

DR. ZZEUS



ZZEUS TRAINING

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'DR. ZZEUS' TOM BROOKES, MD OF ZZEUS TRAINING AND CHAIRMAN OF THE FSA, ANSWERS YOUR QUESTIONS RELATED TO FIRE SAFETY COMPLIANCE.



Q. I've been asked to commission a fire alarm system that a subcontractor has installed for our client. The spacing of the detection is all within BS 5839-1:2017. However, the detection on suspended ceilings is just a hole with two lumps of wood screwing the base up without any back box, and no glands or grommets protecting the cable (see picture). I spoke to the contractor, and he said he doesn't have to do it because it does not say in BS 5839-1 that penetration through a suspended ceiling must have a back to it. Can you clarify please?



This type of installer (or worse still, the company in question) boils my blood. Essentially, they've taken a theory-only BS 5839-1 installation course, and away they went with a CPD certificate saying they're now an advanced installer.

The short answer to the question is that it must have a back box or, as it is worded in BS 7671, be in an enclosure.

The longer answer is as follows: BS 5839-1 is one of many standards that should be used during the installation of the fire alarm system. Within that standard, BS 7671 is referenced no less than 16 times, including, notably, clause 37 Installation that states the entire system should conform to the requirements of BS 7671.

This practice breaches several clauses in BS 7671:2018 and amendment 2: 2022 – my first thought was that it breaches clause 526.5. Every termination and joint in a live conductor or a PEN conductor shall be

made within one of the following:

- A suitable accessory that complies with the appropriate product standard.
- An equipment enclosure that complies with the appropriate standards.
- An enclosure partially formed or completed with building materials that are non-combustible and meet the requirements of BS 476.4.

So, what does that mean? Basically you should either use a suitable back box/enclosure purchased from your electrical supplier that meets the standards or you can make an enclosure out of fire-resisting materials.

In short, buy a galvanised metal conduit box or a plastic fire-resistant one.

With cables where the sheathing is removed, it also breaches Clause 526.8, which states that where cables have been stripped to the bare cores at the termination, they shall be enclosed.

I recently spoke with Senior Technical Manager at the ECA, Gary Parker, who is named in BS 7671 and he listed three other clauses it breaches.

521.10.1 *Installation of cables*
522.8.1 *Other mechanical stresses*
522.8.5 *(dependent on the installation)*

This is why when we train to BS 5839-1 at ZZEUS, we always state during our installation training that the reason there are only three clauses in BS 5839-1 on installation is that the bulk of the installation should comply with BS 7671.

By not doing so the installer is in serious breach of BS 5839-1:2017 clause 3.12: A competent person who is a person with the relevant current training and experience, and with access to the requisite tools, equipment and information, and capable of carrying out a defined task.



DO YOU HAVE A QUESTION YOU'D LIKE ANSWERED?

EMAIL YOUR QUERIES TO:

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