DIVERSITY: WHY THE TWO TABLES DIFFER, AND THE 5 A SOCKET

IS EVERYTHING ON AT ONCE?

TABLE A1 AND TABLE A2 — THE SAME SUM

> `Table A2: 30% f.l. in excess of 10 A. Table A1 gives the same result`

	TABLE A1 — ASSUMED DEMAND	TABLE A2 — DIVERSITY
Design current	23.91 A	23.91 A
First 10 A	Set aside	Set aside
30% of	the load above the first 10 A — 13.91 × 0.3	**the full load in excess of 10 A** — 13.91 × 0.3
=	4.17 A	4.17 A
+ 10 A back, + 5 A socket	**19.17 A**	**19.17 A**

The same **19.17 A** either way. **On-Site Guide** · Table A2 · p.151 reads: "10 A + 30% f.l. of connected cooking appliances in excess of 10 A + 5 A if a socket-outlet is incorporated in the control unit". The trap is stopping at "30% f.l." and taking 30% of the whole full load: 23.91 × 0.3 = 7.17 A, giving 22.17 A — about 3 A too high. The words **"in excess of 10 A"** are worth highlighting.

WHY 5 A, AND THE HONEST ANSWER

Nobody gives a derivation. The reasoning offered: a socket next to a cooker is unlikely to be carrying much — a phone charger rather than a kettle — so 5 A is a reasonable allowance.

> **The wording in these tables is not the clearest in the books.**
> Read properly, Table A1 and Table A2 give the same arithmetic. The next two sections show why, and where the misreading costs marks.

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