READING THE BS 7671 CABLE TABLES

WHAT MUST THE TABLE RATING REACH?

What it's for: finding a cable size whose current rating covers your It. Once you know It, you go to the right **cable table** for your cable type and read down the column for your installation method.

- The cable tables ("current-carrying capacity" tables) fill over 40 pages of Appendix 4. The top-right corner of each says **copper** or **aluminium**; the aluminium tables start with Table 4H1A.
- Tables ending in **A** hold the **current ratings**. The matching **B** table on the next page holds the **voltage drop (mV/A/m)**. That's why you skip every other page as you search.
- The one exception is **Table 4D5** (flat twin and earth, p.484). It fits ratings and volt drop on a single table.

TABLE	CABLE
4D1A	Single-core 70 °C thermoplastic (not ours)
4D2A	Multicore 70 °C thermoplastic (not ours)
4D3A	Single-core armoured 70 °C thermoplastic (not ours)
4D4A / 4D4B	Multicore armoured 70 °C: ratings / mV/A/m (not ours)
4D5	70 °C flat twin and earth, ratings **and** mV/A/m on one table, p.484 (not ours)
4E1A	**Single-core 90 °C thermosetting, non-sheathed: our cable**
4E1B	**Its voltage drop (mV/A/m) table**

BS 7671 · Appendix 4 · cable tables · copper first, then aluminium (from Table 4H1A)

BS 7671 · Table 4E1A · 90 °C thermosetting single-core, current ratings · **p.486**

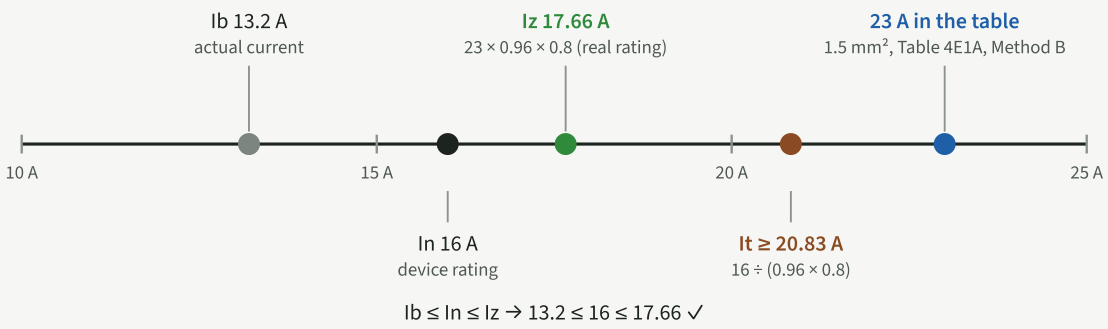
BS 7671 · Table 4D5 flat T&E · **p.484**

WORKED EXAMPLE: CHOOSING THE CABLE

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Table 4E1A · first column = conductor CSA (mm²)
Use the Reference Method B, single-phase (2 cables) column
Read down it for the first value ≥ 20.83 A:
   1.5 mm² → 23 A  ✓

→ 1.5 mm² 90 °C thermosetting singles, in conduit (Method B),
  can carry up to and including 23 A.
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In summary: know In, the cable type, the installation method and the correction factors. Do the It calculation. Then find a table value that's **bigger**.



The numbers from our example on one line. The Ib of 13.2 A is the made-up design current used in the voltage drop step next. Dividing In by the factors (20.83 A) and then multiplying the table value by the same factors (17.66 A) are two views of the same check.

The letters It and Iz It ≥ In ÷ (factors) = 20.83 A is the smallest **tabulated** current-carrying capacity you can accept, so you pick the first table value that's bigger: 23 A. **Iz** is the cable's rating *once the factors are applied*: 23 × 0.96 × 0.8 = **17.66 A**, which is ≥ In (16 A) ✓.

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