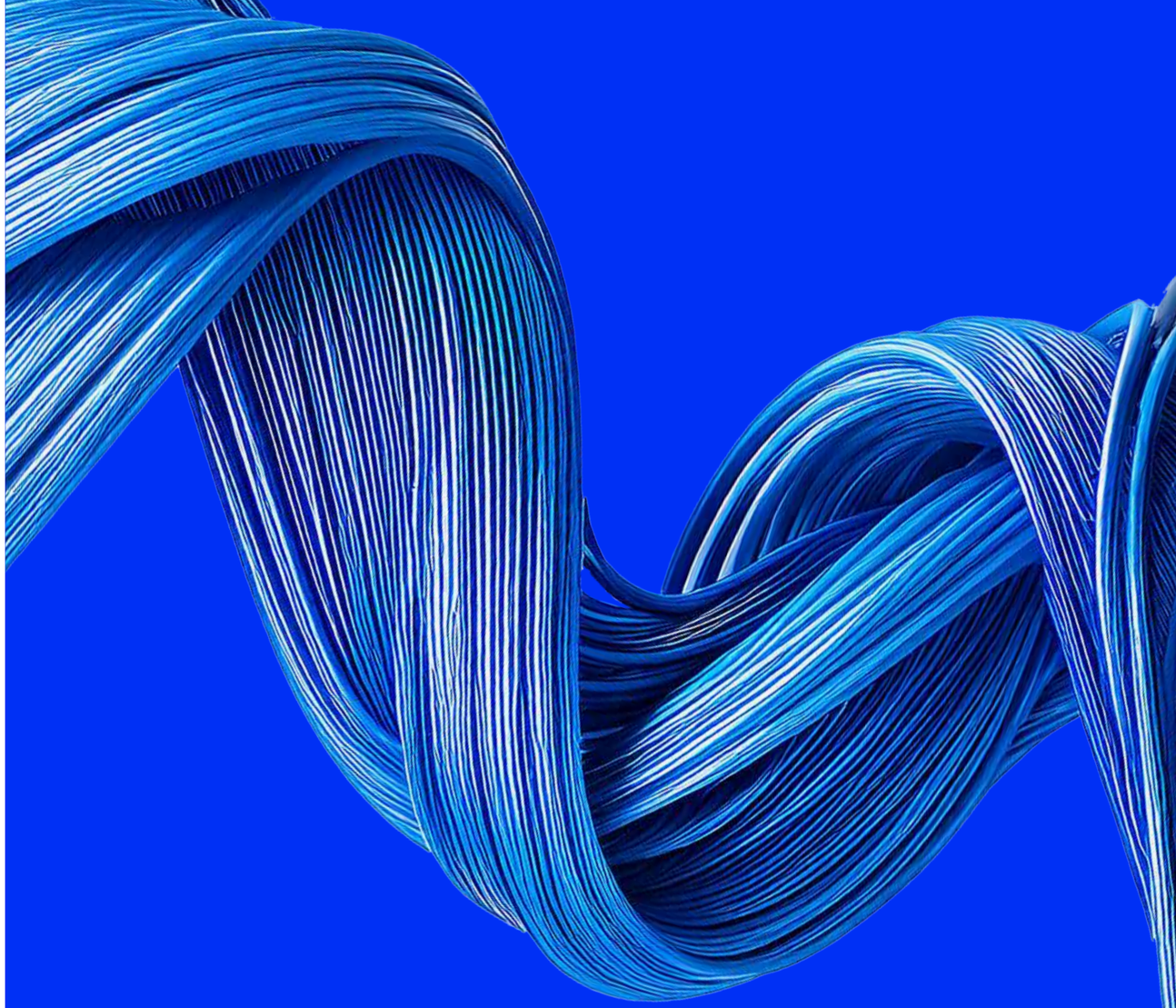
The Complete Guide to BS-Standard Cables

Your In-Depth Reference for Safe, Compliant, and Reliable Cable Selection and Installation

BATT™

Contents



1. Introduction

The Role of BS-Standard Cables in Modern Installations

BS-standard cables are the backbone of compliant and safe electrical networks. Designed in accordance with British Standards, they provide consistency, resilience, and assurance across industries. Whether installed in industrial plants, public infrastructure, or residential environments, these cables meet rigorous safety, performance, and reliability criteria.

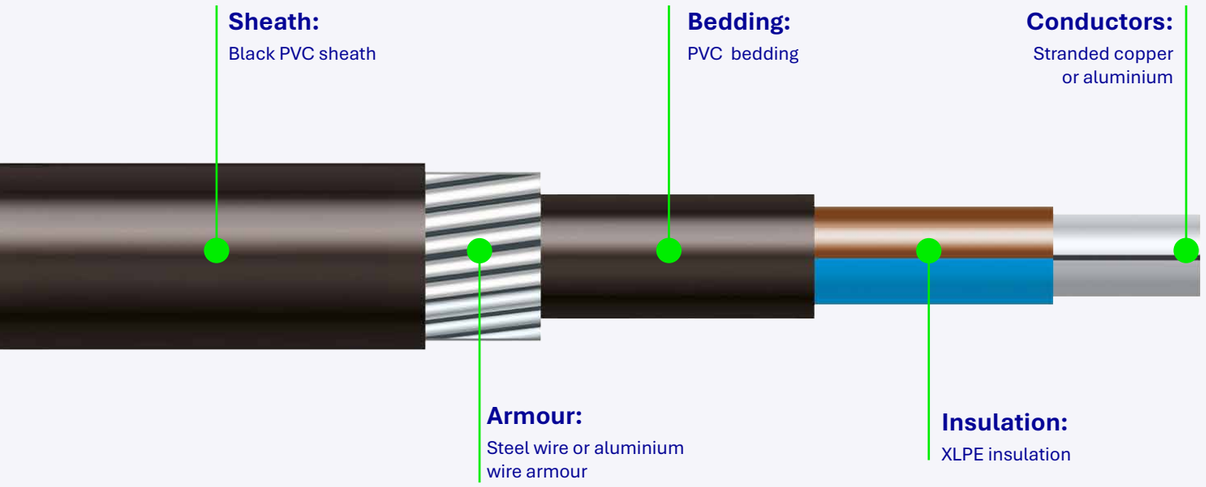
2. BS-Standard Cable Types: Technical Breakdown

BS5467 – XLPE Insulated, Armoured, PVC Sheathed Cable

Ideal For:

Multicore power circuits, high-risk environments, underground installation.

Technical Construction



Advantages:

- High mechanical protection
- Suitable for direct burial and exposed locations
- Compliant with BS5467 (PVC) and BS6724 (LSZH)

Engineer's Note:

BS5467 cables are widely specified due to their compliance, reliability, and suitability for demanding environments.

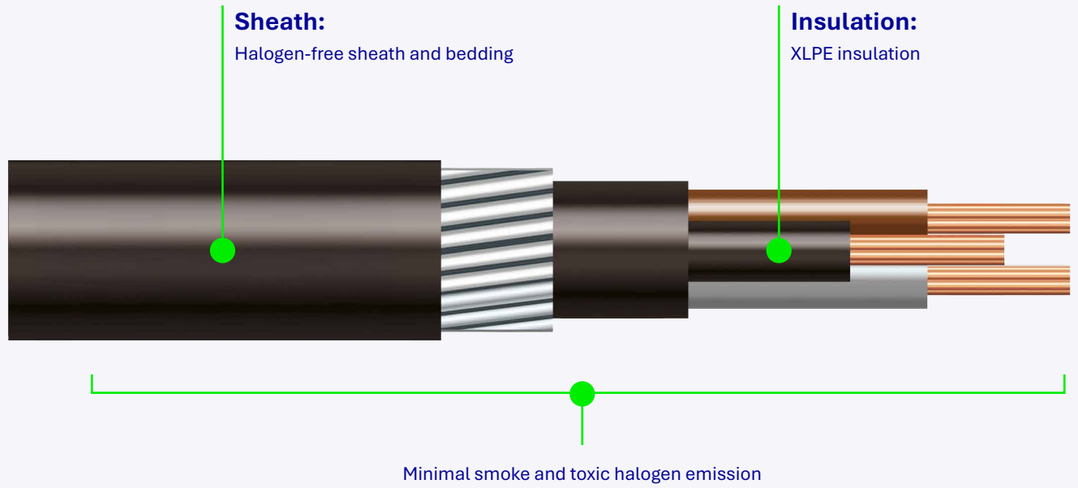
2. BS-Standard Cable Types: Technical Breakdown

BS6724 – XLPE Insulated, Armoured, LSZH Sheathed Cable

Ideal For:

Fire-sensitive installations: hospitals, tunnels, airports.

Technical Construction



Advantages:

- Low smoke and halogen-free
- Enhanced thermal performance
- Critical for safety systems

Engineer's Note:

BS6724 cables are widely specified due to their compliance, reliability, and suitability for demanding environments.

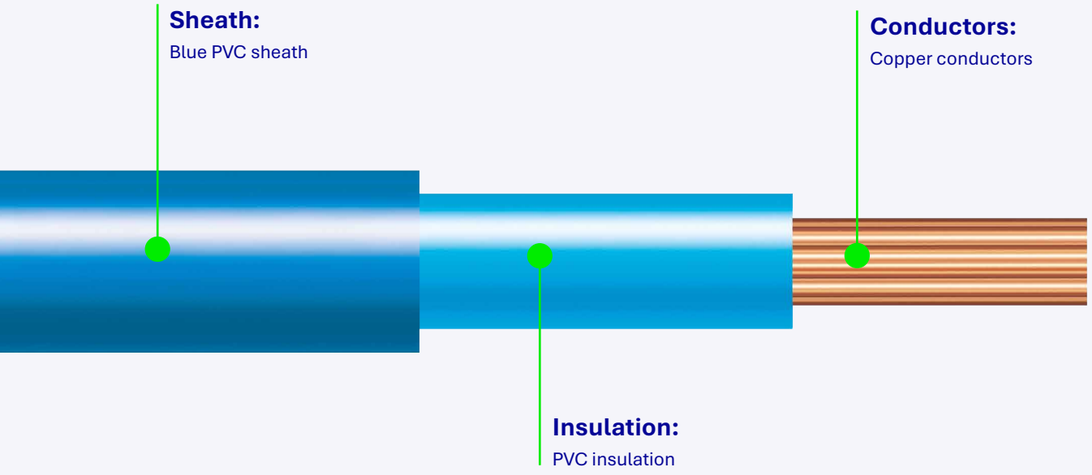
2. BS-Standard Cable Types: Technical Breakdown

BS6004 – PVC Insulated, Non-Armoured and Sheathed Wiring Cables

Ideal For:

Domestic and light commercial wiring.

Technical Construction



Advantages:

- Cost-effective
- Widely used for lighting and small power circuits

Engineer's Note:

BS6004 cables are widely specified due to their compliance, reliability, and suitability for demanding environments.

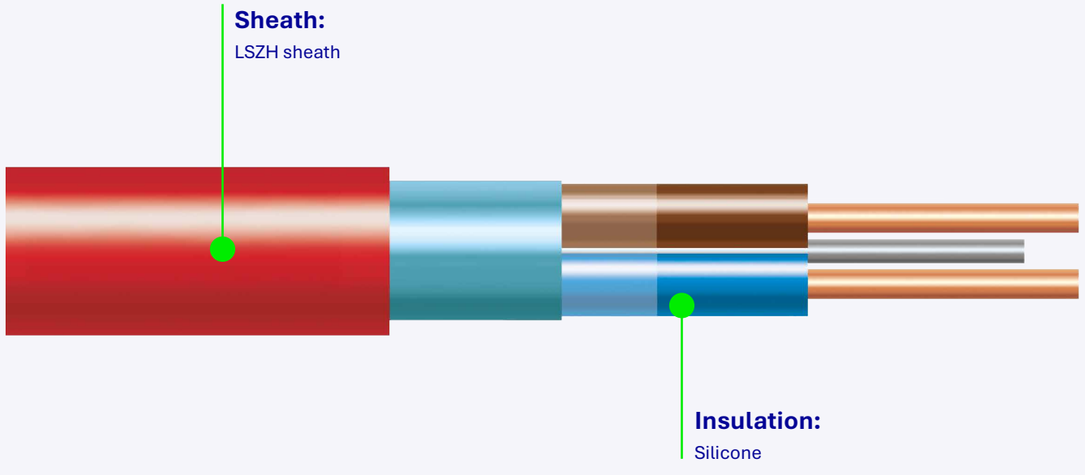
2. BS-Standard Cable Types: Technical Breakdown

BS7629-1 – Standard Fire Resistant CWZ Cable

Ideal For:

Fire alarm systems, emergency lighting circuits, voice alarm systems, fire detection and safety circuits, critical infrastructure where operation must continue during a fire.

Technical Construction



Advantages:

- Enhanced fire resistance — maintains circuit integrity during fire
- Low smoke, zero halogen sheath for improved safety in evacuation scenarios
- Meets BS7629-1, BS6387 & BS5839-1 stringent standards
- Available in multiple core sizes (2, 3, 4, 7, 12, 19) for flexibility
- Robust "soft skin" design provides durability during installation and operation

Engineer's Note:

BS7629-1 CWZ fire resistant cables are a preferred choice for life safety applications because they are tested for performance under fire, mechanical shock, and water conditions. With a 90°C operating temperature rating and compliance with BS6387, they are highly specified for critical emergency systems in commercial and industrial project.

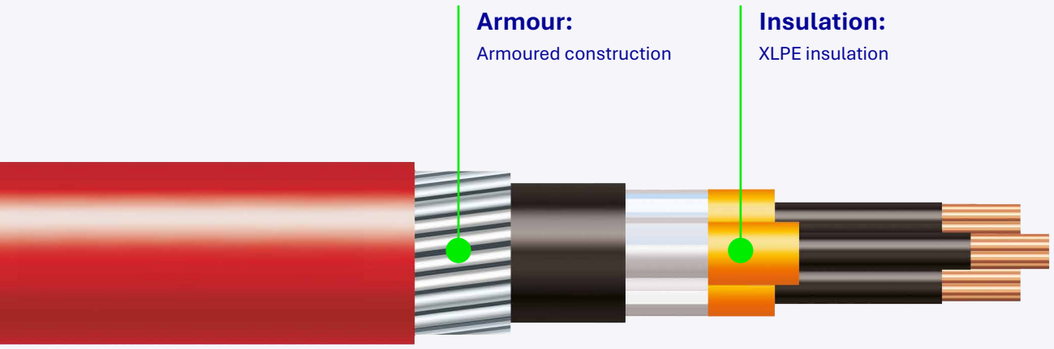
2. BS-Standard Cable Types: Technical Breakdown

BS6622 & BS7835 – Medium Voltage (MV) Armoured Cables

Ideal For:

Substations, MV feeders, renewable energy networks.

Technical Construction



Advantages:

- Support for higher voltages
- Robust mechanical strength
- Certified for MV systems

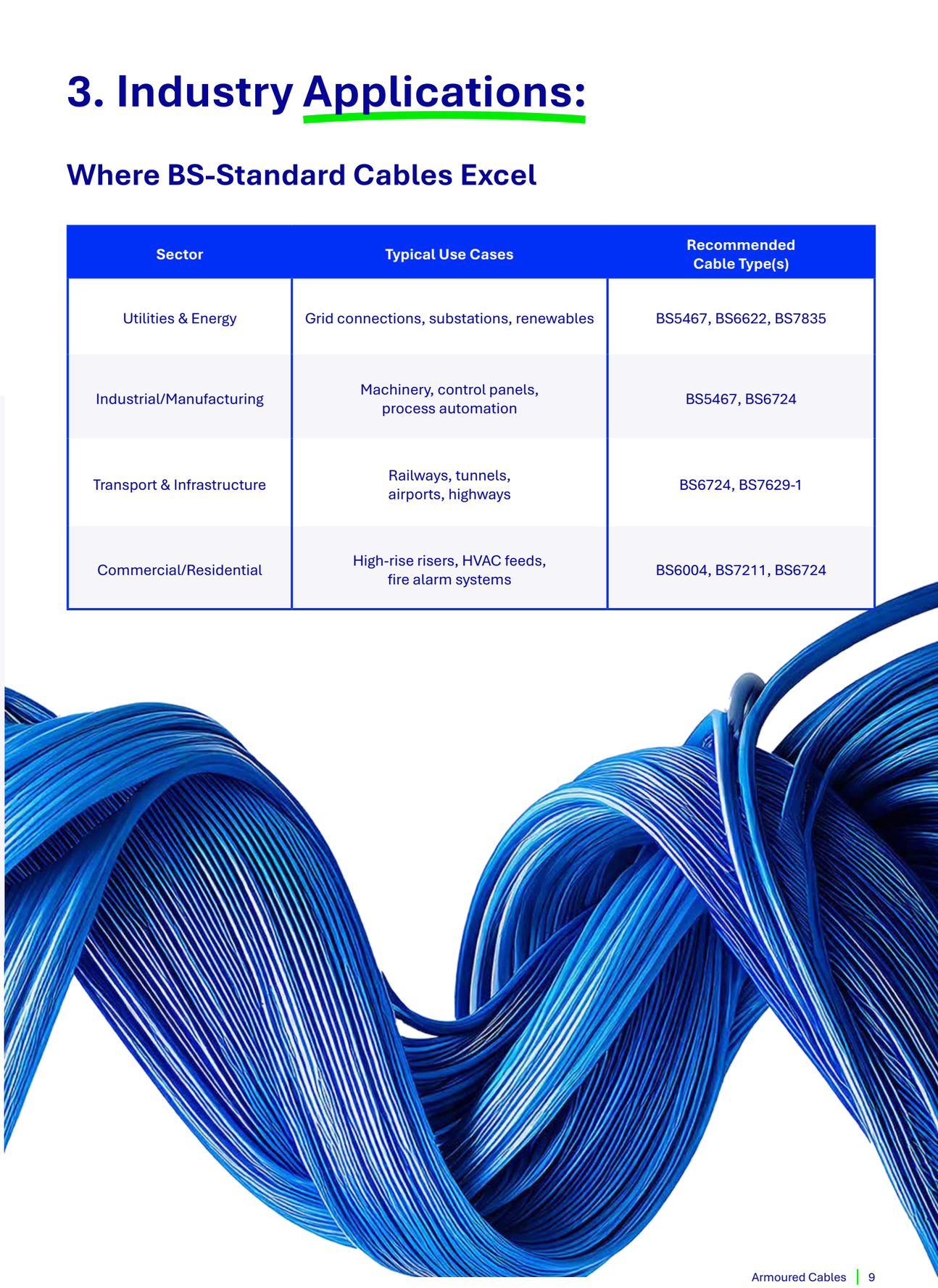
Engineer's Note:

BS6622 & BS7835 cables are widely specified due to their compliance, reliability, and suitability for demanding environments.

3. Industry Applications:

Where BS-Standard Cables Excel

Sector	Typical Use Cases	Recommended Cable Type(s)
Utilities & Energy	Grid connections, substations, renewables	BS5467, BS6622, BS7835
Industrial/Manufacturing	Machinery, control panels, process automation	BS5467, BS6724
Transport & Infrastructure	Railways, tunnels, airports, highways	BS6724, BS7629-1
Commercial/Residential	High-rise risers, HVAC feeds, fire alarm systems	BS6004, BS7211, BS6724



4. Installation Best Practices

- **Bend Radius**
  Follow manufacturer guidance (15–20 × diameter)
- **Gland Selection**
  Use BW (indoor) or CW (outdoor) glands
- **Earthing/Bonding**
  Ensure bonding at both ends for safety
- **Supporting/Cleating**
  Employ cleats at recommended intervals
- **Environmental Selection**
  MDPE for outdoor/UV, LSZH for fire-sensitive spaces

Practical Tip **Pre-plan routes, check obstructions, and avoid sharp bends or abrasions during installation.**

5. Compliance and Certifications

British & International Standards

- **BS5467 / BS6724**
  - LV armoured cable standards
- **BS6004 / BS7211**
  - General and LSZH wiring standards
- **BS6622 / BS7835**
  - MV cable standards
- **IEC 60502-1 and -2**
  - International standards for cable structure and testing

Fire/Health & Safety Regulation

- **CPR Classes (EN 50575)**
  - B2ca to Eca fire performance ratings
- **LSZH recommended for Cca/Dca classifications**
- **BS EN 50267 (halogen-free), BS EN 50268 (smoke), BS EN 50265/66 (flame)**
- **BS6387 and BS8434-2 for fire circuit integrity**

Specifiers' Note: **Always request certification and documentation on performance, CPR classification, and material safety.**

6. Why Batt Cables?

Batt Cables is trusted by engineering professionals for:

- **Technical Depth**
  Detailed data, bespoke solutions, expert advisory support
- **Comprehensive Range**
  All major BS-standard cable types available
- **Assured Compliance**
  Cables tested to BS, IEC, CPR, and project-specific standards
- **Global Logistics**
  Fast, secure delivery with project-dedicated teams
- **Sustainability**
  Eco-friendly, low-emission ranges with full traceability

Testimonial

> "Batt Cables' commitment to technical excellence and project deadlines ensures smooth delivery and long-term confidence."
>
> **- PowerSystems**

Ready for tailored technical support or a quote for your next armoured cable requirement?

Visit **battcables.com** contact our technical team, and specify with confidence. solutions and building lasting relationships.

The trusted choice.

battcables.com