The BSI Kitemark™

for Functional Safety of Electrical, Electronic and Programmable Electronic Systems

bsi.
Functional Safety
E/E/PE Systems
KITEMARK™

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The BSI Kitemark for Functional Safety is the benchmark in best practice for validating Safety Integrity Levels (SIL) of electrical and electronic safeguarding systems. It assures the integrity of SIL throughout the full lifetime of these products.
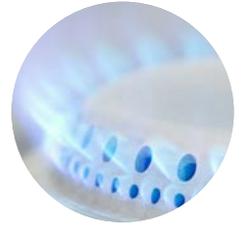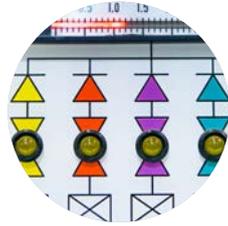
Products include:

- Valves and emergency shut-off systems
- Detection sensors for fire, smoke, heat and security
- Alarm systems for fire and security
- Emergency lighting
- Battery-powered emergency back-up systems
- Automatic Burner Control Systems

The importance of reliable functional safety

Functional safety is critical to ensuring that these safeguards work exactly as they should at the moment they're needed — even if they may be dormant for extended periods. The purpose is threefold:

- **To prevent harm,** injury or death to people and livestock
- **To prevent environmental damage** e.g. water pollution
- **To prevent damage to assets** e.g. building fire or machinery overheating

BSI Kitemark assurance

The Kitemark certification process ensures that your product safety integrity level (SIL) remains valid throughout its working life – from purchase, installation and maintenance. It does this by assessing the design and manufacturing inputs, including:

- Quality management system
- Product design
- Software programming
- Product performance data
- Service and maintenance
- Process control
- Competence of key personnel involved in the process

It also assures that your safeguarding products continue to be maintained effectively after installation and validates that they retain their SIL throughout their working life.

What are the benefits of the Functional Safety Kitemark?

Customer satisfaction – assure your customers that your products function when necessary and at critical times during its lifecycle, giving them peace of mind and confidence in you.

Risk reduction – through continual assessment of your product and considering critical aspects such as operation and maintenance, it ensures that your system will work exactly as intended when needed including in times of emergency.

Win more business – opportunity to win more contracts though providing third party certification from the UK's leading independent Certification Body.

Improve reputation – with this third party endorsement; you'll be able to enhance your reputation through demonstrating you go above and beyond in including safety by design in your products and processes.

Functional Safety Kitemark assessment standard

The assessment standard series is EN 61508 – Functional Safety of Electrical / Electronic / Programmable Electronic Safety-related Systems (E/E/PE, or E/E/PES).

The standard has seven parts:

- Parts 1–3 contain the requirements of the standard (normative)

- Parts 4–7 are guidelines and examples for development and thus informative.

The assessment process validates the manufacturers capabilities and processes for producing products that meet the desired SIL throughout the sixteen phases of the safety lifecycle, which are roughly divided into three groups:

- Phases 1–5 address analysis

- Phases 6–13 address realisation

- Phases 14–16 address operation.

The Functional Safety Kitemark Certification Journey

In order to demonstrate your capability to work in compliance and achieve the Functional Safety Kitemark, here is what you can expect in five simple steps.

Step 1 Download your copy from the BS EN 61508 series

Download the appropriate standard from the BS EN 61508 series from the BSI shop here: **shop.bsigroup.com** This is the standard you'll be assessed against and it contains all the requirements you'll need to meet to achieve the BSI Kitemark for Functional Safety.

Step 2 Complete your application

Contact our team to confirm your scope of assessment and start the assessment process. We'll assign you a Certification Manager, who will be your point of contact through the process – and beyond. They'll have an excellent understanding of your business area and will support you as you move forward to assessment and certification. To get started, please email **product.development@bsigroup.com** or call **+44 (0)345 0765 606**.

Step 3 GAP Assessment to make sure you're on track

We carry out a gap assessment, of your documented system against the requirements of the standard and identify any omissions or weaknesses that need resolving before formal assessment. We also offer this a standalone option, if you are unsure about committing to certification at this stage.

Step 4 Formal assessment to achieve your BSI Kitemark

We'll conduct an assessment, the length and scope of which will be tailored to your specific requirements. As there is a wide range of activities, our assessment will vary form one organization to another. We'll also review your product to ensure it meets the requirements of the standard.

Step 5 Certification and beyond

Once the assessment has been successfully completed, we'll issue your BSI Kitemark certificate which can help grow your business. We will then be conducting surveillance visits on an annual basis, to review any changes to your product and processes and to ensure you continue to meet the latest standard.

Why BSI?

For more than a century BSI has been helping clients make excellence a habit.

- Having worked with over 70,000 companies of all sizes globally, we have a proven track record.

- BSI works in partnership with industry experts, government bodies, trade associations and consumer groups to gain the widest possible market and industry view to shape our services for the challenges companies face today.

- Our clients reap the benefits of working with BSI teams with a wealth of experience in a wide range of industries. They help cultivate a better understanding of the challenges and share valuable insights.

- We provide end-to-end support, helping our clients monitor and maintain their excellence.

- We talk with and listen to clients every day, asking them what they want and how satisfied they are with our products and services. This way we ensure we respond to the needs of our clients as they arise.

Our products and services

We provide a unique combination of complementary products and services, managed through our three business streams; Knowledge, Assurance and Compliance.

Knowledge

The core of our business centres on the knowledge that we create and impart to our clients. In the standards arena we continue to build our reputation as an expert body, bringing together experts from industry to shape standards at local, regional and international levels. In fact, BSI originally created eight of the world's top ten management system standards.

Assurance

Independent assessment of the conformity of a process or product to a particular standard ensures that our clients perform to a high level of excellence. We train our clients in world-class implementation and auditing techniques to ensure they maximize the benefits of standards.

Compliance

To experience real, long-term benefits, our clients need to ensure ongoing compliance to a regulation, market need or standard so that it becomes an embedded habit. We provide a range of services and differentiated management tools to facilitate this process.

Find out more

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Email: product.certification@bsigroup.com

Visit: bsigroup.com/fskm-uk