

# 1. Overview

## 1. Definition of the “Load Cell”

As explained in the Introduction to Load Cell 1, load cells are sensors that convert force (mass, torque) into electrical signals and output the electrical signals. Load cells are also called “load transducers.”

In the dictionary, a load cell is described as a “weight measurement device necessary for electronic scales that display weights in digits.”

Load cells can be classified according to the following operational principles:

1. Load cells that utilize liquid pressure or air pressure
2. Load cells that utilize elasticity
3. Load cells that utilize a magnetostriction effect or piezoelectricity effect

Among the many kinds of load cells, the strain gauge load cell is the most prevalent. Therefore, when we say “load cell,” we are generally referring to strain gauge load cells.

While there are many measurement devices other than strain gauge load cells, such as magnetostrictive sensors, capacitance sensors, and gyro sensors, this article will focus on a description of strain gauge load cells.

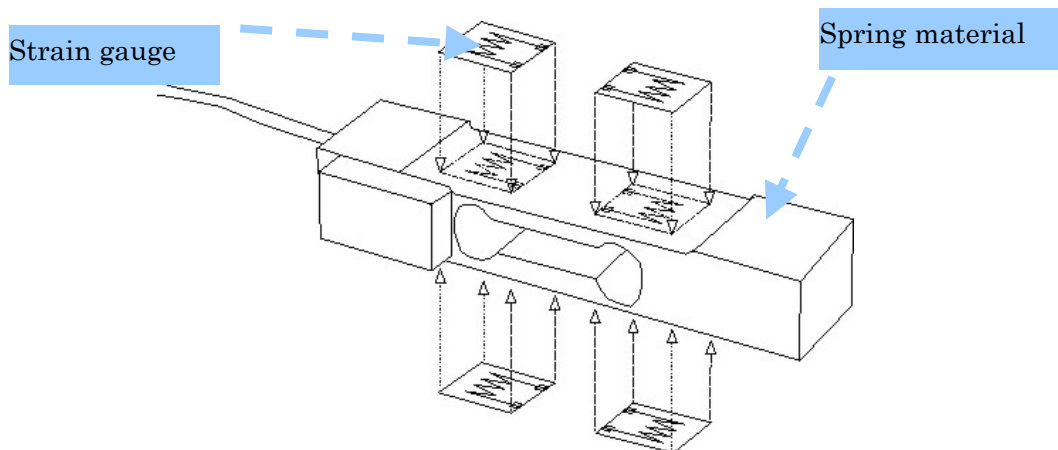


Figure 1.1