SLOVENSKI STANDARD
SIST EN 50047:2019

01-september-2019

Nadomešča:
SIST EN 50047:1998

Nizkonapetostne stikalne in krmilne naprave - Kontrolna stikala - Položaj stikala 30×55 - Mere in značilnosti

Low-voltage switchgear and controlgear - Control switches - Position switches 30×55 - Dimensions and characteristics

Niederspannungs-Schaltgeräte - Hilfsstromschalter - Positionsschalter 30x55 - Masse und Kennwerte

Appareillage à basse tension - Auxiliaires de commande - Interrupteurs de position 30x55 - Dimensions et caractéristiques

Ta slovenski standard je istoveten z: **EN 50047:2019**

ICS:

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear

SIST EN 50047:2019 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50047

June 2019

ICS 29.130.20

Supersedes EN 50047:1981

English Version

Low-voltage switchgear and controlgear - Control switches - Position switches 30 × 55 - Dimensions and characteristics

Appareillage à basse tension - Auxiliaires de commande - Interrupteurs de position 30x55 - Dimensions et caractéristiques

Niederspannungs-Schaltgeräte - Hilfsstromschalter - Positionsschalter 30x55 - Maße und Kennwerte

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 50047:2019 E

Contents

Page

European foreword

This document (EN 50047:2019) has been prepared by CLC/TC 121A “Low-voltage switchgear and controlgear”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-05-06
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-11-06

This document supersedes EN 50047:1981.

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1 Scope

This document applies to certain position switches with automatic return actuator, the standardized dimensions of which and the characteristics necessary for their application are given below.

A larger size (42,5x80) is standardized in EN 50041.

This document includes four types of position switches with the following actuator types:

– roller lever actuator (form A);

– rounded plunger actuator (form B);

– roller plunger actuator (form C);

– roller lever arm (form E).

This document is covering devices fitted with either independent (snap) action contact elements, designated (1), or dependent (slow make and break), designated (2) in Clause 5.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60947-1:2007, *Low-voltage switchgear and controlgear - Part 1: General rules*

EN 60947-1:2007/A1:2011, *Low-voltage switchgear and controlgear - Part 1: General rules*

EN 60947-5-1:2017, *Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices*

3 Terms and definitions

For the purposes of this document, the following terms and definitions given in EN 60947-5-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
enclosure
part providing a specified degree of protection of equipment against certain external influences and a specified degree of protection against approach to or contact with live parts and moving parts

3.2
operating point
position of the actuator in which the contact state changes when the position switch is activated

3.3
reset point
position of the actuator in which the contact state changes when the position switch is deactivated

3.4
differential travel
distance (in millimetres) between the operating and reset points

3.5
lever
part of actuator used for rotative movement

3.6
roller lever
lever, equipped with a free-running cylinder which is suitably shaped to make contact with the object to detect

3.7
plunger
piston which transmits the movement or the force to the contact of the position switch

3.8
rounded plunger
plunger with a round end

3.9
roller plunger
plunger, equipped with a free-running cylinder which is suitably shaped to make contact with the object to detect

3.10
lever arm
part of actuator used to actuate a plunger

3.11
roller lever arm
lever arm, equipped with a free-running cylinder which is suitably shaped to make contact with the object to detect

4 Dimensions

4.1 General

The dimensions shown in Figure 1, Figure 2, Figure 3, Figure 4 and Figure 5 are applicable to switches in a new condition.

The operating point corresponds to the opening of the break contact element. The operating point can drift during the life of the switch. The manufacturer shall indicate the direction of the drift.

The differential travel of a position switch with independent mechanism shall be stated by the manufacturer, it is shown as *H* in Figure 2, Figure 3, Figure 4a), Figure 4c) and Figure 5, and differs dependent upon the type of actuator.

Apart from the dimensions indicated, the design of these devices is not restricted.

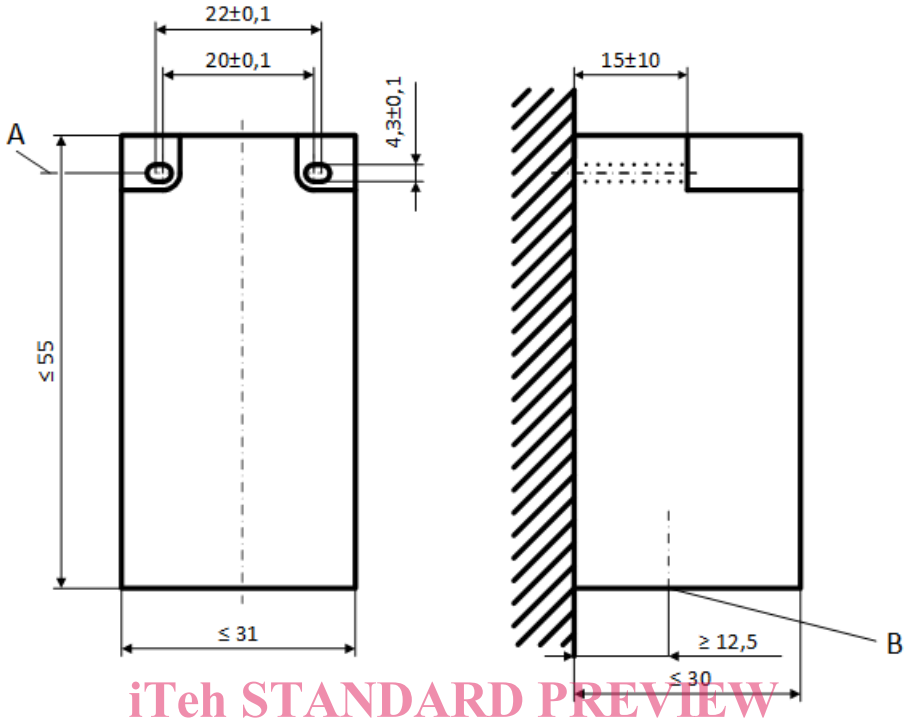
Dimensions are given in millimetres.

4.2 Enclosure

Enclosures shall meet the requirements given in EN 60947-5-1 with the following additions:

Enclosures shall be equipped with a threaded hole for a cable entry. The manufacturer shall specify the thread the device is fitted with, e.g. M16x1,5 according to ISO 261.

The distance between fixing points shall be either (20 ± 0,1) mm or (22 ± 0,1) mm. As an alternative, elongated hole is accepted as shown in Figure 1.



Key

A reference line

B cable entry

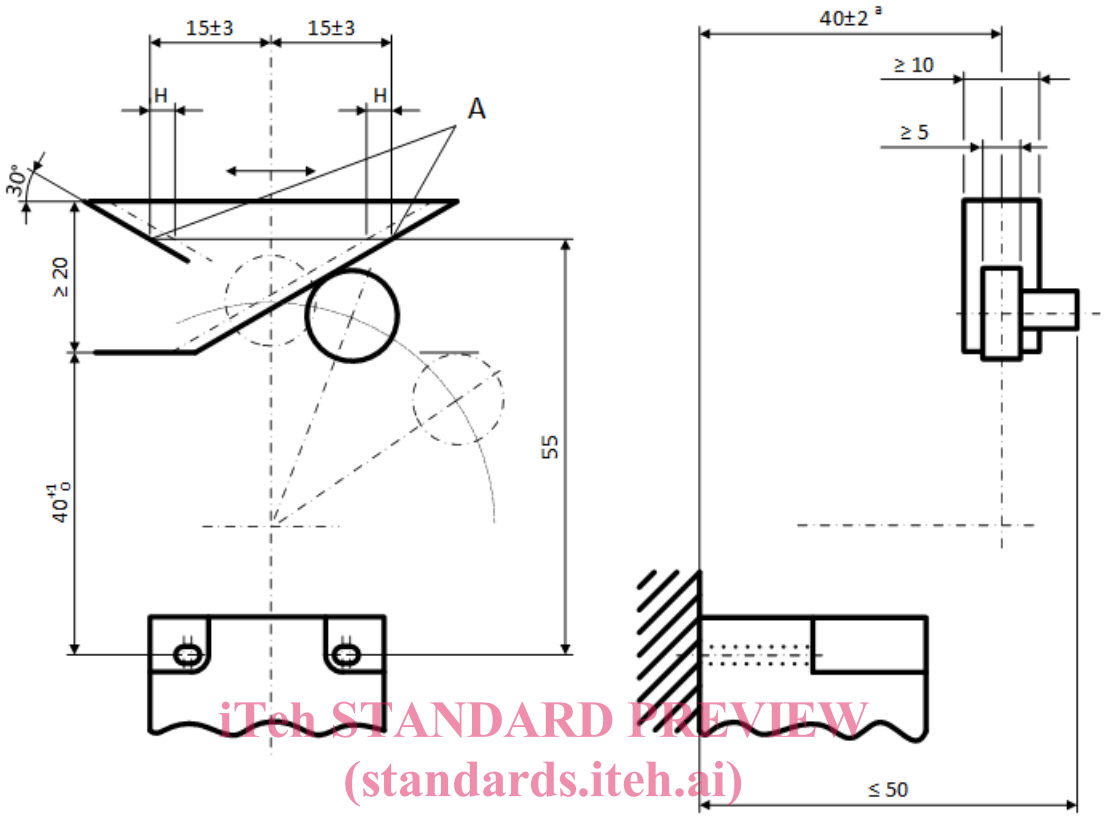
Figure 1 — Dimensions of enclosure

4.3 Actuator

4.3.1 General

Actuators for position switches shall meet the following constructional requirements. The characteristic for the operation of the position switch (actuator and enclosure including the contact elements) shall be within the range stated in Figure 2 to Figure 5.

4.3.2 Roller lever actuator (form A)



Key

A operating point

H differential travel

[a] If, using the same parts, a second track position can be achieved, the preferred value is 24 ± 2.

Figure 2 — Roller lever actuator (form A)