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(54) **CONNECTION DEVICE FOR COAXIAL CABLES.**

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Description

Technical Field

The invention relates to a connection device for connecting a coaxial cable to a component arranged on a circuit board, of the type having one edge provided with rows of connecting pins which coact with connection blocks containing female contacts on one side and connection pins associated with these on the other side.

Background Art

Relatively expensive arrangements are necessary for connecting a coaxial cable to a component on a circuit board of the type mentioned, since such a cable cannot be connected quite simply to the connection pins on the edge of the board, it being necessary to replace the pins with coaxial connection sleeves in which the pin of the coaxial connector can be inserted. Such a device is described in DIN No 4162.

The invention enables a coaxial cable to be connected to a component mounted on a circuit board, while using the customary connection pins.

Brief Description of Drawing

The invention is explained in detail below with the aid of an embodiment, while referring to the appended drawing, on which Figure 1 schematically illustrates in perspective a connection device in accordance with the invention, Figure 2 being a side view and Figure 3 a plan view of the connection device.

Mode for Carrying out the Invention

Figure 1 illustrates the inventive connection device in perspective. A coaxial cable denoted by 1 is to be connected to a component 3 mounted on a circuit board 2. Along its edge portion the board 2 is provided with contact blocks 4, of which one is shown lifted up in relation to the circuit board, for the sake of clarity. The block 4 is provided along one side with rows of bent pins 15, which are soldered to the circuit board and via printed conductors 31, 32, 33, for example, are connected to the different components. Along its other side the block 4 is provided with straight pins 14, which are fixed in rows of holes in the same way as the pins 15, for engagement with a connection block 5 having female contacts 6. In the extension of the female contacts the connection block 5 is provided with connection pins 7, forming rows in the same way as the other pins in block 4.

The coaxial cable 1, which is to be connected to the connection block 5, has a cylindrical screening sleeve 8 connected to its outer conductor and having an outer diameter such that it can be inserted between four pins 7a—7d on the block 5. The sleeve 8 is provided with four slits 12 which are shorter than the pins 7. In assembling, the central conductor 1 is first soldered to the central pin 9, subsequent to which the sleeve 8 is thrust in between the pins 7a—7d such that these engage

in the slits. Since the pins are pointed, they are pressed outwards as the sleeve is pressed down, so that the sleeve is kept in a fixed position by engagement between the pins and the edges of the slits. There has thus been obtained a removable coaxial connection from the cable 1 to the component 3.

Figures 2 and 3 respectively show, in front and plan views, the inventive coaxial connection before, and after, the sleeve has been thrust in between the pins. The inner contour of the pins lies along a circle having a somewhat smaller diameter than that of the sleeve. When the sleeve is pressed down, the pins 7 glide in the slits 12 until they come into contact with the end wall of the slits, and since the ends of the pins are bevelled off, the pins glide obliquely outwards along the outer wall of the sleeve, as will be seen from the right-hand portion of Figure 2. Further to the elastic retention, it is also possible to solder the pins to the wall of the sleeve 8, as indicated by 16 in Figure 2.

It will be seen that by the invention there has been obtained a much simpler connection device than the previously used devices, when existing standard connection devices having screening sleeves provided with longitudinal slits have been used.

Claims

1. Connection device for connecting a coaxial cable (1) to a component (3) arranged on a circuit board, of the type having one edge provided with rows of connection pins (14), which coact with connection blocks (5) having female contacts (6) on one side and connection pins (7) associated with said female contacts along the other side, characterized in that the inner contour of four pins (7a—7d) in the connection block (5) lie along a circle, the diameter of which is somewhat less than the outer diameter of a screening sleeve (8) of the said coaxial cable, and in that a pin (9) centrally positioned in relation to said four pins is adapted for soldering to the central conductor (11) of the coaxial cable, the sleeve (8) being provided with longitudinal slits (12), which are approximately just as wide as the thickness of the pins but shorter than the pins, so that when the sleeve is thrust between these pins the pins glide in the slits until the end portions of the pins come into engagement with end walls of the slits and are deflected outwardly for retaining the sleeve (8).

2. Connection device as claimed in claim 1 or 2, characterized in that the screening sleeve is connected to the pins by welding or soldering.

Patentansprüche

1. Anschlussvorrichtung zum Verbinden eines Koaxialkabels (1) mit einer auf einer Schalttafel angeordneten Komponente (3) des Typs, bei dem ein Rand mit Reihen von Anschlussstiften (14) versehen ist, die mit einem Anschlussblock

zusammenwirken, der an einer Seite Buchsen (6) und entlang der anderen Seite den Buchsen zugeordnete Anschlussstifte (7) aufweist, dadurch gekennzeichnet, dass die Innenkontur von vier Stiften (7a bis 7d) im Anschlussblock (7) auf einem Kreis liegen, dessen Durchmesser ein wenig kleiner ist als der Aussendurchmesser einer Abschirmhülse des Koaxialkabels, und dass ein mittig zu den vier Stiften angeordneter Stift (9) an den Mittelleiter (11) des Koaxialkabels anlötfar ist, wobei die Hülse (8) mit Längsschlitzen (12) versehen ist, die nahezu gerade so breit sind wie die Dicke der Stifte, jedoch kürzer als die Stifte, so dass, wenn die Hülse zwischen diese Stifte geschoben wird, die Stifte in die Schlitze gleiten, bis die Endabschnitte der Stifte mit den Endwänden der Schlitze in Berührung gelangen und zum Halten der Hülse (8) nach aussen weggebogen werden.

2. Anschlussvorrichtung nach Anspruch 1, dadurch gekennzeichnet, dass die Abschirmhülse durch Schweißen oder Löten mit den Stiften verbunden ist.

Revendications

1. Dispositif de connexion pour connecter un câble coaxial (1) à un composant (3) agencé sur

une plaquette à circuit, du type comportant un bord présentant des rangées de broches (14) de connexion, qui coopèrent avec des blocs (5) de connexion comportant des contacts femelles (6) sur un côté et des broches (7) de connexion associées auxdits contacts femelles le long de l'autre côté, caractérisé en ce que le contour intérieur de quatre broches (7A—7d) situées dans le bloc (5) de connexion s'étend le long d'un cercle dont le diamètre est quelque peu inférieur au diamètre extérieur d'un manchon (8) de blindage dudit câble coaxial, et en ce qu'une broche (9), positionnée centralement par rapport auxdites quatre broches, est conçue pour être soudée sur le conducteur central (11) du câble coaxial, le manchon (8) présentant des entailles longitudinales (12) qui sont approximativement d'une largeur à peine égale à l'épaisseur des broches, mais qui sont plus courtes que les broches, de manière que, lorsque le manchon est poussé entre ces broches, celles-ci glissent dans les entailles jusqu'à ce que les parties extrêmes des broches entrent en contact avec les parois extrêmes des entailles et soient déviées vers l'extérieur pour retenir le manchon (8).

2. Dispositif de connexion selon la revendication 1 ou 2, caractérisé en ce que le manchon de blindage est connecté aux broches par soudage ou brasage.

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