

- 1 Sheet of plywood
- 2 Pivot



Dimensions in millimetres



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Key

- 1 Interchangeable steel plate with a thickness of 1 mm
- 2 Aluminium plates with a thickness of 8 mm
- 3 Mounting plate
- 4 Rail for RCCB designed to be mounted on a rail
- 5 Cut-out for the RCCB in the steel plate
- a The distance between the edges of the cut-out and the faces of the RCCB shall be between 1 mm and 2 mm.
- *b* The height of the aluminium plates shall be such that the steel plate rests on the supports of the RCCB if the RCCB has no such supports, the distance from live parts, which are to be protected by an additional cover plate, to the underside of the steel, is 8 mm.

Figure 18 – Example of mounting and unenclosed RCCB for mechanical impact test (9.12.2.1)



- 1 Interchangeable steel plate with a thickness of 1,5 mm
- 2 Aluminium plates with a thickness of 8 mm
- 3 Mounting plate
- 4 Cut-out for the RCCB in the steel plate
- NOTE In particular cases the dimensions may be increased.

Figure 19 – Example of mounting of panel mounting type RCCB for the mechanical impact test (9.12.2.1)



- 1 Rail
- 2 Cord

Figure 20 – Application of force for mechanical test of rail mounted RCCB (9.12.2.2)

Dimensions in millimetres



Key

- 1 Sample
- 2 Spherical



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Key

- S Supply
- S₁ Two-pole switch
- V Voltmetre
- A Ammeter
- D RCCB under test
- R Variable resistor

Figure 22 – Test circuit for the verification of the limiting value of overcurrent in case of single-phase load through a three-pole RCCB (9.18.2)



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NOTE Care should be taken that the oscillating wave is guaranteed at least up to the 5th full period (50 µs).

Figure 23 – Current ring wave 0,5 μ s/100 kHz



Key

- 1 Ring wave generator 0,5 μs/100 kHz
- 2 Trigger
- 3 Filter
- 4 Supply
- 1) If the RCCB has an earthing terminal, it shall be connected to the neutral terminal, if any, and if so marked on the RCCB or, failing that, to any phase terminal.

Figure 24 – Test circuit for the ring wave test at RCCBs



- 1 Relative humidity (%)
- 2 Ambient temperature (°C)
- 3 Stabilizing period
- 4 First cycle
- 5 Time required to reach 95 %-100 % relative humidity (not exceeding 1 h)
- 6 Time
- 7 Start of the first cycle
- 8 Time required for test specimen toreach temperature stability

Figure 25 – Stabilizing period for reliability test (9.22.1.3)



IEC 066/10

Key

- 1 Relative humidity (%)
- 2 Ambient temperature (°C)
- 3 End of the temperature rise
- 4 Start of the temperature fall
- 5 Time
- 6 Upper temperature +57 °C
- 7 Lower temperature +53 °C





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Key

- 1 Supply at 1,1 U_n
- 2 Current supply





Figure 28 – Surge current impulse 8/20 μs



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Key

- 1 Surge current generator 8/20 μs
- 2 Filter
- 3 Supply
- 1) If the RCCB has an earthing terminal, it shall be connected to the neutral terminal, if any, and if so marked on the RCCB or, failing that, to any phase terminal.





Key

- 1 Current
- 2 Voltage



Annex A

(normative)

Test sequence and number of samples to be submitted for certification¹ purposes

A.1 Test sequences

The tests are made according to Table A.1 where the tests in each sequence are carried out in the order indicated.

Table	A.1	– Test	sequences
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Test sequence	Clause or subclause	Test (or inspection)
A	6	Marking
	8.1.1	General
	8.1.2	Mechanism
	9.3	Indelibility of marking
	8.1.3	Clearances and creepage distances (external parts only)
	9.1.5	Trip-free mechanism
	9.4	Reliability of screws, current-carrying parts and connections
	9.5	Reliability of terminals for external conductors
	9.6	Protection against electric shock
	9.13	Resistance to heat
	8.1.3	Clearances and creepage distances (internal parts)
	9.25	Resistance to rusting
A ₂	9.14	Resistance to abnormal heat and to fire
В	9.7.7.4	Resistance of the insulation of open contacts and basic insulation against an impulse voltage in normal conditions
	9.7.7.5 ^b	Verification of the behaviour of components bridging the basic insulation
	9.7.1	Resistance to humidity
	9.7.2	Insulation resistance of the main circuit
	9.7.3	Dielectric strength of the main circuit
	9.7.4	Insulation resistance and dielectric strength of auxiliary circuits
	9.7.7.2	Verification of clearances with the impulse withstand voltage
	9.7.5	Secondary circuit of detection transformers
	9.7.6	Capability of control circuits connected to the main circuits etc.
	9.8	Temperature-rise
	9.22.2	Reliability at 40 °C
	9.23	Ageing of electronic components
С	9.10	Mechanical and electrical endurance

¹ The term "certification" denotes either a Declaration of Conformity by the manufactuer, or a Third Paty Certification, e.g. by an independent testing station.