

DIN EN 15500-1:2017-09 (E)

Energy Performance of Buildings - Control for heating, ventilating and air conditioning applications - Part 1: Electronic individual zone control equipment - Modules M3-5, M4-5, M5-5

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
2	Normative references	8
3	Terms and definitions	9
4	Symbols, subscripts and abbreviations	11
4.1	Symbols	11
4.2	Subscripts	11
4.3	Abbreviations	11
5	Functionality	12
5.1	General	12
5.1.1	Functional objective	12
5.1.2	Minimum operating mode	12
5.1.3	Controller functions	12
5.2	Individual zone control applications	14
5.2.1	General	14
5.2.2	Water Systems	15
5.2.3	Air- / Water-Systems	17
5.2.4	Electrical Systems	25
5.3	Functionality and hardware	27
5.3.1	General	27
5.3.2	Power supply and data protection	27
5.3.3	Inputs of the controller	27
5.3.4	Outputs of the controller	27
5.3.5	Sensor requirements	28
5.3.6	Actuator requirements	28
5.4	Temperature control accuracy	28
5.4.1	Introduction	28
5.4.2	General	29
5.4.3	Definition of CV and CSD	29
5.4.4	Definition of the control accuracy CA	31
5.4.5	Temperature control accuracy compliance	32
5.5	User Interface (UI)	32
5.6	Electrical requirements	32
5.6.1	General	32
5.6.2	Supply voltage	32
5.6.3	Protection against electric shock	32
5.6.4	Electromagnetic compatibility	32
5.6.5	Degrees of protection	33
5.6.6	Environmentally induced stress due to temperature	33
5.6.7	Materials	33
6	Test method	33

6.1	Power supply and data protection	33
6.2	Operating modes	33
6.2.1	Economy mode	33
6.2.2	Frost/Building protection	34
6.3	Temperature control accuracy compliance	34
6.4	Electrical tests	34
6.5	Supply voltage	34
6.6	Protection against electric shock	34
6.7	Electromagnetic compatibility	34
6.8	Degrees of protection	34
6.9	Environmental individual stress due to temperature	34
7	Classification and designation	34
8	Marking and documentation	35
8.1	Marking	35
8.2	Documentation	35
8.2.1	Installation instructions	35
8.2.2	User operating instructions	36
	Bibliography	37