

Logic Gates & Truth Tables

Logic gates are tiny electronic "decision makers". They take inputs (like YES or NO, or ON or OFF), and then give an output based on a rule. The most basic rules are **AND** and **OR** rules. Your electronic safe mechanism works like these logic gates, with a specific one of the rules deciding if the safe door opens or not. **Can you figure out which rule it is using?**

Using the **AND** rule, this means that the reed switch must be activated **AND** the handle must be turned for the safe to open.

AND		
Reed switch	Handle	Result
NO	NO	NO
NO	YES	NO
YES	NO	NO
YES	YES	YES

OR		
Reed switch	Handle	Result
NO	NO	NO
NO	YES	YES
YES	NO	YES
YES	YES	YES

Using the **OR** rule, this means that the reed switch must be activated **OR** the handle must be turned for the safe to open, they work independently from each other.