

EP 0432525

The present invention relates to a marking carrier for electrical conductors, comprising a carrier body having an upper marking receiving means, side walls and a bottom region with a clamping means which has a clamping tongue acting on the inserted electrical conductor. According to a previous proposal for a marking carrier of this kind (EP-A-404988), the clamping means consists of a clamping tongue, one end of which is formed on the bottom region of the carrier body, and the free clamping end of the clamping tongue extends inclinedly upwardly and inwardly onto the upper marking receiving means of the carrier body. In the case of a hollow profile of a carrier body which happens to be closed, this design results in the electrical conductor being able to be properly guided and inserted, and by virtue of the clamping tongue it is also possible to obtain considerable clamping force, wherein conductors of large diameter can be inserted there. On the basis of that design, the conductors can, however, only be inserted from one side into the carrier body of the marking carrier, or the marking carrier can only be pushed from one side over an electrical conductor. This can cause problems with assembly. Attention is also to be given to the fact that marking receiving means of this kind are frequently printed identically, and therefore are only readable from one direction, from the right or left. A marking carrier is also disclosed in EP-A-295 542.

The aim of the present invention is therefore to create a marking carrier of the kind in question, which can be pushed from both directions onto the conductor to be marked, whilst keeping assembly simple and a reliable clamping capacity.

The solution, according to the invention, is given in the characterising part of Claim 1. By virtue of the clamping rocker member characterised in greater detail there, it is now actually possible for the marking carrier to be pushed from both directions onto an electrical conductor which is to be marked, with simple assembly and reliable clamping. The regions in the carrier body for insertion of the electrical conductors remain basically free. When inserted, the electrical conductor immediately meets the central clamping tongue of the rocker member. When it is further inserted, the clamping rocker member rotates from the conductor via the central clamping tongue, until, depending on the direction of insertion, one of the two other rocker members also rests

against the electrical conductor. When they are further joined together, the desired deformation with clamping effect is produced between the two clamping tongues of the clamping rocker member which act upon the electrical conductor, and thus a stable double clamping of the conductor is produced to suit its diameter, and the upper more stable marking receiving means provides a secure support. Assembly with respect to the direction of joining is completely arbitrary, particularly for the sake of the desired reading direction with respect to the push-in direction of the marking carrier onto the electrical conductor.

Further preferred embodiments of a marking carrier of this kind are characterised in the sub-claims. It should be emphasised that the clamping rocker member is elastically rotatably movable relative to the support, in this case, in particular, by virtue of a rotary bar which is integrally connected in the lower region to the two side walls of the clamping body. It should also be emphasised that elastic guide- and clamping plates are provided in the upper region of the carrier body, directly beneath the marking receiving means which likewise assist in providing proper clamping, and which during the insertion stage reliably guide the conductors towards the clamping rocker member, even if conductors of considerably greater diameter are to be provided with the marking carriers.

There now follows a description of a preferred embodiment of a marking carrier according to the invention, with reference to the accompanying drawings, wherein:

Figure 1 is a front view in perspective of a marking carrier according to the invention,

Figure 2 is a bottom view in perspective of the marking carrier according to Figure 1,

Figure 3 is another front view in perspective of a marking carrier of this kind with an inserted electrical conductor,

Figures 4 and 5 are sectional views through a marking carrier of this kind with a conductor which is inserted from the right and from the left.

The marking carrier for electrical conductors has a carrier body which basically consists of an upper marking receiving means 1, side walls 2 connected thereto and a bottom region which is formed mainly by a clamping means in the form of a clamping rocker member 3. The afore-mentioned regions of the carrier body define a through passage for an electrical conductor 4.

The clamping rocker member 3 consists, in turn, basically of three clamping tongues 5, 6 and 7, the inner ends of which emanate from a rotary bar 8 integrally formed on the lower region of the two side walls 2. The arrangement therein is such that the central clamping tongue 6, provided that no electrical conductor 4 is yet inserted, projects basically substantially vertically upwards into the through space for the electrical conductor 4. Another clamping tongue 5 is then provided, approximately at 90° to the left of it, and the third clamping tongue 7 is disposed at approximately 90° to the right of it. Two upper lateral guide- and clamping plates 9 are also formed in the through space defined by the carrier bodies for the electrical conductors 4, in the upper region beneath the marking receiving means 1 in relation to an inserted conductor, thus on the side thereof which is remote from the clamping rocker member 3.

The above-mentioned arrangement enables the electrical conductor 4 to be introduced both from the right (see Figure 4) and also from the left (see Figure 5) into a marking carrier of this kind, wherein in both cases simple assembly and proper clamping is ensured, with the marking carrier thus being seated firmly on the electrical conductor. If, according to Figure 4, the electrical conductor is introduced from the right, which means that a marking carrier of this kind is placed from the left onto an electrical conductor, the front edge of the electrical conductor 4 first of all abuts on the central clamping tongue 6 of the clamping rocker member 3, which thus initially acts as an actuating lever for the clamping rocker member 3, since thereby the clamping rocker member 3 is rotated as a whole, by surmounting the elastic resistance of the rotary bar 8.

When the conductor 4 is further inserted, due to the rotary movement of the clamping rocker member 3, the other clamping tongue 7 disposed to the right pivots onto the insulating casing of the electrical conductor, and therein, depending on the size of the diameter of the electrical conductor 4, the free

operative ends of the clamping tongues 5 and 7 are also deformed in accordance with the size of the diameter of the electrical conductor, resulting in the entire marking carrier being supported in clamping manner twice on the underside of the electrical conductor. When the electrical conductor is introduced, the two upper guide- and clamping plates 9 have been elastically expanded by spring force. When the electrical conductor was inserted, they have pushed and guided it appropriately in a downwards direction onto the clamping rocker member 3. Since the entry region of the through passage in the carrier body for the electrical conductor 4 is basically open, the entire assembly process takes place without any problems. The conductor is first of all able to enter freely, and is directly pressed by the expanding guide- and clamping plates 9 in the direction of the clamping rocker member 3. When it is further introduced, it pivots it automatically and thus automatically causes deformation of the free ends of the clamping tongues in order to produce a stable seating, and, by virtue of the two-fold supporting, tilt-safe seating.

The clamping effect is provided essentially by the two clamping tongues, by the two clamping tongues 6 and 7 in the above-described instance. Further clamping effect can be provided by the elastic power of resistance of the rotary bar 8. With a corresponding design, a clamping effect is also produced by the guide- and clamping plates 9. The above-described design also makes it possible for electrical conductors 4 of considerably different diameters to be introduced into one and the same marking carrier, or for marking carriers to be clamped securely on electrical conductors of this kind.

Figure 5 illustrates the insertion of an electrical conductor from the left, in accordance with the marking carrier being pushed onto an electrical conductor from the right. With this direction of insertion too, the front edge of the electrical conductor 4 directly meets the clamping tongue 6 after it has entered the inside of the marking carrier, this clamping tongue, in turn acting as an actuating lever. The clamping rocker member 3 is rotated by the rotary bar 8 being twisted. The clamping tongue 5 on the left is then pivoted on the casing of the electrical conductor 4, so that after insertion is complete the two clamping tongues 5 and 6 are responsible for providing stable tilt-safe fixture.

CLAIMS

1. A marking carrier for electrical conductors, comprising a carrier body having an upper marking receiving means (1), side walls (2) and a bottom region with a clamping means which has a clamping tongue acting on the inserted electrical conductor (4), characterised in that the clamping means is a rotatable clamping rocker member (3) with three clamping tongues (5, 6, 7) of which a middle tongue (6) projects into the path of the conductor while a respective one of the other two clamping tongues (5; 7) pivots against the electrical conductor (4) by virtue of the rotary movement of the clamping rocker member by means of the middle clamping tongue (6) when the conductor is introduced, depending on the respective direction of introduction of the conductor.

2. A marking carrier according to claim 1 characterised in that the clamping rocker member (3) is arranged rotatably resiliently against resistance.

3. A marking carrier according to claim 2 characterised in that the clamping rocker member (3) is mounted by means of a rotary bar (8) integrally connected to the side walls (2) of the carrier body.

4. A marking carrier according to one or more of the preceding claims characterised in that guide and clamping plates (9) are provided on the carrier body, in relation to the inserted electrical conductor (4) on the side thereof which is remote from the clamping rocker member (3).

