

ABSTRACT

The present disclosure provides a method and device for transmitting data by using a power line, and a method and device for receiving data by using a power line. The method for transmitting data includes: setting $i=1$ and $j=1$; receiving an i -th zero crossing signal at a time point t_i , and determining, based on the i -th zero crossing signal, a start time when synchronization signals of a j -th data packet are transmitted, the start time when the synchronization signals of the j -th data packet are transmitted being t_i+t ; transmitting the synchronization signals of the j -th data packet at the start time when the synchronization signals of the j -th data packet are transmitted; transmitting data signals of the j -th data packet in sequence; and determining whether j is equal to M ; when j is not equal to M , continuing a data transmission; and when j is equal to M , ending the data transmission, M being a number of data packets into which data to be transmitted is divided.

(Fig.1)