

ESSAILEC®

Test Blocks



ESSAILEC® has been especially designed to fit the electricity Utilities requirements for safe and reliable testing.

ESSAILEC® allows the testing, without any circuit break, of meters and protective relays installed in the current transformers and voltage

transformers secondary circuits.

ESSAILEC® has been approved by major Utilities and has been successfully implemented for years in worldwide electricity production, transport and distribution networks.

Applications :

- Measurement, current or voltage injection, repair, device replacement.
- Current testing without cutting the energy supply.
- Voltage testing with the possibility of cutting or not the energy supply to the device according to the voltage sockets implemented.
- Simultaneous testing of 1 to 4 independent circuits on the same socket.
- The test plug can also be connected continuously to the socket in order to supply current or voltage to secondary circuits sub assemblies.

Characteristics and benefits :

- Fast and easy testing procedure.
- No cursor or switch element to operate manually: the current transformers short circuiting is automatically performed in the correct sequence with the current socket with "make before break contacts".

Security for the operator:

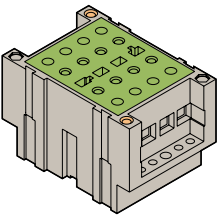
- IP20 protection degree.
- Coding protection.
- Locking system.
- Sealed cover.
- Range and versions product identification with marking and colour coding.

Flexibility :

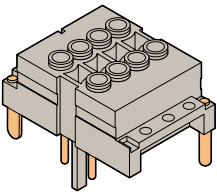
- Panel and switchboard mounting: base mounting, flush mounting, rack mounting, din rail...
- Several wiring technologies, wire connection up to 10 mm².

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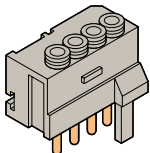
Generalities



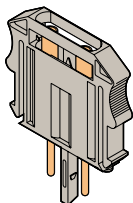
Socket



Plug 2x4 poles



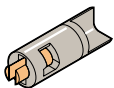
Plug 4 poles



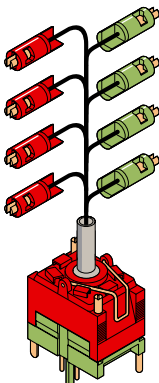
Plug 2 poles



Ø 4 mm test plug



Bayonet security test plug



Prewired plug

Socket

The ESSAILEC® socket is installed in the circuit and wired to the device to be tested during its installation or its servicing. The use of the cover is strongly recommended in order to prevent unauthorized access.

The sockets are available in the following designs:

- Socket with "make before break" contact design, available in the Current and Voltage ranges.
- Socket with "opened" ("break before make") contact design, available in Voltage range.
- Socket with "closed" contact design, available in Voltage range.

Plug

The plug is connected on its other extremity to the test equipment. For testing, the cover is removed and replaced by the test plug.

The test plugs are available in the following designs:

- 2x4 poles plug: allows the testing of 4 current or voltage circuits.
- 4 poles plug: allows the testing of 4 voltage circuits.
- 2 poles plug: allows the testing of 1 current or voltage circuit.

Compatibility between the socket and plug designs:

Circuit type	Contacts socket	2x4 poles plug	4 poles plug
Current ■	Make before break	Measurement Calibration Distribution	
Voltage □	Make before break	Measurement Calibration Distribution	
	Opened	Measurement Calibration	Measurement Calibration
	Closed		Measurement Distribution

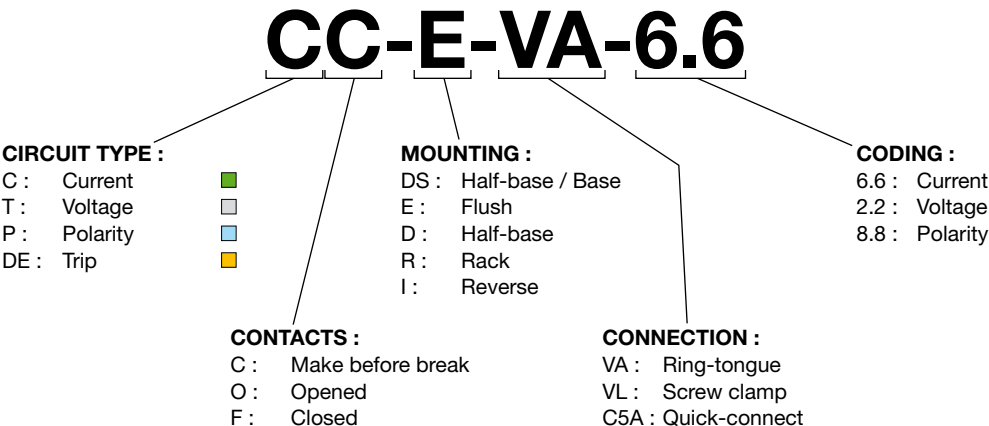
Test accessories and prewired plug

The ESSAILEC® range offers a wide range of test accessories as well as prewired plugs with the following test accessories wired on its test equipment extremity:

- Security bayonet test plug (bayonet locking mechanism in the test equipment for maximized security during the testing).
- Ø 4mm IP20 test plug.

The security test plugs can be connected together with the use of two accessories: straight and H adapters. The purpose of these two accessories is to offer extra test configurations with the prewired plug.

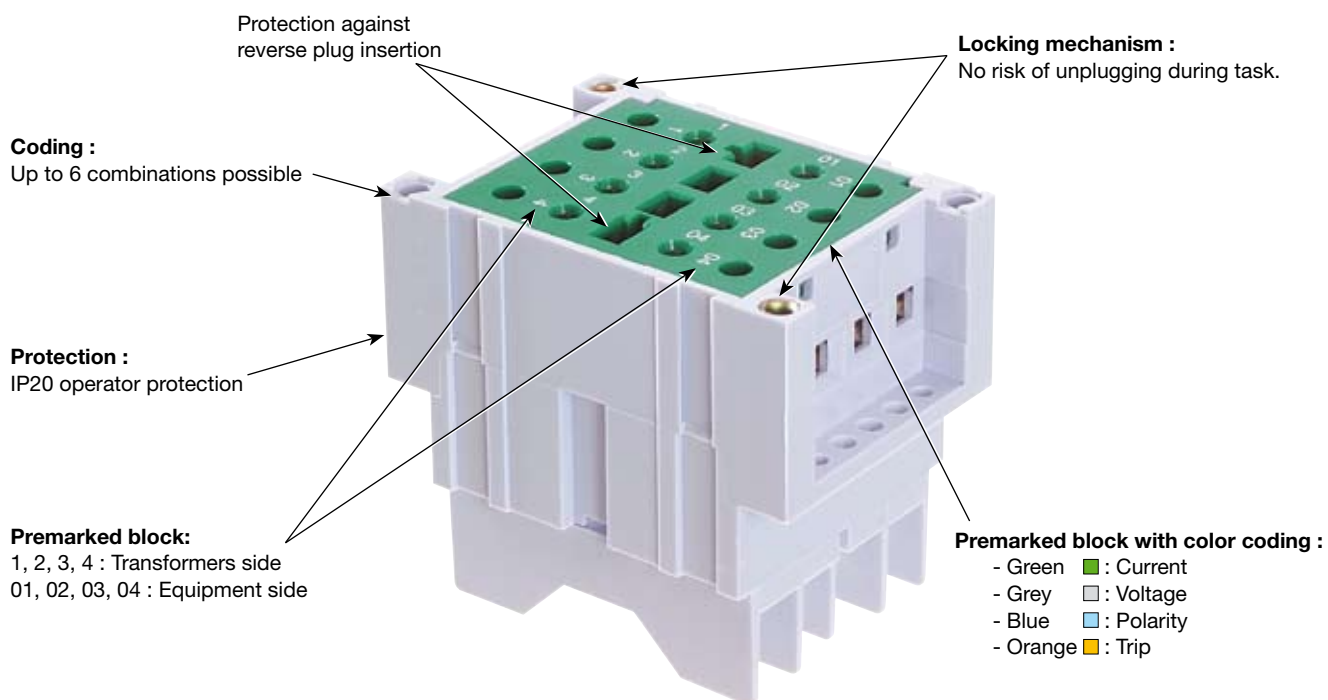
Socket identification:



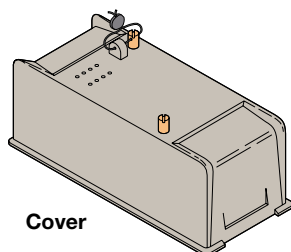
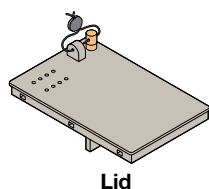
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Generalities

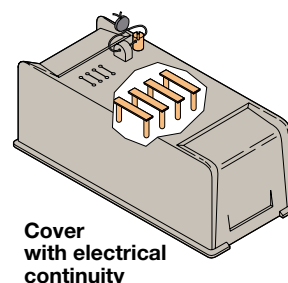
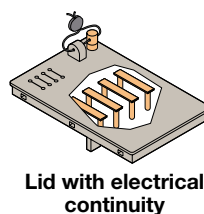
Socket features



Protection

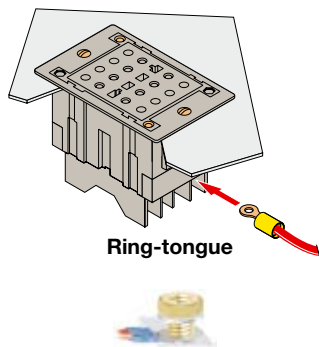


Provide dust protection and prevent unauthorised access (lead seal).

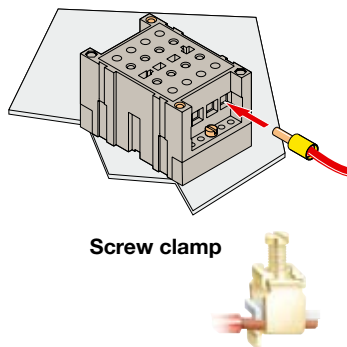


Lid and cover with electrical continuity, to be mounted on opened contacts socket.
Provide the electrical continuity thanks to the inner pins and linking bar that close the circuit.

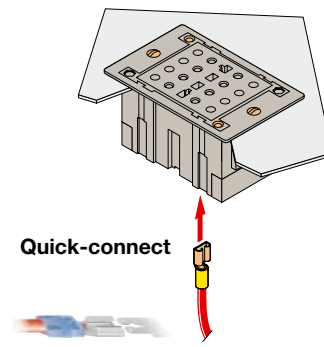
Connection technologies



Compatible with flush, rack, half-base and reverse mounting.
Benefits : Wire pulling safe.



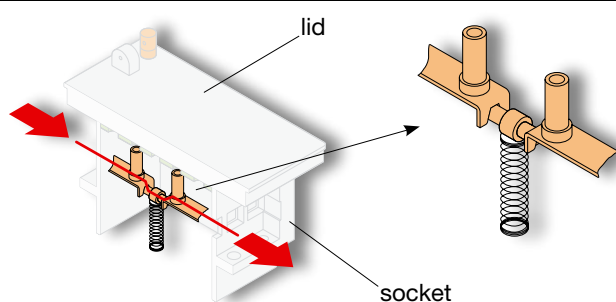
Compatible with base and half-base mounting and DIN 1 rail.
Benefits : Universal connecting technology.



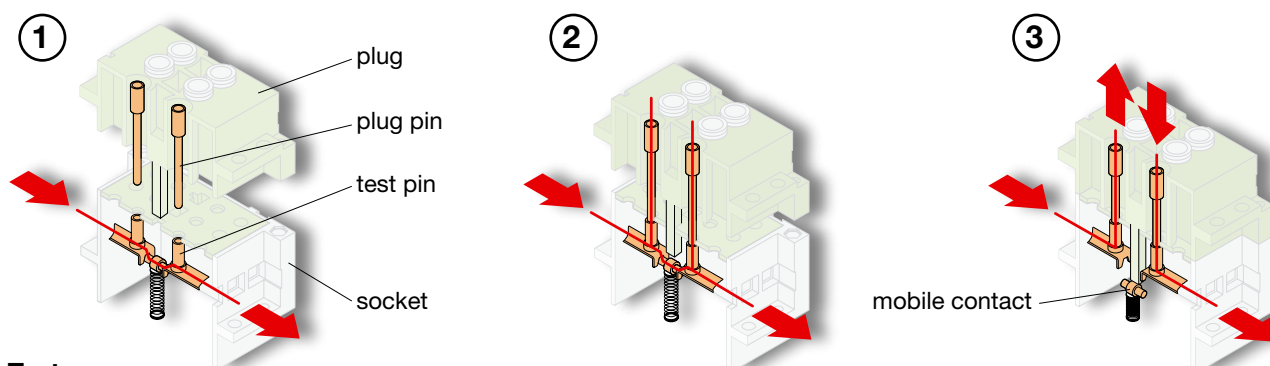
Compatible with flush, rack and half-base mounting.
Benefits : Quick and vibration safe.

**Applications :**

- Measurement
- Injection
- Distribution

**Servicing**

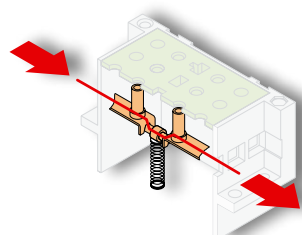
During normal servicing, the socket with make before break contact design supplies energy to the device. The lid is installed and sealed.

**Test**

The lid is removed.

When the plug is inserted (1), the plug pins make contact with the socket test pins. The test circuit is established but still remains closed (2).

When the plug is completely inserted in the socket, the inner mobile contact is opened: the current completely deviates in the test circuit (3).

**Re servicing**

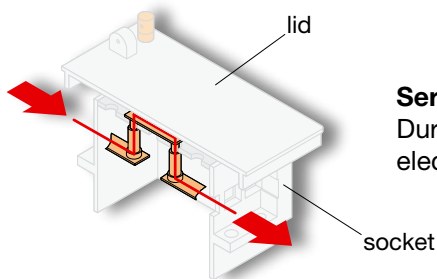
Thanks to the inner mobile contact the circuit will close automatically when the plug is removed.

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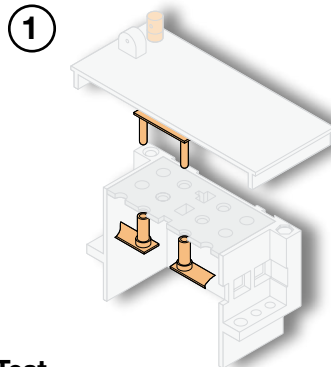
Test principle : Break before make (opened)

**Applications :**

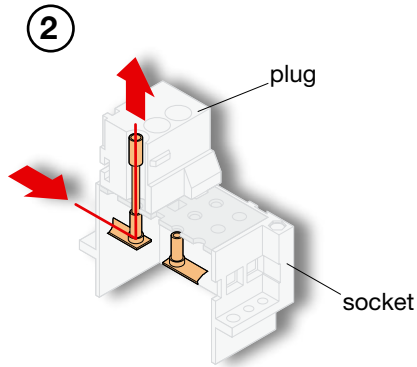
- Measurement
- Injection

**Servicing**

During normal functioning, electrical continuity is ensured by the lid with electrical continuity mounted on the socket.



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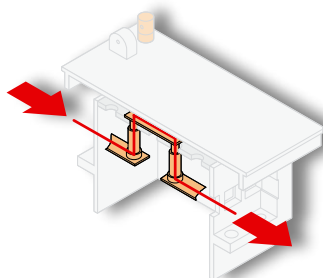


②

Test

The removing of the lid opens the circuit (1).

The device to be tested is then isolated from the power supply (transformer) and is no longer energised (2).

**Re servicing**

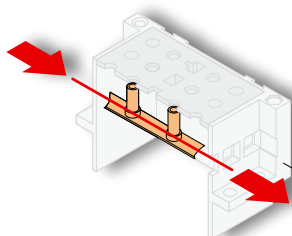
When the test is finished, the circuit is closed when the lid is reinstalled.



The electrical connection is continuous.
This socket is particularly suitable for
power distribution.

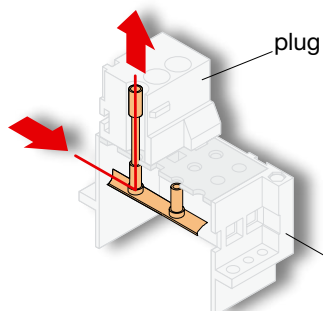
Applications :

- Measurement
- Distribution

**Servicing**

The electrical connection is continuous: removing or fitting the lid does not have any impact on the circuits.

socket



plug

Test

The measurement is performed by the insertion of the 4 poles test plug.

socket

Re servicing

No particular procedure.