



उत्पाद मैनुअल
निम्न - वोल्टेज स्विचगियर और नियंत्रण
भाग 3 स्विच, डिस्कनेक्टर, स्विच-डिस्कनेक्टर और फ्यूज संयोजन इकाइयां
आई एस/आई इ सी 60947 (भाग 3) : 2020 के अनुसार

PRODUCT MANUAL
Low-Voltage Switchgear and Controlgear
Part 3 Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units
According to IS/IEC 60947 (Part 3): 2020

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या IS No.	:	IS/IEC 60947 (Part 3): 2020
	शीर्षक Title	:	Low-Voltage Switchgear and Controlgear Part 3 Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units
	संशोधनों की संख्या No. of amendments	:	0
2.	मानकीकरण / मनकीकरण में बदलाव के लिये अतिरिक्त दिशा निर्देश Additional Guidelines for GoL / CSoL	:	Please refer <u>Annex - A</u>
3.	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer <u>Annex – B</u>

4.	तकनीकी फाइल Technical File	:	Please refer <u>Annex – C</u>
5.	लेबलिंग और चिह्नांकन आवश्यकताएँ Labelling and Marking Requirements	:	Please refer <u>Annex – D</u>
6.	लाइसेंस का दायरा Scope of the Licence		As per below table
Licence is granted to use Standard Mark as per IS/IEC 60947 (Part 3): 2020 with the following scope:”			
Name of the product:		Low-Voltage Switchgear and Controlgear Part 3 Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units	
Model(s)			
Equipment Types: (Table 1)		Switch;	Switch-fuse; Fuse-switch;
		Disconnector;	Disconnector-fuse; Fuse-disconnector;
		Switch-disconnector;	Switch-disconnector-fuse; Fuse-switch-disconnector;
Breaking arrangement for fused devices		Single Opening; Double Opening	
Rated Voltages (V): (Cl. 5.3.2)		Rated operational voltage (U_e) Rated insulation voltage (U_i) Rated impulse withstand voltage (U_{imp})	
Rated Currents (A): (Cl. 5.3.3, 5.3.7)		Rated operational current (I_c) Conventional free air thermal current (I_{th}) Conventional enclosed thermal current (I_{the}) Rated uninterrupted current (I_u) Rated short-time withstand current (I_{cw}) Rated short circuit making capacity (I_{cm})	
Rated Frequency (Hz): (Cl. 5.3.4)			
Rated Duty: (Cl. 5.3.5)		Eight hour duty / Uninterrupted duty	
Utilization category: (Cl. 5.4)		Category A	Category B
		AC-20A	AC-20B
		AC-21A	AC-21B
		AC-22A	AC-22B
		AC-23A	AC-23B
		AC-23Ae	AC-23Be

	DC-20A	DC-20B
	DC-21A	DC-21B
	DC-22A	DC-22B
	DC-23A	DC-23B
Method of operation of manually operated equipment: (Cl. 3.2)	- dependent manual operation; - independent manual operation; - semi-independent manual operation	
Suitability for isolation: (Cl. 4.3)	- suitable for isolation; - not suitable for isolation	
Degree of protection provided: (Cl. 4.4)	According to clause 7.1.12 and Annex C of IS/IEC 60947-1	
Type of Supply: (Cl. 5.2)	- 1 Phase AC; - 3 Phase AC; - Direct Current	
Number of poles: (Cl. 5.2)	- One Pole; - Two Pole; - Three Pole; 3P+N - Four Pole	
Number of positions of the main contacts: (Cl. 5.2)	- 2 - If more than two, specify	
Control Circuit, if applicable: (Cl. 5.5)	- Electrically or electronically controlled circuits - Air-supply control circuits (pneumatic or electro-pneumatic)	
Auxiliary Circuit, if applicable: (Cl. 5.6)		
Co-ordination with short-circuit protective devices (SCPD), if applicable (Cl. 5.7)		
Co-ordination with short-circuit protective devices (SCPD), if applicable (Cl. 5.8)	To be declared by the manufacturer	
Electromagnetic Compatibility (EMC) (Cl. 9.4)	Tested for Environment A / Tested for Environment B / Not tested	
Additional Features *		
Direct switching of a single motor (Annex – A)	Suitable and tested for Direct switching of Single Motor / Not tested for Direct switching of Single Motor	
Single pole operated three pole switches (Annex – C)	Suitable and tested for Single Pole operated three-pole switches / Not tested for Single Pole operated three-pole switches	
Use in Photovoltaic (PV) DC applications (Annex – D)	Suitable and tested for Use in (PV) DC applications / Not tested for Use in (PV) DC applications	

Intended for connection of Aluminium Conductors (Annex – E)	Suitable and tested for Connection of Aluminium conductors / Not tested for Connection of Aluminium conductors
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* - The additional features shall be mentioned in the scope of licence document as per the declaration submitted by the manufacturer.

ANNEX - A**Additional Guidelines for GoL / CSoL**

1. To ensure uniform operation of certification process, the following guidelines in addition to CMD Guidelines on GoL / CSoL as per the conformity assessment Scheme – X of Schedule – II of the BIS (Conformity Assessment) Regulations, 2018 placed below shall be followed:

For GoL:

- i. The scope of the licence shall be restricted to the applicable test (with / without EMC test as per Cl. 9.4 (or) Special test as per Cl. 9.5, etc) that were carried out on the representative samples of the Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units as per the grouping guidelines given at Annex - B. However, it shall be ensured that all the requirements of the standard and all applicable tests as declared by the manufacturer have been reported in the test report.

For eg(s):

- (i) In case the Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units are not tested for the requirements of Cl. 9.4 i.e. Electromagnetic compatibility (EMC), the scope granted to the manufacturer shall clearly mention – ‘Not tested for EMC requirement’.
- (ii) In case if special tests are carried out based on the declaration of the manufacturer, the same has to be incorporated in the applicable models.
- ii. The licence document shall contain the following technical data for each of the model as enclosed at Annex – AA.

For CSoL:

- i. The manufacturer shall submit the technical file for the model(s) for which the manufacturer intends to get the CSoL as specified in Annex C, covering all aspects, including compliance report of product having complete test report issued by third party laboratory(ies). The manufacturer shall also submit a declaration whether the product category applied for inclusion falls under the same group for which the manufacturer is already having licence or the product category is a new group as per the grouping guidelines (Annex – B). The technical file and documents submitted by the manufacturer shall be reviewed by the BOs and the following process has to be followed:
 - a) If the model / variety applied for CSoL falls under the existing group and does not require any additional manufacturing and testing infrastructure, CSoL may be done based on desk audit for which the manufacturer has applied for CSoL.
 - b) If the model / variety applied for CSoL falls under different group, visit shall be carried out to verify the manufacturing process and necessary processes required for manufacturing such products. After satisfactory verification of manufacturing process and necessary processes required for manufacturing, CSoL may be processed.

For eg:

1. In case the manufacturer is having a licence for Disconnectors and applies for inclusion of Switch-Disconnectors and / or Fuse-Combination Units, an inspection visit shall be carried out at the manufacturer premise to verify the manufacturing process and necessary processes required for manufacturing such products.

ANNEX – AA
Scope of Licence document

Name of the product:		Low-Voltage Switchgear and Controlgear Part 3 Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units
Type Designation		
Poles		
Model(s)	XXXXXXXX -(Lead / Test model) XXXX XXXX XXXX XXXX XXXX XXXX	
Equipment Types		
Breaking arrangement for fused devices		
Rated Voltages (V)	Rated operational voltage (Ue)	
	Rated insulation voltage (Ui)	
	Rated impulse withstand voltage (Uimp)	
Rated Currents (A)	Rated operational current (Ie)	
	Conventional free air thermal current (Ith)	
	Conventional enclosed thermal current (Ithe)	
	Rated uninterrupted current (Iu)	
	Rated short-time withstand current (Icw)	
	Rated short circuit making capacity (Icm)	
Rated Frequency (Hz):		
Rated Duty		
Utilization category		
Method of operation of manually operated equipment		
Suitability for isolation		
Degree of protection		
Pollution Degree		
Material Group		
Type of Supply		
Number of Poles		
Number of positions of the main contacts		
Electromagnetic Compatibility (EMC)		
Direct switching of a single motor		
Single pole operated three pole switches		
Use in Photovoltaic (PV) DC applications		
Intended for connection of Aluminium Conductors		

ANNEX – B

Grouping Guidelines

1. For considering Grant of licence / Change in scope of licence the manufacturer shall submit the technical file including the test reports(s) / certificates(s) etc. for each of the variety of particular type designation(s) or model(s) as specified in the Scope of Licence (as given in Sl. 6 above) based on product grouping as per Gazette Notification F. No. 8(1)/2018-HEI-Part (1) dated 10 March 2025 given below:

2. Product Grouping

2.1 Product series of equipment(s): A group of switches, disconnectors, switch-disconnectors and/or fuse combination units referred to a particular type designation(s) or model(s) having a range of current ratings with a unique combination of function(s) under classification mentioned in Table A at Annexure -I.

Note 1: Switches, disconnectors, switch-disconnectors and fuse-combination units is referred to as "equipment".

Note 2: Equipment in a product series may have same or different fundamental design and function(s).

Note 3: Within the product series, the width or height may vary according to number of poles or types of termination.

Note 4: The classification is indicative, and possible classification may increase on the basis of any specific requirements.

2.2 Requirements for equipment having the same fundamental design (as per clause 9.3.3.3 of IS/IEC 60947 (Part 3): 2020

Switches, disconnectors, switch-disconnectors or fuse combination units shall meet the following criteria for acceptance as the same fundamental design:

- a) the material, finish and dimensions of the current-carrying parts are identical, except for variation in design of terminals and means of fuse attachment
- b) the contact size, material, configuration and method of attachment are identical;
- c) the operating mechanism is of the same fundamental design, materials and physical characteristics are identical;
- d) the closing and opening speeds of contacts are substantially the same;
- e) moulding and insulating materials are identical;
- f) method, materials and construction of any arc extinction device are identical.

The following variations are also permitted, 9.3.3.4 of IS/IEC 60947 (Part 3): 2020 or provisions in 4.1.3 is used:

- a) utilization category and operational voltage;
- b) application for 50 Hz or 60 Hz;
- c) three or four pole equipment (switched or non-switched neutral), provided the requirements of 7.1.9 are applicable;

- d) design of terminal provided that clearances and creepage distance are not reduced (see clause 9.2.5 and 9.3.4.3 of IS/IEC 60947 (Part 3):2020 and also see clause 8.1.4 of IS/IEC 60947 (Part 1):2020);
- e) different types of actuators, either additional or integral, provided the requirements for strength of actuator are verified (see clause 9.2.6 of IS/IEC 60947 (Part 3): 2020) on each type of actuator, one of which during test sequence
- f) fuse-base contacts of switch-fuses, disconnecter-fuses and switch-disconnector-fuse with different types of fuse-links (fuse-link removed only under no-load conditions).

1. Sampling and Testing

3.1 Sampling and Testing: The type test for each product series shall be as below:

3.1.1. For each product series type test report, an equipment with maximum current rating and maximum features, functions satisfying all operational criteria shall be tested. The test must be in accordance with the clause 9.3.2, Table 9 & Table 10 of IS/IEC 60947 (Part 3): 2020. The number of test sample (s) for each test sequence shall be selected as defined in the respective test sequence and according to 3.1.3 if applicable.

3.1.2. Type Tests are grouped together in number of test sequences, the test shall be done as per the sequence and applicability defined in each test sequence. For each sequence, tests shall be made in the order listed in accordance with the requirements of the appropriate sub-clause, unless otherwise specified in IS/IEC 60947 (Part 3): 2020.

Note- Spares, accessories and sub-assemblies are integral part of product series. They shall be tested as far as possible with the equipment. (Spares and sub-assemblies being the integral part of the device, separate testing is not envisaged; Accessories may please be used while testing.

In case, the accessories are complying to the requirement of any other standard IS/IEC 60947 series) then accessories shall meet the requirements of the respective Indian Standards.

3.1.3 In order to reduce multiple testing for the same fundamental design of equipment, the following Simplified test procedure shall be used:

- a) If equipment having the same fundamental design is marked claiming more than one utilization category and/or more than one operational voltage, the number of test samples may be reduced, providing the tests are conducted under the most severe conditions.

For short-circuit, making and breaking, and operational performance tests, the conditions are deemed more severe if the following conditions are simultaneously fulfilled:

- operational rated voltage equal or higher;
- test current equal or higher;
- power factor equal or lower;
- number of operations equal or higher.

Product series having multiple rated operational voltages, multiple rated operational currents, multiple utilization categories will be covered by testing a single sample at maximum rated operational current with corresponding rated operational voltage and maximum rated operational voltage with corresponding rated operational current, most severe utilization category with maximum number of operations as per Table 4 of IS/IEC 60947-3.

- b) Tests performed at 50 Hz are deemed to cover 60 Hz applications and vice versa with the following exceptions:
- temperature-rise test according to 9.3.4.2 for devices having a current greater than 800 A;

NOTE: By agreement between manufacturer and user, tests at 50 Hz may be accepted for operation at 60 Hz and vice versa for currents greater than 800 A.

- temperature-rise and operational performance of relays and releases (see 8.2.2 and 8.2.2.7 of IS/IEC 60947 (Part 3):2020). Temperature-rise tests of coils shall be performed for each frequency, but only one included in the relevant test sequence, and if separate supplying of coils and other circuits is possible, it is accepted that other circuits remain supplied at 50 Hz.

- c) Tests performed on three pole devices are deemed to cover also four pole devices with a non-switched neutral pole, provided a single-phase test on the neutral pole is performed according to clause 9.3.3.3.4 of IS / IEC 60947 (Part 1): 2020.

Tests performed on four switched pole devices are deemed to cover also three switched pole devices provided that all poles are identical and the closing and opening speeds of contacts are substantially the same (only the requirements of clause 8.1.9 of IS/IEC 60947 (Part 3): 2020 are applicable concerning closing and opening of the neutral pole). However, the four switched pole devices shall always be connected in a three-phase arrangement (see Figure 11 of IS/IEC 60947 (Part 1):2020).

- d) Tests performed with different types of fuse-base contacts. Where switch-fuse, disconnecter-fuse or switch-disconnector-fuse are designed to be provided with different types of fuse-base contacts, temperature-rise tests according to 9.3.4.2 of IS/IEC 60947 (Part 3): 2020 shall be conducted on each type at the corresponding highest fuse rated current.

The type having the maximum temperature-rise among those of the maximum test current shall be used for tests to sequences I, II and V Sequence IV shall be conducted on each type of fuse-base contacts whose fuse connecting means are other than bolted connection, at the highest rated conditional short circuit corresponding current, and, if different, with the type of fuse having the maximum let through energy at the highest test voltage.

- e) Tests performed with different terminal designs. Where equipment is designed to be provided with different designs of terminal, the requirements and tests according to 9.3.4.2 of IS/IEC 60947-3:2020 and 9.2.5 of IS/IEC 60947-1:2020 shall be conducted on each design.

Where equipment has terminals to be used on plug-on busbars, tests according to 9.3.4.2, 9.3.6.2 or 9.3.7.3.1 a) or 9.3.7.2.1 a) of IS/IEC 60947-3:2020, as applicable, shall be performed. Verification of the plugging operation shall be made. The number of operating cycles shall be 50, the cycle being from the connected position to the disconnected position and back to the connected position. The plugging operation test can be performed on a separate sample.

The test is considered to be satisfactory if the equipment remains mechanically operable.

- f) When conducting the tests according to 3.1.3 items d) and e), the temperature-rise at terminals and accessible parts can be measured. If the temperature-rise limits of accessible parts comply with Table 3 of IS/IEC 60947-1:2020, no further tests of these parts according to clause 9.3.4.7 of IS/IEC 60947 (Part 3):2020 are necessary. Since the intention of the tests to 4.1.3, items d) and e), is to establish the worst case, the values of Table 2 of IS/IEC 60947-1:2020 do not apply.

3.1.4 Each Product rating(s) / varieties are not subjected to testing. Product samples as mentioned in Cl. 3.1.1 will cover all the product rating(s) / varieties having ratings lower or equal under the scope of Licence is by virtue of this grouping guidelines.

3.1.5 For any change in the fundamental design (i.e. non-permissible variations corresponding to same fundamental design), the manufacturer shall have additional sample submission for testing as defined and may have a common test report for a given type of equipment with different fundamental design.

3.1.6 However, for cases as mentioned in Table B, Annexure-II, separate type test report is not required for inclusion of the same under scope of licence.

3.1.7 If Equipment with a fuse combination, having same fundamental design and function is tested with most severe conditions, only additional test sequence as applicable is needed on the equipment without fuse to include under the scope of licence. No repeat testing of all test sequences is required on the equipment without fuse as outlined in Table C, Annexure III.

3.1.8 Equipment marked with both AC & DC voltage ratings shall be tested separately for both the utilization (AC & DC) categories.

Annexure –I**Table A** - Classification of Equipment Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units

Sr. No.	Classification based on	Type of Equipment	
1	Equipment Types	Switch; Switch-fuse; Fuse-switch; Disconnector; Disconnector-fuse; Fuse-disconnector; Switch-disconnector; Switch-disconnector-fuse; Fuse-switch-disconnector	
2	Breaking arrangement for fused devices	- Single opening - Double opening	
	Classification as per Clause 4 of IS/IEC 60947-3 : 2020		
3	Utilization category	Category A	Category B
		AC-20A	AC-20B
		AC-21A	AC-21B
		AC-22A	AC-22B
		AC-23A	AC-23B
		AC-23Ae	AC-23Be
		DC-20A	DC-20B
		DC-21A	DC-21B
		DC-22A	DC-22B
		DC-23A	DC-23B
4	Method of operation of manually operated equipment	- dependent manual operation; - independent manual operation; - semi-independent manual operation	
5	Suitability for isolation	- suitable for isolation; - not suitable for isolation	
6	Degree of protection provided	According to clause 8.1.12 and Annex C of IS/IEC 60947-1:2020	
	Operational Characteristics		
7	Type of Supply	- 1 Phase AC; - 3 Phase AC; - Direct Current (DC)	
8	Number of poles	- One Pole; - Two Pole; - Three Pole; - Four Pole, Three Pole + Neutral	
9	Number of positions of the main contacts	-Two (default) - If more than two	

For Example

Product series 1: Switch –**AXXA (type designation)** - AC-21A/ AC-22A/ AC-23A - independent manual operation - suitable for isolation – IPXX

Product series 2: Switch Disconnector, Switch Disconnector Fuse –**XXXXX (type designations)** - AC-21A/ AC-22A/ AC-23A - independent manual operation - suitable for isolation – IPXX

Product series 3: **Switch-disconnector – AYYA (type designation)** - AC-21A- independent manual operation – suitable for isolation – IPXX

Annexure -II**Table B** - Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units can be added under the scope of Licence without additional type testing

Case		Condition
A	Equipment with multiple utilization categories and/or multiple operational voltages, operational currents	If the Equipment with same fundamental design is tested with most severe test conditions in terms of equal or higher operational rated voltage, equal or higher test current, equal or lower power factor, equal or higher number of operations; all other utilization categories, operational voltages, variants are deemed to be covered. e.g. AC-23 will cover both AC-21 and AC-22 categories; higher operational voltage will cover all lower voltages. e.g. DC-23 will cover DC-22 & DC-21 Test to be carried out at maximum rated operational current at corresponding rated operational voltage and at maximum rated operational voltage with corresponding rated operational current, most severe utilization category with maximum number of operations as per Table 4 & 5 of IS/IEC 60947-3: 2020
B	Equipment not suitable for isolation	If Equipment with same fundamental design is tested for equipment suitable for isolation then non-suitable for isolation will cover.
C	One, Two, Three, Four Poles type equipment	If the Equipment with higher pole combination is tested, then lower pole combination will be deemed to be covered subject to identical pole designs with same voltage rating. If Four Pole is tested then 3 P + Neutral, 3 Pole, 2 Pole will be covered. Single Pole shall be tested separately.
D	Equipment with different types of accessories, relays and releases	If the Equipment is tested with a representative release, relays, accessories of highest features or parameters, it will cover other variants, however declaration shall be provided for all such types by Manufacturer.
E	Equipment with combination of functions	If a range of Equipment having the same design and has combination of functions, equipment tested for maximum functionality and maximum severity will deem to cover all other type of equipment e.g. a) Switch-disconnector will cover Switch and Disconnector b) Switch Disconnector fuse will cover Switch-Fuse and Disconnector-fuse c) Fuse switch disconnector will cover Fuse- switch and Fuse – disconnector

Annexure -III**Table C** - Equipment without Fuse can be added under the scope of Licence with applicable additional type testing.

Functions	Equipment Type	Fundamental design	Remark
Making, breaking and isolating	Switch-disconnector-fuse	Same	All applicable test sequences
	Switch-disconnector	Same	Can be added under the scope of licence with only additional type test as per Table 9 and 14 of IS/IEC 60947-3:2020
	Fuse-switch-disconnector	Different	All applicable test sequences
Isolating	Disconnector-fuse	Same	All applicable test sequences
	Disconnector	Same	Can be added under the scope of licence with only additional type test as per Table 9 and 14 of IS/IEC 60947-3:2020
	Fuse-disconnector	Different	All applicable test sequences
Making and breaking current	Switch-fuse	Same	All applicable test sequences
	Switch	Same	Can be added under the scope of licence with only additional type test as per Table 9 of IS/IEC 60947-3:2020
	Fuse-switch	Different	All applicable test sequences

Note: If for a function type, only one equipment is available then that equipment will be subjected for all applicable test sequences.

ANNEX – C
Technical File

1. TECHNICAL FILE - Manufacturer shall maintain a Technical File for each model(s) manufactured by them as per BIS circular Ref: CMD-I/2:17:1 dated 02 June 2023 with subject 'Guidelines for Grant of Licence (GoL) as per the conformity assessment Scheme – X of Schedule – II of BIS (Conformity Assessment) Regulations, 2018'.
2. In addition to the documents indicated in above circular, following documents are also to be submitted in the Technical File:
 - a) Declaration for variety(ies) applied for BIS licence. The declaration shall be in line with scope of licence specified in this Product Manual;
 - b) Technical data for model(s) to be tested as per format specified in Annex B.1 (for guidance only);
 - c) Test Report / Certificate of compliance for Constructional and Performance requirements (Cl. 8 of IS 60947 (Part 3): 2020, wherever applicable);
 - d) Declaration with respect to special test and its compliance as per Cl. 9.5 of the IS 60947 (Part 3): 2020.
3. The technical File shall be maintained by the manufacturer till the End of Life of the variety(ies).

ANNEX C.1**Format for Technical Data****Name of the product:** Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units**Equipment Type:****Model No(s):****Technical Description of the product:**

Test item particulars:	
Rated Voltages	
- rated operational Voltage: U_e (V) :	
- rated insulation voltage: U_i (V) :	
- rated impulse withstand voltage: U_{imp} (kV) :	
- rated control circuit voltage, kind of current and frequency:	
- rated control circuit voltage, kind of current and frequency:	
- control circuit supply voltage, kind of current and frequency, if different from those of the control coil;	
Rated Currents	
- rated operational current: I_e (A) :	
- Rated uninterrupted current: I_n (A):	
- conventional free air thermal current: I_{th} (A) :	
- conventional enclosed thermal current: I_{the} (A) :	
- Rated short time withstand current (I_{cw}), along with duration, if any:	
-Rated short circuit making capacity (I_{cm}):	
-Rated short-circuit breaking capacity (I_{cn}):	
-Rated conditional short-circuit current (I_q (or) I_{ce}):	
-Type of Supply (1 Phase/ 2 Phase/ DC)	
-Rated Frequency (Hz):	
-Short-circuit protection device:	
-rated duty, with the indication of the class of intermittent duty, if any:	
Utilization Category:	
-Category A:	
-Category B:	
-Method of operation of manually operated equipment:	
-Method of locking:	
-Suitability for Isolation:	
-Degree of protection:	
-Pollution degree/ Material Group:	
-Number of Poles:	
-Number of positions of mains contact:	
-No. of break per pole:	
-Material of terminal:	
-Breaking arrangement for fused devices:	
-Control circuit	
-Auxiliary circuit	
-Co-ordination with short-circuit protective devices (SCPD):	
-Kind of protective device:	

Relays and releases	
-type of relay or release:	
-current setting or current setting range:	
-time/current characteristics:	
-influence of ambient air temperature:	
-extended functions as given in Annex T:	
-rated supply pressure of the air-pressure and limits of pressure variations (for air-pressure controlled equipment):	
-pole impedance of the switching device (Z):	
-material declaration as per Annex W:	
-length of insulation to be removed before insertion of the conductor into the terminal:	
For non-universal screwless terminals (if applicable)	
-“s” or "sol" for terminals declared for solid conductors:	
- "r" for terminals declared for solid and stranded conductors:	
- "f" for terminals declared for flexible conductors:	
In the case of equipment co-ordinated with short-circuit protective devices (SCPDs)	
-rated conditional short-circuit current	
-other types of co-ordination, specified solely in the relevant product standard	

ANNEX – D
Labelling and Marking Requirements

1. **Labelling and Marking Requirements-** Labelling and Marking of Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units shall be as per Cl. 6.2 of IS/IEC 60947 (Part 3): 2020.
 - a) Each Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units and its packaging shall be marked with the Standard Mark, as specified in Scheme –X in Schedule –II of the BIS (Conformity Assessment) Regulations, 2018. The Standard Mark shall carry the licence number in a visible manner as specified in the licence document.
 - b) In addition, details of BIS website shall be marked on the package as follows:
 ‘For details of BIS certification please visit www.bis.gov.in.’
2. In case the Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units are not tested for the requirements of Cl. 9.4 i.e. Electromagnetic compatibility (EMC), the product / its packaging shall either be marked with the following on the Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units – ‘Not tested for EMC requirement’.
3. Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units shall be clearly marked with the rated current upto which the product has been tested:

