bottom right of the configuration area.

### E-mail

**SMTP Server:** Set the name or the IP address of the SMTP server used for sending outgoing e-mail (e.g., "smtp.gmail.com").

**SMTP Port:** Set the port used by the SMTP server. The default setting is 25.

**SMTP Server requires SSL:** Select this check box if the SMTP server requires an encrypted SSL connection. This box should normally be checked if the SMTP port used by the SMTP server is 465. If the SMTP server uses STARTTLS (normally port 587), this box should be unchecked.

**Sender E-mail Address:** Set an e-mail address that will appear as the sender for all e-mail notifications sent from the unit.

**Recipient E-mail Addresses:** Set one or more e-mail addresses that are to receive all e-mail notifications from the unit. Use commas to separate multiple addresses.

**NOTE:** This field can also be used to send text message notifications to a phone (see Section 6.5).

**SMTP User Name:** Set an SMTP username here, if required by the SMTP server. Leave this field blank if the server does not require authentication.

**SMTP Password:** Set an SMTP password here, if required by the SMTP server. Leave this field blank if the server does not require authentication.

**Minimum E-mail Interval:** Set a minimum interval in minutes (0–60 minutes) between e-mail notifications. This time interval is used to prevent an un-intended flood of e-mail alarm notifications that could occur when an alarm limit is incorrectly configured, for example. The default setting is 0.

### **General E-mail Notifications**

Set these options to receive an e-mail when one or more of these events occurs:

**The Distribution Panel restarts:** Select this check box to receive an e-mail notification when the unit restarts after a power failure or a soft reset.

**Load-Shedding is activated:** Select this check box to receive an e-mail notification when any of the outputs are disabled or enabled due the voltage crossing one of the load-shed settings configured on the Output Setup page.

**The Network Watchdog triggers:** Select this check box to receive an e-mail notification when the Network Watchdog triggers due to a loss of the network connection.

**NOTE:** Save Settings to enable any changes made.

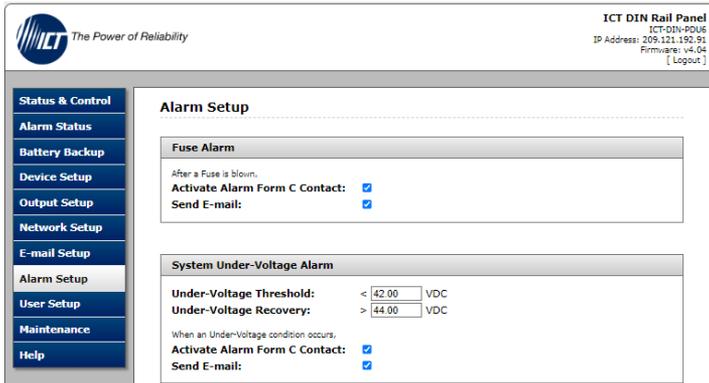
## **4.9 Alarm Setup**

Use this tab to control the settings for the PDU alarms. If DIN PDU is connected, there is an option on the "Battery Backup" tab (see Section 4.4) to configure the PDU to send emails for the PSU alarms.

### **Fuse Alarm**

**Activate Alarm Form C Contact:** Set the check box to have the unit send a form-C alarm for a fuse that is blown or open. The default setting is Enabled.

**Send E-mail:** Select the check box to have an e-mail sent to the e-mail addresses set up on the E-mail Setup page when a fuse is blown or open on any of the output channels (see Section 4.8). The default is Disabled.



## System Under-Voltage Alarm

**Under-Voltage Threshold:** Set the voltage that will trigger an undervoltage alarm. System voltage dropping below this level will immediately trigger an undervoltage alarm. Default setting is 20.00 VDC.

**Under-Voltage Recovery:** Set the voltage that will clear the alarm. System voltage rising above this level will clear the alarm. This value must be at least 0.05 V above the Under-Voltage Threshold. The default setting is 24.00 VDC.

**Activate Alarm Form C Contact:** Set the check box for the Alarm relay to trigger for an undervoltage condition. The default setting is Disabled.

**Send E-mail:** Select the check box to have an Under-Voltage alarm e-mail sent to the e-mail addresses set up on the E-mail Setup page (see Section 4.8). The default setting is Disabled.

## System Over-Voltage Alarm



**Over-Voltage Threshold:** Set the voltage that will trigger an overvoltage alarm. System voltage rising above this level will immediately trigger an overvoltage alarm. The default setting is 60.00 VDC.

**Activate Alarm Form C Contact:** Select the check box to have Alarm relay trigger for an overvoltage condition. The default setting is Disabled.

**Send E-mail:** Select the check box to have an Over-Voltage e-mail sent to the e-mail addresses set up on the E-mail Setup page (see Section 4.8). The default setting is Disabled.

### System Over-Current Alarm

System Over-Current Alarm	
<b>Over-Current Threshold:</b>	> <input type="text" value="60.0"/> A
<small>When an Over-Current condition occurs:</small>	
<b>Activate Alarm Form C Contact:</b>	<input checked="" type="checkbox"/>
<b>Send E-mail:</b>	<input checked="" type="checkbox"/>

**Over-Current Threshold:** Set the current that will trigger an overcurrent alarm. System current above this level for at least 5 seconds will immediately trigger an Over-Current Alarm. Default settings is 60.0 A.

**Activate Alarm Form C Contact:** Select the check box to have Alarm relay trigger for an overcurrent condition. The default setting is Disabled.

**Send E-mail:** Select the check box to have an Over-Current Alarm e-mail sent to the e-mail addresses set up on the E-mail Setup page for an overcurrent alarm condition (see Section 4.8). The default setting is Disabled.

### Alarm Input #

Alarm Input #1	
<b>Alarm Name:</b>	<input type="text"/>
<b>Contact Type:</b>	<input type="text" value="Normally Open (N.O.)"/> ▼
<small>When this alarm triggers:</small>	
<b>Activate Alarm Form C Contact:</b>	<input type="checkbox"/>
<b>Send E-mail:</b>	<input type="checkbox"/>

**Alarm Name:** Set a meaningful name to suit the installation (these will be used for e-mailed alarm messages).

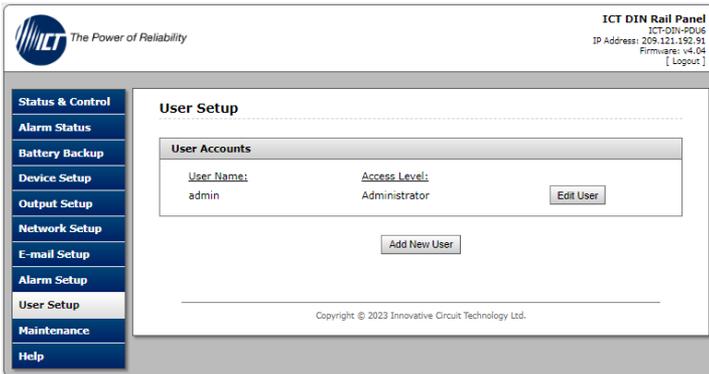
**Contact Type:** Set the form-C behavior for each device to be monitored (Not Used, Normally Open, Normally Closed). Select Not Used for all unused alarm input channels. The default setting is Not Used.

**Activate Alarm Form C Contact:** Set the check box to have the unit send a form-C alarm for an alarm condition. The default setting is Disabled.

**Send E-mail:** Select the check box to have an e-mail sent to the e-mail addresses set up on the E-mail Setup page for an alarm condition (see Section 4.8). The default setting is Disabled.

**NOTE:** Save Settings to enable any changes made.

## 4.10 User Setup



User Name:	Access Level:	
admin	Administrator	<input type="button" value="Edit User"/>
<input type="button" value="Add New User"/>		

Use this tab to set up and configure the usernames and passwords for up to 10 users. Set the level of access to the unit settings allowed for each user. Click on the Save Settings button at the bottom of the page to save any password changes.

**NOTE:** The unit has no password assigned by default, so an Administrator password should be assigned to the unit for improved security.



Record the new password(s) for future access. If the Administrator password is lost the unit must be reset to return the password to the blank default setting, causing loss of all other user settings (see Section 3.1).

## User Accounts

Shows the User Name and Access Level.

### Edit User

Select to edit an existing user account. Set the access level for each user.

**User Name:** Shows the username.

**Access Level:** Set the access level:

- **Administrator:** This level has full access to the unit settings and can set up users and change passwords ("admin" is the default user).
- **Control:** User has read-only access to the unit, but can enable or disable the outputs, and change some of the basic settings.
- **View-Only:** User can only view status, cannot change any settings.

**Password:** Enter the password for the chosen user.

**Password (confirm):** Re-enter the new password to confirm the entry.

**User Setup**

---

**Edit User**

**User Name:** user

**Access Level:** View-Only ▾

**Password:**

**Password (confirm):**

Use a password length of 8 to 32 characters. Passwords are case sensitive.

**Confirm Changes**

Enter your current Administrator user name and password to confirm changes.

**User Name:**

**Password:**

### Confirm Changes

**User Name:** Enter admin username to confirm these changes are valid.

**Password:** Enter the password for the admin name to confirm the changes are valid.

## Add New User

### User Setup

---

#### Add New User

**User Name:**

**Access Level:**

**Password:**

**Password (confirm):**

Use a password length of 8 to 32 characters. Passwords are case sensitive.

#### Confirm Changes

Enter your current Administrator user name and password to confirm changes.

**User Name:**

**Password:**

**User Name:** Set username.

**Access Level:** Set the access level:

- **Administrator:** This level has full access to the unit settings and can set up users and change passwords ("admin" is the default user).
- **Control:** User has read-only access to the unit, but can enable or disable the outputs, and change some of the basic settings.
- **View-Only:** User can only view status, cannot change any settings.

**Password:** Enter the new password for the chosen user.

**Password (confirm):** Re-enter the new password to confirm the entry.

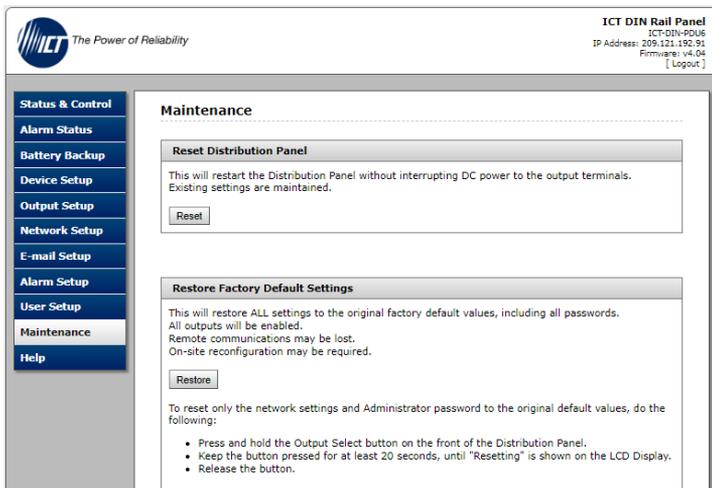
### Confirm Changes

**User Name:** Enter admin username to confirm these changes are valid.

**Password:** Enter the password for the admin name to confirm the changes are valid.

## 4.11 Maintenance

Use this tab to reset the unit (soft reset), restore the factory default settings, or send a test e-mail to verify e-mail functionality.



The screenshot shows the web interface for the ICT DIN Rail Panel. The top right corner displays the device name "ICT DIN Rail Panel", model "ICT-DIN-POU6", IP address "209.121.192.91", firmware version "v4.04", and a "Logout" link. A left-hand navigation menu includes "Status & Control", "Alarm Status", "Battery Backup", "Device Setup", "Output Setup", "Network Setup", "E-mail Setup", "Alarm Setup", "User Setup", "Maintenance" (highlighted), and "Help". The main content area is titled "Maintenance" and contains two sections: "Reset Distribution Panel" and "Restore Factory Default Settings".

**Reset Distribution Panel**

This will restart the Distribution Panel without interrupting DC power to the output terminals. Existing settings are maintained.

**Restore Factory Default Settings**

This will restore ALL settings to the original factory default values, including all passwords. All outputs will be enabled. Remote communications may be lost. On-site reconfiguration may be required.

To reset only the network settings and Administrator password to the original default values, do the following:

- Press and hold the Output Select button on the front of the Distribution Panel.
- Keep the button pressed for at least 20 seconds, until "Resetting" is shown on the LCD Display.
- Release the button.

### **Reset Distribution Panel**

Select the "Reset" button to restart the unit. The channel output states will be restored according to the "Output State after Panel Reset" setting for each output on the "Output Setup" page. All other settings are maintained during the reset. This will not affect the output power.

### **Restore Factory Default Settings**

Select the "Restore" button to restore "ALL" settings to the original factory default values, including the user passwords. To only restore the network settings and passwords see the "Password Reset" section (this feature is only available to the system Administrator).

#### **Restart In Progress...**

This page will, after 15 seconds, automatically attempt to reconnect to the Distribution Panel.

If the IP address of the Distribution Panel has changed, the connection will need to be reopened manually. Enter the IP address of the Distribution Panel in the URL field (address bar) in your browser.



NOTICE

- Restoring the unit to Factory Default settings may cause loss of network communications due to loss of custom changes to any network settings.
- Restoring the unit to Factory Default settings will not affect the power output.

To reset only the network settings and Administrator password to the original default values, see Section 3.1.

## Export and Import Settings

### Export and Import Settings

Export the current configuration of the Distribution Panel to a file, or import a previously saved configuration file.

Select the "Manage Settings" button to access the Export and Import Settings page shown below. Use this page to export all system settings to an encrypted .cfg file which may be imported into other units to speed configuration. The export does not include Administrator password, Network nor Web Server settings. Use the Import Settings section on other systems to locate this file and then import it to any other DIN Series Power Distribution Unit.

### Export and Import Settings

---

#### Export Settings

Save all settings to a configuration file:

#### Import Settings

Import settings from a previously saved configuration file:

Select a ".cfg" file below, then click the "Import Settings" button.  
The unit will restart automatically after the import is complete.

Importing settings will overwrite all current settings  
(except for Administrator password, Network and Web Server settings).

**Configuration File:**  No file chosen

## Firmware Update

### Firmware Update

Update the Distribution Panel with the latest firmware.

Download the latest DIN Series Power Distribution Unit firmware file from the ICT website ([ict-power.com/resources/product-firmware/](http://ict-power.com/resources/product-firmware/)) to a local computer. Select the "Update Firmware" button to access the Firmware Update page shown below. Use this page to update the firmware on the unit by clicking the "Choose File" button to link the downloaded firmware then

click the "Update Now" button. Do not disconnect power to the device during the update process. The device restarts automatically after the update has been completed. This will not affect the output power.

### Firmware Update

To update the Distribution Panel firmware:

1. Download the latest firmware from [ict-power.com](http://ict-power.com)
2. Extract the firmware file to your local disk. Firmware files have a ".cry" extension.
3. Select the firmware file below, then click the "Update Now" button to begin the update.

Do not disconnect power to the device during the update!

The device restarts automatically after the update has completed.

Firmware File:  No file chosen



NOTICE

Updating the firmware will delete the current log file. Download the log before updating the firmware.

## Send Test E-mail

### Send Test E-mail

This will send a test e-mail using the settings on the E-mail Setup page.

Select the "Send Test E-mail" button to send a test e-mail to the e-mail recipients listed on the E-mail Setup page (see Section 4.8).

## Ping Diagnostics Tool

### Ping Diagnostics Tool

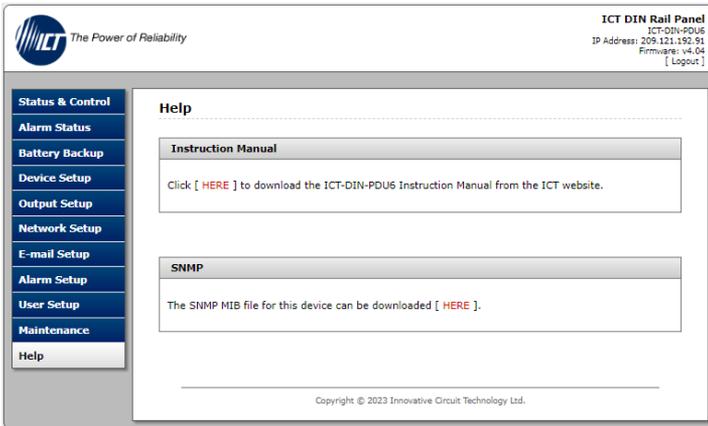
Use this tool to verify connectivity to any network device.

Host or IP address:

Use this feature to verify connectivity of any network connected unit. Enter the hostname or IP address of the target device, and then click the "Ping" button to check if the device is active.

## 4.12 Help

This tab has helpful links to ICT's website.



### Instruction Manual

Click the "HERE" button to download the ICT DIN Series Power Distribution Unit Instruction Manual from ICT's website.

### SNMP

Click the "HERE" button to download the SNMP MIB file.

## 5.0 OPERATION: MOBILE VERSION

Use the mobile version of the "Status & Control" page to monitor and control the unit with a smartphone web browser.

### 5.1 Log In/Log Out

1. Connect to the DIN Series Power Distribution Unit by entering the IP address of the unit in the address field of the mobile browser, followed by "/m" (e.g., <https://192.168.0.180/m>) shown below.



For improved security, the user should normally use a HTTPS (secure) connection when accessing the unit over the Internet with the mobile web version or use a Virtual Private Network (VPN) connection.

- Log into the unit's built-in server when prompted with the username and password. The default username is "admin", and no password is required as the factory default.

## 5.2 Status & Control

Once successfully logged in, the mobile version of the Status & Control page will be shown in the smartphone web browser.

<b>Eng DIN Rail Panel</b>	
<b>System Voltage:</b>	26.3VDC
<b>System Current:</b>	0.0A
<b>Alarm Inputs:</b>	1 2 3 4
<b>Output #1</b> 0.0A	<b>Output #2</b> 0.0A
<b>Output #3</b> 0.0A DISABLED	<b>Output #4</b> 0.0A
<b>Output #5</b> 0.0A FUSE OPEN	<b>Output #6</b> 0.0A
<b>Enable</b> All Outputs	<b>Disable</b> All Outputs

The mobile web version page provides information on the system voltage, system current, input alarm status, and the status and current level of each output channels. Each individual output may be manually enabled or disabled by tapping on an output cell (if the user is logged in using the administrator account).

### System Voltage

Shows the output voltage of the unit. This value does specify polarity.

### System Current

Shows the total amps being supplied by the unit.

## **Alarm Inputs**

Shows the status of any of the four Input Alarms for alarms that have been enabled (see Section 4.9). Will show grey if inactive or red if an alarm is active. An alarm input indicator box will not be displayed if the alarm is not enabled.

## **Output Status**

**Output #x cells:** Use these to toggle the internal relay for each channel, enabling or disabling the power to the load on that output. Each output on the unit will be displayed with name and status (green cell, orange cell with Disabled, red cell with FUSE OPEN). A status "green cell" indicates the electronic relay on that output channel is closed or turned on. A status "orange cell with Disabled" indicates that the internal electronic relay is open or turned off. A status "red cell with FUSE OPEN" indicates that the fuse is blown.

## **Enable All Outputs Cell**

Use this to enable DC power to all output channels simultaneously.

## **Enable All Outputs Cell**

Use this to disable DC power to all output channels simultaneously.

# **6.0 FAQs**

## **6.1 How do I configure a router?**

To set up the ICT DIN Series Power Distribution Unit with remote internet access when it is located behind a router, Port Forwarding will need to be enabled on the router to forward incoming HTTP or HTTPS traffic to the local IP address of the unit. Refer to the router's user manual for instructions on how to configure Port Forwarding.

## **6.2 How do I reset the password?**

Reset the Administrator password, the network, and web server settings to the original factory default values by doing the following (the standard user password and other settings are not affected):

1. Press and hold the recessed button on the front panel for approximately 10 seconds.
2. Release the button.
3. Log in to the unit as username "admin", no password is required. Set new password as desired and reconfigure the network settings.

### 6.3 How do I access the web-based configuration utility?

- Check that the IP address for the unit is correct by downloading and running the ICT IP Address Discovery tool (tool available for download from ICT <http://www.ict-power.com/resources/tools-utilities/>).
- Check the network cable connections to the unit and the network.
- Ensure that the network card settings on the computer are configured for accessing the IP address of the unit. To access a unit with the default IP address of 192.168.0.180, the typical network settings for the computer are:
  - IP Address: 192.168.0.100
  - Subnet Mask: 255.255.255.0
  - Gateway: 192.168.0.1
- If the HTTP port of the unit has been changed, append the new port number to the URL used to access the unit (see Section 4.7). See the Password Reset Section 4.11 for details on how to reset the port number to the factory default value.
- If the network switch allows the user to manually configure port speed and duplex settings, turn-on "Auto Negotiation" for the switch port that the unit is connected to.

### 6.4 How do I receive e-mails from the unit?

- See Section 4.8 E-MAIL SETUP.
- Verify that the "Send E-mail" check boxes are selected for any alarm conditions for which the user wishes to receive e-mail notifications.
- Verify the e-mail settings by going to the "Maintenance" tab on the unit's GUI and clicking on the "Send Test E-mail" button to send a test message to the designated recipient addresses. The "Send Test E-mail" page will show an error message if the system is unable to send the e-mail.
- Check on the "E-mail Setup" page and ensure that the "SMTP Server" field is the correct address for the e-mail provider, and that the "SMTP Port" is correct (Port should be 25 for most servers).
- If the SMTP server requires SSL encryption, ensure that the "SMTP Server requires SSL" checkbox is ticked. Otherwise leave it blank.
- If the SMTP server requires authentication, ensure that the "SMTP User Name" and "SMTP Password" fields are correctly entered.

## 6.5 How do I receive text message alarm notifications?

The unit can send alarm notifications as text messages to a cell phone by configuring the alarm e-mails to be sent to the mobile phone service provider.

On the "E-mail Setup" page of the GUI enter the address of the phone in the "Recipient E-mail Address" field. Example with an AT&T phone: enter the recipient address "cellnumber@txt.att.net", replacing "cell number" with the 10-digit cell phone number.

Cell address formats for some common North American mobile phone providers:

AT&T	cellnumber@txt.att.net
Verizon	cellnumber@vtext.com
T-Mobile	cellnumber@tmomail.net
Virgin Mobile	cellnumber@vmobl.com
Bell Mobility	cellnumber@txt.bell.ca
Rogers	cellnumber@pcs.rogers.com
Telus	cellnumber@msg.telus.com
Virgin Mobile (Can)	cellnumber@vmobile.ca



NOTICE

Verify formatting with the mobile provider.

## 6.6 How do I upgrade the firmware?

On the ICT website, click on Resources > Product Firmware and select the product. Download the latest firmware. In the ZIP file will be a README document with step-by-step instructions or see section "Firmware Update" in Section 4.11.



NOTICE

Updating the firmware will delete the current log file. Download the log before updating the firmware.

## 6.7 How can I access the MIB file?

The MIB file can be downloaded from the ICT website: <https://ict-power.com/resources/tools-utilities/>. Use the ICT-PDU MIB files. It can also be downloaded from within the GUI through the links in the SNMP section of the Network Setup tab (see Section 4.7) and on the Help tab (see Section 4.12).

## 6.8 Can the SNMP monitor and control both PDU and PSU?

The SNMP is only for the ICT DIN Series Power Distribution Unit (PDU) functions, and it cannot monitor and control the ICT DIN Series Power Supply Unit (PSU) functions. The information available from the SNMP agent is only for the PDU which is described in the ICT Distribution Series MIB files.

Only PDU alarms are reported via SNMP. There is an option on the "Battery Backup" section on the GUI (see Section 4.4) to configure the PDU to send emails for the PSU alarms.

## 6.9 How do I log out of the GUI?

To log out of the ICT DIN Series Power Distribution Unit GUI, click on the Logout link on the top right of the browser window. The system will also automatically log off the user after 20 minutes of inactivity.

# 7.0 PRODUCT SPECIFICATIONS

## 7.1 Electrical Specifications

Table 8. Electrical Specifications

Parameters	Rating
Operating Voltage (POS or NEG ground)	10 to 60 VDC
System Current Rating	60 A continuous/peak
Outputs	6 (normally open)
Max Output Rating	15 A peak (12 A continuous) <sup>1</sup>
Meter Accuracy, Voltage	Bus voltage readings +/- 1%
Meter Accuracy, Current	Channel current readings +/- 3%
Power Consumption	< 8 W (all outputs disabled) < 4 W (all outputs enabled)
Network Communications	RJ45 10/100-T port (IPv4, HTTP, HTTPS, SMTP, DNS, TCP, UDP, ICMP, DHCP, ARP, SNMP v1/v2c/v3)
Network Security	Password protection, SSL encryption for HTTPS and SMTP (TLS 1.2) and SNMPv3

<sup>1</sup> In accordance with NEC Section 210.20(A).

## 7.2 Physical Specifications

Table 9. Physical Specifications

Parameters	Configuration
Outputs	Floating
Alarm Output	Form-C contact, 1 A, 60 VDC max
Input Connector	2-pin terminal block 6–20 AWG
Output Connector	2x 6-pin removable plug cage clamp type, 10–30 AWG
Alarm Output/Input Connector	12-pin removable plug, cage clamp type, 12–30 AWG
Operating Temperature	–20°C to +60°C (Derate max bus current by 2% per degree C above 50°C)
Storage Temperature Range	–45°C to +85°C
Humidity	Operating: 10–90% (non-condensing) Storage: 5–95% (non-condensing)
Cooling	Convection (no fan)

## 7.3 Regulatory Specifications

Table 10. Regulatory Compliance

Category	Certification
Safety, EMC-Emissions, EMC-Immunity, RoHS	Designed to meet CSA 60950, FCC Class B, and CE. RoHS

## 7.4 Mechanical Specifications

Table 11. Dimension and Weight

Physical Property	Value
Dimension - L x W x H	5.4 x 4.4 x 5.9 in. (137 x 111 x 149 mm)
Weight	2.8 lbs. (1.27 kg)

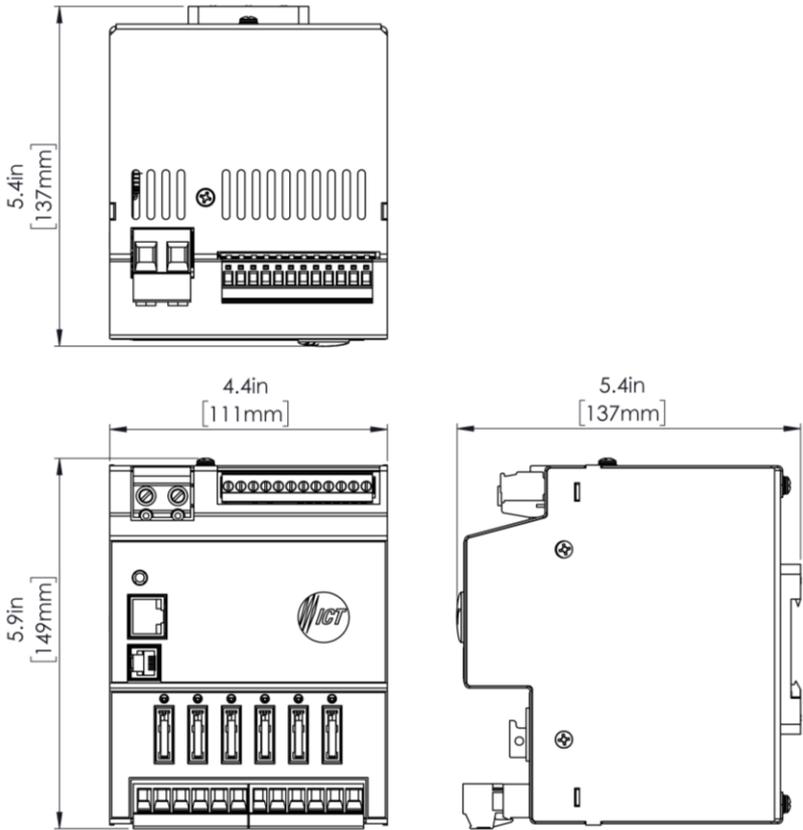


Figure 5. Unit Dimensions

## 8.0 GLOSSARY

• A, amps	Amperes
• AES	Advanced Encryption Standard
• ANSI	American National Standards Institute
• AWG	American Wire Gauge
• CSV	Comma-Separated Values
• DHCP	Dynamic Host Configuration Protocol
• DIN	Deutsche Institut fur Normung
• DNS	Domain Name System
• GUI	Graphical User Interface
• HTTPS	Hypertext Transfer Protocol Secure
• ICES	Interference-Causing Equipment Standard
• ICMP	Internet Control Message Protocol
• ISO	International Organization for Standardization
• ISP	Internet Service Provider
• LVD	Low Voltage Disconnect
• MAC	Media Access Control
• MIB	Management Information Base
• NEC	National Electrical Code
• OEM	Original Equipment Manufacturer
• PDU	Power Distribution Unit
• PSU	Power Supply Unit
• RMA	Return Material Authorization
• RoHS	Restriction of Hazardous Substances
• SHA	Secure Hash Algorithms
• SMTP	Simple Mail Transfer Protocol
• SNMP	Simple Network Management Protocol
• TCP/IP	Transmission Control Protocol/Internet Protocol
• TLS	Transport Layer Security
• UDP	User Datagram Protocol
• V	Volts
• VDC	Volts, Direct Current
• VPN	Virtual Private Network

Find the latest version of this manual here:

<https://ict-power.com/product/din-series-power-distribution-unit/>



**INNOVATIVE CIRCUIT TECHNOLOGY LTD.**

26921 Gloucester Way

Langley, British Columbia, Canada V4W 3Y3

T +1 604.856.6303 (International)

T +1 877.930.0717 (North America Toll-free)

[www.ict-power.com](http://www.ict-power.com)