

The Importance of BS7909 in Events and Production



Energy Group Ltd

Energy Distribution Hire Ltd, May 2021

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Executive Summary

BS7909 is there to help ensure that your electrical system is safe for use. It shouldn't be seen as another 'hoop to jump through'. It should be welcomed by those who want to strive ahead, providing the best and the safest customer experience possible, particularly in the Entertainment industry.

Case Study Introduction

Energy Distribution Hire Ltd

Energy Distribution Hire is a respected market leader in the supply and installation of temporary power solutions.

We are a team of dedicated and experienced individuals whose exceptional knowledge coupled with industry-standard equipment and a European-wide network and infrastructure enable us to deliver outstanding events, high-quality finishes and breath-taking experiences across the UK and EU.



From dry equipment hire to multi-stage shows, tours, conferences, arenas, indoor events, outdoor festivals and more, we have the in-house facilities to provide power solutions required for an exceptional event. With access to all aspects of event infrastructure from our sister companies in the group, we can manage all event elements from design to completion.

We benefit from a large UK base with our transport solutions, a team of full-time industry professionals and in-house specialist services, including printing, set building, customisation and fabrication, all suitable for one-off events, product launches, tours and more.

Explanation of key points of case study

This case study seeks to advise and educate regarding BS7909 and its need within the Event Distribution Hire industry to keep organisers, suppliers, and attendees safe whilst organising and attending small and large-scale events with electrical equipment and installation on-site.

Who can use this case study?

The information contained within this case study is aimed at those who are seeking to employ Energy Distribution Hire for their electrical equipment and installation for temporary power solutions. This case study will also benefit those seeking to understand more about BS7909, how it may relate to them on a professional level, and the key points to remember when seeking to contract services with a distribution solutions company that may or may not have certification in BS7909.

An Introduction to BS7909

What is BS7909?



BS - British Standards and 7909 is the document to which the British Standard relates.

BS7909 is a widely used standard for the construction of temporary electrical installations. BS7909, published by the BSI Group, guides the planning, design, commissioning and maintenance of such installations. It lists a series of general conditions and considerations that need to be made to ensure that the installation complies with the most up to date standards and regulations.

About BS 7909 Certification

BS7909 is a certification developed by the British Standard to govern the code of practice concerning temporary electrical systems for event and entertainment purposes.

Temporary power and electrical supplies are needed for many different events, including music festivals and outdoor concerts, TV and film sets, theatre productions and outdoor sporting events. The power requirements for these events are wide-ranging, from a few kilowatts to many megawatts.

The standard splits the electrical distributions into two categories:

Small and Simple Systems (under 6kVA)

Any small appliance under 6kVA and plugged into a mains socket (laptops, phone chargers, etc.) does not require a BS7909 compliant electrician. In these cases, PAT testing must be checked periodically, and the power supply verified as per building regulations.

Large and Complex Systems

Therefore, anything that does not fit into the small and simple systems category is large and complex. In these situations, a qualified Senior Person Responsible (SPR) must be identified to ensure compliance and safety. Powering outdoor events, mainly through generators or cables taken from the mains, will require a skilled electrician to assess and implement a risk management plan to protect all who will be on-site. Temporary power systems should be tested and certified to ensure safety at all times.

Testing will identify any issues or concerns that will need to be fixed before certification is completed, and all results will be handed to the organiser of the event. The certificate will be completed once power is operational, and the Senior Person Responsible has satisfied themselves that the system is safe and works effectively.

How BS7909 is obtained by electricians and production hire companies

To comply with BS7909, electricians must undertake an electrical safety training course to confirm they can safely work with temporary distribution systems and electrical equipment. This training course also complies with relevant parts of BS7671 (17th edition). The course is accredited by City & Guilds and the IET (Institution of Engineering and Technology). Once the course has been completed, electricians can work safely on-site with temporary power systems safely and effectively.

Who should have BS7909 certification?

The following tradespeople should obtain BS7909 certification:



- Electrical installers
- Designers
- Specifiers
- Electric testers and inspectors

Reasons for obtaining BS7909 and working with compliant suppliers

BS7909 is an essential document for any electrical company that wants to work with the highest safety standard. The British Standards group created this standard. It is used for assessing temporary electrical installations, indicating the quality requirements that have to be fulfilled by all companies working with temporary electrical installations as electricians, contractors or sub-contractors.

For temporary electrical installers, having a BS7909 certificate in your company standards is one of the essential accreditations that you should have. Not only do you set yourself at a higher level than your competitors, but it will also assure and protect your customers' safety in case of any incident that may occur. In a day and age where companies are being stricter than ever before, having this certification is vital.

For those looking to hire a temporary electrical installation company, you may already know that there are considerable costs to businesses involved with electrics. A lot of these are because of fitting errors and mistakes that could have been avoided. This in itself is one of the reasons why you need a BS7909 accredited company in your corner that can make sure all the electrics are done correctly. There are many benefits to using a company for your electrical installation project with the BS7909 certification. As well as peace of mind, you also have to consider the higher safety standards. If there is a fire or fault and a public member is injured due to insufficient fixing, the company may have to compensate for this. They need their work to be regularly checked over and be up to date with electrical laws, too.

What does having BS7909 mean in practice?

BS7909 is the British Standard for the installation of temporary electrical equipment and power. It was introduced in 1977 and has been revised several times to reflect industry changes, most recently in 2014.

As with any industry, the more complex the situation, the more in-depth standards become. It is much the same with event production. For a simple event, weddings with lighting and a DJ, BS7909 compliance is more straightforward. Simple electrical testing should be conducted, and formal inspection and testing of electrical equipment should be available if required. The more complex the electrical system, the more in-depth the application of BS7909 becomes.

BS7909 in Events and production

BS 7909 is an essential reference for the Event industry. This standard provides information on how "planning, management and operation of major and minor events" help you form a checklist of procedures if you run an event or hire out your venue. As a client, it can help you understand what happens behind the scenes concerning risk assessments, emergency response plans, action plans, and public information booklets prepared by event organisers.

Roles and responsibilities of event organisers

According to HSE (2021), *'Event organisers, contractors and others using electrical equipment must do all that is reasonably practicable to ensure that electrical installations and equipment at an event are properly selected, installed and maintained so as not to cause death or injury.'*

The responsibility list of an Event organiser can be incredibly long. As well as organising and implementing all the entertainment, catering, safety and timetables for the event itself, the organiser must play a vital role in the electrical supply that the event will require. For this reason, it can be a huge relief to employ the services of a fully qualified and accredited installation company to support large and technical installations, as well as ensuring the safety of all those who will be on-site throughout the setup, event dates and clear down. BS7909 requires the Event Manager, Owner, Promoter or Organiser to enlist a suitably qualified person in charge of overseeing the electrical system; that person will be known as the SPR - Senior Person Responsible.

The event organiser should be aware that a re-test or re-certification may be required to ensure continued compliance for any substantial changes in distribution. For example, each new location or venue will require certification, equipment additions (generators etc.), any environmental damage caused by extreme weather (fire or flooding).

Roles and responsibilities of electrical suppliers

The electrical installer is one of the essential roles on-site at an event. It's their job to make sure that the site is safe and that everything runs smoothly. There's a lot more to doing an excellent job than simply unrolling some cable and plugging things in, though. Getting it right takes experience, careful planning and communication. Behind the scenes, work can and should often go largely unnoticed, so their wider team must well support the electrical installer.

The key responsibilities of the electrical installer at an event are:

- to check the electrical installation before and during the event
- to ensure that any electrical issues are identified and resolved quickly
- layout and location of stages, lighting and sound systems
- layout and location of traders, bars, public areas and access routes
- location of existing overhead power lines or buried cables
- positioning of temporary overhead or underground outdoor mains cables
- electrical requirements for emergency lighting and exit signs.

Good communication between the team of electrical installers, the Senior Person Responsible and the event organiser are vital when supplying power to an event, particularly a significant event such as Reading Festival or Silverstone. All parties should be aware of any challenges, especially if these are likely to affect the events safety precautions in any way.

The Temporary Electrical Installation Supplier should have robust and current risk management plans in place. All involved should be fully aware of these and adhering to procedures at all times. The supplier should provide the organiser with a comprehensive specification of all works that are to be carried out, their updated accreditation of BS7909 and a copy of valid Public Liability Insurance so the event organiser can be confident that all safety measures are in place prior to work beginning.



Energy Distribution Hire and BS7909

Energy Distribution Hire Ltd is part of Energy Group Ltd. A family-run business that has built long-lasting relationships with a variety of clients over many years. The team are highly skilled and experienced with the overall management of many different sites, all needing temporary power distribution. Whether it's a festival, construction or hospital site, Energy Distribution is perfectly positioned to ensure you get the exact temporary electrics you need at any time.

As a national service, Energy Distribution can provide temporary power solutions all over the UK and have a 24/7 emergency call-out service so you can be confident that if you need power fast, Energy Distribution is always on hand to help with the largest stock of power distribution products in the UK.

Energy Distribution understands that every project is different, and that one size will never fit all. That is why their full range of power distribution products are specially designed for the temporary power industry and cater for both indoor and outdoor situations and are all fully tested and certified to meet British and European safety standards.

Energy Distribution can help and support a range of temporary power requirements:

- Dry Hire / Installation
- Advice on temporary site requirements
- Site Design
- Maintenance
- Temporary Electrical Installation Report

Energy Distribution is fully compliant with the following Acts and Regulations:

- Electricity at Work Regulations 1989
- IP rated Distribution Equipment
- IS7909 Certification
- NICEIC qualified installers
- 17th Edition IEE wiring regulations
- BS7909

Festivals, concerts, sporting events, weddings, corporate events – it doesn't matter what type of event you're running; you've already got enough to worry about without adding temporary site electrics to your list. You need to be confident that not only have you got the suitable event power distribution to run all aspects of your festival but that it's been installed and maintained by a compliant and experienced team of engineers.

Conclusion

BS7909, a document published by BSI (British Standards Institution), sets the standards for the British Standard used in electrical installations and those that have to deal with electrical safety. Not to be relied on independently when ensuring compliance is achieved, BS7909 works in conjunction with many other regulations, all of which intend to keep both contractors and members of public safety and ensure that all electrical works are completed to the highest standard.

The benefits of employing a contractor who has the accreditation of BS7909 cannot be denied. Those working under the certification of BS7909 are following quality requirements that have to be fulfilled, indicated by the British Standards.

Energy Distribution Hire Ltd are fully accredited with all standards and regulations required to be a compliant and competent temporary power supplier. With the largest stock in distribution products, nationwide support service, and 24/7 emergency call out, it's no wonder Energy Distribution Hire are leaders in temporary power solutions across the UK.



FAQ's

Does that mean I need a qualified electrician to sign off my system?

Not necessarily, however, you should employ someone competent. The Senior Person Responsible (SPR) does not need to be a qualified electrician. Experience and competency are widely required when installing temporary systems.

What are the requirements for complex electrical systems?

A higher degree of electrical knowledge and skill is required for complex systems such as those using generators. For example, all temporary electrical systems must be erected safely and tested.

What is the best way to ensure electrical safety?

Always request certification and insurance policies from those deploying temporary electrical systems. Electrical systems must be looked at holistically, not just as kits of tested parts.

What are the legal obligations as an event organiser?

The legal obligations of an event organiser are to implement and enforce safety measures on-site that protect all contractors, subcontractors, employees and attendees. Event's organisers should ensure that risk management plans are structured, and all health and safety requirements are adhered to on-site.

What should I do to ensure electrical safety on-site?

Do not leave systems unattended when powered up unless suitable measures have been put in place to isolate the system in the event of a problem. Someone should plan the electrical system and coordinate suppliers as necessary.

What are the requirements?

Considerations include where power is being taken from, cable routes and sizes, protective measures (earthing, RCDs or circuit breakers, for example), facilities and crewing, testing and certification etc. Occasionally, a specialist company may be required to produce a suitable design. All final circuits must be protected by a 30mA Residual Current Device (RCD).

What are the risks of removing protection from my site?

There are always risks in removing any protection once it's been established, and to do so would not only violate any insurance policies but put attendees and staff in grave danger. Electrical fires are most common when looking into the risks of leaving electrical equipment unattended, and it would be unwise to do so.

Related links

<https://www.bbc.co.uk/safety/resources/aztopics/safety-of-electrical-equipment>

http://www.google.com/url?q=http%3A%2F%2Fwww.legislation.gov.uk%2Fuksi%2F1989%2F635%2Fcontent%2Fmade&sa=D&sntz=1&usg=AFQjCNHUAU7XV3o-t7fkWg8c-Y_YByvZaw

<https://energydistributionhire.co.uk/temporary-site-electrics-installations/>

<https://energydistributionhire.co.uk/event-power-distribution/>

<https://energydistributionhire.co.uk/temporary-electrics-installation-and-dry-hire/>

References and Bibliography

<https://www.bbc.co.uk/safety/resources/aztopics/temporary-electrical-systems#recommendedlinks>

<https://academy.theiet.org/18th-edition-applying-the-osg>

<https://www.hse.gov.uk/event-safety/electrical-safety.htm>



How to contact us:

Energy Distribution Hire,
Aylesbury, Bucks, HP178SX

Freephone: 0800 1512698

Local: 01296 906586

Mobile: 07928 597046

Email: enquiry@energydistributionhire.co.uk

Energy Distribution Ltd
Hill View Farm, Kimble Wick, Aylesbury HP17 8SX