

Claims

1. System (2) having a controller (16) and having an actuator (4) and also having an assembly (18) for providing functional safety, wherein the assembly (18) has a
5 switching unit (24) inserted into an electrical supply line (8) of the actuator (4) and a control device (22) which is provided and set up to operate the switching unit (24) and is connected to the controller (16) for signal transfer purposes, characterized in that process parameters for controlling the actuator (4) are stored in the controller (16), which process parameters are designed in such a way that the actuator (4)
10 performs a desired function when it is operated in accordance with the process parameters, wherein the system (2) is designed in such a way that, in order for the actuator (4) to be operated by the controller (16), a signal, by means of which the switching unit (24) is accordingly operated, is transmitted to the control device (22) of the assembly (18).
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2. System (2) according to Claim 1, characterized in that the switching unit (24) has a number of switching elements (54) which are electrically connected in series and are inserted into the supply line (8).
- 20 3. System (2) according to Claim 2, characterized in that two of the switching elements (54) are each a mechanical switch (56).
4. System (2) according to Claim 2 or 3, characterized in that one of the switching elements (54) is a semiconductor switch (58).
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5. System (2) according to one of Claims 2 to 4, characterized in that the switching unit (24) has a fuse (60) which is electrically connected in series with the switching elements (54).
- 30 6. System (2) according to one of Claims 2 to 5, characterized in that the switching unit (24) has a control unit (48) which is provided and set up to actuate the switching elements (54).

7. System (2) according to one of Claims 1 to 6, characterized in that the switching unit (24) has an additional switching element (62) which is inserted into an earth line (10) of the actuator (4).

5 8. System (2) according to one of Claims 1 to 7, characterized by a further actuator (72) having a further supply line (70), wherein the switching unit (24) has a number of further switching elements (66) which are electrically connected in series and are inserted into the further supply line (70), or wherein the assembly (18) has a further switching unit (78) which is inserted into the further supply line (70) and is operated
10 by means of the control device (22).

9. System (2) according to one of Claims 1 to 8, characterized in that the control device (22) and the switching unit (24) are connected by means of a first bus system (44) for signal transfer purposes, wherein the control device (22) is configured as a
15 master of the first bus system (44).

10. System (2) according to one of Claims 1 to 9, characterized in that the control device (22) and the controller (16) are connected by means of a second bus system (36) for signal transfer purposes, wherein the control device (22) is configured as a
20 slave of the second bus system (36).