

Coiled cables and loops - risk of overheating and power-stage damage

Why should high-load cables not be coiled?

A power cable or extension lead carrying high current heats up. When it is tightly coiled in loops or left on a reel, it dissipates heat much less effectively. The temperature of the cable, plug and contacts can then rise even though the load itself is operating correctly.

How can the controller be damaged?

An overheated cable or connector can increase contact resistance, cause voltage drops, sparking, electrical arcing, intermittent breaks and short circuits. Such events stress the controller power path and, in an extreme case, can damage the triac, relay, connector or power tracks. The point is not that the "loop magnetically destroys the triac", but that high load creates unfavourable thermal and electrical conditions.

How should cables be routed?

Unwind high-power cables and lay them loosely so they can dissipate heat. Do not place a coiled cable on the controller or under insulating material. An extension reel used with a high load should be unwound in accordance with its markings and permitted current.