ISO/IEC 22237-1:2021-10 (E)

Information technology - Data centre facilities and infrastructures - Part 1: General concepts

Contents

Page

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Terms,definitionsandabbreviatedterms 1
3.1 Terms and definitions 1
3.2 Abbreviated terms 5

4 Conformance 6

5 Business risk analysis 6
5.1 General 6
5.2 Business impact analysis 7
5.3 Risk analysis 7

6 Data centre design overview 9
6.1 General 9
6.2 Spaces and facilities 9

7 Classificationsystemforthedesignofdatacentrefacilitiesandinfrastructures 12
7.1 General 12
7.2 Availability 12
7.2.1 General 12
7.2.2 Single-site data centres 12
7.2.3 Multi-site data centres 14
7.3 Physical security 15
7.3.1 General 15
7.3.2 Protection against unauthorized access 15
7.3.3 Protection against intrusion 15
7.3.4 Protection against environmental events 15
7.4 Energy efficiency enablement 16
7.4.1 General 16
7.4.2 Power distribution system 17
7.4.3 Environmental monitoring and control 17
7.4.4 Operational processes and KPIs 17

8 Design and implementation process 17
8.1 Introduction 17
8.2 Design phases 18
8.2.1 Phase 1 -- Strategy 18
8.2.2 Phase 2 -- Objectives 18
8.2.3 Phase 3 -- System specifications 19
8.2.4 Phase 4 -- Design proposal 19
8.2.5 Phase 5 -- Decision 19
8.2.6 Phase 6 -- Functional design 20
8.2.7 Phase 7 -- Approval 20
8.2.8 Phase 8 -- Final design and project plan 20

8.2.9 Phase 9 -- Contract 20
8.2.10 Phase 10 -- Construction 20
8.2.11 Phase 11 -- Operation 20

9 Design principles 20
9.1 Design reference documentation 20
9.2 Design principles to support energy efficiency 21
9.3 Design principles for electromagnetic interference 21
9.4 Design principles to support operational excellence 21
9.5 Design principles for availability, reliability and resilience 21

Annex A (informative)AvailabilityandReliability 23

Annex B (informative)Availabilitydescription 28

Bibliography 29