ADOPTION PROPOSAL FORM

**CPR183/F15**

**KENYA BUREAU OF STANDARDS**

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| **Document Type:** | **Adoption proposal** | |
| **Dates:** | Circulation date | Closing date |
| 2022-01-05 | 2021-02-05 |
| **TC Secretary** | **This form shall be filled, signed and returned to Kenya Bureau of Standards for the attention of Alex S Mboa (amboa@kebs.org)** | |

The Kenya Bureau of Standards intends to adopt the International Standards as detailed here below.

We are therefore seeking views from potential users in respect of the same. The Standards are available at the Kenya Bureau of Standards Information Resource Centre. Please tick and fill your preference of the listed option in the attached table against each of the standards.

Where the option is that the adoption is not acceptable, you MUST give a reason(s) and recommendation(s).

**NOTE:** Absence of any reply or comments shall be deemed to be an acceptance of the proposal for adoption and **shall constitute an approval vote**.

1. **Number**: IEC 60947-1:2020 to replace KS IEC 60947-1:1999

**Title**: Low-voltage switchgear and controlgear - Part 1: General rules

**Scope**: This document applies, when required by the relevant product standard, to low-voltage switchgear and controlgear hereinafter referred to as "equipment" or “device” and intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V AC or 1 500 V DC.

https://webstore.iec.ch/preview/info\_iec60947-1%7Bed6.0%7Db.pdf

1. **Number**: IEC 60947-2:2016/AMD1:2019 to replace KS IEC 60947-2:1996

**Title**: Low-voltage switchgear and controlgear - Part 2: Circuit-breakers

**Scope**: This part of IEC 60947 series applies to circuit-breakers, intended to be installed and operated by instructed or skilled persons, the main contacts of which are intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c.; it also contains additional requirements for integrally fused circuit-breakers.

https://webstore.iec.ch/preview/info\_iec60947-2%7Bed5.1%7Db.pdf

1. **Number**: IEC 60947-3:2020 to replace IEC 60947-3:1999

**Title**: Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

**Scope**: This part of IEC 60947 applies to switches, disconnectors, switch-disconnectors and fuse combination units and their dedicated accessories to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1 000 V AC or 1 500 V DC.

https://webstore.iec.ch/preview/info\_iec60947-3%7Bed4.0%7Db.pdf

1. **Number**: IEC 60947-4-1:2018 to replace IEC 60947-4-1:2012

**Title**: Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters

**Scope**: This part of IEC 60947 is applicable to the following equipment:

– electromechanical contactors and starters including motor protective switching device (MPSD);

– actuators of contactor relays;

– contacts dedicated exclusively to the coil circuit of this contactor or this contactor relay;

– dedicated accessories (e.g. dedicated wiring, dedicated latch accessory);

intended to be connected to distribution circuits, motors circuits and other load circuits, the rated voltage of which does not exceed 1 000 V AC or 1 500 V DC.

This document covers also the assessment procedure for electromechanical overload protection used in safety applications such as protecting a motor located in explosive atmosphere from the outside atmosphere

https://webstore.iec.ch/preview/info\_iec60947-4-1%7Bed4.0%7Db.pdf

1. **Number**: IEC 60947-4-2:2020 to replace IEC 60947-4-2:2011 & IEC 60947-4-2:2001

**Title**: Low-voltage switchgear and controlgear – Part 4-2: Contactors and motor-starters – Semiconductor motor controllers, starters and soft-starters

**Scope**: This part of IEC 60947 applies to semiconductor motor controllers, starters and soft-starters which can include a series mechanical switching device, intended to be connected to circuits the rated voltage of which does not exceed 1 000 V AC.

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1. **Number**: IEC 60947-4-3:2020 to replace IEC 60947-4-3:2014

**Title**: Low-voltage switchgear and controlgear - Part 4-3: Contactors and motor-starters - Semiconductor controllers and semiconductor contactors for non-motor loads

**Scope**: This document applies to semiconductor controllers and semiconductor contactors for nonmotor load intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V AC.

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1. **Number**: IEC 60947-5-1:2016 to replace KS IEC 60947-5-1:1997 and KS EAS 378-5-1:2005

**Title**: Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices

**Scope**: This document applies to semiconductor controllers and semiconductor contactors for nonmotor load intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V AC.

<https://webstore.iec.ch/preview/info_iec60947-5-1%7Bed4.0%7Db.pdf>

1. **Number**: IEC 60947-5-2:2016 to replace KS IEC 60947-5-2:1997

**Title**: Low-voltage switchgear and controlgear - Part 5-2: Control circuit devices and switching elements - Proximity switches

**Scope**: This part of IEC 60947 applies to inductive and capacitive proximity switches that sense the presence of metallic and/or non-metallic objects, ultrasonic proximity switches that sense the presence of sound reflecting objects, photoelectric proximity switches that sense the presence of objects and non-mechanical magnetic proximity switches that sense the presence of objects with a magnetic field.

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1. **Number**: IEC 60947-5-3:2013 to replace KS IEC 60947-5-3:1999 and KS EAS 378-5-3:2005

**Title**: Low-voltage switchgear and controlgear - Part 5-3: Control circuit devices and switching elements - Requirements for proximity devices with defined behaviour under fault conditions (PDDB)

**Scope**: This part of IEC 60947 series provides additional requirements to those given in IEC 60947-5- 2. It addresses the fault performance aspects of proximity devices with a defined behaviour under fault conditions (PDDB). It does not address any other characteristics that can be required for specific applications.

<https://webstore.iec.ch/preview/info_iec60947-5-3%7Bed2.0%7Db.pdf>

1. **Number**: IEC 60947-5-4:2002+AMD1:2019 CSV to replace KS IEC60947-5-4:2001

**Title**: Low-voltage switchgear and controlgear - Part 5-4: Control circuit devices and switching elements - Method of assessing the performance of low-energy contacts - Special tests

**Scope**: This part of IEC 60947 applies to separable contacts used in the utilization area considered, such as switching elements for control circuits. This standard takes into consideration two typical rated voltage areas:

a) above (and including) 10 V (typically 24 V) where contacts are used for switching loads with possible electrical erosion, such as programmable controller inputs;

b) below 10 V (typically 5 V) with negligible electrical erosion, such as electronic circuits.

<https://webstore.iec.ch/preview/info_iec60947-5-4%7Bed2.1%7Db.pdf>

1. **Number**: IEC 60947-5-5:1997+AMD1:2005+AMD2:2016 CSV to replace KS IEC 60947-5-5:1997 and KS EAS 378-5-5:2005

**Title**: Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function

**Scope**: This section of IEC 60947-5 provides detailed specifications relating to the electrical and mechanical construction of emergency stop devices with mechanical latching function and to their testing.

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1. **Number**: IEC 60947-5-8:2020 to replace KS IEC 60947-5-8:2006

**Title**: Low-voltage switchgear and controlgear - Part 5-8: Control circuit devices and switching elements - Three-position enabling switches

**Scope**: This part of IEC 60947 series specifies requirements for three-position enabling switches.

These switches are used as components of enabling devices to provide signals that,

a) when activated, allow machine operation to be initiated by a separate start control, and

b) when de-activated,

– initiate a stop function, and

– prevent initiation of machine operation.

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1. **Number**: IEC 60947-6-1:2021 to replace KS IEC 60947-6-1:2005

**Title**: Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment

**Scope**: This document applies to transfer switching equipment (TSE), to be used in power systems for ensuring the continuity of the supply and allowing the energy management of the installation, by transferring a load between power supply sources, the rated voltage of which does not exceed 1 000 V AC or 1 500 V DC.

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1. **Number**: IEC 60947-6-2:2020 to replace KS IEC 60947-6-2:2007

**Title**: Low-voltage switchgear and controlgear - Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)

**Scope**: This document applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1 000 V AC or 1 500 V DC.

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1. **Number**: IEC 60947-7-1:2009 to replace KS IEC 60947-7-1:2001

**Title**: Low-voltage switchgear and controlgear - Part 7-1: Ancillary equipment - Terminal blocks for copper conductors

**Scope**: This part of IEC 60947 specifies requirements for terminal blocks with screw-type or screwless-type clamping units primarily intended for industrial or similar use and to be fixed to a support to provide electrical and mechanical connection between copper conductors. lt applies to terminal blocks intended to connect round copper conductors, with or without special preparation, having a cross-section between 0,2 mm2 and 300 mm2, intended to be used in circuits of a rated voltage not exceeding 1 000 V a.c. up to 1 000 Hz or 1 500 V d.c.

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1. **Number**: IEC 60947-7-2:2009 to replace KS IEC 60947-7-2:2001

**Title**: Low-voltage switchgear and controlgear - Part 7-2: Ancillary equipment - Protective conductor terminal blocks for copper conductors

**Scope**: This part of IEC 60947 specifies requirements for protective conductor terminal blocks with PE function up to 120 mm2 and for protective conductor terminal blocks with PEN function equal to and above 10 mm2 with screw-type or screwless-type clamping units, primarily intended for industrial applications.

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1. **Number**: IEC 60947-7-3:2009 to replace KS IEC 60947-7-3:2002

**Title**: Low-voltage switchgear and controlgear - Part 7-3: Ancillary equipment - Safety requirements for fuse terminal blocks

**Scope**: This part of IEC 60947 applies to fuse terminal blocks with screw-type or screwless-type clamping units for the connection of rigid (solid or stranded) or flexible copper conductors for the reception of cartridge fuse-links in accordance with IEC 60127-2, intended primarily for industrial or similar use in circuits not exceeding 1 000 V a.c., up to 1 000 Hz or 1 500 V d.c., and having a maximum short-circuit breaking capacity of 1 500 A.

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1. **Number**: IEC 60947-7-4:2019

**Title**: Low-voltage switchgear and controlgear - Part 7-4: Ancillary equipment - PCB terminal blocks for copper conductors

**Scope**: This part of IEC 60947-7 specifies requirements for PCB terminal blocks primarily intended for industrial or similar use.

Mounting and fixing on the printed circuit board is made by soldering, press-in or equivalent methods to provide electrical and mechanical connection between copper conductors and the printed circuit board.

https://webstore.iec.ch/preview/info\_iec60947-7-4%7Bed2.0%7Db.pd

1. **Number**: IEC 60947-8:2021 to replace KS IEC 60947-8:2003

**Title**: Low-voltage switchgear and controlgear - Part 8: Control units for built-in thermal protection (PTC) for rotating electrical machines

**Scope**: This part of IEC 60947 series specifies requirements for control units, which control a switching device in response to the PTC thermistors incorporated in rotating electrical machines and the industrial application.

It specifies requirements for that type of system comprising a positive temperature coefficient (PTC) thermistor having particular characteristics, and its associated control unit.

https://webstore.iec.ch/preview/info\_iec60947-8%7Bed2.0%7Db.pdf

1. **Number**: IEC 60947-9-1:2019

**Title**: Low-voltage switchgear and controlgear - Part 9-1: Active arc-fault mitigation systems - Arc quenching devices

**Scope**: This part of IEC 60947 covers low-voltage arc quenching devices, hereinafter referred to as AQDs, which are intended to eliminate arc-faults in low-voltage assemblies (typically low voltage switchgear and controlgear assemblies in accordance with the IEC 61439 series), by creating a lower impedance current path, to cause the arcing current to transfer to the new current path. This new current path is maintained until a short-circuit protection device (SCPD) interrupts the short-circuit current.

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1. **Number**: IEC 60947-9-2:2021

**Title**: Low-voltage switchgear and controlgear - Part 9-2: Active arc-fault mitigation systems - Optical-based internal arc-detection and mitigation devices

**Scope**: This document covers internal arc-fault control devices, hereinafter referred to as IACD, which are intended to:

– detect internal arc-faults in low-voltage switchgear and controlgear assemblies, by processing (at a minimum) the optical effect of an internal arc-fault, and

– operate mitigation device (either external or combined).

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1. **Number**: IEC 61439-1:2020 to replace IEC 61439-1:2011

**Title**: Low-voltage switchgear and controlgear assemblies - Part 1: General rules

**Scope**: This part of IEC 61439 lays down the general definitions and service conditions, construction requirements, technical characteristics and verification requirements for low-voltage switchgear and controlgear assemblies.

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1. **Number**: IEC 61439-2:2020 to replace IEC 61439-2:2011

**Title**: Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies

**Scope**: This part of IEC 61439 defines the specific requirements for the power switchgear and controlgear assembly (abbreviated ‘PSC-assembly’ throughout this document see 3.1.101) as follows:

* assemblies for which the rated voltage does not exceed 1 000 V AC or 1 500 V DC;
* assemblies designed for a nominal frequency of the incoming supply or supplies not exceeding 1000 Hz;
* to take into account additional constraints to insulation coordination.
* assemblies intended for indoor and outdoor applications;
* stationary or movable assemblies with or without enclosures;
* assemblies intended for use in connection with the generation, transmission, distribution
* and conversion of electrical energy, and for the control of equipment consuming electrical
* energy and for associated data processing;
* assemblies designed for use under special service conditions, for example in ships and in rail vehicles, provided that the other relevant specific requirements are complied with.

https://webstore.iec.ch/preview/info\_iec61439-2%7Bed3.0%7Db.pdf

1. **Number**: IEC 61439-7:2018

**Title**: Low-voltage switchgear and controlgear assemblies - Part 7: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations

**Scope**: This Part of IEC 61439 defines the specific requirements of ASSEMBLIES as follows:

– ASSEMBLIES for which the rated voltage does not exceed 1 000 V in the case of AC or 1 500 V in the case of DC;

– ASSEMBLIES intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment;

– ASSEMBLIES operated by ordinary persons (e.g. plug and unplug of electrical equipment);

– ASSEMBLIES intended to be installed and used in market squares, marinas, campsites and other similar outdoor public sites;

– ASSEMBLIES intended for charging stations for electric vehicles (AEVCS) for Mode 3 and Mode 4. They are designed to integrate the functionality and additional requirements for electric vehicle conductive charging systems according to IEC 61851-1:2017.

https://webstore.iec.ch/preview/info\_iec61439-7%7Bed1.0%7Db.pdf

1. **Number**: IEC 62271-100:2021

**Title**: High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers

**Scope**: This part of IEC 62271 is applicable to three-phase AC circuit-breakers designed for indoor or outdoor installation and for operation at frequencies of 50 Hz and/or 60 Hz on systems having voltages above 1 000 V. This document includes only direct testing methods for making breaking tests.

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1. **Number**: IEC 62271-101:2021 to replace KS IEC 62271-101:2011

**Title**: High-voltage switchgear and controlgear - Part 101: Synthetic testing

**Scope**: This part of IEC 62271 mainly applies to AC circuit-breakers within the scope of IEC 62271-100. It provides the general rules for testing AC circuit-breakers, for making and breaking capacities over the range of test duties described in 7.102 to 7.111 of IEC 62271-100:2021, by synthetic methods.

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1. **Number**: IEC 62271-102:2018

**Title**: High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches

**Scope**: This part of IEC 62271 applies to alternating current disconnectors and earthing switches, designed for indoor and outdoor installations for nominal voltages above 1 000 V and for service frequencies up to and including 60 Hz.

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1. **Number**: IEC 62271-103:2021

**Title**: High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV

**Scope**: This part of IEC 62271 is applicable to three-phase, alternating current switches and switch disconnectors for their switching function, having making and breaking current ratings, for indoor and outdoor installations, for rated voltages above 1 kV up to and including 52 kV and for rated frequencies from 16 2/3 Hz up to and including 60 Hz. This document is also applicable to single-pole switches used on three-phase systems.

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1. **Number**: IEC 62271-104:2020

**Title**: High-voltage switchgear and controlgear - Part 104: Alternating current switches for rated voltages higher than 52 kV

**Scope**: This part of IEC 62271 is applicable to three-pole alternating current switches for rated voltages higher than 52 kV, having making and breaking current ratings, for indoor and outdoor installations, and for rated frequencies up to and including 60 Hz.

https://webstore.iec.ch/preview/info\_iec62271-104%7Bed3.0%7Db.pdf

1. **Number**: IEC 62271-105:2021

**Title**: High-voltage switchgear and controlgear - Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV

**Scope**: This part of IEC 62271 applies to three-pole units for public and industrial distribution systems which are functional assemblies of switches composed of switches or switch-disconnectors and current-limiting fuses designed so as to be capable of:

– breaking, at the rated voltage, any current up to and including the rated short-circuit breaking current;

– making, at the rated voltage, circuits to which the rated short-circuit breaking current applies.

https://webstore.iec.ch/preview/info\_iec62271-105%7Bed3.0%7Db.pdf

1. **Number**: IEC 62271-107:2019

**Title**: High-voltage switchgear and controlgear - Part 107: Alternating current fused circuit-switchers for rated voltages above 1 kV up to and including 52 kV

**Scope**: This part of IEC 62271 applies to three-pole-operated fused circuit-switchers designed with rated voltages above 1 kV up to and including 52 kV for use on three-phase alternating current systems of either 50 Hz or 60 Hz.

https://webstore.iec.ch/preview/info\_iec62271-107%7Bed3.0%7Db.pdf

1. **Number**: IEC 62271-108:2020

**Title**: High-voltage switchgear and controlgear - Part 108: High-voltage alternating current disconnecting circuit-breakers for rated voltages above 52 kV

**Scope**: This part of IEC 62271 applies to high-voltage alternating current disconnecting circuit breakers for operation at frequencies of 50 Hz and 60 Hz on systems having voltages above 52 kV.

https://webstore.iec.ch/preview/info\_iec62271-108%7Bed2.0%7Db.pdf

1. **Number**: IEC 62271-200:2021

**Title**: High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV

**Scope**: This part of IEC 62271 is applicable to prefabricated metal-enclosed switchgear and controlgear assemblies designed for:

– alternating current; – rated voltages above 1 kV and up to and including 52 kV;

– service frequencies up to and including 60 Hz;

– indoor and outdoor installation.

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**ADOPTION PROPOSAL**

| **S/No.** | **Standard Number** | **Adoption acceptable as presented** | **Adoption proposal not acceptable** | **Reason why adoption proposal not acceptable** | **Proposed Change/recommendation(s)** |
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|  | IEC 60947-1:2020 |  |  |  |  |
|  | IEC 60947-2:2016/AMD1:2019 |  |  |  |  |
|  | IEC 60947-3:2020 |  |  |  |  |
|  | IEC 60947-4-1:2018 |  |  |  |  |
|  | IEC 60947-4-2:2020 |  |  |  |  |
|  | IEC 60947-4-3:2020 |  |  |  |  |
|  | IEC 60947-5-1:2016 |  |  |  |  |
|  | IEC 60947-5-2:2016 |  |  |  |  |
|  | IEC 60947-5-3:2013 |  |  |  |  |
|  | IEC 60947-5-4:2002+AMD1:2019 CSV |  |  |  |  |
|  | IEC 60947-5-5:1997+AMD1:2005+AMD2:2016 CSV |  |  |  |  |
|  | IEC 60947-5-8:2020 |  |  |  |  |
|  | IEC 60947-6-1:2021 |  |  |  |  |
|  | IEC 60947-6-2:2020 |  |  |  |  |
|  | IEC 60947-7-1:2009 |  |  |  |  |
|  | IEC 60947-7-2:2009 |  |  |  |  |
|  | IEC 60947-7-3:2009 |  |  |  |  |
|  | IEC 60947-7-4:2019 |  |  |  |  |
|  | IEC 60947-8:2021 |  |  |  |  |
|  | IEC 60947-9-1:2019 |  |  |  |  |
|  | IEC 60947-9-2:2021 |  |  |  |  |
|  | IEC 61439-1:2020 |  |  |  |  |
|  | IEC 61439-2:2020 |  |  |  |  |
|  | IEC 61439-7:2018 |  |  |  |  |
|  | IEC 62271-100:2021 |  |  |  |  |
|  | IEC 62271-101:2021 |  |  |  |  |
|  | IEC 62271-102:2018 |  |  |  |  |
|  | IEC 62271-103:2021 |  |  |  |  |
|  | IEC 62271-104:2020 |  |  |  |  |
|  | IEC 62271-105:2021 |  |  |  |  |
|  | IEC 62271-107:2019 |  |  |  |  |
|  | IEC 62271-108:2020 |  |  |  |  |
|  | IEC 62271-200:2021 |  |  |  |  |