Title (en)

Contact clamp and connector with contact clamp

Title (de)

Kontaktklemme und Verbinder mit Kontaktklemme

Title (fr)

Pinces de contact et connexion dotée de pinces de contact

Publication

EP 2381536 A2 20111026 (DE)

Application

EP 11005784 A 20091208

Priority

- EP 09767983 A 20091208
- DE 102008061268 A 20081210

Abstract (en)

The inserted end of the conductor is connected to an electrical contact (28). The support frame (20) includes a contact section (26) contacted by the end of the conductor. The clamping limb (72) swings in the support frame between open and closed positions. This limb holds the end of the conductor against the contact section (26) when the conductor end is inserted to reach the desired contact position. This completes electrical connection. The limb (72) swings away when open, leaving the contact region free. This assists insertion or removal of the conductor end. In the closed position, the clamping limb (72) is at an angle to the contact section (26). Its movement is resilient, such that the conductor end is under spring force in the closed position, once inserted. The pivot bearing is ahead of the clamping location in the direction of insertion; the limb runs at an angle from the bearing to the clamping location when closed. The clamping section is an integral component of the clamping spring (60), which also has an operating limb (74). The clamping spring is constructed as a tilting lever pivoting in the support frame. Flexural strength of the clamping spring is designed to allow insertion of the conductor, which pushes it back as it slides into the desired position. The clamping spring is stamped as a single piece from a spring metal sheet. It is formed as a V-shaped angled lever, the acutely-angled section lying between the clamping- and operating limbs. Further mechanical details of the spring and its mounting in the support frame are elaborated in the text and clarified by accompanying drawings. When closed, a catch section on the operating limb engages the support frame. The support frame includes a fixed connecting component (28) extending in the insertion direction (E). The support frame is stamped-out and formed from metal sheet; it is essentially U-shaped. It forms part of an insulated connector for the end of a conductor. The connector has an insulating housing (162) with a screw-on cover (166) providing cable sheath clamping. When the connector is assembled, the clamping spring is moved to the closed position, completing clamping of the cable end and making connection with it.

Abstract (de)

Die Erfindung betrifft eine Kontaktklemme zum Verbinden eines Leiterendes mit einem elektrischen Kontakt und mit einer Einführseite von der das Leiterende in die Kontaktklemme einführbar ist, welche ein Haltegestell umfasst mit einem Kontaktabschnitt, mit welchem das Leiterende kontaktierbar ist, sowie einen Klemmschenkel, welcher in dem Haltegestell schwenkbar gelagert und zwischen einer geöffneten Schwenkposition (Fig. 1) und einer geschlossenen Schwenkposition (Fig. 2) hin und her schwenkbar ist, und der Klemmschenkel in der geschlossenen Schwenkposition das Leiterende gegen den Kontaktabschnitt klemmt, wenn das Leiterende in die Sollkontaktposition (Fig. 11) in die Kontaktklemme eingeführt ist, um den elektrischen Kontakt zwischen dem Leiterende und dem Kontaktabschnitt herzustellen, und der Klemmschenkel in der geöffneten Schwenkposition von dem Kontaktabschnitt weggeschwenkt ist und den Kontaktbereich in der Kontaktklemme freigibt, so dass das Leiterende in der geöffneten Schwenkposition einerseits in die Kontaktklemme einführbar ist und andererseits zur Entnahme aus der Kontaktklemme freigegeben ist und der Klemmschenkel in der geschlossenen Schwenkposition schräg (³) zum Kontaktabschnitt hin verläuft und federnd beweglich ausgebildet ist, derart dass das Leiterende in der geschlossenen Schwenkposition unter elastischem Auffedern des Klemmschenkels in die Sollkontaktposition in die Kontaktklemme einführbar ist.

IPC 8 full level

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CPC (source: EP US)

H01R 4/4821 (2023.08 - EP); **H01R 4/489** (2013.01 - EP US); **H01R 11/22** (2013.01 - US); **H01R 11/24** (2013.01 - US); **H01R 13/15** (2013.01 - EP US); H01R 4/484 (2023.08 - EP); H01R 13/42 (2013.01 - EP US); H01R 13/502 (2013.01 - EP US); H01R 2101/00 (2013.01 - EP)

Citation (applicant)

- DE 19613557 A1 19970626 - HAGER ELECTRO GMBH [DE]
- DE 202005007607 U1 20060921 - TRIDONICATCO CONNECTION TECHNO [AT]
- DE 19513557 A1 19961024 - BOSCH GMBH ROBERT [DE]

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Designated extension state (EPC)

AL BA RS

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