

POWER PLAY

Why low voltage is the right voltage when it comes to outdoor lighting



Do you know your RCD from your IP rating? **Robert Webber** explains the rules of the game when installing external lighting – why you need to get the voltage right first time

It's been another busy week. My team and I have spent most of it carrying out maintenance work on garden lighting installations carried out by other installers. It still amazes me that many installers have no concept of a durable system for all seasons. Designers and landscapers need to insist on low voltage lighting. If your installer can't offer a solution, call us!

All electrical installation work carried out in the garden is subject to both BS7671 (known to installers as 'the regs') and also Part P of the building regulations. This helps set a basic standard for installation works. All works need to be certificated by the installer to state complicity

with the current regulations. However, the regs are just rules for us; they don't offer much advice on the best type of lights to use – when to use mains voltage and when to use low voltage lighting. This is predominantly left to the installer, except where swimming pools and water features are concerned.

The most basic rule of any garden lighting system is that it should be RCD protected. An RCD (Residual Current Device) is one that can switch off the power supply to a circuit within four tenths of a second if it detects a fault.

The RCD only monitors the mains voltage side of the installation however, normally from the switches to the transformer. After the transformer the circuit is low voltage (normally 12V). The RCD is looking for any fault on the mains voltage side.

In a 240V garden lighting system, the RCD monitors all the way up to and including the lamp, which sounds good at first. Most garden lights are subject to a small amount of moisture

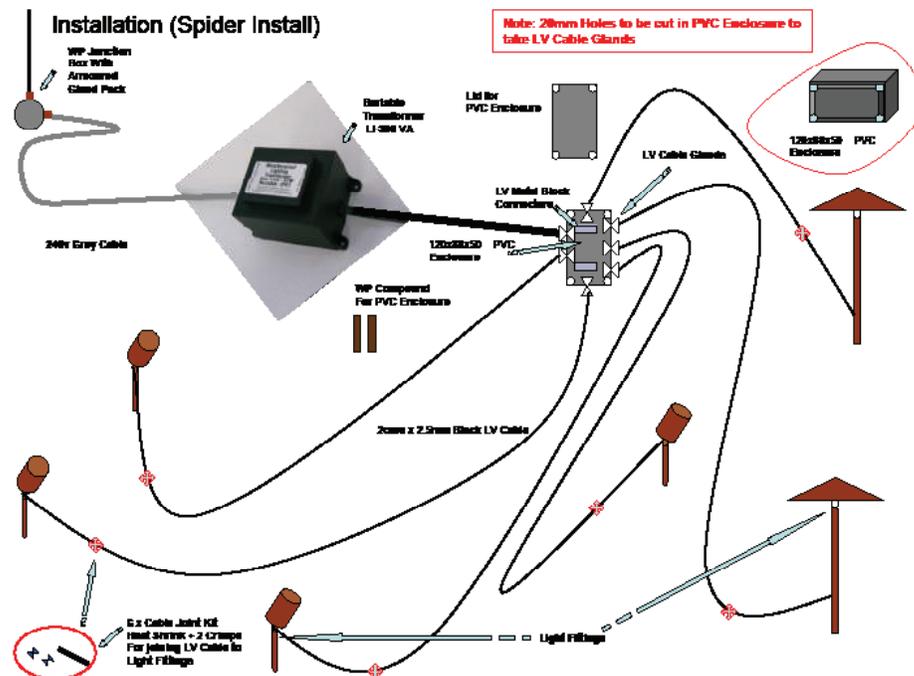
inside. When you have a hot lamp in an enclosed space outside, moisture in the warm air condenses when it hits the cold fitting. Rightly, if this happens the RCD will trip and turn the whole installation off. This complies with all regulations, but is a nuisance to the user. Then they need either to get their hands dirty and find the issue or call us. This week we have had four days of maintaining mains voltage systems. Slightly boring for me and my guys and costly for clients who have paid others for a solution to lighting their garden. They should have fitted low voltage first time.

My way or the highway

This week I've had to say "no thanks" to two garden designers who insisted on using 240V spike lights in a garden they had designed. This was because they had purchased the lights themselves without much knowledge of their suitability for the site.

I explained the drawbacks of mains voltage lighting and why installing a light with a rating of IP44 in a shady woodland area with little direct sunlight would be a very bad idea. IP refers to Ingress Protection; it's a scale that tells a purchaser how durable a light is in regard to external influences (such as moisture). We very rarely fit a light with a rating below IP65.

It's a shame when designers don't trust 20 years of installation experience. I'm sure they will have a great relationship with their chosen installer; as they will be spending rather a lot of time together in the future maintaining those lights.



ABOUT ROBERT WEBBER

Robert Webber is the founder of Scenic Lighting, a specialist exterior lighting company based in Berkshire. He designs and installs garden lighting throughout the UK and internationally. Robert can be contacted on rob@sceniclighting.com or via his mobile on 07766 051 000.

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