Unidirectional inverter and three-phase inverter

What does a three-phase inverter convert?
The voltage source inverter (VSI) is a commonly used power inverter. It converts a DC voltage into a three-phase AC voltage. So a three-phase inverter is required.

What does VSI stand for in a three-phase inverter?
For the three-phase inverter,we sub-divide into VSI (voltage source inverter)and CSI (current source inverter). We study the VSI (voltage waveforms,harmonics,calculation of the output voltage).

Does a 3 phase inverter have harmonics?
The output voltages of a three-phase inverter have the shape of a square wave,not a pure sinusoidal wave,so they include many harmonics.

What is a three-phase AC/DC converter?
Three-phase currents, voltages and their corresponding phase shifts are shown when having the AC/DC converter working respectively as a PFC, inductive load, inverter and capacitive load. The currents and voltages have a constant amplitude, thus implying constant apparent power. Figure 34. Operating region of a three-phase converter.

How many switching states are there in a 3 phase inverter?
For the six switches of a three-phase inverter,there are only eight possible switch combinations,i.e.,eight different switching states.

What is a voltage source inverter?
A voltage source inverter (VSI)is a commonly used power inverter that converts a DC voltage into a three-phase AC voltage. The three-phase VSI has six transistors to form a bridge structure with three legs,as illustrated in Figure 3.17.

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