

Reciting.

Discrete automation is not really about everything that happens within the process is done only within discrete signals. Discrete automation is a definition that uses if you can measure the output product, in other words It should be quantified. It doesn't mean that the process should have just one step.

For example, let's take a look at the process of placing caps on bottles. There are some steps are being made such as compression, twisting etc. So, it doesn't really matter how many steps does a process take: if the product may be quantified – the process may be called discrete.

Let's take a look at the process of making cell phones. Even though all of the parts might be in various countries, the process of making each one of them might be considered a discrete automated process. Also, the assembly of a cell phones might be called discrete.

The discrete automated process might be stopped at any time. Moreover, starting/stopping a discrete automated process is as easy as stopping a machine (you don't have any kind of delays etc. and the release of the signal doesn't have a tail).

Engine Installation.

Installing an engine into a vehicle might be called a discrete automation process since by the end you get a quantified product.

Integration an engine requires precise work.

Before installation, the engine is inspected and prepared for integration into the vehicle. Robots or automated systems may check for any defects or ensure that all necessary components (like the exhaust manifold, intake, or sensors) are properly assembled.

Automated conveyor belts bring the engine to the installation station. The engine is positioned and ready for installation.

A robotic arm or gantry crane, with precision control, lifts the engine into position. The system may be equipped with sensors to ensure it is aligned correctly with the mounting points and connecting interfaces

Once the engine is in place, automated systems may guide bolts and fasteners into position, securing the engine to the vehicle's frame. This step often involves robotic arms with torque-controlled wrenches to ensure the correct tightness of the bolts.

The only thing that is left is to connect the engine with different pipes and gauges, fuel lines and cooling system.