

WE CLAIM:

1. Electronic control system for a number of electrostatic precipitators of a
10 building ventilation system, comprising
at least one master device (1) and node devices (2), **wherein**
a node device (2) can be connected to each of the electrostatic precipitators,
the or each master device (1), respectively, and each node device (2) has a computing
unit,
15 one or more chains (3) of node devices (2) can be connected to the master device (1)
or to each of the master devices (1), wherein in each chain (3) a first node device (2)
can be connected to the associated master device (1) and the further node devices (2)
of the chain (3) can each be connected to the predecessor node device (2), so that the
node devices (2) of the chain (3) are connected to one another in series, the master
20 device (1) being the predecessor of the first node device (2) of the connected chain
(3) or the predecessor of the first node devices (2) of the connected chains (3),
respectively,
a position number is assigned to each of the node devices (2) of a chain (3),
the computing unit of the master device (1) or the master devices (1), respectively, is
25 configured, in a configuration mode, to cause the computing unit of the first node
device (2) of each connected chain to execute a configuration program that is
configured:
to receive the position number of its predecessor and to assign itself the
position number increased by the value 1 and to store it in the node device (2),
30 to determine whether a subsequent node device (2) is connected and, if this is
the case, to cause the computing unit of the subsequent node device (2) to execute
the configuration program.

5 2. Electronic control system according to claim 1, characterized in that each of
the node devices (2) has one or more sensors in order to detect a coding of the
connected electrostatic precipitator, and in that the configuration program is
additionally configured to determine the coding of the connected electrostatic
precipitator from the output signal of the sensor or from the output signals of the
10 sensors.

3. Electronic control system according to claim 1 or 2, characterized in that the
master device (1) or the master devices (1), respectively, supply the connected node
devices (2) with a supply voltage for the electrostatic precipitators, and in that each
15 of the node devices (2) has a galvanic isolating element for transmitting the supply
voltage from the node device (2) to the connected electrostatic precipitator.

4. Electronic control system according to any of claims 1 to 3, wherein each of
the electrostatic precipitators has a predetermined size and comprises an ionization
20 stage and a collector stage, and the control of each of the electrostatic precipitators is
effected by presetting an ionization current flowing through the ionization stage and
a DC high voltage to be applied to the collector stage, characterized in that
the at least one master device (1) is connectable to a building control device (4) or is
part of a building control device (4),
25 the at least one master device (1) is configured to transmit a control signal
transmitted from the building control device (4) or a control signal derived therefrom
to the node devices (2), and
each of the node devices (2) is configured to determine, for the associated
electrostatic precipitator, the ionisation current to be set on the basis of the
30 transmitted control signal and, optionally, the size of the connected electrostatic
precipitator and/or to determine the DC high voltage to be applied to the collector on
the basis of the transmitted control signal.


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5. Electronic control system according to claim 4, characterized in that the control signal transmitted to the node devices (2) is a measure of the current air volume flow flowing through a ventilation duct in which the electrostatic precipitators are arranged.

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Applicant's Agent

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