Claims

1. A contacting device for transmitting electrical energy to a circuit board, with

- a housing (3) which has at least one opening (15, 15‘, 23, 23‘),
- a first contact element (4),
  - -- which is arranged in the housing (3) and
  - -- which has a receiving chamber (30) which is open with respect to the at least one opening (15, 15‘, 23, 23‘), with a central longitudinal axis (31),
- at least one plug-in contact element (6) for mechanical and electrical connecting of the first contact element (4) to a circuit board (8),
- a second contact element (7) for insertion into the receiving chamber (30) through the at least one opening (15, 15‘, 23, 23‘) and for contacting the first contact element (4),

wherein

the housing (3) and the first contact element (4) are displaceable relative to one another in a direction transverse to the central longitudinal axis (31),

a spring element (5) acting in a direction transverse to the central longitudinal axis (31) is arranged between the housing (3) and the first contact element (4),

the at least one plug-in contact element (6) and the first contact element (4) are firmly connected to one another,

characterized in that a plurality of plug-in contact elements (6) for distributing energy are firmly connected to the first contact element (4).

2. The contacting device as claimed in claim 1, **characterized in that** the first contact element (4) and the at least one plug-in contact element (6) are formed in one piece.

3. The contacting device as claimed in claim 1 or 2, **characterized in that** the housing (3) forms a first stop (A_1), for limiting the motion of the first contact element (4) in a first displacement direction (V_1) and a second stop (A_2) for limiting the motion of the first contact element (4) in a contrary second displacement direction (V_2).

4. The contacting device as claimed in one of claims 1 to 3, **characterized in that** the housing (3) has a passage opening (29) for the first contact element (4).

5. The contacting device as claimed in one of claims 1 to 4, **characterized in that** the housing (3) comprises two housing parts (9, 10) which, in particular, form a latching connection (17).

6. The contacting device as claimed in one of claims 1 to 5, **characterized in that** the second contact element (7) has a cylindrical contact portion (38), and the receiving chamber (30) for receiving and clamping the contact portion (38) is of cylindrical design.

7. The contacting device as claimed in one of claims 1 to 6, **characterized**

in that the second contact element (7) has at least one groove (41, 41'), and the housing (3) forms a wall (12, 21, 12', 21'), delimiting the at least one opening (15, 15', 23, 23'), for engagement in the at least one groove (41, 41').

8. The contacting device as claimed in one of claims 1 to 7,
characterized
in that the housing (3) has two openings (15, 15', 23, 23') situated opposite one another for passing through the second contact element (7).

9. The contacting device as claimed in one of claims 1 to 8,
characterized
in that the second contact element (7) has a stop (43) for limiting the inserting into the housing (3).

10. The contacting device as claimed in one of claims 1 to 9,
characterized
in that the second contact element (7) has a tapering tip (42) for inserting into the housing (3).

11. The contacting device as claimed in one of claims 1 to 10,
characterized
in that the second contact element (7) has a crimp portion (40) for connecting to a power supply line (44).

12. A method for assembling a contacting device comprises the following steps:
- providing a preassembled subunit (2) comprising

-- a housing (3) which has at least one opening (15, 23, 15', 23'),

-- a first contact element (4) which is arranged in the housing (3) and which has a receiving chamber (30) which is open with respect to the at least one opening (15, 23, 15', 23'), with a central longitudinal axis (31), said housing (3) and said first contact element (4) being displaceable to one another in a direction transverse to the central longitudinal axis (31),

-- a spring element (5) acting in a direction transverse to the central longitudinal axis (31), which is arranged between the housing (3) and the first contact element (4),

-- at least one plug-in contact element (6) for mechanical and electrical connecting of the first contact element (4) to a circuit board (8),

wherein the at least one plug-in contact element (6) and the first contact element (4) are firmly connected to one another, and wherein a plurality of plug-in contact elements (6) for distributing energy are firmly connected to the first contact element (4),

- contacting the first contact element (4) with the circuit board (8) by inserting the at least one plug-in contact element (6) into an associated plug-in contact element receptacle of the circuit board (8),

- displacing the housing (3) and the first contact element (4) relative to one another in a direction transverse to the central longitudinal axis (31) against a spring force of the spring element (5) into an insertion position,

- inserting a second contact element (7) into the receiving chamber (30) through the at least one opening (15, 15'),

- displacing the housing (3) and the first contact element (4) relative to one another in a direction transverse to the central longitudinal axis (31) by relaxation of the spring element (5) into a clamping position,
- clamping the second contact element (7) located in the receiving chamber (30) between the housing (3) and the first contact element (4) in such a manner that the second contact element (7) is contacted with the circuit board (8) in electrically conducting manner via the first contact element (4) and the at least one plug-in contact element (6).