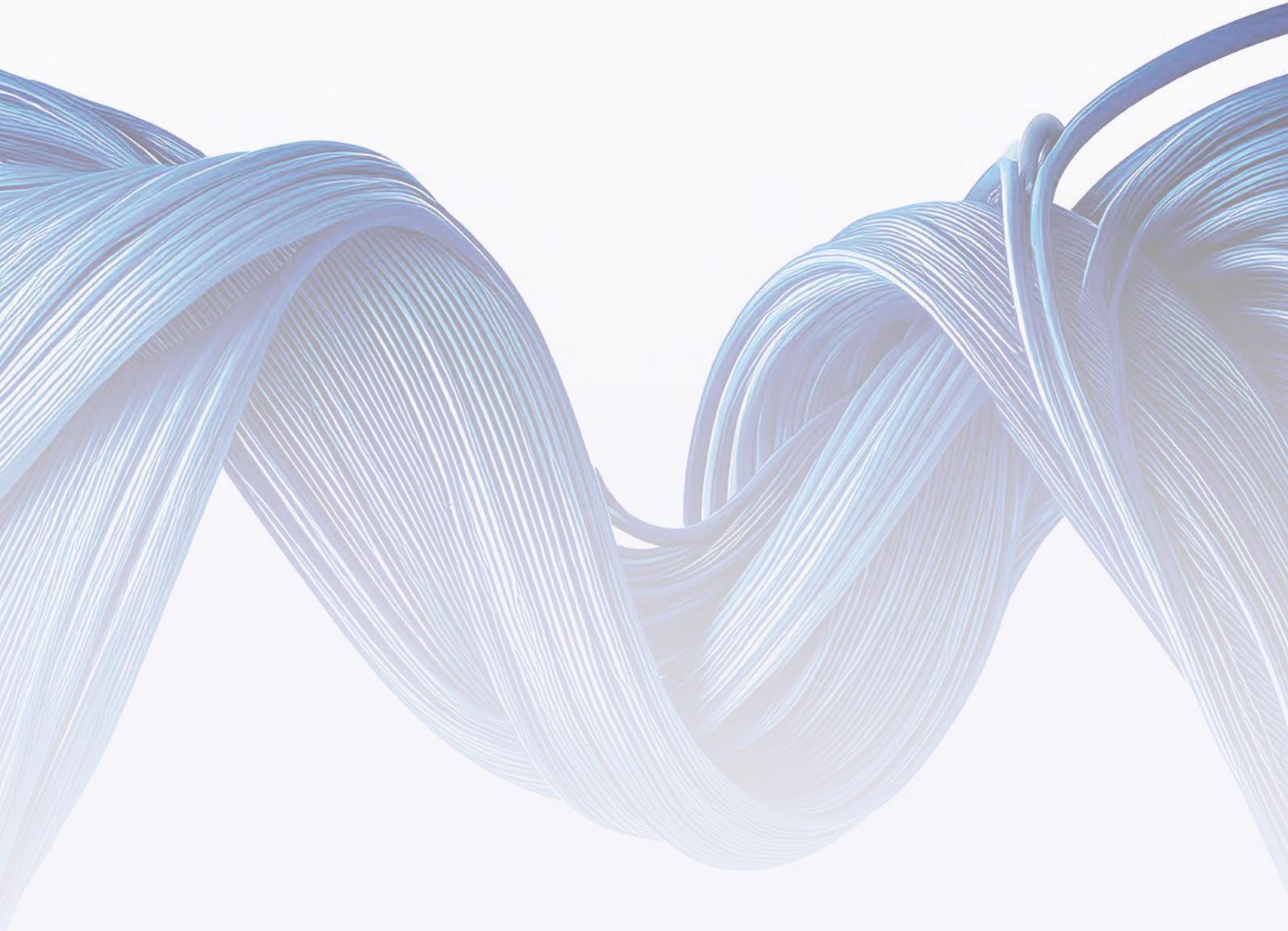


The Complete Guide to LSZH Cables

Your In-Depth Reference for Safer, Greener, and
More Reliable Cable Selection and Installation



Contents

1. Introduction	3
2. LSZH Cable Types: Technical Breakdown	
LSZH Armoured Power Cables (BS 6724, BS 7835)	4
LSZH Fire-Resistant Cables (BS 7846, BS 7629-1, Enhanced CWZ)	5
General Wiring LSZH Cables (6491B, 2491B, 318-B, 624-B Twin & Earth)	6
Data & Telecom LSZH Options (Cat 5e–Cat 7, Fibre Optics)	7
3. Industry Applications	
Where LSZH Cables Excel	8
4. Installation Best Practices	9
5. Compliance and Certifications	9
6. Why Batt Cables?	10

1. Introduction

The Role of LSZH Cables in Modern Installations

When cables burn, traditional PVC releases dense black smoke and toxic halogen gases. This can obscure visibility, corrode equipment, and endanger lives.

LSZH (Low Smoke Zero Halogen) cables help to minimise this problem. With a halogen-free sheath and minimal smoke emission, they:

- Reduce toxicity, protecting people in evacuation scenarios
- Maintain visibility during fires, aiding safe escape and rescue
- Prevent corrosive damage to sensitive electronic systems

As building safety regulations and sustainability standards tighten worldwide, LSZH cables are now the preferred choice for hospitals, airports, data centres, transport hubs, and high-occupancy buildings.

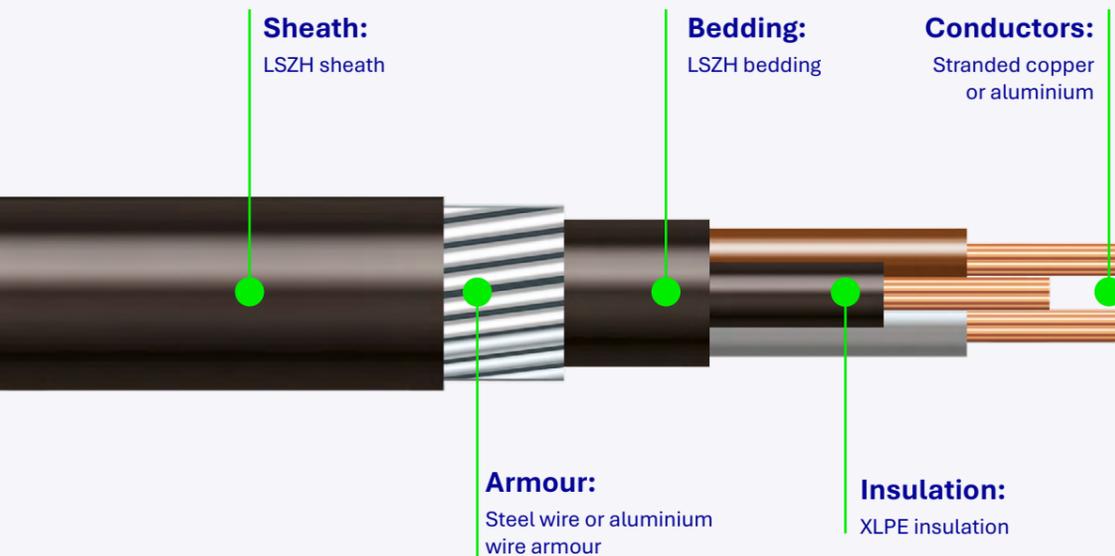
2. LSZH Cable Types: Technical Breakdown

LSZH Armoured Power Cables (BS 6724, BS 7835)

Ideal For:

Power distribution in public buildings, data centres, shopping malls, industrial facilities.

Technical Construction



Advantages:

- Enhanced fire safety with minimal toxic emissions
- Mechanical protection for direct burial, ducts, or exposed environments
- Compliance with BS 6724 and BS 7835

Engineer's Note:

LSZH armoured cables are mandatory in many infrastructure projects, especially metro systems and airports, to meet fire safety and evacuation requirements.

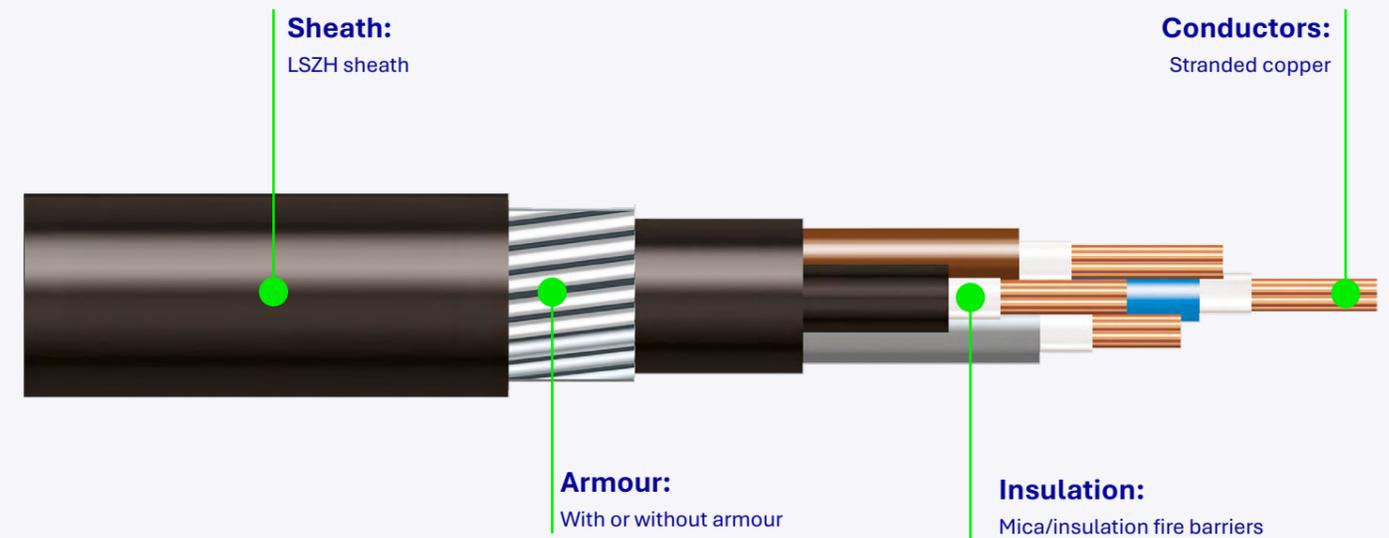
2. LSZH Cable Types: Technical Breakdown

LSZH Fire-Resistant Cables (BS 7846, BS 7629-1, Enhanced CWZ)

Ideal For:

Life safety systems such as fire alarms, emergency lighting, smoke extract fans, sprinkler pumps.

Technical Construction



Advantages:

- Maintain circuit integrity for 30–120 minutes during fire
- BASEC & LPCB certified for compliance
- Meet BS 6387 (CWZ), BS 7629-1, and BS 7846 standards

Engineer's Note:

Enhanced CWZ LSZH cables provide 120 minutes of continuous operation in fire, ideal for high-rise and complex evacuation projects.

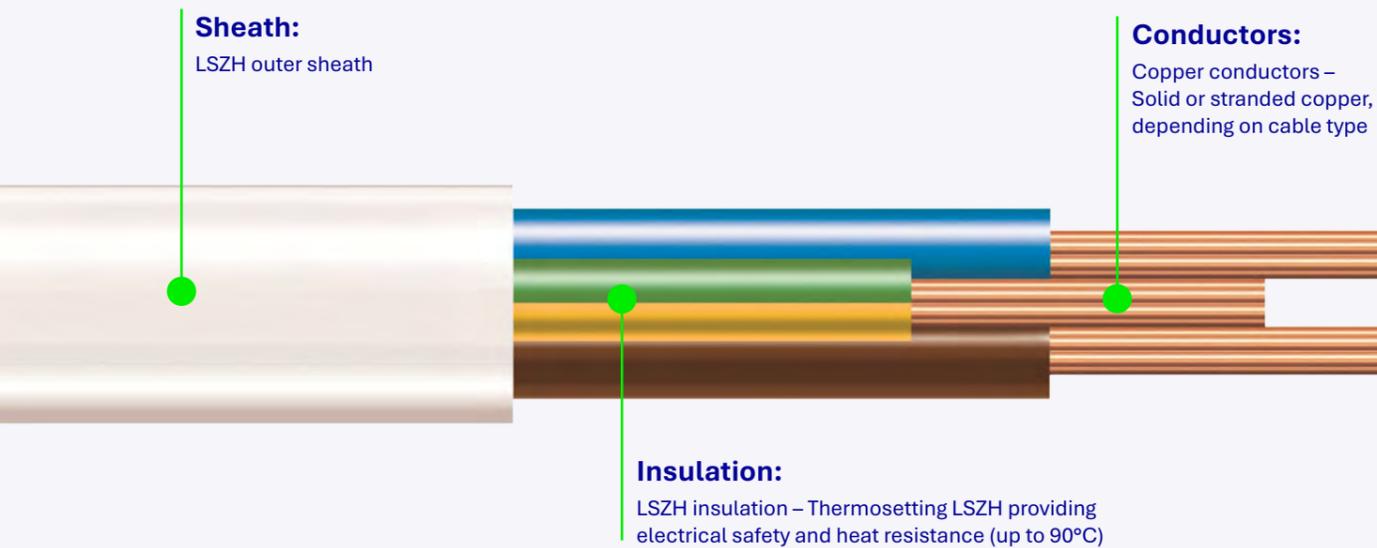
2. LSZH Cable Types: Technical Breakdown

General Wiring LSZH Cables (6491B, 2491B, 318-B, 624-B Twin & Earth)

Ideal For:

Domestic and industrial wiring, control circuits, appliances, lighting.

Technical Construction



Advantages:

- Low smoke, halogen-free sheathing for safer environments
- Flexible and easy to install in conduit, trunking, or clipped direct
- Easy to install in conduit, trunking, distribution panel or clipped direct

Range includes:

- **6491B** (single core, stranded)
- **2491B** (single core, flexible)
- **318-B** (multicore flexible)
- **624-B** Twin & Earth (domestic and light commercial wiring)

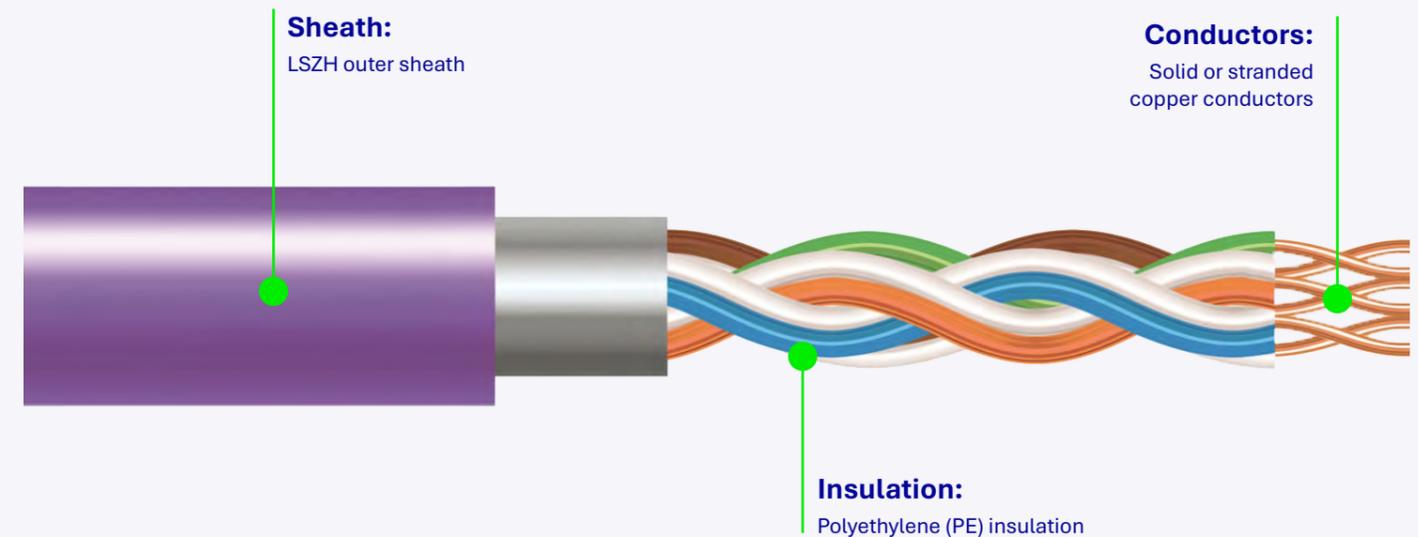
2. LSZH Cable Types: Technical Breakdown

Data & Telecom LSZH Options (Cat 5e–Cat 7, Fibre Optics)

Ideal For:

Structured cabling in offices, hospitals, schools, transport hubs, and data centres - environments where reduced smoke and toxic emissions are required during fire.

Technical Construction



LSZH Data & Communication Cable Range

- **Copper Data Cabling:** UTP and FTP categories (Cat 5e–Cat 7), available in LSZH sheath.
- **Patch Leads:** Stranded LSZH options for patch leads only.
- **Telephone:** CW1308 LSZH white cables, from 2 pairs to 320 pairs.
- **Fibre Optics:** LSZH sheathed fibre in multimode (OM1–OM5) and single-mode formats.

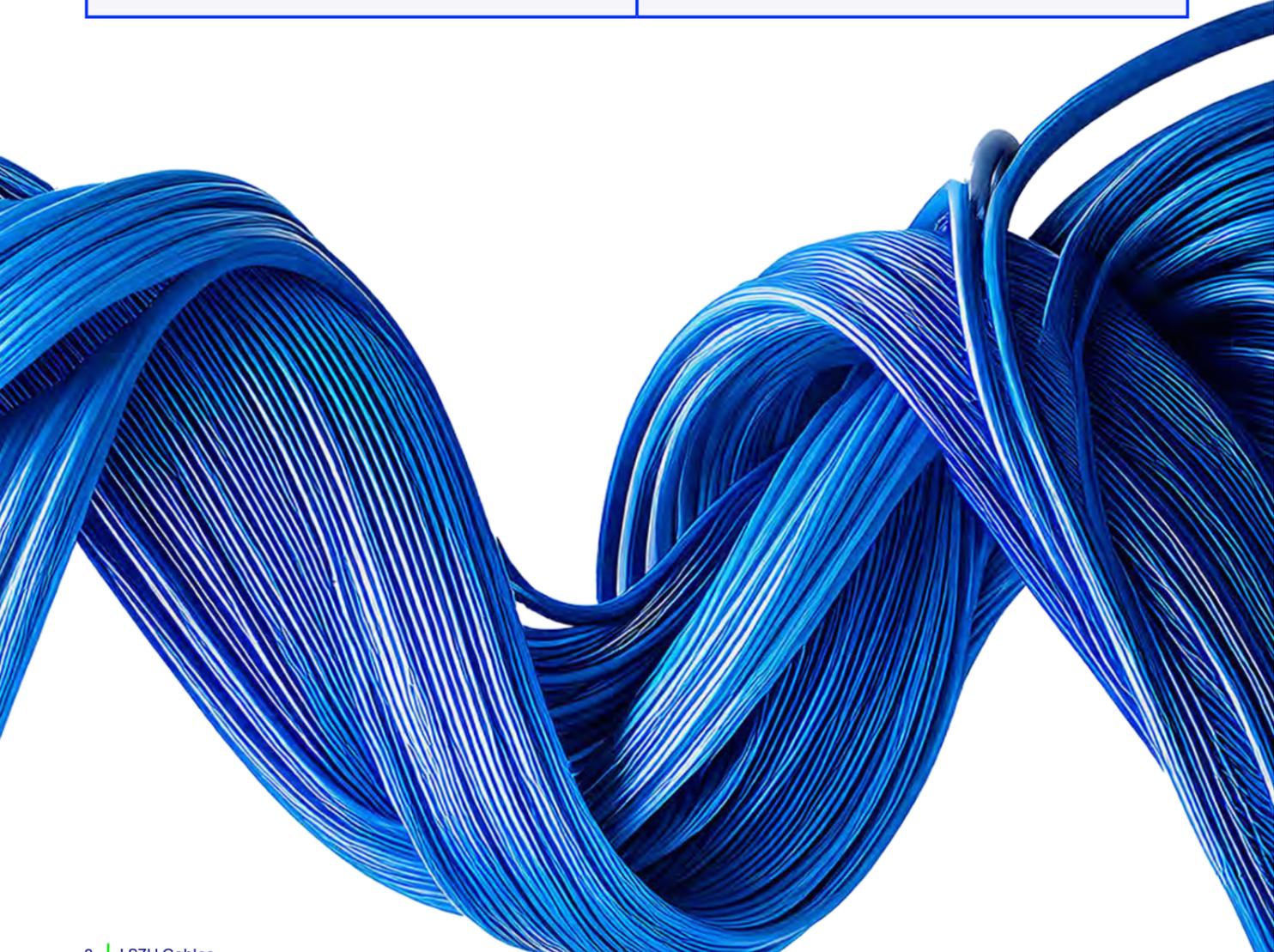
Comparison:

- Copper Cat 6 (10Gbps drops to 55m max length) vs Multimode Fibre LSZH (up to 400m at 10Gbps, immune to EMI, safer in fire-critical areas)

3. Industry Applications:

Where LSZH Cables Excel

Sector	Typical Use Cases
Public Buildings	Shopping centres, hospitals, schools, government facilities
Transport & Infrastructure	Railways, tunnels, stations, airports
Data Centres & IT Hubs	Protecting servers and sensitive electronics
Industrial Facilities	Areas with large numbers of personnel or high-value equipment



4. Installation Best Practices

- **Environment Selection**
Choose LSZH sheathing for fire-sensitive and enclosed spaces
- **Supporting & Cleating**
Use cleats and clips at recommended intervals
- **Conduit/Trunking**
For wiring (6491B, 2491B), ensure smooth bends and avoid sharp abrasion points
- **Termination**
Use certified glands, lugs, and accessories designed for LSZH sheathing

Practical Tip

Always pre-plan routes and consider both normal load conditions and fire survival requirements.

5. Compliance and Certifications

Batt's LSZH range meets the strictest standards:

- **British Standards**
 - BS 6724, BS 7835, BS 7846, BS 7629-1, BS 7211, BS 6387
- **International Standards**
 - IEC 60331, IEC 60332, IEC 60502-1/-2
- **CPR Fire Classes**
 - LSZH types recommended for Cca and Dca in public/sensitive buildings
- **Third-Party Approvals**
 - BASEC and LPCB certified products available

Specifiers' Note:

Always request CPR classification and test reports to confirm compliance.

6. Why Batt Cables?

Batt Cables is trusted by engineering professionals for:

- **Technical Depth**
Decades of LSZH expertise, with advisory support for project-specific requirements
- **Global Logistics**
Rapid supply for major projects worldwide
- **Comprehensive Range**
From small wiring to large, armoured power LSZH, across copper and fibre
- **Sustainability**
Eco-friendly, halogen-free products support green building certifications
- **Assured Compliance**
All cables tested to BS, IEC, and CPR fire standards



Testimonial

“ Batt Cables played a crucial role in the successful delivery of the Kemble Solar Farm grid connection. Their responsiveness, technical expertise, and ability to meet tight delivery deadlines ensured the smooth installation of over 48 km of 33 kV cable. It’s rare to find a supplier so aligned with project demands — they delivered not just materials, but confidence and continuity. ”

- Cameron Carson, Senior Project Engineer 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