

Title (en)
Connection system for realising of branchings to continuous conductors

Title (de)
Anschluss-System zur Realisierung von Abzweigungen an durchgehenden Leitern

Title (fr)
Système de connexion pour réalisation des branchements des conducteurs continus

Publication
EP 1764870 A1 20070321 (DE)

Application
EP 06120274 A 20060907

Priority
DE 202005014718 U 20050917

Abstract (en)
An electrical connector arrangement comprises base (2) having horizontal upper surface containing longitudinally extending conductor seats (20); hollow support frame (3) mounted on the base upper surface and surrounding a space above the conductor seats; terminal blocks (4) mounted for vertical movement within the frame above and parallel with the conductor seats, respectively; and displacement mechanism for displacing the terminal blocks. The electrical connector arrangement comprises (a) base having horizontal upper surface containing longitudinally extending conductor seats for supporting the insulated input conductors, respectively; (b) hollow support frame mounted on the base upper surface and surrounding a space above the conductor seats, the frame having spaced pairs of side and end walls; (c) terminal blocks mounted for vertical movement within the frame above and parallel with the conductor seats, respectively, each of the terminal blocks including (i) hollow housing (7), (ii) output terminal mounted in the housing adjacent an access opening contained in the housing, and (iii) insulation-piercing contact (8) connected with the output terminal and extending downwardly from the housing; and (d) displacement mechanism for displacing the terminal blocks between elevated disengaged positions spaced above the conductor seats, and lowered engaged positions in which the insulation piercing contacts are arranged to pierce the insulation layers and electrically engage the conductors supported by the associated seats, respectively. The frame is formed from an electrical insulating material and contains longitudinal chambers extending parallel with and above the conductor seats. The electrical connector arrangement further includes vertical guide rib and guide for guiding the terminal blocks for vertical movement relative to the frame; and fastener for fastening the frame to the base. The fastener comprises spaced stud and snap fastener. The frame includes pivot lug and operating tab. The terminal block displacement mechanism comprises support shaft, and axially spaced eccentric operating disks. The electrical connector arrangement further includes a releasable catch mechanism having spring-biased button. Each operating disk includes a pair of centrally arranged guide pegs.

IPC 8 full level
H01R 4/24 (2006.01); **H01R 9/03** (2006.01); **H01R 9/24** (2006.01)

CPC (source: EP US)
H01R 4/24 (2013.01 - EP US); **H01R 9/031** (2013.01 - EP US); **H01R 9/2408** (2013.01 - EP US); **H01R 12/592** (2013.01 - EP US); **H01R 12/675** (2013.01 - EP US); **H01R 4/2429** (2013.01 - EP US); **H01R 4/2475** (2013.01 - EP US); **H01R 4/4809** (2013.01 - US); **H01R 4/4821** (2023.08 - EP); **H01R 4/4842** (2023.08 - EP)

Citation (applicant)
• DE 29708222 U1 19980910 - TEHALIT GMBH [DE]
• US 6811430 B1 20041102 - CARRICO ALAN [US], et al
• EP 0271413 A1 19880615 - TELEMECANIQUE ELECTRIQUE [FR]
• DE 10163809 A1 20030710 - WIELAND ELECTRIC GMBH [DE]
• WO 0211249 A1 20020207 - TYCO ELECTRONICS CORP [US]
• US 5637011 A 19970610 - MEYERHOEFER CARL H [US], et al
• DE 29708222 U1 19980910 - TEHALIT GMBH [DE]

Citation (search report)
• [X] EP 0690523 A1 19960103 - MINNESOTA MINING & MFG [US]
• [X] US 6811430 B1 20041102 - CARRICO ALAN [US], et al
• [A] EP 0271413 A1 19880615 - TELEMECANIQUE ELECTRIQUE [FR]
• [A] WO 0211249 A1 20020207 - TYCO ELECTRONICS CORP [US]
• [A] US 5637011 A 19970610 - MEYERHOEFER CARL H [US], et al
• [AD] DE 29708222 U1 19980910 - TEHALIT GMBH [DE]

Cited by
DE202008015310U1; EP4297190A1; DE102013017309A1; EP3021421A1; DE202010008934U1; WO2010057749A1; DE202008015307U1; US8298019B2; EP3342006B1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1764870 A1 20070321; **EP 1764870 B1 20141203**; CN 100492768 C 20090527; CN 1933247 A 20070321; DE 202005014718 U1 20070201; US 2007066121 A1 20070322; US 7407406 B2 20080805

DOCDB simple family (application)
EP 06120274 A 20060907; CN 200610154220 A 20060915; DE 202005014718 U 20050917; US 51925006 A 20060912