GUIDANCE NOTES to BS 7671 : 1992

Incorporating Amendment No 1, 1994 (AMD 8536)

Selection & Erection

IEE Guidance Note 1 - Second Edition

CONTENTS

ACKNOWLEDGEMENTS
PREFACE
INTRODUCTION

SECTION 1 : THE GENERAL REQUIREMENTS

- 1.1 - General
- 1.2 - Equipment
- 1.3 - Electricity at Work Regulations
- 1.4 - The Construction (Design and Management) Regulations

SECTION 2 : SELECTION AND ERECTION OF EQUIPMENT

- 2.1 - Selection and erection of equipment
- 2.2 - Operational conditions and external influences
2.3 - Compliance with standards
2.4 - Operational requirements
2.5 - Identification
2.6 - Mutual detrimental influence
2.7 - Compatibility
2.8 - LV switchgear and controlgear assemblies — Forms of separation

SECTION 3 : PROTECTION AGAINST OVERCURRENT AND ELECTRIC SHOCK

3.1 - Protective devices
3.2 - Overcurrent protective devices
3.3 - Fuses
3.4 - Miniature circuit breaker (mcbs)
3.5 - Insulation monitoring devices
3.6 - Residual current operated devices (RCDs)
3.7 - Earthed equipotential bonding and automatic disconnection of supply

SECTION 4 : EXTERNAL INFLUENCES

4.1 - External influences
4.2 - Ambient temperature (AA)
4.3 - External heat sources and solar radiation (AN)
4.4 - The IP and IK classifications
4.5 - Presence of water (AD) or high humidity (AB)
4.6 - Presence of solid foreign bodies (AE)
4.7 - Presence of corrosive or polluting substances (AF)
4.8 - Impact (AG), vibration (AH) and other mechanical stresses (AJ)
4.9 - Presence of fauna (AL), flora and/or mould growth (AK)
4.10 - Potentially explosive atmospheres

SECTION 5 : INSTALLATION OF CABLES

5.1 - Cable selection
5.2 - Cable concealed in structures
5.3 - Cable routes and livestock
• 5.4 - Capacity of conduit and trunking
• 5.5 - Selection of cables and wiring systems with low emission of smoke and corrosive gases when affected by fire
• 5.6 - Buried cables

SECTION 6 : SIZING OF CABLES

• 6.1 - Current carrying capacity and voltage drop
• 6.2 - Diversity
• 6.3 - Cross sectional areas of conductors
• 6.4 - Voltage drop in consumers' installations

SECTION 7 : OTHER INFLUENCES

• 7.1 - Electrical connections
• 7.2 - Cables in contact with thermal insulation
• 7.3 - Mutual or individual deterioration
• 7.4 - Proximity to other services
• 7.5 - Plasticiser migration from pvc insulation to the conductor surface

SECTION 8 : INSTALLATION OF EQUIPMENT

• 8.1 - Equipment having a high earth leakage current
• 8.2 - Water heating
• 8.3 - Safety services
• 8.4 - Other equipment
• 8.5 - Selection and erection in relation to design and maintainability

APPENDIX A : CABLE CAPACITIES OF CONDUIT AND TRUNKING

• (a) General
• (b) Single core pvc insulated cables in straight runs of conduit not exceeding 3 m in length
• (c) Single core pvc insulated cables; in straight runs of conduit exceeding 3 m in length or
• (d) Single core pvc insulated cables in trunking
• (e) For other sizes and types of cable in conduit or trunking, including flexible conduit
• (f) Background to the tables

APPENDIX B : DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

• IP code for ingress protection
• IK code for impact protection

APPENDIX C : CLASSIFICATION OF EXTERNAL INFLUENCES

• Concise List Of External Influences
• Environment:
• Utilisation:
• Construction of buildings:

APPENDIX D : EXPLANATORY NOTES ON TYPES OF SYSTEM EARTHING

APPENDIX E : CONVENTIONAL CIRCUIT ARRANGEMENTS

• (a) General
• (b) Final circuits using socket-outlets complying with BS 1363 and fused connection units
• (c) Final circuits using socket-outlets complying with BS 196
• (d) Final radial circuits using 16 A socket-outlets complying with BS 4343 (BS EN 60309 2)
• (e) Cooker final circuits in household premises
• (f) Electric shower final circuits in household premises

APPENDIX F : LIMITATION OF EARTH FAULT LOOP IMPEDANCE FOR COMPLIANCE WITH REGULATION 543 01 01

APPENDIX G : RESISTANCE AND IMPEDANCE OF COPPER AND ALUMINIUM CONDUCTORS UNDER
FAULT CONDITIONS

APPENDIX H : SELECTION AND ERECTION OF WIRING SYSTEMS

APPENDIX I : NOTES ON METHODS OF SUPPORT FOR CABLES, CONDUCTORS AND WIRING SYSTEMS

APPENDIX J : MAXIMUM DEMAND AND DIVERSITY

APPENDIX K : MINIMUM SEPARATING DISTANCES BETWEEN ELECTRICITY SUPPLY CABLES AND TELECOMMUNICATIONS OR CONTROL CABLES

APPENDIX L : PERMITTED LEAKAGE CURRENTS

APPENDIX M : STANDARD SYMBOLS AND GRAPHICAL SYMBOLS FOR GENERAL ELECTRICAL PURPOSES

APPENDIX N: ADDRESSES OF ASSOCIATED BODIES

INDEX

Click here to return to top of file