

Calculation of the cyclic and emergency current rating of cables —

**Part 3: Cyclic rating factor for cables of
all voltages, with partial drying of the
soil**

ICS 29.060.20

National foreword

This British Standard reproduces verbatim IEC 60853-3:2002 and implements it as the UK national standard.

The UK participation in its preparation was entrusted by Technical Committee GEL/20, Electric cables, to Subcommittee GEL/20/16, Medium/high voltage cables, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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**Calcul des capacités de transport des câbles
pour les régimes de charge cycliques et
de surcharge de secours –**

**Partie 3:
Facteur de capacité de transport cyclique
pour des câbles de toute tension, avec
assèchement partiel du sol**

**Calculation of the cyclic and emergency
current rating of cables –**

**Part 3:
Cyclic rating factor for cables of all voltages,
with partial drying of the soil**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CALCULATION OF THE CYCLIC AND EMERGENCY CURRENT RATING OF CABLES –

Part 3: Cyclic rating factor for cables of all voltages, with partial drying of the soil

FOREWORD

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International Standard IEC 60853-3 has been prepared by IEC technical committee 20: Electric cables.

The text of this standard is based on the following documents:

FDIS	Report on voting
20/493/FDIS	20/512/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

Annexes A and B are for information only.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

INTRODUCTION

Methods for calculating cyclic ratings for cables installed in the ground are given in IEC 60853-1 and IEC 60853-2. Part 1 is applicable to cables having negligible thermal capacitance; Part 2 is applicable to cables where their thermal capacitance cannot be neglected.

A fundamental assumption in Part 1 and Part 2 is that the thermal properties of the soil are uniform throughout the thermal field of the cable. For many installations, such an assumption is acceptable and further refinement is unnecessary.

However, higher working temperatures increase the probability that the soil immediately around a cable may lose so much of its moisture that it dries out to a significantly higher value of thermal resistivity than that corresponding to its normal site condition. The reduction in permissible current-carrying capacity of a cable, necessary to avoid overheating, can be significant.