

# IEEE Standard Test Methods for Surge Protectors and Protective Circuits Used in Information and Communications Technology (ICT) Circuits, and Smart Grid Data Circuits

IEEE Power and Energy Society

Sponsored by the  
Surge Protective Devices Committee

**IEEE Std C62.36™-2016**  
(Revision of  
IEEE Std C62.36-2014)

# **IEEE Standard Test Methods for Surge Protectors and Protective Circuits Used in Information and Communications Technology (ICT) Circuits, and Smart Grid Data Circuits**

Sponsor

**Surge Protective Devices Committee  
of the  
IEEE Power and Energy Society**

Approved 16 May 2016

**IEEE-SA Standards Board**

**Abstract:** Surge protectors for application on multiconductor balanced or unbalanced information and communications technology (ICT) circuits and smart grid data circuits are addressed in this standard. These surge protectors are designed to limit voltage surges, current surges, or both. The surge protectors covered are generally multiple-component series or parallel combinations of linear or nonlinear elements, packaged or organized for the purpose of limiting voltage, current, or both. The methods of testing and criteria (where appropriate) for the characteristics and ratings of surge protectors used in ICT circuits and smart grid data circuits are also described in this standard. Packaged single gas tube, air gap, varistor, or avalanche junction surge-protective components are not covered by this standard, but rather are covered by IEEE Std C62.31™, IEEE Std C62.32™, IEEE Std C62.33™, and IEEE Std C62.35™, respectively. Specifically excluded from this standard are test methods for low-voltage power circuit applications. For protection of wire-line communication facilities under the specialized conditions found at power stations, consult IEEE Std 487™.

**Keywords:** ICT surge protection, IEEE C62.36™, signal line surge protection, smart grid surge protection, SPD, surge-protective circuits, surge protector, telecommunication line protector unit, transient overvoltage protector

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## Introduction

This introduction is not part of IEEE Std C62.36-2016, IEEE Standard Test Methods for Surge Protectors and Protective Circuits Used in Information and Communications Technology (ICT) Circuits, and Smart Grid Data Circuits.

This standard applies to surge protectors for application on multiconductor balanced or unbalanced information and communications technology (ICT) circuits and smart grid data circuits. These surge protectors are designed to limit voltage surges, current surges, or both. The surge protectors covered are generally multiple-component series or parallel combinations of linear or nonlinear elements, packaged or organized for the purpose of limiting voltage, current, or both.

This standard describes the methods of testing and criteria (where appropriate) for the characteristics and ratings of surge protectors used in ICT circuits and smart grid data circuits. This standard is not intended to cover packaged single gas tube, air gap, varistor, or avalanche junction surge-protective components (SPCs), which are covered by IEEE Std C62.31™ [B20], IEEE Std C62.32™ [B21], IEEE Std C62.33™ [B22], and IEEE Std C62.35™ [B23], respectively. Specifically excluded from this standard are test methods for low-voltage power circuit applications. For protection of wire-line communication facilities under the specialized conditions found at power stations, consult IEEE Std 487™ [B16].<sup>1,2</sup>

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## Contents

1. Scope .....	10
2. Normative references .....	11
3. Definitions, acronyms, and abbreviations .....	11
3.1 Definitions .....	11
3.2 Acronyms and abbreviations .....	12
4. Service conditions .....	13
4.1 Normal service conditions .....	13
4.2 Unusual service conditions .....	14
4.3 Radiation .....	15
5. Basic configurations .....	15
6. Standard design test procedure .....	17
6.1 Standard design test criteria .....	17
6.2 Statistical procedures .....	17
6.3 Test conditions .....	17
6.4 Test measurements .....	17
7. Surge protector characteristics .....	17
7.1 General .....	17
7.2 DC series resistance .....	18
7.3 Capacitance .....	19
7.4 Inductance .....	24
7.5 Insulation resistance (IR) test .....	26
7.6 Standby current test .....	28
7.7 DC ringing current .....	32
7.8 Distortion .....	34
7.9 Transmission properties: insertion loss, return loss, phase shift .....	39
7.10 Longitudinal conversion transformers (LCTL) .....	46
7.11 Voltage reset [electronic current limiters (ECLs)] .....	49
7.12 Impulse reset .....	52
7.13 Transition current test for thermally activated components .....	57
7.14 Time-to-trip test for thermally activated components .....	60
7.15 Transverse surge generation .....	65
7.16 DC-limiting voltage .....	69
7.17 Impulse-limiting voltage .....	74
7.18 In-line surge protector: protected port surge current let-through .....	78
7.19 In-line surge protector: surge series resistance .....	80
7.20 In-line surge protector: protected port ground potential rise (GPR) .....	83
7.21 In-line surge protector: protected port ground lead inductive voltage spike .....	86
Protected surge protector ratings under specified conditioning .....	89
8.1 Surge protector ratings under environmental cycling with impulse surges .....	89
8.2 Surge protector ratings under environmental cycling with ac exposure .....	93
8.3 Surge protector ratings under ac life (durability) .....	97
8.4 Surge protector ratings under impulse life (durability) .....	99
8.5 Surge protector ratings under maximum single-impulse discharge .....	103
9. Failure modes .....	105

Annex A (informative) Examples of internal arrangements of surge-limiting components .....	106
Annex B (informative) Test measurement techniques .....	109
B.1 Warning .....	109
B.2 Oscilloscopes .....	109
B.3 Voltage measurements .....	110
B.4 Current measurements .....	111
Annex C (informative) Impulse generators .....	112
C.1 Introduction .....	112
C.2 Types of impulse generator .....	112
C.3 Impulse generator parameters .....	112
C.4 Impulse generators typically used for surge protector testing .....	113
C.5 Impulse generator circuits .....	117
C.6 Combination wave generators .....	121
C.7 Expanding single-output generators to multiple output .....	123
C.8 Generator variants .....	126
Annex D (informative) Cable discharge events .....	131
D.1 Background .....	131
D.2 Event characteristics .....	131
D.3 Test methods .....	132
Annex E (informative) .....	134
GDT-based surge protector oscillation test .....	134
E.1 Background .....	134
E.2 Purpose .....	135
E.3 Equipment .....	135
E.4 Equipment states subject to test .....	135
E.5 Procedures .....	136
E.6 Alternative methods .....	136
E.7 Suggested data .....	137
E.8 Comments .....	138
Annex F (informative) Multiport surge protector .....	139
F.1 Introduction .....	139
F.2 Individual service protection .....	139
F.3 Standards that address multiport coupling .....	140
Annex G (informative) Comparison characteristics and ratings .....	142
Annex H (informative) Signal transformers voltage-time product .....	143
H.1 Background .....	143
H.2 Purpose .....	143
H.3 Equipment .....	143
H.4 Protector states subject to test .....	143
H.5 Procedures .....	143
H.6 Alternative method .....	144
H.7 Suggested test data .....	144
H.8 Requirement .....	144
H.9 Comments .....	145
Annex I (informative) Bibliography .....	146

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## 1. Scope

This standard applies to surge protectors for application on multiconductor balanced or unbalanced information and communications technology (ICT) circuits and smart grid data circuits. These surge protectors are designed to limit voltage surges, current surges, or both. The surge protectors covered are generally multiple-component series or parallel combinations of linear or nonlinear elements, packaged or organized for the purpose of limiting voltage, current, or both.

This standard describes the methods of testing and criteria (where appropriate) for the characteristics and ratings of surge protectors used in ICT circuits and smart grid data circuits. This standard is not intended to cover packaged single gas tube, air gap, varistor, avalanche junction, or self-restoring current limiter surge-protective components (SPCs), which are covered by IEEE Std C62.31 [B20], IEEE Std C62.32 [B21], IEEE Std C62.33 [B22], IEEE Std C62.35 [B23], and IEEE Std C62.39 [B24], respectively. Specifically excluded from this standard are test methods for low-voltage power circuit applications. For protection of wire-line communication facilities under the specialized conditions found at power stations, consult IEEE Std 487 [B16] series of documents.<sup>1,2</sup>

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