203: Electrical installations technology  
**Handout 2: Technical information**

**Learning outcome**

The learner will:

1. know how to obtain technical information.

**Assessment criteria**

The learner can:

2.1 state purpose of different **sources** of technical information.

**Range**

**Sources**: Specifications (to select correct materials), drawings (provide technical information on wiring systems), BS 7671 On-Site Guide, Unite Union Book, manufacturers’ data, Guidance Notes (install in accordance with Regulations), client’s needs.

**Technical information**

Technical information required to enable us to carry out electrical installations can come from many sources. These include the following:

* specifications (to select correct materials)
* drawings (provide technical information on wiring systems)
* BS 7671
* On-Site Guide
* Unite Union Book
* manufacturers’ data
* Guidance Notes (install in accordance with Regulations)
* client’s needs.

**Specifications, drawings and diagrams**

In order to enable the various contractors to tender for the work, detailed specifications, drawings and diagrams have to be produced.

It is essential that, when pricing against other companies, everyone uses the same base for their final price. This ensures that everyone sets their prices similarly for the same equipment, cable sizes and runs, etc. Companies are free to apply their own wage rates, discounts and profit margins in determining the total cost.

Installation specifications give complete details of what is to be included in the installation, including plans. They will give details of the equipment to be installed, where it is to be installed, sizes, etc.

**BS 7671 (Requirements for Electrical Installations)**

Published by the Institution of Engineering and Technology (IET), these are the national standard in the United Kingdom for low voltage electrical installations.

The IET (formerly IEE) has published wiring Regulations in the United Kingdom since 1882. Since their 15th edition (1981), these Regulations have closely followed the corresponding international standard IEC 60364. Today, they are largely based on the European Committee for Electrotechnical Standardization (CENELEC) harmonization documents and therefore are technically very similar to the current wiring regulations of other European countries.

In 1992, the IEE Wiring Regulations became British Standard BS 7671 and they are now treated similarly to other British Standards. Although the IET and BSI are non-governmental organisations and the Wiring Regulations are non-statutory, they are referenced in several UK statutory instruments.

**On‑Site Guide**

The On‑Site Guide published by the IET is a handbook that contains some information that is not found in BS7671: 2008 Inc Amendment No 3: 2015. It is meant as a handy notebook reference for electricians working on building sites.

**Unite Union Book**

This book has been published by the trade union **Unite** for over 20 years; *The Electrician’s Guide to Good Electrical Practice* revised to BS 7671:2008, incorporating amendment 1, contains a wealth of information for the practising electrician. This information is based on BS 7671 but contains much more and is, additionally, pocket‑sized and therefore ideal to keep in the toolbox or van for reference purposes.

**Manufacturers’ information and data**

Manufacturers provide a wide range of information about their products in general and specifically to individual equipment or components.

Catalogues are produced which illustrate the type and range produced by that manufacturer. It is usual for this to be quite general but some will include technical data as well.

The production costs of these catalogues, and so on is covered by the price charged by the manufacturer. The printing costs of these catalogues are relatively high.

Data sheets are normally provided with individual accessories or components where needed. These apply to wiring diagrams for heating controls, connections for lighting systems etc and give the load capacity amongst other information.

Paper based systems tend to get out of date relatively quickly. Widespread access to the internet means that most companies have started to place all their catalogues and data on their websites. This is a cheaper option, reducing component cost and allowing instant updates to be posted as and when required.

**IET Guidance Notes**

The IET issues a number of Guidance Notes based on different topics. They provide additional clarification on how to implement and comply with BS 7671. Current titles are:

* *Guidance Note 1: Selection and Erection*, 7th Edition
* *Guidance Note 2: Isolation and Switching*, 7th Edition
* *Guidance Note 3: Inspection and Testing*, 7th Edition
* *Guidance Note 4: Protection Against Fire*, 7th Edition
* *Guidance Note 5: Protection Against Electric Shock*, 7th Edition
* *Guidance Note 6: Protection Against Overcurrent*, 7th Edition
* *Guidance Note 7: Special Location*, 5th Edition
* *Guidance Note 8: Earthing and Bonding*, 3rd Edition.

Although all are important, when designing and installing electrical installations, the most popular in the set is *Guidance Note 3: Inspection and Testing*.

**Client’s needs**

The client or customer will produce a general statement as to what they require. They will normally appoint an architect or consultant to produce a more detailed plan for approval. Once approved by the client (and approving authority), the customer’s agent will draw up detailed plans and specifications.