chargepoint

CT4000
Networked Charging Station

Operation and Maintenance Guide

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

WARNING:

1. **Read and follow all warnings and instructions before servicing, installing, or operating the ChargePoint® charging station.** Install and operate only as instructed. Failure to do so may lead to death, injury, or property damage, and will void the Limited Warranty.

2. **Only use licensed professionals certified by ChargePoint for installation and service, adhere to all national and local building codes and standards, and ensure compliance** with local building and electrical codes and standards, climate conditions, safety standards, and all applicable codes and ordinances. Inspect the charging station for proper installation before use.

3. **Always ground the ChargePoint charging station.** Failure to ground the charging station can lead to risk of electrocution or fire. The charging station must be connected to a grounded, metal, permanent wiring system, or an equipment grounding conductor shall be run with circuit conductors and connected to the equipment grounding terminal or lead on the Electric Vehicle Supply Equipment (EVSE). Connections to the EVSE shall comply with all applicable codes and ordinances.

4. **Install the ChargePoint charging station on a concrete pad using a ChargePoint-approved method.** Failure to install on a surface that can support the full weight of the charging station can result in death, personal injury, or property damage. Inspect the charging station for proper installation before use.

5. **This charging station is not suitable for use in Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**

6. **Supervise children near this device.**

7. **Do not put fingers into the electric vehicle connector.**

8. **Do not use this product if any cable is frayed, has broken insulation, or shows any other signs of damage.**

9. **Do not use this product if the enclosure or the electric vehicle connector is broken, cracked, open, or shows any other signs of damage.**

10. **Use only copper conductor wire rated for 90 °C (194 °F).**

IMPORTANT: Under no circumstances will compliance with the information in a ChargePoint guide such as this one relieve the user of the responsibility to comply with all applicable codes and safety standards. This document describes approved procedures. If it is not possible to perform the procedures as indicated, contact ChargePoint. **ChargePoint is not responsible for any damages that may result from custom installations or procedures not described in this document or that fail to adhere to ChargePoint recommendations.**

Product Disposal

Do not dispose of as part of unsorted domestic waste. Inquire with local authorities regarding proper disposal. Product materials are recyclable as marked.

Document Accuracy

The specifications and other information in this document were verified to be accurate and complete at the time of its publication. However, due to ongoing product improvement, this information is subject to change at any time without prior notice. For the latest information, see our documentation online at chargepoint.com/guides.

Copyright and Trademarks

Symbols

This guide and product use the following symbols:

⚠	**DANGER:** Risk of electric shock
⚠	**WARNING:** Risk of personal harm or death
⚠	**CAUTION:** Risk of equipment or property damage
ⓘ	**IMPORTANT:** Crucial step for installation success
📖	Read the manual for instructions
⏚	Ground/protective earth

Illustrations Used in This Document

The illustrations used in this document are for demonstration purposes only and may not be an exact representation of the product. However, unless otherwise specified, the underlying instructions are accurate for the product.

Contents

−chargepoint.®

Basic Operation 1

This guide describes how to operate and maintain a ChargePoint® CT4000 AC charging station as a station owner or facility manager.

For full charging station specifications and ratings, refer to the charging station Datasheet at: chargepoint.com/guides

Power On the System

The charging station is powered on by the installation team at the site's electrical panel, immediately after completing installation. The charging station does not have a separate power switch.

When power is turned on at the panel after it is first installed, the station runs a self-diagnostic that includes:

- Electrical safety checks
- Lighting checks
- Display panel visual checks
- Component operation checks (such as fans and contactors)
- Network connectivity checks
- Installation Wizard process (allows installer to complete configuration and pinpointing of the station on user maps)

  When power is turned on at the panel after servicing or a power outage, the station runs a self-diagnostic to ensure safe and correct operation:

- Electrical safety checks
- Lighting checks
- Display panel visual checks
- Component operation checks (such as fans and contactors)
- Network connectivity checks

  If any errors are found, the station displays error codes on the website dashboard. See Section 3 for further information on diagnostics.

Power Off the System

The charging station does not need to be powered off except during service. The charging station does not have a separate power switch. The service technician turns off power at the electrical panel or disconnect switch before beginning work. There is no need for a software command to power off the station; the hardware is not harmed by disconnecting the circuit's breaker.

IMPORTANT: You must be a licensed electrician and complete online training to become a ChargePoint certified installer. If you do not complete training, you cannot access the ChargePoint network to complete installation.

Find online training at: chargepoint.com/installers

If the charging station is not installed by a ChargePoint certified installer, using a ChargePoint approved method, it is not covered under warranty and ChargePoint is not responsible for any malfunctions.

DANGER: RISK OF SHOCK. Before performing any procedure, the technician must disconnect the power to the charging station at the service panel. Follow local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off. Keep power off for the circuit until all cover panels are correctly reinstalled and the work is complete. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.

Configure System Behavior

ChargePoint offers its station owners a variety of software features to customize operation, such as:

- How to set pricing and billing methods for station use

- Who is allowed to use the station

- Waiting lists if the station(s) are already full

- How to display simple messages on the station

    All configuration is done on the ChargePoint website for station owners. You are issued a username and password during the station purchase process. Log in at:
    na.chargepoint.com

    Instructions and videos are available in ChargePoint by selecting Help.

Receive Notification

To receive email alerts of system alarms:

1. Log into the dashboard and select your name in the upper-left corner.
2. Click the **Edit** button next to your name.
3. Select the Batched Email Alerts checkbox.

4. Click **Save**.

Alarms are batched and sent a maximum of once per hour. You will not receive email unless there is an alarm.

ChargePoint Alarm Codes

The ChargePoint Cloud application logs alarm codes for each station. For more information on generating reports, see Section 3: Reporting.

Code Name	Description	Solution
Unreachable	The station has lost connection to the ChargePoint network.	Turn breaker(s) off for at least 2 minutes. Then switch breakers back on. If this does not resolve the issue, contact ChargePoint Support.
Over Current Hard Trip Detected	The vehicle is attempting to pull more current than the station allows.	Contact ChargePoint Support.
GFCI Soft Trip	GFCI monitor saw a small mismatch in power input/ output.	Usually this problem is with the vehicle. Unless this is occurring across many different vehicles and charging sessions, you can disregard this alarm. If it is occurring frequently with various vehicles, contact ChargePoint Support for guidance.
GFCI Hard Trip	GFCI monitor saw a significant mismatch in power input/ output.	Usually this problem is with the vehicle. Unless this is occurring across many different vehicles and charging sessions, you can disregard this alarm. If it is occurring frequently with various vehicles, contact ChargePoint Support for guidance.
GFCI Self-Test Fault	The GFCI monitor has detected a problem.	Contact ChargePoint Support.
Relay Stuck Open	The relay did not close at the start of the session.	Contact ChargePoint Support.
Relay Stuck Closed	The relay stuck closed and the station has stopped power to the connector. The station cannot start a new session.	Contact ChargePoint Support.
Breakaway Fault	The cable was pulled too hard and some internal wiring has broken.	Contact ChargePoint Support.
Pilot Unreachable	Station saw a fluctuation in power. Ports are marked Out of Service.	1. Go to the station Properties Sheet for the station with a red pin in the ChargePoint application. 2. Click the Status/Actions tab. 3. Click the Mark Under Maintenance button.

Code Name	Description	Solution
		4. Uncheck Needs Service. 5. Click the Update button. 6. Click the Reboot button. If the station is not back in service after approximately five minutes, or if the alarm returns, contact ChargePoint Support.
Tamper Detect	The station enclosure has been opened.	Contact ChargePoint Support.
UIC Firmware Upgrade Failed	RFID reader has failed to update the firmware.	Contact ChargePoint Support.
Earth Fault Station In Service	Station is detecting a grounding issue.	1. Go to the station Properties Sheet for the station with a red pin in the ChargePoint application. 2. Click the Status/Actions tab. 3. Click the Mark Under Maintenance button. 4. Uncheck Needs Service. 5. Click the Update button. 6. Click the Reboot button. If the station is not back in service after approximately five minutes, or if the alarm returns, contact ChargePoint Support.
Data Partition Full	Station memory is full.	Contact ChargePoint Support.
Hardware Fault	No power to port 1. The breaker is off/tripped.	1. Investigate the breaker feeding port 1 at the electrical panel. 2. Ensure the Breaker supplying power to port 1 is ON. 3. Go to the station's Properties Sheet for the station reporting Hardware fault alarm in the ChargePoint application. 4. Click the Status/Action Tab. 5. C.lick the Reboot button.
Grace Session Expire	This only applies to unactivated stations. All grace sessions have been used.	Activate the station in the ChargePoint network manager account.
Earth Fault Station Out of Service	Station is detecting a grounding issue.	Contact ChargePoint Support.

Code Name	Description	Solution
Hardware Fault Station Out of Service	No power to port 1. The breaker is off/tripped.	1. Ensure breaker supplying power to port 1 is ON. 2. Go to the station's Properties Sheet for the station with a red pin in the ChargePoint application. 3. Click the Status/Actions tab. 4. Click the Mark Under Maintenance button. 5. Uncheck Needs Service. 6. Click the Update button. 7. Click the Reboot button. If the station is not back in service after approximately five minutes, or if the alarm returns, contact ChargePoint Support.
Thermal Alarm	The station is detecting cold lower than -40°C (-40°F) or higher than 95°C (203°F).	Contact ChargePoint Support, unless it has exceeded that temperature range in that location.

ChargePoint station owner support is available at 1-877-850-4562. More information is available at chargepoint.com/products/support-faq.

Displaying Station Codes

Station codes are displayed on the station.

1. At the charging station, press the station button immediately below the **HELP** menu option.
2. Press the station button immediately below the **DOWN** menu option to highlight **Station Codes** and then press **SELECT**.
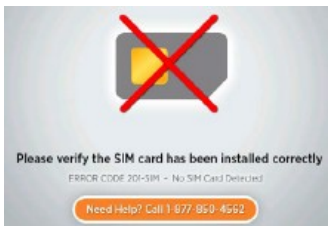

Understanding Station Codes

When the station stops delivering power to the vehicle, most likely, those issues are vehicle-related. However, other situations may require service from a ChargePoint approved electrician.

Starts with	Description
1	Indicates vehicle-related issues.
2	Indicates a problem with wiring or network connectivity that needs to be resolved at the station, often with the assistance of a ChargePoint approved electrician.
3	Indicates a problem internal to the station. Contact ChargePoint Customer Support.

Additional details about each code are shown below.

Code	Indicator	Description	Solution
101 Over Current Detection	*	During charging, the vehicle attempted to draw more power than allowed, indicating an issue with the vehicle.	+ End the session by inserting the station's plug back into its holster, then restart the session. + If error persists, contact ChargePoint Customer Support.
102 Ventilation Requested	*	Vehicle requires ventilated charging that is not supported by the station. The driver is unable to use the station to charge their type of vehicle.	+ Contact the vehicle manufacturer.
103 Soft Ground Fault	*	During charging, the station detected a ground fault. The station stops delivering power to the vehicle, but continues to retry every 30 seconds.	+ End the session by inserting the station's plug back into its holster, then restart the session. + If error persists, contact ChargePoint Customer Support.
104 Immediate Ground Fault	*	On initial plug-in, the station detected a ground fault.	+ End the session by inserting the station's plug back into its holster, then restart the session. + If error persists, contact ChargePoint Customer Support.

* n indicates the number of the applicable port.

Code	Indicator	Description	Solution
201-SIM	Please verify the SIM card has been installed correctly. ERROR CODE 201-SIM – No SIM Card Detected. Need Help? Call 1-877-850-4562	The SIM is either not installed or incorrectly installed and the station cannot communicate with the ChargePoint network.	+ Disconnect power and install (or re-install) the SIM card. + If the error persists, contact ChargePoint Customer Support.

Code	Indicator	Description	Solution
202-EF		Earth Fault—The station has detected a poor ground connection and the station is not operational.	+ Disconnect power and check that the station is properly grounded. See the Installation Guide for further information. + After the station is properly grounded, reconnect power. + If the error persists, unplug the head assembly and plug it back in. + If the error continues, contact ChargePoint Customer Support.
203-SNP	The banner displays STATION NOT ACTIVATED ON CHARGEPOINT - GRACE SESSIONS REMAINING (N) When all grace sessions have been used: 	Station not activated—The station can be used to charge for the specified number of remaining grace sessions. When all grace sessions have been used, the station is not operational.	+ Arrange for the station to be activated on ChargePoint by completing the steps in the Installation Guide.
204-NGNP	Before activation: The banner displays NO GATEWAY WITHIN RANGE After activation: This code is listed in Help > Station Codes.	Non-Gateway Not Paired—The station is set up to communicate with a gateway station that is either not within range or is not powered on.	+ Verify that the gateway station is powered on and located within 150 feet line of sight (no obstructions). + If the error persists, contact ChargePoint Customer Support.

Code	Indicator	Description	Solution
205-UNS		Unknown Network Signal—The gateway station is unable to establish a network connection.	+ Ensure the station is receiving an adequate signal strength from the cellular network. To do so, display the Service menu and then: + Choose Basic mode > Display last measured RSSI. Check the network signal for each type of modem. The signal strength should be A, B or C. + If the network signal is Grade D, or if a better network signal is available on the other type of modem, change modems by choosing Basic mode > Change modem technology (CDMA or GSM). + If the signal strength is either weak (D) or not

Code	Indicator	Description	Solution
		available for both CDMA and GSM, arrange for cellular repeaters to be installed near the installation site. + If the error persists when the station shows a strong network signal, contact ChargePoint Customer Support.	

Code	Indicator	Description	Solution
206-FLC	Before activation: After activation: The code is shown in Help > Station Codes and the port status icons shows: * or 	Floating Line Connection—The voltage of an AC input line has fallen below 80 VAC relative to ground. Even if the line-to-line voltage measures nominally 208 or 240 volts, the voltage of each line must be greater than 80 volts when measured to ground.	+ Correct any faulty connections. Confirm that the neutral is properly bonded to ground.
		A poor connection in the wiring supplying power and the ground connection to the station. There could be a poor connection between the buss bar and circuit breaker, the breaker to the branch circuit feeding the station, or at any splice along the branch circuit.	+ Verify that the station is connected to a system with its neutral properly grounded according to NEC Article 250.
		The station is connected to an improperly grounded power source. All power and ground connections must be clean and tight and carry the full rated current of the station.	+ Verify the station is connected to one of the system types described in the Installation Guide. + Do not connect the station to an ungrounded (floating neutral) system, a corner grounded Delta system, or the high (or "stinger" leg) of a center grounded Delta system.
			+ If the error persists, contact ChargePoint Customer Support.

* n indicates the number of the applicable port.

Code	Indicator	Description	Solution
300-BA	🔧1 🔧2 (red)	Breakaway Fault—The cable has been removed from the station or is damaged. The station is not operational.	+ Contact ChargePoint Customer Support to arrange to have the station replaced.
302-GST	* or 🔧1 🔧2 (red)	GFCI Self Test Failed—The station detected a ground fault during power up and is not operational.	+ End the session by inserting the station's plug back into its holster, and then restart the session. + If the error persists, contact ChargePoint Customer Support,
303-RSC	* or 🔧1 🔧2 (red)	Relay Stuck Closed—When attempting to end a charging session, the relay stays closed. Although the driver can return the station's plug to its holster, the station doesn't end the session. Therefore, a new session cannot be started.	+ Contact ChargePoint Customer Support at to arrange to have the station replaced or repaired.
305-LCO	🔧1 🔧2 (red)	Pilot Unreachable—The station is out of service.	+ Disconnect and reconnect power. + If the error persists, contact ChargePoint Customer Support to arrange to have the station replaced or repaired.
306-BF	🔧1 🔧2 (red)	Boot Fault—The station is out of service.	+ Disconnect and reconnect power. + If the error persists, contact ChargePoint Customer Support to arrange to have the station replaced or repaired.
307-HE	🔧1 🔧2 (red)	Hardware Error—The station is out of service.	+ Disconnect and reconnect power. + If the error persists, contact ChargePoint Customer Support to arrange to have the station replaced or repaired.

* n indicates the number of the applicable port.

ChargePoint station owner support is available at 1-877-850-4562. More information is available at chargepoint.com/products/support-faq.

Scope of Maintenance   **2**

Responsibility for Maintenance

The ChargePoint charging station needs preventive maintenance over its lifetime. ChargePoint's network connection monitors for system health and sends an alert when corrective maintenance might be required.

Maintenance can be performed by ChargePoint technicians for an additional fee. Otherwise, customers can send their own technicians for training to become approved by ChargePoint to perform the work. For more information on becoming a ChargePoint approved installer or service technician, see Become a Certified ChargePoint Installer.

Site Manager's Responsibilities

The site or facility manager where the ChargePoint charging station is installed has a few duties for general site maintenance:

- Ensure the station is free of debris or any substance blocking the front and rear vents.

- Keep snow below 0.25 m (10 in) to ensure proper ventilation.

- Check each station monthly for vandalism or damage. If the station is marked, contact ChargePoint for replacement signs. If the station appears damaged, contact ChargePoint for a service visit.

- Check each charging cable monthly for any signs of wear or damage. If a cable appears damaged, contact ChargePoint for a service visit.

⚠️ **CAUTION:** Do not pressure wash the charging station. Pressurized water can damage the system. To clean the charging station, use a damp cloth.

Preventative Maintenance

Perform these recommended service checks at the intervals listed below.

DANGER: RISK OF SHOCK. Before performing any procedure, the technician must disconnect the power to the charging station at the service panel. Follow local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off. Keep power off for the circuit until all cover panels are correctly reinstalled and the work is complete. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.

Yearly Maintenance

For all installations:

- Check signs for marks or fading, and replace if needed using the appropriate service guide.
- Use a damp, lint-free cloth to wipe down the outside surfaces of the station, including the cables, outer surfaces of the connector, and screen.
- Check the exterior of the charging station for any signs of corrosion or damage. Contact ChargePoint if damage is found.
- For installations with a screen, verify that the screen and the buttons are functioning properly. Replace if needed using the appropriate service guides.
- Perform all safety testing required by law. Refer to local regulations for details.
    - Check charging cables and connectors for any degradation or damage and replace if needed using the appropriate service guides.
    - Check the strain relief for any damage. If damage is found, replace the head assembly using the appropriate service guides.
- For installations with a Cable Management Kit, verify the retractor for the cable management kit is not frayed and successfully retracts. For problems with the retractor, contact ChargePoint for assistance.

For pedestal mounted installations:

- Verify the pedestal is secured to the ground and does not wobble. If loose, disassemble the station and tighten the bolts to 160 Nm (1416 in-lb). Refer to the Installation Guide for guidance.

For wall mounted installations:

- Verify the installation does not shift or wobble. If the charging station is not fully secured, contact ChargePoint for assistance.

Reporting 3

This section describes how to find reporting and diagnostic information about your charging stations. All information is located in the ChargePoint dashboard:

na.chargepoint.com

Generate a Report

The ChargePoint dashboard offers a full set of reports for the station owner. Log into the ChargePoint application and select **Reports** from the top menu bar:

Major features of the reporting view include:

- Report selection by data type in the secondary top menu (Analytics, Financial, Logs, etc.)
- Time scope slider below the chart (day, week, etc.)
- More advanced filters to apply from the bottom tab (by station name, organization, etc.)
- Detailed data view when mousing over a report graph

  For a tutorial on using the reporting features, select **Help > Videos and Manuals > Advanced Topics > How to Generate Reports.**

Find Diagnostic Information

Charging station error codes and alerts can be found on the ChargePoint application.

To find alerts in the ChargePoint application:

1. Log in and select **Reports > Alarms** from the top menu bar.
2. Set the dropdown menu to display Most Recent Only, Current Alarms, Historical Alarms, or All Alarms.
3. Apply filters using the **Filter** tab, if desired.
4. Use the checkboxes on the left to further select specific data if desired.
5. Export to a .csv format spreadsheet by choosing either Visible Columns or All Columns from the dropdown menu.

To find diagnostic information on a particular station:

1. On the top menu of the dashboard, select **Stations**.
2. Select the Station Name in the Table View.
3. Select the **Status/Actions** tab. Station-specific information appears.

Limited Warranty Information and Disclaimer

The Limited Warranty you received with your charging station is subject to certain exceptions and exclusions. For example, your use of, installation of, or modification to, the ChargePoint® charging station in a manner in which the ChargePoint® charging station is not intended to be used or modified will void the limited warranty. You should review your limited warranty and become familiar with the terms thereof. Other than any such limited warranty, the ChargePoint products are provided "AS IS," and ChargePoint, Inc. and its distributors expressly disclaim all implied warranties, including any warranty of design, merchantability, fitness for a particular purposes and non-infringement, to the maximum extent permitted by law.

Limitation of Liability

CHARGEPOINT IS NOT LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS, LOST BUSINESS, LOST DATA, LOSS OF USE, OR COST OF COVER INCURRED BY YOU ARISING OUT OF OR RELATED TO YOUR PURCHASE OR USE OF, OR INABILITY TO USE, THE CHARGING STATION, UNDER ANY THEORY OF LIABILITY, WHETHER IN AN ACTION IN CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY, EVEN IF CHARGEPOINT KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY EVENT, THE CUMULATIVE LIABILITY OF CHARGEPOINT FOR ALL CLAIMS WHATSOEVER RELATED TO THE CHARGING STATION WILL NOT EXCEED THE PRICE YOU PAID FOR THE CHARGING STATION. THE LIMITATIONS SET FORTH HEREIN ARE INTENDED TO LIMIT THE LIABILITY OF CHARGEPOINT AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, you will be required to correct the interference at your own expense.

Important: Changes or modifications to this product not authorized by ChargePoint, Inc., could affect the EMC compliance and revoke your authority to operate this product.

Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. The antenna of this product, used under normal conditions, is at least 20 cm away from the body of the user. This device must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

ISED (formerly Industry Canada)

This device complies with the licence-exempt RSS standard(s) of Innovation, Science and Economic Development Canada (ISED). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux flux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada (ISDE). L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter.

Radiation Exposure Statement: This equipment complies with the IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Énoncé d'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doit être installé et utilisé avec un Distance minimale de 20 cm entre le radiateur et votre corps.

FCC/IC Compliance Labels

Visit chargepoint.com/labels

chargepoint.com/support

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