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The essentials of IP testing for newcomers – what it is, why it is needed, and what it involves

While it is often said that there are only two certainties in life – "death and taxes" – some observers might be inclined to add a third to the list: brands making claims about their products that are difficult, or even impossible, to fully verify.

If, for example, you have ever looked to buy a new smartphone or a similar device, you might have perused a manufacturer's marketing materials, and seen a particular product referred to as "waterproof".

But what does such a term even truly mean? For example, the term "waterproof" on its own says nothing about how deeply immersed in water the given product can be, or for how long. And of course, even the most robust waterproofing is not a guarantee that the item will stand up to other possible environmental pressures, such as solid bodies and dust.

Environmental testing, then, and the associated ratings arising from this process, is crucial for consumers in that it saves them from having to simply "take the manufacturer's word for it". And it is important for manufacturers that wish to make legitimate and verified product claims, backed up by the results of independent testing, and that consumers therefore feel they can trust.

Ingress protection is a key parameter in environmental product testing today

The term "ingress protection", or IP, refers to the extent to which a product can protect against environmental elements, such as water and dust, getting inside it. So, for all manner of products that need to be able to stand up to such environmental pressures, IP testing plays a vital role.

Ingress Protection testing, then, is a means of testing a given product's resistance to water and dust infiltration, as well as solid objects.

We have explained the rating system behind IP testing in greater detail on the page of our website dedicated to environmental testing. But basically, an IP rating consists of two digits, with the first of those signifying how resistant the product is towards the entrance of solid particles, and the second digit referencing liquid protection.

So, if – for example – a device has an IP12 rating, this indicates that it is protected against solid objects greater than 50mm in diameter, and protected against vertically falling water drops when the enclosure is tilted up to 15 degrees.

But that particular rating is a lot less impressive than, for example, IP57. This rating would signify that the product in question is "dust protected", which would mean the ingress of dust is not *totally* prevented, but dust is not able to penetrate the apparatus in a quantity sufficient to impair quality or to interfere with the product's operation.

As for the water aspect of the rating, IP57 would suggest that the product is protected against the effects of temporary immersion, with the product having been tested in a metre of water for half an hour.

Ask Cranage EMC and Safety about our industry-leading IP testing facilities

Did you know that at our own purpose-built site in North Shropshire, we have an indoor test area measuring 50 square metres, and which allows for water ingress to be evaluated to the highest rating presently available?

In fact, Cranage EMC and Safety is UKAS accredited to carry out IP testing in accordance with BS EN/IEC 60529, which covers the aforementioned areas of water and solids/dust testing. So, you really can approach us about our IP testing services with the greatest confidence in the sophistication of our facilities, and the breadth and depth of our expertise in this specialised field.

Reach out to our team today at Tern Valley Business Park, Market Drayton, and we will be pleased to discuss your requirements and expectations, and the possibilities for how we could work together.