

# ISO/IEC 22237-4:2021-10 (E)

## Information technology - Data centre facilities and infrastructures - Part 4: Environmental control

---

<b>Contents</b>		<b>Page</b>
<b>Foreword</b>		<b>v</b>
<b>Introduction</b>		<b>vi</b>
<b>1</b>	<b>Scope</b>	<b>1</b>
<b>2</b>	<b>Normative references</b>	<b>1</b>
<b>3</b>	<b>Terms, definitions and abbreviated terms</b>	<b>2</b>
	3.1 Terms and definitions	2
	3.2 Abbreviated terms	3
<b>4</b>	<b>Conformance</b>	<b>3</b>
<b>5</b>	<b>Environmental control within data centres</b>	<b>4</b>
	5.1 General	4
	5.1.1 Design input	4
	5.1.2 Functional elements	4
	5.1.3 Requirements	5
	5.1.4 Recommendations	5
	5.2 Environmental control of data centre spaces	6
	5.2.1 Building entrance facilities	6
	5.2.2 Personnel entrance(s)	6
	5.2.3 Docking/loading bay(s)	6
	5.2.4 Generator space(s) including fuel storage	6
	5.2.5 Transformer space(s)	6
	5.2.6 Electrical distribution space(s)	7
	5.2.7 Telecommunication spaces(s)	7
	5.2.8 Main distributor spaces(s)	7
	5.2.9 Computer room space(s) and associated testing space(s)	7
	5.2.10 Electrical space(s)	8
	5.2.11 Mechanical space(s)	8
	5.2.12 Control room space(s)	8
	5.2.13 Office space(s)	8
	5.2.14 Storage and holding space(s)	8
	5.2.15 Accommodation of UPS equipment	9
<b>6</b>	<b>Availability</b>	<b>9</b>
	6.1 General	9
	6.2 Availability Class design options	9
	6.2.1 General	9
	6.2.2 Computer room and telecom space(s)	10
	6.2.3 UPS space	17
	6.3 Environmental control system capacity planning with respect to expansion	17
	6.4 Environmental control system capacity planning with respect to resilience	17
<b>7</b>	<b>Physical security</b>	<b>18</b>
	7.1 General	18
	7.2 Protection against unauthorized access	18
<b>8</b>	<b>Energy efficiency enablement</b>	<b>18</b>
	8.1 General	18
	8.2 Measurement of temperature	18
	8.2.1 External temperature	18
	8.2.2 Computer room temperature	18

8.3	Measurement of relative humidity .....	19
8.3.1	External relative humidity .....	19
8.3.2	Computer room relative humidity .....	20
8.4	Measurement of air pressure .....	20
8.5	Coolant flow rates .....	20
8.6	Heat removal .....	20
8.7	Outside air .....	20
<b>Annex A (informative) Overview of the requirements for environmental conditions .....</b>		<b>21</b>
<b>Bibliography .....</b>		<b>24</b>