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The value and complexity of equipment deployed across vast geographical areas has increased massively. The need to protect the function of these networks and devices has been met with all sorts of interesting ideas. Some challenges have been brilliantly overcome, but no solution has been able to completely address the convergence of the challenges that exist in this environment.

Often- overlooked or forgotten challenges

Vandalism: Due to the high value of enclosure content, bypassing a smart meter, disabling a surveillance system or simply stripping the contents for sale on the black market are growing global realities.

Access Control: Ease of access for authorised personnel is often adversely affected when trying to address vandalism challenge. Monitoring and tracking of authorised personnel is important as criminal elements sometimes gain authorised status.

IP Level (Water and Dust): While companies do their utmost to solve new challenges, the primary function of the enclosure is sometimes forgotten. Electrical systems fail because of three main factors, Temperature, water and dust. The latter two are addressed by the international standard IEC61529 (SANS IEC 61529). Enclosures that are hand-made differ from each other and simply do not seal consistently.

UV resilience and weatherability: Accelerated UV testing is primarily a measure of colour degradation. However, real life exposure has to cope with temperature cycling, rain and particle rich wind. International standards do not currently exist to test this, leaving real life long-term field trials to provide the only genuine test of an enclosure's ability to withstand the elements.

Human contact risk/shock hazard: When the solution to vandalism involves metallic materials, there is a serious risk for personnel and public to come into contact with live electrical circuits. When such an enclosure is on a pole the risk for the person working at height is exaggerated.

Flammability: Some plastic materials are able to absorb impact very well. If one strikes a garden refuse bin with a hammer it just bounces off. The cautionary embossed words on the lid "No hot ash" point to a serious flaw in using such materials within an electrical network. All electrical enclosures are supposed to be non-flammable or at least self-extinguishing. Most utility companies require compliance to IEC 62208, which stipulates the parameters of glow wire testing and flammability. Using these materials specifically to address vandalism would incorrectly suppose that vandals only have access to hammers and not matches.

Weight: Whilst modern composites constantly deliver greater strength to weight performance, there is no way to get around the fact that weight is added when increasing the strength of a mechanical part. Keeping this weight down to a level that allows installation and does not compromise the pole or wall structure is a real challenge.

Signal interference: Some materials create a faraday cage effect and interfere with signals that often form part of the function of the installed equipment. Antennae that are mounted outside the enclosure are a vulnerable point that also attract unwanted attention.

Announcement

Solving the above challenges is complicated, and the resulting solution normally becomes costly bringing the price into question.

AllVault™ is the name given to the latest innovation. Experience learned while pioneering composite manhole chamber design allowed Allbro to create what we believe is the strongest composite enclosure ever to be sold commercially.

AllVault™ has been designed to address every one of the above challenges. The cost of lost revenue is not measured in the time and capital it takes to replace infrastructure. Systems that are bypassed or are out of order represent enormous values that can never be recovered. The financial case to be made to justify investment in this area is a very straightforward conclusion to prove.



Part Number	Description	H (mm)	W (mm)	D (mm)
040-906	AllVault empty with mechanical nut (IP 66)	581	403	201

AllVault™ is a world first. This high security outdoor box is made to offer exceptional protection from dust, water and unwanted personnel. The structure of the box is as important as the locking system and access control. Various locking systems have been catered for.

Mechanical

Simple and Effective Mechanical Locking Options

Coded Nuts (1000 variations) with magnetic caps works like coded wheel mag nuts

Key Based Access Control

Key based access control system

Allbro Pty Ltd

View our YouTube channel (Allbro Pty Ltd) Click on the video "Allbro bullet proof box" to view the AllVault™ being put to the test to showcase its true durability and strength.

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