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## **ELECTRONIC ACCELERATION SERVO OSA MOVEMENT ON THE SIEMENS S1500T PLC SET FOR THE REQUIREMENTS FOR RECYCLING THE CAR**

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In order to maximize the effects of car recycling, it is necessary to constantly innovate machines where recycling processes take place. In recycling processes, we have cutting various materials such as: metal, glass, plastic, wood, leather, etc. Various drives are used for all these processes. Sometimes the drives were only mechanically shifted. Mechanical couplings such as gears, couplings, sprockets and other mechanical power transmissions were reliable solutions but were not easily interchangeable. Changing the relationship between the two axes of motion would require a change in the ratio of the mechanical gearbox or the use of a gearbox. With the development of electronics, the movement of the axis of movement is displaced from the domain of mechanics into the domain of electronics. Thanks to the quick regulation structures it is possible to mix two or more axes of movement without mechanical connections, and based on the reading from the position sensor or speed. By introducing electronic coupling, the change in the relationship in the software itself will be possible without any changes to the mechanics and during the work itself. The paper provides an overview of the basic concepts and parameters when synchronizing two axes of motion. Also, the necessary parameters and settings are explained for the purpose of synchronizing two axes of movement. Finally, a comparative analysis of three synchronization cases was performed: Reverse motion, Synchronizing and Symetrical, with its advantages and disadvantages.

**Key words:** *recycling, drives, axes of movement, electronic coupling.*

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