

U-Pillar – safer in the wet

Electricians working with developers of private subdivisions now have a new underground service connection box to recommend that is as invisible to home-owners as it is safe and easy to install and maintain.

Originally designed by Hiko Power Engineering for the Vector network, version 2.0 of the Hiko U-Pillar is now available to any developer or network company to provide safe, robust, secure and enduring connections between street supply and home installations.

Hiko general manager, Geoffrey Sullivan, says the U-Pillar is a new concept in service connections for branching and looping networks that takes a completely different approach to the traditional sealing of underground fuses to prevent the ingress of water.

In a U-Pillar, the LV switch and fuse gear is factory-installed in a self-contained, pre-wired stand which is then covered by a transparent, airtight bell-shaped enclosure which latches down onto the stand and traps all the air needed to keep the electrical connections under it dry, even when the U-Pillar becomes completely submerged in water.

Sullivan says even in flood conditions or with waves breaking over the in-ground U-Pillar, the permanent air pocket created by the bell cover remains tranquil and unaffected.

“The air trapped in the bell continues to keep the water displaced well below the fuse stand. The electrical connections remain clean, dry, fully protected in air and electrically safe.”

While the fuses no longer require IP68 protection, the jointing of the pre-terminated flexible tails to both the incomer and service cables do. The U-Pillar is supplied complete with a 4-core tail to connect to the network with a branch joint or with separated cores using in-line shear-bolts sealed with adhesive heat-shrink tube.

On the service side, connecting to the U-Pillar is just as simple. Out-going cable tails are pre-installed for each of the three power options in the standard-sized pillar: 6 x 63 amp, 4 x 100 amp or 1 x 3P 160 amp. The



Pre-installed cabling allows the U-Pillar fusegear stand and the protective bell covering it to be lifted out of the pit for easy inspection and maintenance above ground – on both branching and looping networks

joints are similarly protected by shear-bolts sealed with heat-shrink.

Because the U-Pillar operates underground and at varying temperatures to the ground, it is normal for condensation to form as it does in most underground enclosures.

With the CorrosionX coated transparent bell, the condensation tracks away as it forms so it has no adverse effect on electrical safety and network maintenance staff get to visually check fuse holders from above.

However, the presence of condensation does require the output voltage of the fuse carriers to be checked at the switchboard using a tester with a low impedance function to prevent ghost voltage readings caused by the condensation.

The U-Pillar offers further maintenance advantages. Because the fuse gear is mounted on a removable stand, the extra length on the pre-wired cabling allows the stand and its detachable bell cover to be lifted out of the installed U-Pillar housing, turned 45 degrees then set down on the base provided for the lid. This allows all U-Pillar maintenance to be carried out above ground in the dry with no need to pump out water before or after.

Sullivan says the U-pillar is installed

across eight New Zealand networks and enquiries are coming in from overseas for Hiko Power Engineering to develop a U-Pillar for their local power supply systems, particularly in flood-prone areas.

He says the U-Pillar ticks all the boxes for electrical safety and compliance.

“We have solved the risks of operational safety and long-term reliability associated with other underground solutions that rely on having to maintain the integrity of waterproof fuse housings.

“U-Pillar is perfect for developers wanting to avoid above ground street furniture and is the easiest cost-effective solution for electricians and inspectors completing the service-side connection. Everything you need to know for a trouble-free installation can be found in a link on our website homepage or from a QR code in every U-Pillar we ship.” ■

For further information:
Hiko Power Engineering Limited
P: 0800 473 999
E: sales@hikopower.co.nz
W: www.hikopower.co.nz