

ISO/IEC 22237-3:2021-10 (E)

Information technology - Data centre facilities and infrastructures - Part 3: Power distribution

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms, definitions and abbreviated terms	2
3.1	Terms and definitions	2
3.2	Abbreviated terms	6
3.3	Symbols	6
4	Conformance	7
5	Power supply and distribution within data centres	7
5.1	Functional elements	7
5.1.1	General	7
5.1.2	Power supply to the data centre	8
5.1.3	Power distribution within the data centre	9
5.2	Dimensioning of power distribution systems	10
6	Availability	11
6.1	General requirements	11
6.2	Power supply	11
6.2.1	Capacity planning	11
6.2.2	Availability of the utility supply	13
6.2.3	Power quality	14
6.2.4	Load presented to the utility supply	15
6.2.5	Equipment	15
6.2.6	Availability Class design options	17
6.3	Power distribution	23
6.3.1	Capacity planning	23
6.3.2	Power quality	24
6.3.3	Equipment	25
6.3.4	Availability Class design options	25
6.4	Incorporation of low voltage direct current distribution	29
6.5	Additional considerations	29
6.5.1	Residual current measurement	29
6.5.2	Lightning and surge protection	29
6.5.3	Segregation of power distribution cabling and information technology cabling	30
6.6	Emergency power off (EPO)	30
6.6.1	Requirements	30
6.6.2	Recommendations	30
7	Physical security	30
7.1	General	30
7.2	Access	30
7.2.1	Power supply	30
7.2.2	Power distribution	30
7.2.3	Attachment of unauthorized end-equipment	30

7.3	Internal environmental events	31
7.3.1	Power supply	31
7.3.2	Power distribution	31
7.4	External environmental events	31
8	Energyefficiencyenablementandpowerdistribution	31
8.1	General	31
8.2	Granularity Level 1	32
8.2.1	Requirements	32
8.2.2	Recommendations	33
8.3	Granularity Level 2	33
8.3.1	Requirements	33
8.3.2	Recommendations	33
8.4	Granularity Level 3	34
8.4.1	Requirements	34
8.4.2	Recommendations	34
8.5	Cabling infrastructure to support energy efficiency enablement	34
	Bibliography	35