

Distinguish, differentiate, compare and explain what is the difference between Active and Passive Instruments. Comparison and Differences.

Comparison and Difference between Active and Passive Instruments

1. In the active instruments, the quantity to be measured activates some external power input source, which in turn produces the output. In passive instruments, the output is produced entirely by the quantity being measured.
2. In the active instruments, additional external energy input source is required whereas in passive, additional energy input source not required.
3. Active instruments have a high resolution as compared to passive instruments.
4. In the active instrument, the resolution can be adjusted by adjusting the magnitude of the external energy input. In the passive instrument, the resolution cannot be easily adjusted.
5. Active instruments are complicated to design while passive instruments are simple to design.
6. Due to complex design and a higher number of elements, active instruments are costlier. The passive instrument is cheaper hence economical.
7. Examples of Active Instruments are a liquid level indicator, flow indicator. Examples of Passive Instruments are pressure gauge, voltmeter, ammeter.