

Description

Fuse box closure in a built-on fuse accessory

The invention relates to a fuse box closure in the built-on fuse accessory of load-break switch systems, having a fuse cover which detachably closes the fuse box, a fuse holding part for receiving the contact bolt of a blow-out fuse being detachably connected to the fuse cover.

A fuse box closure of the type defined at the beginning is disclosed in DE-A 41 16 058. The fuse box, which can be closed with the fuse cover, in this case has a conically shaped circumferential annular section which is surrounded in the closed state by a V-shaped annular groove inside the fuse cover. Situated between the inner bearing surface of the circumferential annular section of the fuse box and the V-shaped annular groove surfaces of the fuse cover is a seal which acts by means of the fuse cover both as a fluid seal and as an electric seal between the inner and outer region of the fuse box. The fuse cover itself is detachably connected to the fuse box by means of fastening screws.

The object of the invention is substantially to simplify the design of the fuse box closure and, in particular, to improve the seal in the electric region. This is achieved according to the invention by means of the following features:

- 1.1. the fuse box contains a cylindrical annular groove in the region of the side facing the fuse cover,
- 1.2. the fuse cover contains a profile-widening cylindrical annular contour in the region of the side facing the fuse box,
- 1.3. the cylindrical annular contour is configured such that in the closed state only the longitudinal sides of the cylindrical annular groove of the fuse box surround the cylindrical annular contour of the fuse cover in a self-closed fashion.

In the case of a fuse box closure constructed in

such a way, in which the longitudinal side of the cylindrical contours of the cylindrical annular groove of the fuse box and those of the fuse cover surround one another in a self-closed fashion, the electrical seal for the currents to be prevented represents in practice a barrier which develops a blocking effect which is much more far reaching than the so-called electric noble-metal joint. In this fuse box closure, the sealing element is essentially limited to covering the regions of the fuse box and of the fuse cover which are directed towards one another in a flat fashion. There is no need in this case to seal conically circumferential annular sections. Since only the longitudinal sides of the cylindrical annular groove of the fuse box are surrounded by the cylindrical annular contour of the fuse cover in a self-closing fashion, the sealing cover is prevented from being canted or placed in a leaky fashion onto the fuse box. The end regions of the cylindrical annular contour and of the cylindrical annular groove thus do not abut one another in the closed state.

An advantageous embodiment of the invention provides the following features:

- 2.1. the fuse box can be closed with the fuse cover by means of a manual lever mechanism which is integrated in the fuse cover and contains fuse-tripping control means,
- 2.2. in the closed state of the fuse box the manual lever mechanism causes a fastening lever contour of the manual lever mechanism to act on an annular widened profile of the fuse box.

A closure without fastening screws is realised by means of the manual lever mechanism which is integrated in the fuse cover and acts in the closed state with its fastening lever contour on the annular widened profile of the fuse box. The extraction of the blow-out fuse is performed in a simple way without fastening screws to be detached manually simply by pivoting the manual lever mechanism integrated in the fuse cover.

The invention is explained in more detail by

means of an exemplary embodiment represented in a figure and in which only the parts which are important for the invention are represented in a sectional illustration.

The exemplary embodiment shows in a sectional view the fuse chamber SK which can be closed by the fuse cover SD. The fuse chamber SK has the cylindrical annular groove ZN in which the cylindrical annular contour ZR of the fuse cover SD, in which the manual lever mechanism GM is integrated, engages in the closed state. It is to be seen, furthermore, that the fuse holder ST is detachably connected on the fuse cover SD to a fastening screw (not illustrated). The fuse holder ST is, furthermore, connected to the clip contact KK, in which the contact bolt KB of the blow-out fuse SS engages. The electric connection to the terminal contact (the latter not being shown) is produced by the clip contact KK via the contact conductor KL. It is to be seen, furthermore, that in the region facing the fuse box SK the fuse cover SD provides the sealing element DE which in the closed state of the fuse box SK sealingly closes the interior of the fuse box SK with respect to the external region by means of the fuse cover SD.

The manual lever mechanism GM, which is an integral component of the fuse cover SD, is provided with the fastening lever contour BK, which in the closed state engages behind the widened profile PE of the fuse box SK. A current-proof barrier between the inner region of the fuse box SK and the outer region is achieved by means of the interlocking cylindrical contours of the fuse cover SD and of the fuse box SK.



Patent Claims

1. Fuse box closure in the built-on fuse accessory of load-break switch systems, having a fuse cover which detachably closes the fuse box, a fuse holding part for receiving the contact bolt of a blow-out fuse being detachably connected to the fuse cover, characterized by the following features
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- 1.1. the fuse box (SK) contains a cylindrical annular groove (ZN) in the region of the side facing the fuse cover (SD),
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- 1.2. the fuse cover (SD) contains a profile-widening cylindrical annular contour (ZR) in the region of the side facing the fuse box (SK),
- 1.3. the cylindrical annular contour (ZR) is configured such that in the closed state only the longitudinal sides of the cylindrical annular groove (ZN) of the fuse box (SK) surround the cylindrical annular contour (ZR) of the fuse cover (SD) in a self-closed fashion.
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2. Fuse box closure according to Claim 1, characterized by the following features
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- 2.1. the fuse box (SK) can be closed with the fuse cover (SD) by means of a manual lever mechanism (GM) which is integrated in the fuse cover (SD) and contains fuse-tripping control means,
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- 2.2. in the closed state of the fuse box (SK) the manual lever mechanism (GM) causes a fastening lever contour (BK) of the manual lever mechanism (GM) to act on an annular widened profile (PE) of the fuse box (SK).
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