The Nuts and Bolts of UKCA Marking
Alexander Toohie – Element Materials Technology
Agenda

What is UKCA marking?
Isn’t this just CE marking again?
What are my obligations?
UKCA Marking Example
What about Northern Ireland?
UKCA Marking Legislation

STATUTORY INSTRUMENTS

2016 No. 1091
ELECTROMAGNETIC COMPATIBILITY
The Electromagnetic Compatibility Regulations 2016

2016 No. 1101
CONSUMER PROTECTION
HEALTH AND SAFETY
The Electrical Equipment (Safety) Regulations 2016

2016 No. 1107
HEALTH AND SAFETY
The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016

2017 No. 1206
TELECOMMUNICATIONS
The Radio Equipment Regulations 2017

2019 No. 696
EXITING THE EUROPEAN UNION
CONSUMER PROTECTION
ELECTROMAGNETIC COMPATIBILITY
ENVIRONMENTAL PROTECTION

= UKCA
# UKCA Marking Legislation

<table>
<thead>
<tr>
<th>Equipment for explosive atmosphere</th>
<th>Outdoor Equipment Noise Emissions</th>
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<td>Construction Products</td>
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<td>Eco-design/Energy related product</td>
<td>Pressure Equipment</td>
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<td>Pyrotechnics Articles</td>
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<td>Simple Pressure Vessels</td>
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<td>Medical devices</td>
<td>Toys safety</td>
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<td>Non-automatic weighting instruments</td>
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6. Nothing in these Regulations prevents the making available on the market, or the putting into service in the United Kingdom, of equipment which is in conformity with Part 2 when the equipment is properly installed, maintained and used for its intended purpose.

**Article 5**

**Free movement of equipment**

1. Member States shall not impede, for reasons relating to electromagnetic compatibility, the making available on the market and/or the putting into service in their territory of equipment which complies with this Directive.
Economic Operators

- Manufacturer
- Distributor
- Consumer

UK

EU

Manufacturers
Distributors
Consumers
Economic Operators

Importer
Manufacturer
Distributor
Consumer
Importer
Manufacturer
Authorised Representative
Distributor
Consumer

UK
EU
Economic Operators

UK
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EU
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**Obligations of Manufacturers**

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Essential Requirements

Radio Equipment Regulations

Health and Safety

Electromagnetic Compatibility

Spectrum Usage

Electromagnetic Compatibility Regulations

Emissions

Immunity

Electrical Equipment (Safety) Regulations

Hazards arising from the Equipment

Hazards due to External Influences
<table>
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<tr>
<td>A: Internal Production Control</td>
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<tr>
<td>B: Type Examination</td>
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<tr>
<td>C: Conformity to Type</td>
</tr>
<tr>
<td>D: Production Quality Assurance</td>
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<tr>
<td>E: Product Quality Assurance</td>
</tr>
<tr>
<td>F: Product Verification</td>
</tr>
<tr>
<td>G: Unit Verification</td>
</tr>
<tr>
<td>H: Full Quality Assurance</td>
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Conformity Assessment Procedures

Electrical Equipment (Safety) Regulations Article 41

Internal Production Control

UKCA
Conformity Assessment Procedures

Electromagnetic Compatibility Regulations Article 41

Internal Production Control

UK-Type Examination

Conformity to Type

UKCA
Conformity Assessment Procedures

Radio Equipment Regulations Article 41

Harmonised Standard applied in full for 6.2

Harmonised Standard not applied in full for 6.2

Internal Production Control

Full Quality Assurance

UK-Type Examination

UKCA

Conformity to Type
Declaration of Conformity

Electronics Manufacturer Ltd., of Main Street, Hull, declares under their sole responsibility that:

Super-Duper Electronic Gizmo “SDEG-A”

conforms with the following legislation:

- Electromagnetic Compatibility Regulations 2016
- Electrical Equipment (Safety) Regulations 2016

having been assessed to the following Designated Standards:

- EMCR 2016 Schedule 1: EN 61326-1:2013

and is provided with the following software and accessories:

- Software version 1.4.2k
- Charging dock CD-A

Signed on behalf of Electronics Manufacturer Ltd., May 1st, 2022, in Hull, UK.

Joe Bloggs

Joe Bloggs, Director
Identify Regulations
Identify Essential Requirements
Comply with Essential Requirements
Compile Technical Documentation
Conformity Assessment Procedure

UKCA Example: Temperature Logger

- Battery powered
- Rechargeable via docking station (mains powered)
- Three modes: docked, logging, idle
- No other electrical connections
# UKCA Example: Temperature Logger

## Identify Regulations
- Equipment for explosive atmosphere
- Construction Products
- Eco-design/Energy related product
- Electromagnetic Compatibility
- Explosive (civil uses)
- Gas appliances
- Low Voltage Electrical Equipment (safety)
- Lifts
- Measuring instruments
- Medical devices
- Non-automatic weighting instruments

## Identify Essential Requirements

## Comply with Essential Requirements

## Compile Technical Documentation

## Conformity Assessment Procedure
- Outdoor Equipment Noise Emissions
- Personal Protective Equipment
- Pressure Equipment
- Pyrotechnics Articles
- Radio Equipment
- Machinery
- Recreational craft and personal watercraft
- Restriction of certain Hazardous Substances
- Simple Pressure Vessels
- Toys safety

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[element]
UKCA Example: Temperature Logger

- Identify Regulations
- Identify Essential Requirements
- Comply with Essential Requirements
- Compile Technical Documentation
- Conformity Assessment Procedure

Electromagnetic Compatibility Regulations
- Emissions
- Immunity

Electrical Equipment (Safety) Regulations
- Hazards arising from the Equipment
- Hazards due to External Influences
UKCA Example: Temperature Logger

Identify Regulations
Identify Essential Requirements
Comply with Essential Requirements
Compile Technical Documentation
Conformity Assessment Procedure

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## UKCA Example: Temperature Logger

### Identify Regulations

### Identify Essential Requirements

### Comply with Essential Requirements

### Compile Technical Documentation

### Conformity Assessment Procedure

<table>
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<tr>
<th>Essential Requirement</th>
<th>Hazard</th>
<th>Risk Assessment</th>
<th>Mitigation and Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMC Emissions</strong></td>
<td>Conducted emissions on power cables</td>
<td>Power cable present in docked mode only. Combination of logger and dock should be assessed.</td>
<td>Full tests in docked mode.</td>
</tr>
<tr>
<td></td>
<td>Conducted emissions on signal cables</td>
<td>No signal cables, so no risk</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Radiated emissions below 1 GHz</td>
<td>The device can operate in three modes: docked, logging, and idle. Path to ground may impact tests, but emissions are likely to be worse in logging mode than idle mode.</td>
<td>Pre-scans in all three modes. Full testing in the docked mode. Full testing in worst-case mode of logging or idle. Test report documenting this.</td>
</tr>
<tr>
<td></td>
<td>Radiated emissions above 1 GHz</td>
<td>The device can operate in three modes: docked, logging, and idle. Path to ground may impact tests, but emissions are likely to be worse in logging mode than idle mode.</td>
<td>Full testing in the same modes as above. Test report documenting this.</td>
</tr>
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UKCA Example: Temperature Logger

EMC Modes of Operation – Considerations

1. Test a minimum number of modes to cover all functionality
2. Are all functions active simultaneously in each mode?
3. What is the cycle time for each mode?
4. What support equipment is needed to enable and monitor each mode?
UKCA Example: Temperature Logger

Technical documentation

4. The manufacturer must establish the technical documentation. The documentation must make it possible to assess the conformity of the apparatus to the relevant requirements, and must include an adequate analysis and assessment of the risks.

5. The technical documentation must specify the applicable requirements and cover, as far as relevant for the assessment, the design, manufacture and operation of the apparatus. The technical documentation must, wherever applicable, contain at least the following elements:

(a) a general description of the apparatus;
(b) conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits, etc.;
(c) descriptions and explanations necessary for the understanding of those drawings and schemes and the operation of the apparatus;
(d) a list of the \( F^1 \) designated standards applied in full or in part \( F^2 \) and, where those \( F^1 \) designated standards have not been applied, descriptions of the solutions adopted to meet the essential requirements of these Regulations, including a list of other relevant technical specifications applied. In the event of a partly applied \( F^1 \) designated standard, the technical documentation must specify the parts of the standard that have been applied;
(e) results of design calculations made, examinations carried out, etc.;
(f) test reports.

TEST REPORT ON THE SAFETY OF ELECTRICAL EQUIPMENT
FOR
TEMPERATURE LOGGER
WITH RESPECT TO
EN 61010-1:2010+A1:2019

Element

IAC-MRA
UKAS
0026

TL-X1
UKCA Example: Temperature Logger

- Identify Regulations
- Identify Essential Requirements
- Comply with Essential Requirements
- Compile Technical Documentation
- Conformity Assessment Procedure

Electrical Equipment (Safety) Regulations
Internal Production Control

Electromagnetic Compatibility Regulations
UK-Type Examination
Conformity to Type
UKCA Example: Temperature Logger

1. Identify Regulations
2. Identify Essential Requirements
3. Comply with Essential Requirements
4. Compile Technical Documentation
5. Conformity Assessment Procedure

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**Electrical Equipment (Safety) Regulations**

Internal Production Control

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**Electromagnetic Compatibility Regulations**

UK-Type Examination

Conformity to Type
UKCA Example: Temperature Logger

- Identify Regulations
- Identify Essential Requirements
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Maintain Compliance

Manufacturer

Distributor

Consumer
UKCA Example: Temperature Logger

- Identify Regulations
- Identify Essential Requirements
- Comply with Essential Requirements
- Compile Technical Documentation
- Conformity Assessment Procedure

Maintain Compliance

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Changing Standards How the EN 62368 Update Affects Your Products


- Standard Update: EN 55014-1:2021 and EN 55014-2: 2021
  Electromagnetic compatibility: Emissions and immunity requirements for household appliances, electric tools, and similar apparatus.

- ICES-003 Issue 7 Standard Updates
- DEF STAN 00-035 Issue 5 A Guide to the Update
What about Northern Ireland?
What about Northern Ireland?

In the majority of cases, the UK(NI) marking is not required.

The UK(NI) marking should be placed alongside the CE marking only if all of the following apply:

- The goods are being placed on the NI market, **not** the wider EU market.
- The goods require **mandatory** third-party conformity assessment.
- A **UK** body was used for the mandatory conformity assessment.
Contact Us

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