

Title (en)

Process for automatically mounting electrical conductors with contact elements in connector shells.

Title (de)

Verfahren zum automatischen Montieren von elektrischen Leitern mit Kontaktteilen in Steckergehäuse.

Title (fr)

Procédé de montage automatique de conducteurs électriques avec des pièces de contact dans des boîtiers de connecteurs.

Publication

EP 0348615 B1 19940615 (DE)

Application

EP 89106835 A 19890417

Priority

CH 252488 A 19880701

Abstract (en)

[origin: EP0348615A1] This process and the associated equipment for automatically mounting connector shells (5) and electrical conductors (8) is used to plug connector shells (5) onto the contact elements (8.1, 8.2) of electrical conductors with the aid of an industrial robot. A gripper tool (4) of the industrial robot (1) is capable of holding a plurality of connector shells (5) simultaneously. At the end of a cable processing line (9), each contact element (8.1, 8.2) of the electrical conductor (8) is held in a rest position by two pairs of grippers (11.1, 11.2) each, capable of being controlled independently of each other, of a double gripper (11) after a centering module has established the desired position of the contact elements (8.1, 8.2). Depending on the equipment provided, both contact elements (8.1, 8.2) of the electrical conductor (8) can be fitted with connector shells (5) simultaneously by one industrial robot (1) each or consecutively by only one industrial robot (1) with the aid of a rotatable transfer module (10) which is associated with the double gripper (11) and rotates the electrical conductor (8). Like a pull-off movement necessary to test whether the contact seating is perfect, the fault-free plugging-on of the connector shells is monitored by sensors. The finally assembled cable harnesses (13) are transferred, for example, by two industrial robots (1) individually in the extended state to a transport device (14) which can be matched to the length of the cable harness (13). <IMAGE>

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IPC 8 full level

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CPC (source: EP US)

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Cited by

EP0660466A3; DE4002193A1; US5740602A; CN102035122A; EP0440955A1; EP0448116A1; US5109602A; US10723584B2; WO2023143757A1; WO2020216834A1; EP3155700B1

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