

ELECTRICAL CONDUIT UNIT

The present invention relates to electrical conduit units having means which facilitate the securing of conduit units adjacent one another in adjacent at least substantially parallel positions. The conduit units can be secured one
5 below the other to effectively and neatly manage the separation of sensitive electric cables such as audio, video and telephone cables from other electrical power cables.

Presently, the practice in the electrical trade is that electrical cables are housed in conduits and where there is a need to separate and maintain the
10 electrical cables, distinct and separate conduits are used to avoid the undesired mix of cables. However, the use of separate conduits gives rise to difficulty in maintaining neatness in the management of the conduits, particularly in situations where there is not much space such as inside a partition.

It is an object of the present invention to provide an electrical cable
15 management system that overcomes the abovenoted problem.

With this in mind, the present invention provides in one aspect, an electrical conduit unit including an elongate conduit body and securing means located on the conduit body for securing the conduit unit to another said conduit unit, to thereby locate said conduit units in adjacent at least substantially
20 parallel positions. The securing means may include at least one clip means.

In a preferred embodiment, the clip means includes a male end and a female end, the male end of the clip means of the conduit unit engaging the female end of the clip means of another said conduit unit when the conduit units are in adjacent at least substantially parallel positions. The male end of
25 the clip means includes a tab extending from the elongate conduit body, the tab having a peripheral end portion thereof, and the female end includes a slot located in the conduit body, the peripheral end portion being locatable in said slot when the conduit units are in their adjacent at least substantially parallel positions. The peripheral end portion of the tab includes a lip for engaging the
30 slot. The female end may further include an opening in the conduit body for allowing access of the tab into the conduit body.

According to another aspect of the present invention, there is provided an electrical conduit assembly including at least one conduit unit as described above further including a cover hanger plate securable to a fixture, wherein the male end of the or each clip means of the conduit unit is engagable with a
5 cooperating slot provided by said cover hanger plate, to thereby allow the conduit unit to be suspended from the cover hanger plate. A plurality of said conduit units may be adapted to be suspended one below another from the cover hanger plate.

The present invention will be more readily understood from the following
10 description of a preferred embodiment of the conduit unit according to the present invention with reference to the accompanying drawings as follows:

Figure 1 illustrates a conduit unit according to the present invention;

Figure 2 illustrates the conduit unit of Figure 1 attached to another said conduit unit;

15 Figure 3 illustrates the conduit unit of Figure 1 attached to a cover hanger plate A;

Figure 4 illustrates the conduit unit of Figure 1 attached to yet another embodiment of a cover hanger plate type B.

Referring to Figure 1, in this embodiment the 'U' shaped body of the
20 conduit is shown as (1). Without losing the generality of the cross-sectional shape of the body of the conduit, it is equally possible to configure cross-sectional appearance of the body of the conduit having semi circular or other workable cross-section.

The male end of the clip means is shown as (2). Each conduit unit is
25 configured to have at least four such male end of the clip means. Each male end of the clip means is integrally formed part of the conduit unit and are generally positioned at the ends of the conduit unit as shown in Figure 1.

Each end of the male end of clip means is turned to form a lip (5) at an acute angle. The male end of clip means (2) has sufficient resilience inherent in
30 the material used.

Directly below and in line with the male end of the clip means, a rectangular shaped slot is formed shown as (3) and is referred to as the female

end of the clip means. The dimension of the slot is marginally larger to receive the lip (5) of the male end of clip means (2). Thus there are equal number of slots positioned below the male end of clip means for each conduit unit.

The following is a description of how the clip means of the conduit unit
5 works to form separated conduits in series one below the other in adjacent at least substantially parallel positions.

Referring to Figure 2, from the bottom of the conduit unit (A), the male ends of the clip means (2) of the conduit unit (B) are passed through the openings (4).

10 The lip (5) of each of the male ends of the clip means of conduit unit (B) resiliently "give" before each of the lip (5) engages in the slots (3). The lip (5) formed at an acute angle enables to hook the conduit unit (B) to the slot (3) of conduit (A). Thus the male and female ends of the clips means act together as hooks.

15 This arrangement of clip means as explained, it is easy to appreciate that conduit units may be hooked one below the other in series with each conduit unit forming a separated conduit.

Referring to Figure 3 and Figure 4 respectively, in order to secure the top most conduit in a series of conduits, what is referred to as a cover hanger plate
20 is secured to a fixture such as a partition for example, by screw means preferably.

The cover hanger plate has at least four slots (8) which have the same dimension as the female slot (3).

To secure the conduit unit to the cover hanger plate, as explained above,
25 the male end of the clip means of the conduit unit are made to hook on the slots (8) of the cover plate.

This enables a series of conduit units to be hung from the cover hanger plate, one below another in series. It is however also envisaged that the conduit units be located end to end to provide a continuous conduit for wires and so on.

30 The conduit units can be made of any material or a composite of materials.

Although the described embodiment of the conduit unit uses clip means

to secure together the conduit units, and the conduit units to the cover hanger plate, it is also envisaged that alternative means can be used to secure the conduit units and/or cover hanger plate together.



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An electrical conduit unit including an elongate conduit body (1) and securing means located on the conduit body (1) for securing the conduit unit to another said conduit unit, to thereby locate said conduit units in adjacent at least substantially parallel positions.
2. An electrical conduit unit according to claim 1 wherein the securing means includes at least one clip means.
3. An electrical conduit unit according to claim 2 wherein the clip means includes a male end (2) and a female end (3), the male end (2) of the clip means of the conduit unit engaging the female end (3) of the clip means of another said conduit unit when the conduit units are in adjacent at least substantially parallel positions.
4. An electrical conduit unit according to claim 3 wherein the male end (2) of the clip means includes a tab extending from the elongate conduit body (1), the tab having a peripheral end portion (5) thereof, and wherein the female end (3) includes a slot located in the conduit body (1), the peripheral end portion (5) being locatable in said slot when the conduit units are in their adjacent at least substantially parallel positions.
5. An electrical conduit unit according to claim 4 wherein the peripheral end portion of the tab includes a lip (5) for engaging the slot (3).
6. An electrical conduit unit according to claim 4 or 5 wherein the female end (3) further includes an opening (4) in the conduit body (1) for allowing access of the tab (2) into the conduit body (1).
7. An electrical conduit assembly including at least one conduit unit according to any one of claims 4 to 6 further including a cover hanger plate



securable to a fixture, wherein the male end (2) of the or each clip means of the conduit unit is engagable with a cooperating slot (8) provided by said cover hanger plate, to thereby allow the conduit unit to be suspended from the cover hanger plate.

8. An electrical conduit assembly according to claim 7 wherein a plurality of said conduit units are adapted to be suspended one below another from the cover hanger plate.