

1.) What does the UL 291 approval mean?

The scope of UL 291 is directed at the construction and security of the ATM when operated as intended by an authorized customer. The ATM must provide a limited degree of protection against unauthorized removal of currency. The records of the transactions must be made in order that the customer may be debited for currency dispensed. A limited degree of protection is required against the removal or manipulation of the records.

At this time Triton has only two types of security containers or cabinets as most people call them. One is the Business Hours (BH) and the other is the 24-Hour Level-1 safe. Both must withstand attacks from someone trying to rob the currency or alter the records. Both have environmental requirements. And both have endurance requirements.

2.) What is a Business Hours ATM?

A Business Hours ATM is defined as an ATM that is available during business hours only. It must be under the observation of a responsible party. The money must be removed at the close of business. The metal of the Business Hours is not as thick as that of the Level-1. Business Hours security containers must withstand forceful attacks on the seams and door openings of the container. The attacker may use wires, lines, chisels, pry bars, and wrenches to try to gain entry or remove the currency. Attacks that are quiet are allowed to take 5 minutes. Loud attacks are allowed to take 2 minutes.

24 Hours Service Level-1 containers are defined as those ATMs that are available for use anytime of day. The steel that the security container is constructed of should have a tensile strength of 50,000 psi. Entry from the customer access panel into the currency area of the 24 Hour should resist attacks for up to 30 minutes. Attacks to remove currency will be made using fishing, trapping, and forcing techniques. Tools may be wires, hooks, pry bars, hacksaw blades, and certain other tooling that may be concealed in clothing. Attacks on the other portions of the security container may be made using picks and portable electric tools such as drills and grinders. It shall resist attacks for up to 15 minutes. Most Triton containers to date have the security container portion of the ATM separated from the customer access panel area. Therefore, gaining access to the customer access area does not give entry into the security container.

3.) What is an example of a UL 291 failure?

Failure of attack for either model is defined similarly. With the exception of trapping, the removal of 10% of the currency is a failure. Exposing the currency so that it may be removed is a failure. If a test device can trap 3 or more dispenses without being detected or disturbing the transaction, it is considered a failure.

4.) Does an ATM have to meet any environmental requirements?

Humidity- 85% for 24 hours. The ATM must maintain records and maintain the security of the currency.

Transient testing- simulates a brown out. Must pass 500 simulated brown outs without lessening the security of the currency or the accuracy of the records.

Rain Test for Outdoor ATMs- will have a simulated rainstorm on the exposed control panel for 1 hour. No failures are allowed.

Endurance test- must accurately maintain records and maintain security of the currency for 6000 successful dispensing transactions.

Variable Temperature Test- for Business Hours +13°C to +35°C. For 24 Hour Level –1 indoor units 0°C to +49°C. For Outdoor units the outside portion will be tested from -35°C to +66°C. The ATM may fail to dispense but it must maintain records and maintain the security of the currency.

5.) Does the ATM have any ESD protection?

All Triton ATMs that contain the CE mark have successfully passed EN61000-4-2. This European standard requires the ATM to withstand 4000 volts from a contact discharge and 8000 volts from an air discharge. A contact discharge simulates the person actually making contact with the machine before the discharge occurs. The air discharge simulates the discharge occurring before the person makes contact with the machine.

Triton does perform testing in excess of these values. Protection can take on many forms such as TVS diodes, ferrites, etc...

6.) What does the CE on the product label mean?

CE is an abbreviation for 'Conformité Européenne'. It shows that the ATM has met the requirements and directives set forth by the European Union (EU). The EU has created “directives” that define requirements for, among other things, electronic equipment.

Triton does use an independent third part EMC and Safety test labs to gain compliance with these requirements. Only after the ATM has passed the requirements set forth by the directives are we allowed to place the CE mark on the ATM.

7.) The building inspector asked for proof of safety testing. What does this mean?

Depending on where you live there may be laws that govern the safety of electronic used in a building. I have found most of these request to come from Europe and Australia. If the safety markings on the label are questioned, a copy of the CB certificate will usually satisfy the inspector. My intention is to have the CB certificate for most of our newer products located on the website.

8.) What is a CB certificate?

The CB certificate is issued based on conformity testing to the CB scheme. It is an international safety agreement constructed by many countries defining safety requirements. Over 40 countries contribute to the scheme. There are general requirements as well as country differences requirements that must be tested and passed before the equipment is in compliance. The test facility issuing the CB report has to have approval from the IEC. This does not mean that you can install the product in all countries that recognized the CB scheme. Other considerations such as emissions, immunity, and telecom have to be considered as well. The CB report issued for our ATM is for safety approval only.

9.) If the customer modifies the configuration of the ATM, is the compliance of the ATM affected?

In most cases, yes. Most country compliance standards are very specific about modifications. Changing the hardware configuration of the ATM may bring the machine out of compliance. At this point most standards place the responsibility of compliance on the one performing the modifications.

10.) Should I use a surge suppressor?

Some of the Triton ATMs come with built in surge protection. However, it is always a good idea to place a surge protector in line with electronic equipment. I would personally recommend on both the power and telecom lines. Be sure to use a surge suppressor approved for you location.

11.) The building inspector told me to get a GFI plug. What is this?

A GFI, Ground Fault Interrupt, outlet is used to decrease the chance of shock due to water. Most measure the flow of current between line and neutral. If there is a significant difference, the product assumes the current is flowing through ground-shock condition. It then opens the line. They do have to be checked periodically. Be sure the GFI you use is approved for your area.

Although Triton does not require a GFI outlet for the ATM, we do require that the outlet supplying power to the ATM be properly grounded.

12.) What does the statement “The affect this unit has on Wall Fire Resistance Ratings has not been evaluated.” mean?

You may see this or a similar statement on the Through-The-Wall (TTW) ATMs. Your local building codes may specify that a wall is to have a certain fire rating. Because a hole must be cut into the wall in order for the TTW to be installed, the fire rating of the wall may be affected. Be sure to check your local building codes to see how you are affected. The same advice is given for installing any equipment through a wall.

13.) What is the Power Requirement for the ATM?

First of all don't go by the current rating on the label. That is the max load that Triton states that the user may see. We do add a buffer to this value. This question is usually asked by someone performing power cost studies. See our page “ATM Power Requirements” page for a more accurate power usage values.

If you have further compliance questions, please direct them to Compliance@trtn.com.
DO NOT USE THIS EMAIL FOR SOLICITATIONS.

If you have technical questions call Triton Tech Support.

This document was prepared by Guy Parker. Triton makes no claims to the accuracy of the content. UL 291 is copywrited by Underwriters Laboratory.