



WALL CONNECTOR, 40A SINGLE PHASE INSTALLATION MANUAL

Approved Market: Australia

PRODUCT SPECIFICATIONS

All specifications and descriptions contained in this document are verified to be accurate at the time of printing. However, because continuous improvement is a goal at Tesla, we reserve the right to make product modifications at any time.

ERRORS OR OMISSIONS

To communicate any inaccuracies or omissions in this manual, please send an email to: ownersmanualfeedback@teslamotors.com.

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IMPORTANT !

READ THIS ENTIRE MANDATORY DOCUMENT BEFORE INSTALLING OR USING THE WALL CONNECTOR. FAILURE TO DO SO OR TO FOLLOW ANY OF THE INSTRUCTIONS AND WARNINGS IN THIS DOCUMENT CAN RESULT IN FIRE, ELECTRICAL SHOCK, SERIOUS INJURY OR DEATH.

THE WALL CONNECTOR MUST BE INSTALLED BY A DULY REGISTERED AND QUALIFIED ELECTRICIAN, AND IN ACCORDANCE WITH LOCAL REGULATIONS AND ORDINANCES GOVERNING ELECTRICAL APPLIANCES AND THEIR INSTALLATION, USE, AND MAINTENANCE.

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SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

This document contains important instructions and warnings that must be followed when installing and maintaining the Wall Connector.



WARNINGS

The Wall Connector must be grounded through a permanent wiring system or an equipment grounding conductor.

Do not install or use the Wall Connector near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.

Turn off input power at the circuit breaker before installing or cleaning the Wall Connector.

Use the Wall Connector only within the specified operating parameters.

The Wall Connector is designed only for charging a Tesla vehicle (excluding Tesla Roadster). Do not use it for any other purpose or with any other vehicle or object.

Never spray water or any other liquid directly at the wall mounted control box. Never spray any liquid onto the charge handle or submerge the charge handle in liquid. Store the charge handle above the ground to prevent unnecessary exposure to contamination or moisture.

Stop using and do not use the Wall Connector if it is defective, appears cracked, frayed, broken, or otherwise damaged, or fails to operate, or continue operation.

Do not attempt to disassemble, repair, tamper with, or modify the Wall Connector. The Wall Connector is not user serviceable. Contact Tesla for any repairs or modification.

When transporting the Wall Connector, handle with care. Do not subject it to strong force or impact or pull, twist, tangle, drag, or step on the Wall Connector, to prevent damage to it or any components.

Do not touch the Wall Connector's end terminals with sharp metallic objects, such as wire, tools, or needles.

Do not forcefully fold or apply pressure to any part of the Wall Connector or damage it with sharp objects.

Do not insert foreign objects into any part of the Wall Connector.

Do not use the Wall Connector when a vehicle cover is on the vehicle.

Use of the Wall Connector may affect or impair the operation of any medical or implantable electronic devices, such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator. Check with your electronic device manufacturer concerning the effects that charging may have on such electronic devices before using the Wall Connector.



CAUTIONS

Incorrect installation and testing of the Wall Connector could potentially damage either the vehicle's Battery and/or the Wall Connector itself. Any resulting damage is excluded from New Vehicle Limited Warranty and the Wall Connector Limited Warranty.

Do not operate the Wall Connector in temperatures outside its operating range of -30°C to $+45^{\circ}\text{C}$.

Ensure that the Wall Connector's charging cable is positioned so it will not be stepped on, driven over, tripped on, or subjected to damage or stress.

Do not use cleaning solvents to clean any of the Wall Connector's components. The outside of the Wall Connector, the charging cable, and the connector end of the charging cable should be periodically wiped with a clean dry cloth to remove accumulation of dirt and dust.

Be careful not to damage the circuit board when removing the power entry knock-out.



The maximum rating for the Wall Connector is 10 kW or 40 amps at 240 volts. Your vehicle can charge from 180 to 265 volts.

Voltage and Wiring	240V AC single-phase: LINE, NEUTRAL, and EARTH
Current	Maximum 50A circuit breaker
Frequency	50 -60 Hz
Cable Length	Approximately 7.6 m
Wall Connector Dimensions	Height: 385 mm Width: 157 mm Depth: 100 mm
Bracket Dimensions	Height: 382 mm Width: 158.2 mm Depth: 96 mm
Weight (including bracket)	9 kg
Operating Temperature	-30°C to 45°C
Storage Temperature	-50°C to 85°C
Enclosure Rating	IP 44
Agency Approvals	CE



OPTIONAL CIRCUIT RATINGS

For the fastest charging, using a circuit breaker rated for 50 amps is recommended.

SELF-MONITORING AND RECOVERY

The Wall Connector has a ground (earth) monitoring circuit that continuously checks for the presence of a safe ground connection and automatically recovers from faults. Manual testing and resetting is not required.

Temporary problems such as ground faults or utility power surges are overcome automatically. If a GFCI fault occurs that interrupts charging, the Wall Connector automatically tries to clear the fault and re-attempt charging.

If the problem is immediately sensed a second time, the Wall Connector waits 15 minutes before trying to charge. This process repeats eight times and if all attempts are unsuccessful, power is removed and no further attempts are made. In this case, a red error light lights up on the front panel (refer to the troubleshooting table on page 15). It is recommended that when you see a red error light, you power off the Wall Connector by switching off the circuit breaker, and then power it back on again.

POWER OUTAGES

If a power outage occurs, the Wall Connector automatically resumes charging when power is restored. If the charging cable is plugged into the vehicle when power is restored, the lights blink and the unit does not energise the charging cable for approximately 15 seconds to 3 minutes. This prevents the utility grid from experiencing a large surge when power is restored, allowing vehicles to begin drawing current at random times, rather than all at once.



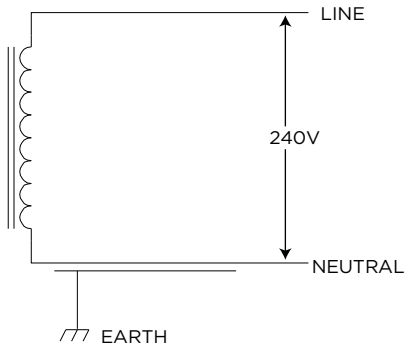
! **WARNING:** The Wall Connector is a single-phase device. Do not connect all 3 phases of a 3-phase feed.

! **WARNING:** Before installing the Wall Connector, identify the type of utility service connection available on site. If you are unsure about the type of connection available at the service panel, consult the local utility company, or contact Tesla for assistance.

! **CAUTION:** The line connection must measure 240V RMS to neutral. Earth must also be connected to the Wall Connector.

Conduit fits into the opening on either the back or the left side of the Wall Connector as described on page 8.

The illustrations provided below shows the most commonly used wiring format.



IMPORTANT! Dip switch 4 must be set to the 1 (left) position. See page 11.

NOTE: The line, neutral, and earth outputs labeled on the illustrations correspond to the inputs on the Wall Connector.

Earth (Ground) Connection

Always connect the earth line at the service panel to earth. Earth fault protection is not possible unless the earth line is connected to earth.

If an earth connection is not available, you must run an Earth from the switchboard to the Wall Connector.

! **WARNING:** Always follow local electrical codes.



TOOLS REQUIRED

Before installing the Wall Connector, ensure you have the following tools:

- Pencil or marker
- Drill and 8 mm drill bit
- T20 torx driver
- Hole saw, 32 mm
- Sharp knife or razor
- Phillips screwdriver
- Wire stripper
- Ratchet wrench with 8 mm and 17 mm sockets, and a 50 mm minimum extension
- Voltmeter or digital multimeter (to measure AC power at the site)

OVERVIEW OF STEPS

After running service wiring to the desired installation location, (see pages 4 through 4), and installing the appropriate circuit breaker, **TURN OFF THE POWER SUPPLY.** Then follow these steps to install the Wall Connector:

- 1** Check box contents (see page 6)
- 2** Install wall bracket (see page 7)
- 3** Prepare for installation (see page 8)
- 4** Mount on wall (see page 9)
- 5** Connect wiring (see page 10)
- 6** Set the operating current (see page 11)
- 7** Confirm a successful installation (see page 12)
- 8** Secure cover and power up (see page 13)
- 9** Install the cable hanger (see page 14)

Step One - Check Box Contents



In addition to this Installation Guide, the shipping box contains the following components. If any components are damaged or missing, contact Tesla.



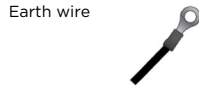
Wall Connector assembly



Mounting bracket



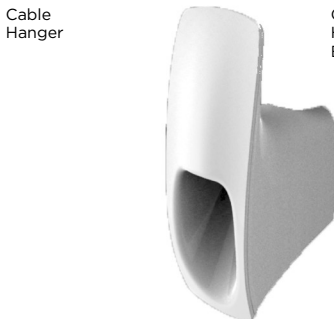
M10 lag screws and washers (2)



Earth wire



M6 flange screws (2)

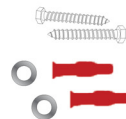


Cable Hanger



Cable Hanger Bracket

Cable Hanger Screws, Anchors, and Washers (2each)





Step Two - Install Wall Bracket

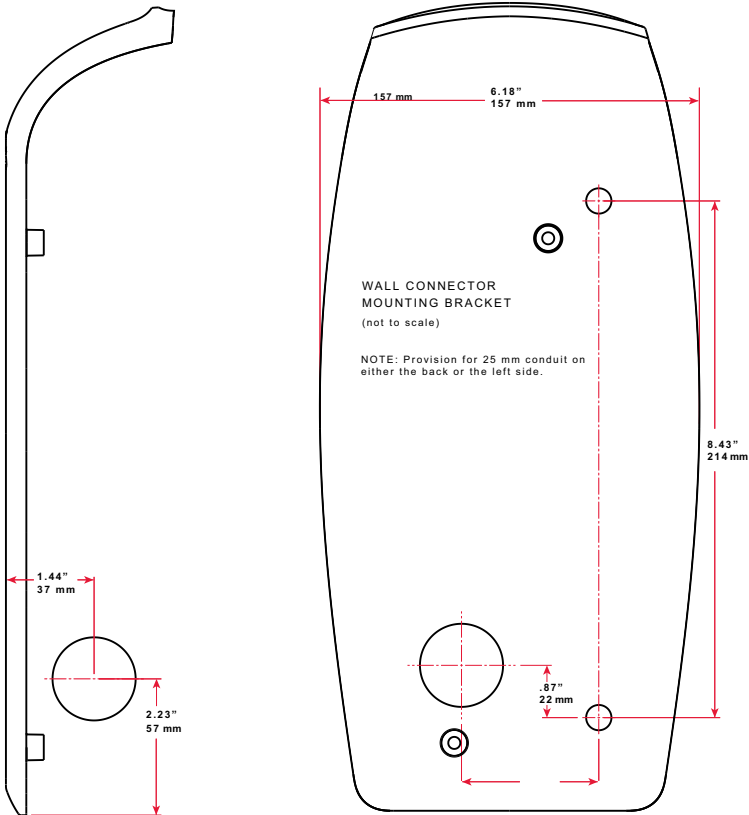
You can run conduit into either the back or the left side of the Wall Connector's main enclosure. Regardless of the conduit opening you use, always run the conduit on the left side of a wall stud. Refer to the illustration below for dimensions.

When determining where to mount the Wall Connector, keep in mind that its 7.6 m charge cable should easily reach the vehicle's charging port without straining the connections at either end.

- 1 Use the mounting bracket as a guide to mark the location on the wall for the two mounting screws.
 - Space the holes exactly 214 mm apart.

- The height of the bracket should ensure that the charging connector is located at a maximum of 1.2 m from floor level. The minimum height is 46 cm if mounting indoors, and 61 cm if mounting outdoors.

- 2 Drill two 8 mm holes in the wall.
- 3 Attach the wall bracket using fasteners appropriate for the type of wall material. Use the supplied lag screws and washers only if mounting to a solid wooden wall stud. If mounting to another type of wall (hollow, masonry, etc.), use fasteners that are long enough to securely anchor the Wall Connector and that can support at least 36 kg.



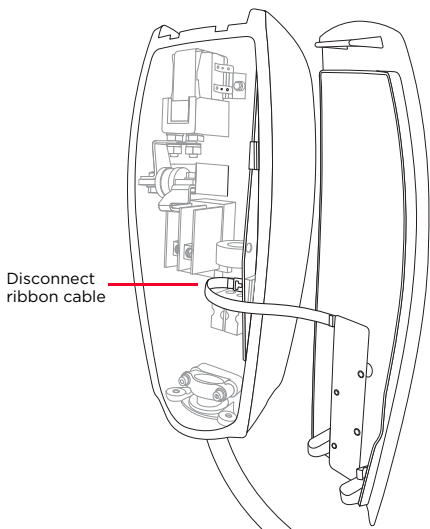


- Using a T20 Torx driver, remove the two security screws from the bottom of the Wall Connector.

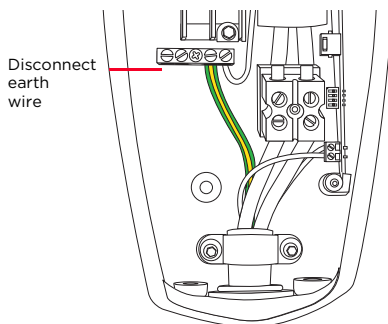


- Release the front cover carefully by pulling it towards you far enough to disconnect the ribbon cable. Disconnect the ribbon cable from inside the main enclosure to fully release the front cover.

! CAUTION: When removing the front cover, do not damage the ribbon cable. Disconnect the ribbon cable before fully releasing the front cover.



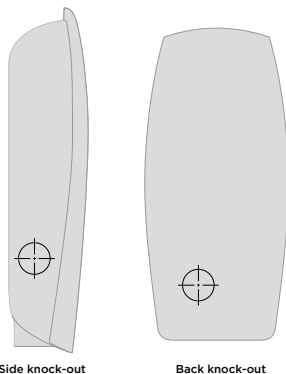
- Disconnect the Earth wire from the terminal block and push it out of the way to avoid damaging it when completing the next step.



- Use a 32 mm hole saw to remove the power entry knock-out from either the side or back of the connector.

! CAUTION: When using the hole saw, do not damage internal components.

If using the side knock-out, center the hole saw at the indented hole and drill through all layers. After drilling, use a sharp knife or razor to cut and remove the rubber molding, as indicated by the indentations in the rubber.



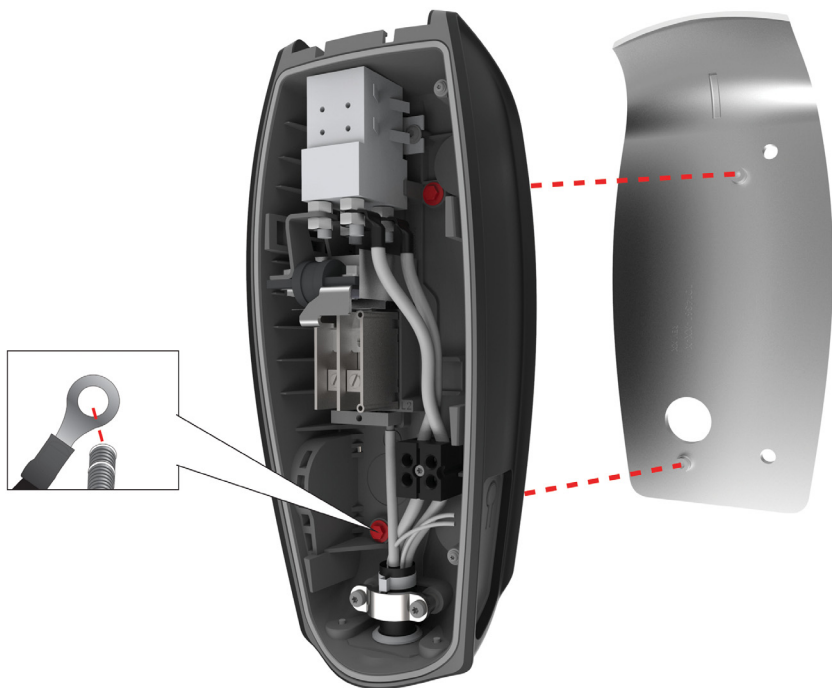
NOTE: Use the back knock-out when mounting to a pedestal or when running wires from behind a wall.

- Reconnect the Earth wire to the terminal block.



Step Four - Mount on Wall

- 1 Position the connector over the bolts on the mounting bracket as shown below.
- 2 Attach the Earth wire, as shown below.
- 3 Use the supplied flange screws to fasten the connector onto the bracket. Use a ratchet wrench and 8 mm socket to tighten until snugly fitted.





NOTE: For most branch circuits of 50A, use 16 mm², 75°C hard copper wire. Consult with your electrician to ensure wiring meets local regulations.

⚠ WARNING: Do not connect service wiring until you have read and fully understand page 4 in this document describing the service wiring. If you are uncertain about the type of power available at the service panel, consult your local utility, or contact Tesla for assistance.

1 Turn off the power.

⚠ WARNING: RISK OF ELECTRIC SHOCK! Before connecting the wiring, use a voltmeter to confirm that **NO POWER** is available at the service wiring or terminals.

2 Pull the service wiring into the Wall Connector.

3 Strip the three wires 10 mm.

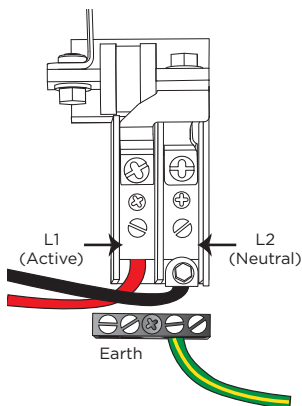
4 Connect wiring to the terminal block. Connect Active to the L1 position, Neutral to the L2 position, and the green earth to one of the two available earth connectors, as shown.

⚠ CAUTION: Cut the wire strands flush and insert them fully into the terminal block.

NOTE: The Earth wire should be at least 6 mm. To ensure proper operation, verify that neutral is connected to the neutral line inside the circuit breaker box or the main electrical panel.

5 Tighten the L1 and L2 screws to 3.5 to 5.6 Nm depending on cable size. Tighten the earth screw as follows:

Cable Size (hard copper)	Torque Nm
2-5 mm ²	2.3
6-12 mm ²	2.8
13-25 mm ²	3.5

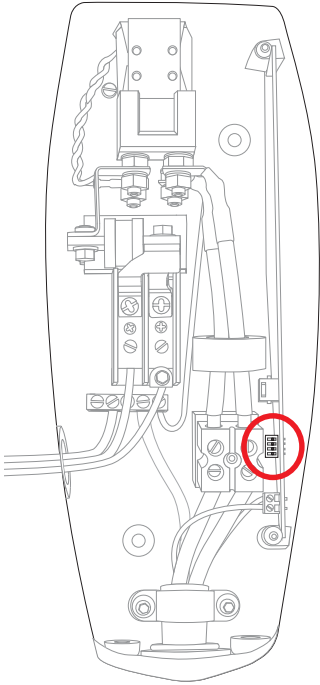




Step Six - Set the Operating Current

Adjust the DIP switches to set the operating current. Use a pointed non-conductive object such as a plastic pen.

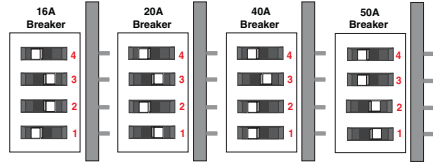
! WARNING: Power **MUST** remain off before setting or changing DIP switches. If you set DIP switches with the power on, not only is it dangerous because of the risk of electric shock, but the changes are not recognised.



DIP switches



SETTINGS



CIRCUIT BREAKER

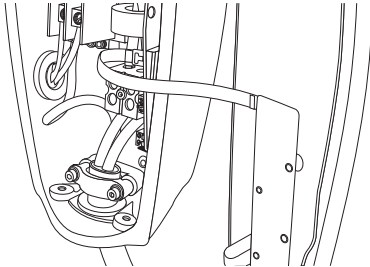
Adjust the operating current based on the type of circuit breaker being used:

Circuit Breaker Rating (Amps)	Maximum Current Supplied to Vehicle (Amps)
50	40
40	32
20	16
16	10

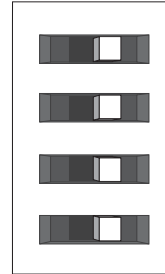
To determine the type of electrical breaker you need, examine the distribution panel/ circuit breaker box to identify the amperage available at the installation site.



- 1 While holding the front cover near the connector, re-connect the ribbon cable.



Test Mode



- 2 Hang the front cover over the hinge located at the top of the connector. Do not secure the front cover yet.
- 3 Turn on the power.
- 4 Hold the RESET button for five seconds. This button is located on the lower right side of the Wall Connector.



You should hear the contacts close and see the Wall Connector's lights sequentially illuminate green.



- 1** Reposition the front cover over the unit, aligning the five tabs on the back of the front cover with their corresponding slots. Starting at the bottom and working upwards, press firmly on both sides of the front cover until it clicks into place.
- 2** Using a T20 torx driver, re-attach the two security screws that you removed from the bottom of the Wall Connector in “Step Three - Prepare for Installation” on page 8.
- 3** Turn on the power.
- 4** Attempt to charge the car to ensure the Wall Connector is operating correctly and charging at the selected operating current. For instructions on how to charge, refer to the owner information provided with your vehicle.




YOU WILL NEED

- Cable Hanger, bracket, two screws and two wall anchors (included in the shipping box)
- Pencil or marker
- Drill with 5 mm drill bit
- Phillips screwdriver

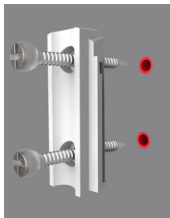
FOLLOW THESE STEPS

- 1 Use the Cable Hanger's bracket as a guide to mark the location on the wall for the two mounting screws.

NOTE: The height of the bracket should ensure that the charging connector is located at a maximum of 1.2 metres from floor level. The minimum height is 46 cm if mounting indoors, and 61 cm if mounting outdoors.

 *CAUTION: If installing in a public location, consider laws and regulations that accommodate persons with disabilities.

- 2 Drill two 5 mm holes in the wall.
- 3 Insert the two Poly-Set anchors into the holes until their flanges are flush.
- 4 Use the supplied Phillips screws to secure the bracket to the wall.



To ensure the screws are secure, apply additional turns after the screw head is against the bracket.

Plasterboard Thickness	Number of Additional Turns
10 mm	7-9
13 mm	5-7
16 mm	3-4
19 mm	1-2

NOTE: For more details on using the anchors and screws, refer to the Poly-Set Installation Instructions, included in the shipping box.

- 5 Slide the Cable Hanger onto the bracket as shown. If desired, you can insert the connector's cable into the groove between the bracket and the Cable Hanger, as shown.





Observe the lights on the front of the Wall Connector, then use the following table to resolve a fault.

Green Lights	Red Light	What It Means	What To Do
Top light on	Off	Power on. Wall Connector is powered, but not charging.	Make sure the Wall Connector is plugged into the car.
Off	1 flash	Earth fault. Electrical current is leaking through a potentially unsafe path.	This should automatically reset in 15 minutes. If not, make sure nobody is touching the car, then press the RESET button.
Off	2 flashes	The Wall Connector did not pass its internal self check.	Unplug the Wall Connector from the car and press the RESET button. Plug the Wall Connector back into the car. If the error persists, unplug the Wall Connector from the car, power off the Wall Connector, then power it back on again before plugging it back into the car.
Off	3 flashes	Contactors failed.	Unplug the Wall Connector from the car and wait 10 seconds. If the error persists, contact Tesla.
Off	4 flashes	Earth lost.	Make sure the power outlet is properly grounded. Make sure the hot and neutral pins are wired properly. If uncertain, ask your electrician.
Off	5 flashes or more	The Wall Connector requires servicing.	Contact Tesla.

QUESTIONS?

Email: Charging_AU@teslamotors.com.



Always ensure that after charging, the charging cable is wrapped around the Wall Connector.

Regularly inspect the Wall Connector and charging cable for signs of damage. If damage is found, contact Tesla.

The Wall Connector contains no user-serviceable components. If the unit is not operating correctly, contact Tesla.

Wipe the outside of the Wall Connector, the charging cable, and the connector end of the charging cable with a clean dry cloth to remove any accumulation of dust and dirt.



WARNING: Turn off input power at the circuit breaker before cleaning the Wall Connector.



WARNING: Do not use cleaning solvents, scouring powder, or any type of abrasive pad to clean the Wall Connector, its charging cable, or the vehicle's charging port.



CAUTION: To reduce the risk of electrical shock or equipment damage, do not allow liquid to enter the Wall Connector while cleaning it.

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