

CLAIMS

What is claimed is

1. A defibrillation generator (1) for an implantable defibrillation system, comprising a housing (10), a connector block (11) for connecting an electrode lead assembly (4), which is to be non-transvenously implanted in a patient, and a control device (12) for controlling the operation of the defibrillation generator (1), **characterised in that** the connector block (11) has two connectors (110, 112), to each of which an electrode lead (2, 2A, 2B) of the electrode lead assembly (4), which electrode leads have at least one defibrillation electrode pole (202), is connectable, the control device (12) being configurable to assume a first operating state if an electrode lead (2, 2A, 2B) is connected to just one of the two connectors (110, 112), or a second operating state if electrode leads (2, 2A, 2B) are connected to each of the two connectors (110, 112), in order to provide a defibrillation function in the first operating state via the electrode lead (2, 2A, 2B) connected to the one of the connectors (110, 112) and a defibrillation function in the second operating state via the electrode leads (2, 2A, 2B) connected to the two connectors (10, 112).
2. The defibrillation generator (1) according to claim 1, **characterised in that** the connector block (11) has a third connector (114) for connecting an electrode lead (3) to be transvenously implanted intracardially.
3. The defibrillation generator (1) according to claim 1 or 2, **characterised in that** the connector block (11) has a fourth connector for connecting a coronary sinus electrode lead to be transvenously implanted.
4. The defibrillation generator (1) according to any one of claims 1 to 3, **characterised in that** the housing (10) of the defibrillation generator (1) forms a counter-electrode to at least one defibrillation electrode pole (202) of an electrode lead (2, 2A, 2b) of the electrode lead assembly (4) for delivering stimulation energy.

5. An implantable defibrillation system comprising a defibrillation generator (1) according to any of the preceding claims and an electrode lead assembly (4), which is to be non-transvenously implanted in a patient.
- 5 6. The implantable defibrillation system according to claim 5, **characterised in that** the electrode lead assembly (4) comprises a first electrode lead (2A) for connection to a first connector (110) of the connector block (11) of the defibrillation generator (1) and a second electrode lead (2B) for connection to a second connector (112) of the connector block (11) of the defibrillation generator (1), the first electrode lead
10 (2A) and the second electrode lead (2B) each having at least one defibrillation electrode pole (202).
7. The implantable defibrillation system according to claim 6, **characterised in that** the first electrode lead (2A) and/or the second electrode lead (2B) have at least one
15 sensing electrode pole (200, 201, 203) for detecting ventricular and/or atrial signals.
8. The implantable defibrillation system according to claim 7, **characterised in that** the at least one sensing electrode pole (200, 201, 203) is designed as a ring electrode.
- 20 9. The implantable defibrillation system according to any one of claims 6 to 8, **characterised in that** the at least one defibrillation electrode pole (202) is designed as a helix.
10. The implantable defibrillation system according to any one of claims 6 to 9,
25 **characterised in that** the first electrode lead (2A) and/or the second electrode lead (2B) have at least one atrial sensing electrode pole (200, 201) for detecting atrial signals at a distal end of the electrode lead (2A, 2B) in question, remote from the defibrillation generator (1).
- 30 11. The implantable defibrillation system according to any one of claims 6 to 10, **characterised in that** the first electrode lead (2A) and/or the second electrode lead

(2B) have two atrial sensing electrode poles (200, 201), forming a dipole, for detecting atrial signals.

12. The implantable defibrillation system according to any one of claims 6 to 11,
5 **characterised in that** at least one atrial sensing electrode pole (200, 201) for detecting atrial signals and at least one ventricular sensing electrode pole (203) for detecting ventricular signals are arranged on different sides of the at least one defibrillation electrode pole (202) of the relevant electrode lead (2A, 2B).
- 10 13. The implantable defibrillation system according to any one of claims 6 to 12, **characterised by** a third electrode lead (3) for connection to a third terminal (114) of the connector block (11) of the defibrillation generator (1), the third electrode lead (3) being intended to be intravenously implanted in the heart (H).
- 15 14. The implantable defibrillation system according to claim 13, **characterised in that** the third electrode lead (3) has an electrode array (30) for intracardiac stimulation and/or sensing.
- 20 15. A method for configuring an implantable defibrillation system, comprising the steps of: providing a defibrillation generator (1), which has a housing (10), a connector block (11) for connecting an electrode lead assembly (4), and a control device (12) for controlling the operation of the defibrillation generator (1); and providing an electrode lead assembly (4) comprising at least one electrode lead (2, 2A, 2B, 3), the electrode lead assembly (4) being intended to be non-transvenously implanted in a patient; **characterised by:** either connecting an electrode lead (2, 2A, 2B) of the electrode lead assembly (4), said electrode lead having at least one defibrillation electrode pole (202), to one of two connectors (110, 112) of the connector block (11), or connecting two electrode leads (2, 2A, 2B) of the electrode lead assembly (4), each electrode lead having at least one defibrillation electrode pole (202), to the two
25 connectors (110, 112) of the connector block (11); and configuring a switching unit (124) of the control device (12) to assume a first operating state if an electrode lead (2, 2A, 2B) is connected to just one of the two connectors (110, 112), or a second
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operating state if an electrode lead (2, 2A, 2B) is connected to each of the two connectors (110, 112), the control device (12) providing a defibrillation function in the first operating state via the electrode lead (2, 2A, 2B) connected to the one of the connectors (110, 112) and a defibrillation function in the second operating state via
5 the electrode leads (2, 2A, 2B) connected to the two connectors (110, 112).

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