DIN EN ISO 13766-1:2019-04 (E)

Earth-moving and building construction machin ery - Electromagnetic compatibility (EMC) of machines with internal electrical power supply - Part 1: General EMC requirements under typical electromagnetic environmental conditions (ISO 13766-1:2018)

Contents

Page

European foreword 4

Annex ZA (informative) Relationship between this European standard and the essential requirements of Directive 2014/30/EU [2014 OJ L96] aimed to be covered 5

Foreword 6

Introduction 7

1 Scope 9

2 Normative references 9

3 Terms and definitions 10

4 Requirements 14
4.1 General requirements 14
4.1.1 Fulfilment of requirements 14
4.1.2 Test specimen 14
4.1.3 Additional requirements for immunity tests 15
4.2 Specifications for broadband electromagnetic emission radiated from machinery 15
4.2.1 Method of measurement 15
4.2.2 Broadband reference limits 15
4.3 Specifications concerning narrowband electromagnetic emission radiated from machinery 15
4.3.1 Method of measurement 15
4.3.2 Narrowband reference limits 15
4.4 Specifications concerning the immunity of machinery to electromagnetic radiation 16
4.4.1 Test method 16
4.4.2 Machinery immunity reference limits 16
4.5 Specifications concerning broadband electromagnetic emissions radiated from ESA 17
4.5.1 Method of measurement 17
4.5.2 ESA broadband reference limits 17
4.6 Specifications concerning narrowband electromagnetic emissions radiated from ESA 17
4.6.1 Method of measurement 17
4.6.2 ESA narrowband reference limits 17
4.7 Specifications concerning the immunity of ESA to electromagnetic radiation 17
4.7.1 Method of testing 17
4.7.2 ESA immunity reference limits 18
4.8 Electrostatic discharge (ESD) 18
4.8.1 Method of testing 18
4.8.2 Reference limits 18
4.9 Conducted transients 19
4.9.1 General 19
4.9.2 Method of testing 19
4.9.3 Conducted emission -- Reference limits 19
4.9.4 Conducted immunity -- Reference limits and functional status 19

5 Exceptions 21

6 Test report 22

Annex A (normative) Reference limits 23

Annex B (normative) Method of measurement of radiated broadband electromagnetic emissions from machinery -- Complete machine only 29

Annex C (normative) Method of measurement of radiated narrowband electromagnetic emissions from machinery -- Complete machine only 34

Annex D (normative) Method of measurement of radiated broadband electromagnetic emissions from electrical/electronic sub-assemblies (ESA) 38

Annex E (normative) Method of measurement of radiated narrowband electromagnetic emissions from ESA 44

Annex F (informative) Guidance for selecting test specimen configuration and additional considerations 47

Bibliography 48