

Abstract

Method for automatic address assignment, bus system for automatic address assignment and communications subscribers which can be used in the bus system or within the scope of the method

A method for automatic address assignment is disclosed, said method being based on a distance measurement, a master (M) transmitting via the bus a preamble (P) which is received by all the slaves which are to be addressed. The slaves react to the preamble (P) by transmitting a response signal sequence (A). A slave (S₂) which is located upstream, in the direction of the master (M), of a slave (S₃) which transmits a response signal sequence (A) registers the response signal sequence (A) of the slave (S₃) and subsequently waits for a new preamble (P). The slave (S_z) which does not register any response signal sequences (A) from other slaves is the last slave (S_z), seen from the master (M), without address allocation on the bus. This slave (S_z) switches into a state in which it is ready to receive an address-assigning telegram (T) from the master (M), with which address-assigning telegram (T) it is assigned an unambiguous address. During the next cycle of the method, the slave (S_z) which has just been assigned an address no longer reacts to the preamble (P) so that another slave evaluates the constellations at the bus in such a way that it switches into a state in which it is ready to receive the address-assigning telegram. In this way, all the slaves without an address are gradually assigned an address.

FIG. 2