Main catalogue

ESSAILEC® range
Test blocks

Power and productivity
for a better world™

ABB

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.

ESSAILEC®

Test Blocks

Contents

ESSAILEC®

Generalities

Socket

Plug 2x4 poles

Plug 4 poles

Plug 2 poles

Ø 4 mm test plug

Bayonet security test plug

Prewired plug
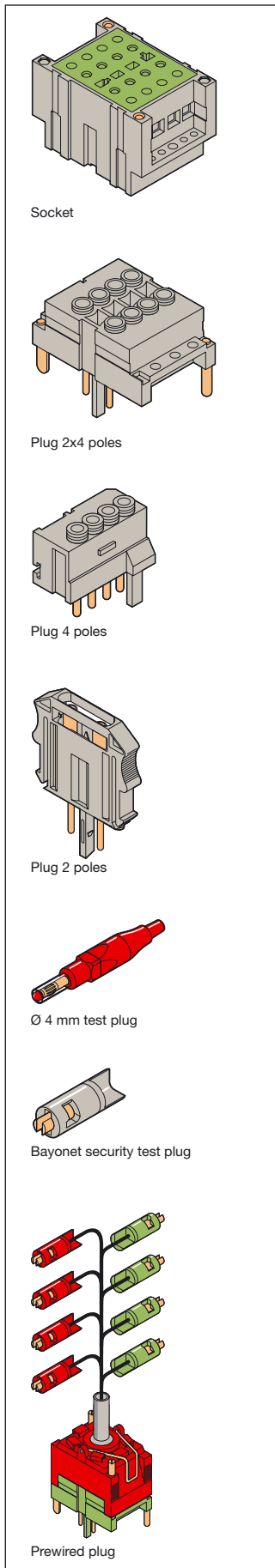
Socket

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:

CC-E-VA-6.6

CIRCUIT TYPE:
C: Current ■
T: Voltage ▪
P: Polarity ▪
DE: Trip ▪

MOUNTING:
DS: Half-base / Base
E: Flush
D: Half-base
R: Rack
I: Reverse

CODING:
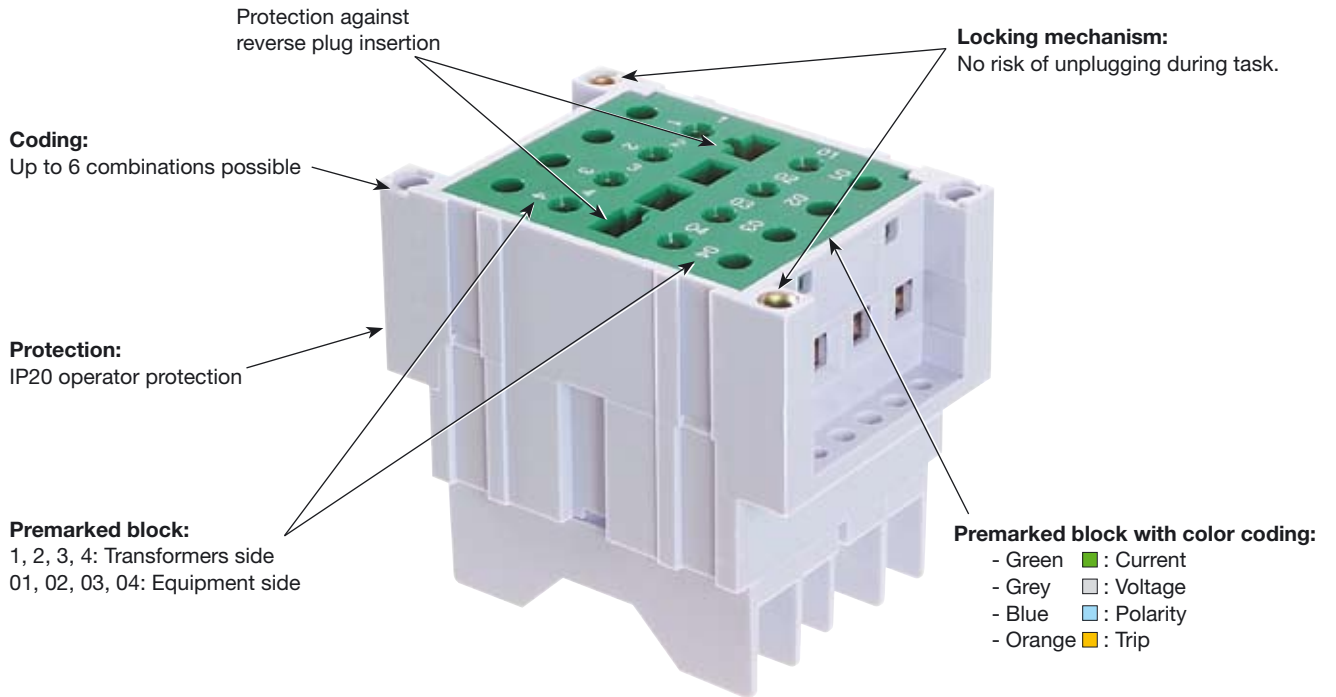6.6: Current
2.2: Voltage
8.8: Polarity

CONTACTS:
C: Make before break
O: Opened
F: Closed

CONNECTION:
VA: Ring-tongue
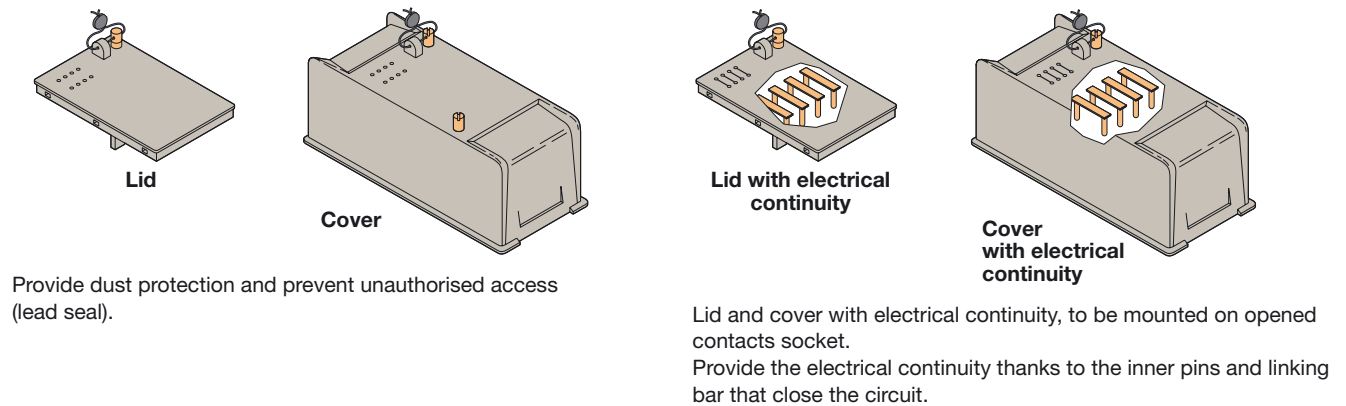VL: Screw clamp
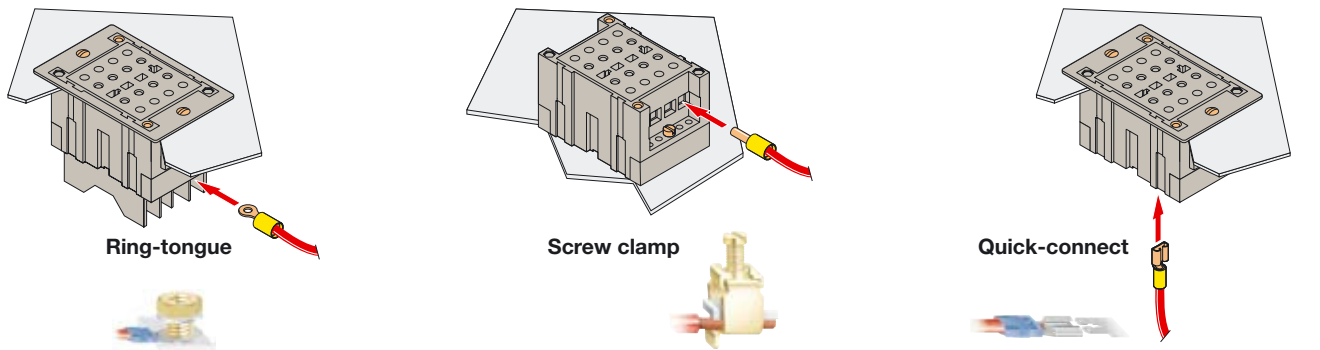C5A: Quick-connect

ABB

ESSAILEC®
Generalities

Socket features

Protection against reverse plug insertion

Locking mechanism:
No risk of unplugging during task.

Coding:
Up to 6 combinations possible

Protection:
IP20 operator protection

Premarked block:
1, 2, 3, 4: Transformers side
01, 02, 03, 04: Equipment side

Premarked block with color coding:
- Green ▢ : Current
- Grey ▢ : Voltage
- Blue ▢ : Polarity
- Orange ▢ : Trip

Protection

Lid

Cover

Lid with electrical continuity

Cover with electrical continuity

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

Ring-tongue

Screw clamp

Quick-connect

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.

ABB

ESSAILEC®

Test principle: Make before break

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.

① ② ③

plug

plug pin

test pin

socket

mobile contact

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.

ABB

ESSAILEC®

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.

lid

socket

① ②

plug

socket

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.
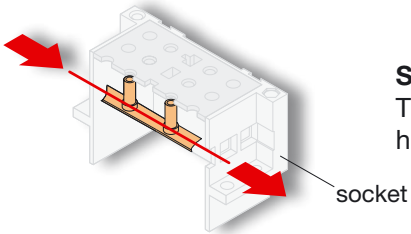
ESSAILEC®

Test principle: Closed contacts

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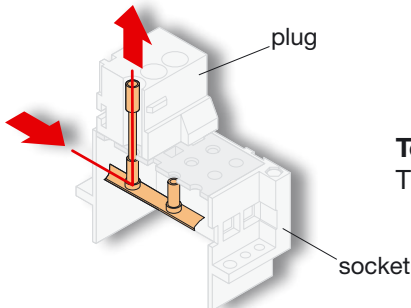power distribution.

Applications:
 - Measurement
 - Distribution

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

socket

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

plug

socket

Re servicing
No particular procedure.

ABB

ESSAILEC®
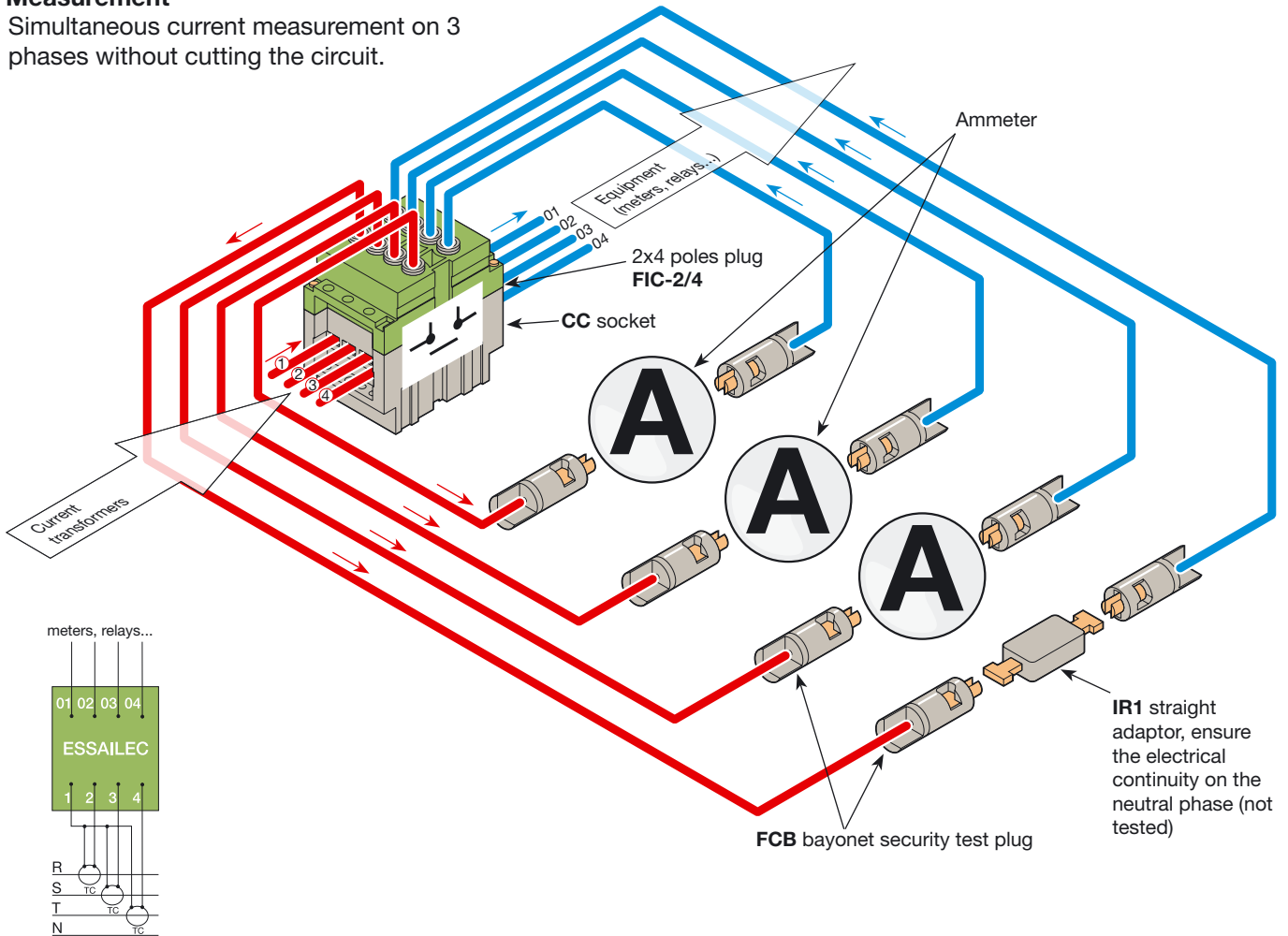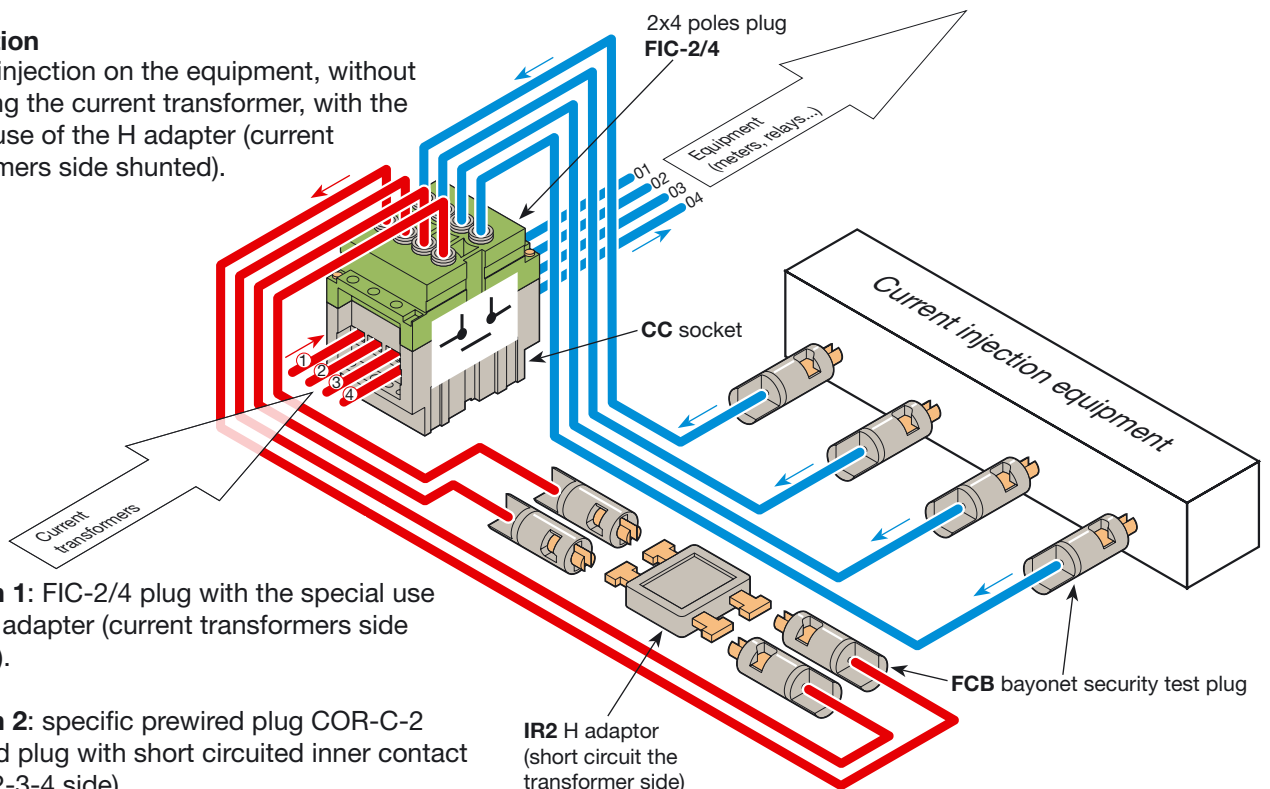
Current range
Examples of applications

Measurement
Simultaneous current measurement on 3
phases without cutting the circuit.

Ammeter

01
02
03
04

2x4 poles plug
FIC-2/4

Equipment
(meters, relays...)

CC socket

①
②
③
④

Current
transformers

meters, relays...

01 02 03 04

ESSAILEC

1 2 3 4

R
S   TC
T   TC
N   TC

IR1 straight
adaptor, ensure
the electrical
continuity on the
neutral phase (not
tested)

FCB bayonet security test plug

Calibration
Current injection on the equipment, without
disturbing the current transformer, with the
special use of the H adapter (current
transformers side shunted).

2x4 poles plug
FIC-2/4

Equipment
(meters, relays...)

01
02
03
04

CC socket

Current injection equipment

①
②
③
④

Current
transformers

Solution 1: FIC-2/4 plug with the special use
of the H adapter (current transformers side
shunted).

Solution 2: specific prewired plug COR-C-2
(prewired plug with short circuited inner contact
pins: 1-2-3-4 side).

IR2 H adaptor
(short circuit the
transformer side)
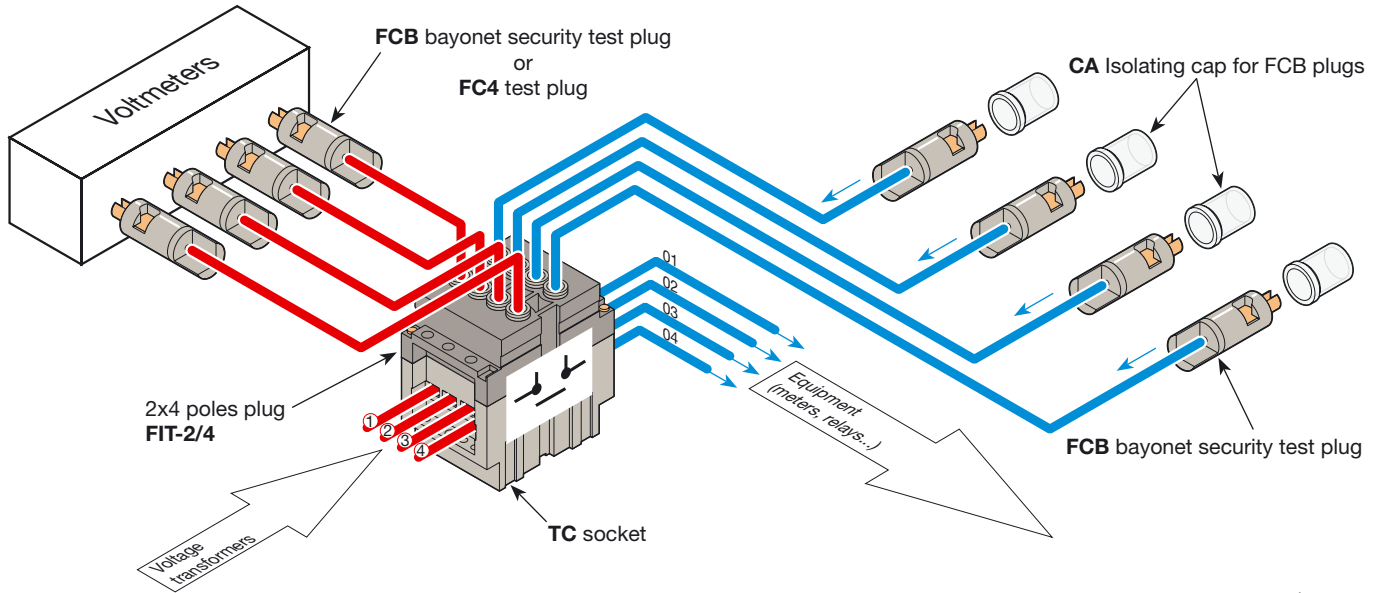
FCB bayonet security test plug

ABB

7

ESSAILEC®

Voltage range
Examples of applications

Measurement

Voltage measurement with TC type voltage socket (make before break) and 2x4 poles plug:

FCB bayonet security test plug
or
FC4 test plug

Voltmeters

CA Isolating cap for FCB plugs

01
02
03
04

Equipment (meters, relays...)

2x4 poles plug **FIT-2/4**

① ② ③ ④

Voltage transformers

TC socket

FCB bayonet security test plug

Voltage measurement with TO type voltage socket (opened) and 4 poles plug:

Lid with electrical continuity

01
02
03
04

① **During servicing**

Equipment (meters, relays...)

① ② ③ ④

Voltage transformers

TO socket

meters, relays...

01	02	03	04

ESSAILEC

1	2	3	4

R
S
T
N

② **During testing**

4 poles voltage plug **FIT-1/4-G**

01
02
03
04

① ② ③ ④

TO socket

Voltmeters

FCB bayonet security test plug
or
FC4 test plug
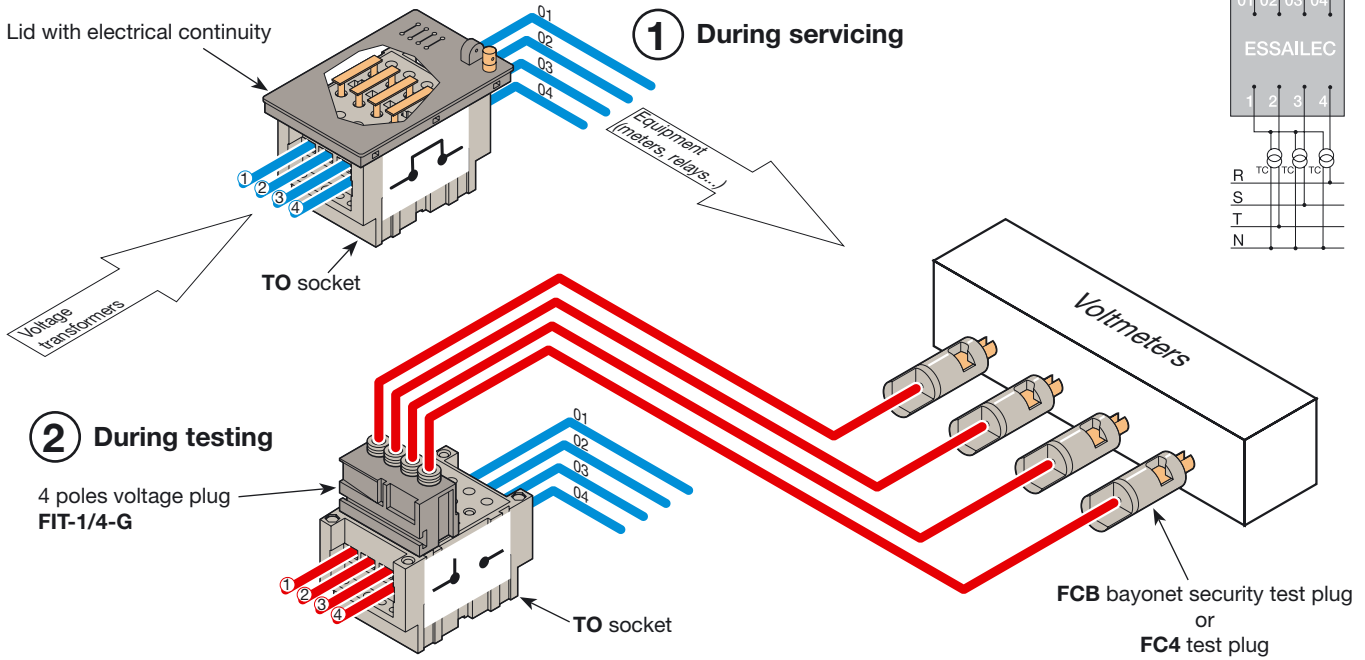
Voltage measurement with TF type voltage socket (closed) and 4 poles plug:

Voltmeters

4 poles voltage plug **FIT-1/4-D**
or
FIT-1/4-D

01
02
03
04

① ② ③ ④

TF socket

FCB bayonet security test plug
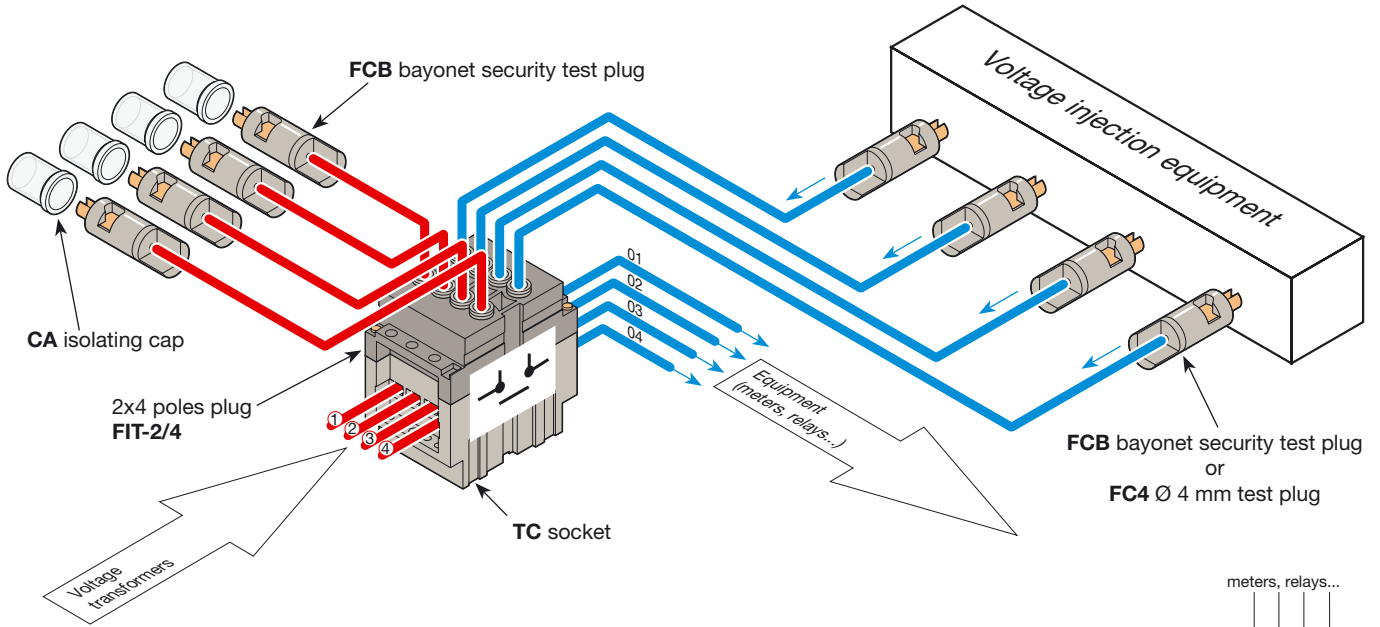or **FC4** test plug

ABB
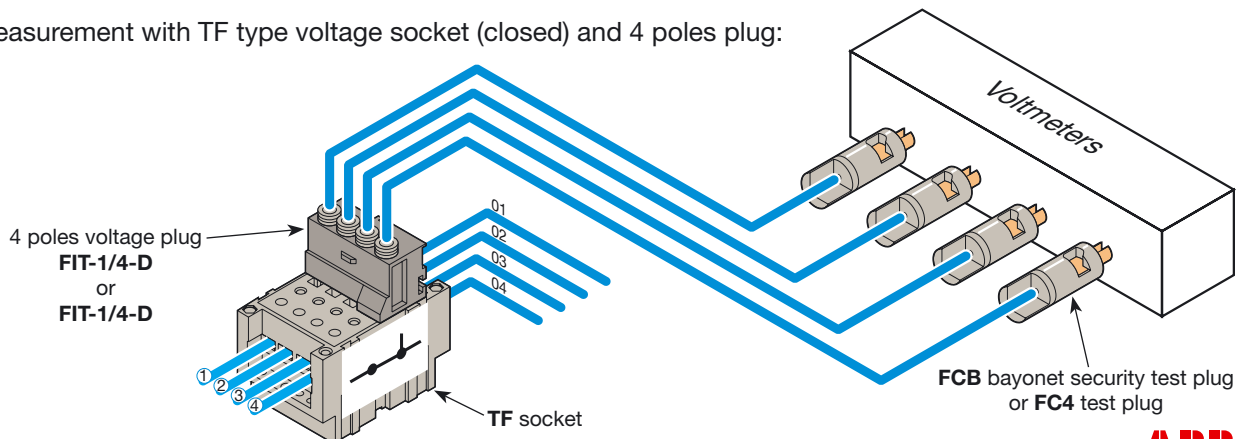
ESSAILEC®

Voltage range
Examples of applications

Calibration
Voltage injection with TC type voltage socket (make before break) and 2x4 poles plug.

FCB bayonet security test plug

CA isolating cap

2x4 poles plug
FIT-2/4

Voltage transformers

TC socket

01
02
03
04

Equipment (meters, relays...)

Voltage injection equipment

FCB bayonet security test plug
or
FC4 Ø 4 mm test plug

meters, relays...

01 02 03 04

ESSAILEC

1 2 3 4

R
S
T
N

TC TC TC

Calibration
Voltage injection with TO type socket (opened) and 4 poles plug.
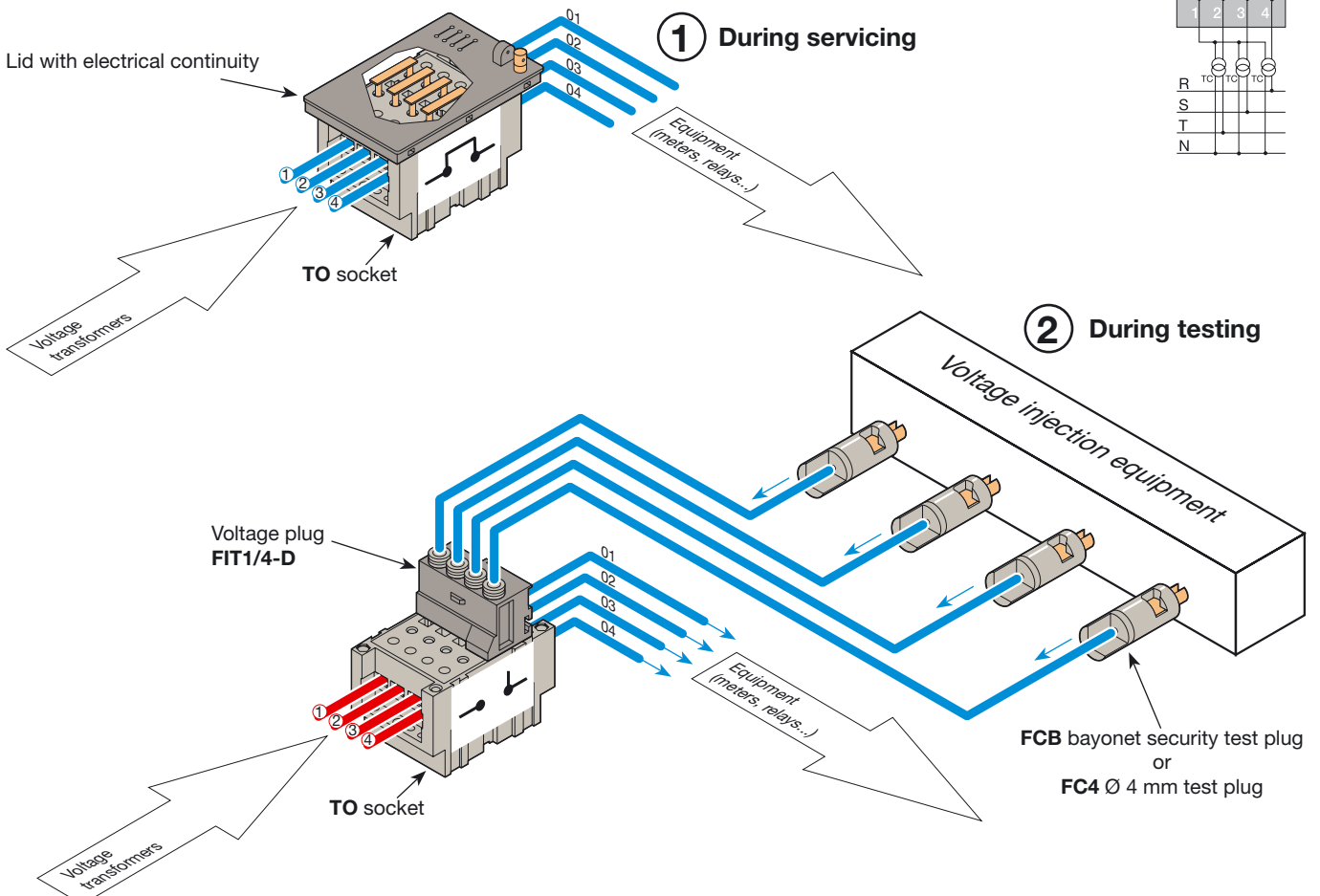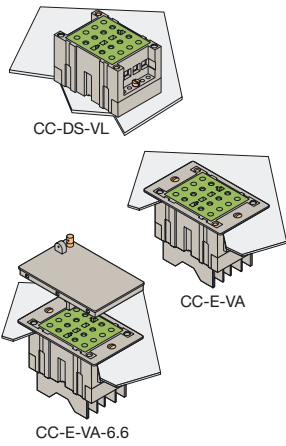
Lid with electrical continuity

Voltage transformers

TO socket

01
02
03
04

Equipment (meters, relays...)

① **During servicing**

② **During testing**

Voltage plug
FIT1/4-D

Voltage transformers

TO socket

01
02
03
04

Equipment (meters, relays...)

Voltage injection equipment

FCB bayonet security test plug
or
FC4 Ø 4 mm test plug

ABB

ESSAILEC®
Current range
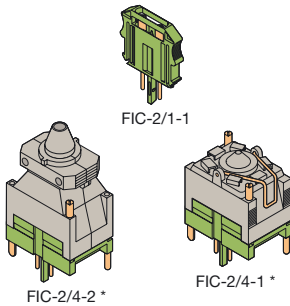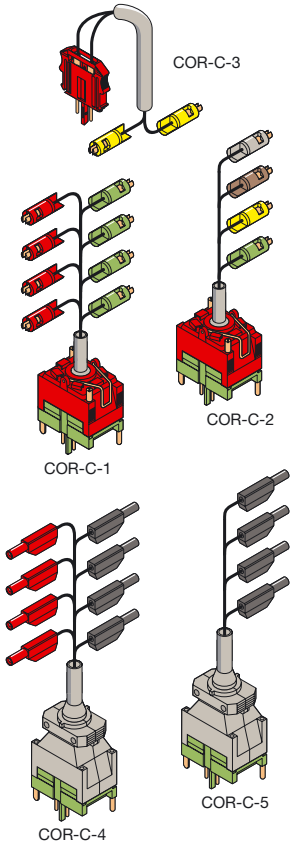
Make before break
Current range color code: Green ▇
Body: Polycarbonate
Conductive parts: Gold-plated

Technical data

	IEC 947-1		
	Socket		Plug
	Screw clamp (VL)	Ring-tongue (VA)	Pin BRE
Connecting capacity			
Rigid conductor	0.2 - 6 mm²		
Flexible conductor	0.22 - 4 mm²	0.34 - 10 mm²	
Wire stripping length	9.5 mm / .370"		9 mm / .350"
Recommended screwdriver	4 mm / .157"		
Recommended torque	0.5-0.8Nm / 4.4-7.1 lb.in		
Crimping outer Ø			
wire 1-2.5 mm²			4 mm
wire 4-6 mm²			5 mm
Ø		Ø 3 mm	
Width		7.5 mm	
Rated voltage	400 V		
Impulse withstand voltage	4 KV		
Pollution degree	3		
Rated current	15 A		
Short-circuit current	100A/5s - 200A/1s		
Storage temperature range	-25 °C ~ +70 °C		
Working temperature range	-10 °C ~ +55 °C		
Front panel protection			
with cover	IP40		
without cover	IP20		

Ordering details

Description		Type	Order code	Packaging	Weight kg
Sockets (a)					
Half-base mounting / base mounting	Screw	**CC-DS-VL**	1SNA **166 500** R**00**00	1	0.1
Flush mounting	R.tongue	**CC-E-VA**	1SNA **166 737** R**20**00	1	0.15
Half-base mounting	R.tongue	CC-D-VA	1SNA **166 738** R**01**00	1	0.09
Rack mounting	R.tongue	CC-R-VA	1SNA **166 523** R**12**00	1	
Reverse mounting	R.tongue	CC-I-VA-2	1SNA **166 941** R**25**00	1	
Flush mounting	R.tongue				
with lid and coding 6.6		**CC-E-VA-6.6**	1SNA **166 625** R**20**00		
		Other preequipped sockets: consult us			
Plugs					
Plug 2 poles with 2.5 mm² pins		FIC-2/1-1	1SNA **166 819** R**23**00	1	
Plug 2x4 poles (b)		**FIC-2/4-2**	1SNA **166 936** R**10**00	1	0.11
Plug 2x4 poles (b)		FIC-2/4-1	1SNA **166 525** R**14**00	1	0.09
Plug 2x4 poles, rack mounting R (b)		FIC-2/4-R	1SNA **166 529** R**20**00	1	
Plug 2x4 poles, reverse mounting I (b)		FIC-2/4-I	1SNA **166 589** R**25**00	1	
		Please refer to selection guide for socket compatibility			
Prewired plugs (c)					
2 poles prewired plug made of:		COR-C-3	1SNA **166 643** R**02**00	1	
1 plug 2 poles	Red ▇	FIC-2/1-1			
2 bayonet security test plugs	Yellow ▢	FCB..			
2x4 poles prewired plug made of:		**COR-C-1**	1SNA **166 638** R**05**00	1	0.87
1 plug 2x4 poles	Green ▇	FIC-2/4-1			
4 bayonet security test plugs	Green ▇	FCB..			
4 bayonet security test plugs	Red ▇	FCB..			
2x4 poles prewired plug made of:		COR-C-4	1SNA **167 932** R**15**00	1	0.87
1 plug 2x4 poles	Green ▇	FIC-2/4-2			
4 x Ø 4 mm test plugs	Black ▇	FC4-5			
4 x Ø 4 mm test plugs	Red ▇	FC4-4			
2x4 poles prewired plug for injection made of:		COR-C-2	1SNA **166 778** R**11**00	1	0.47
1 plug 2x4 poles	Green ▇	FIC-2/4-1			
with 4 short circuited pins (1-2-3-4)					
1 bayonet security test plug	Green ▇	FCB..			
1 bayonet security test plug	Grey ▢	FCB..			
1 bayonet security test plug	Brown ▇	FCB..			
1 bayonet security test plug	Yellow ▢	FCB..			
2x4 poles prewired plug for injection made of:		COR-C-5	1SNA **167 934** R**17**00	1	0.47
1 plug 2x4 poles	Green ▇	FIC-2/4-2			
with 4 short circuited pins (1-2-3-4)					
4 x Ø 4 mm test plugs	Black ▇	FC4-5			

(a) The various accessories necessary for each mounting option are supplied with the socket as well as the 2 coding pins COP-E-1 (see coding section). For rack and reverse mounting sockets drawing, refer to "Outer dimensions, mounting instructions" section.
(b) Plugs supplied with 8 locking pins and 2 coding pins COP-F-1, the BRE contacts pins are to be ordered separately.
(c) Cable length: 2m/ 6.6" - Conductors section: 2.5 mm², all conductors marked (marking begins with 0 on the equipment side) - Precoded: 6.6.
   Caution: The prewired test leads must be connected to the equipment prior to the insertion of the ESSAILEC® prewired plug on the socket.

Sockets

CC-DS-VL

CC-E-VA

CC-E-VA-6.6

Plugs

FIC-2/1-1

FIC-2/4-2 *

FIC-2/4-1 *

* The BRE contacts pins are to be ordered separately

Prewired plugs

COR-C-3

COR-C-1

COR-C-2

COR-C-4

COR-C-5

ABB

ESSAILEC®
Current range
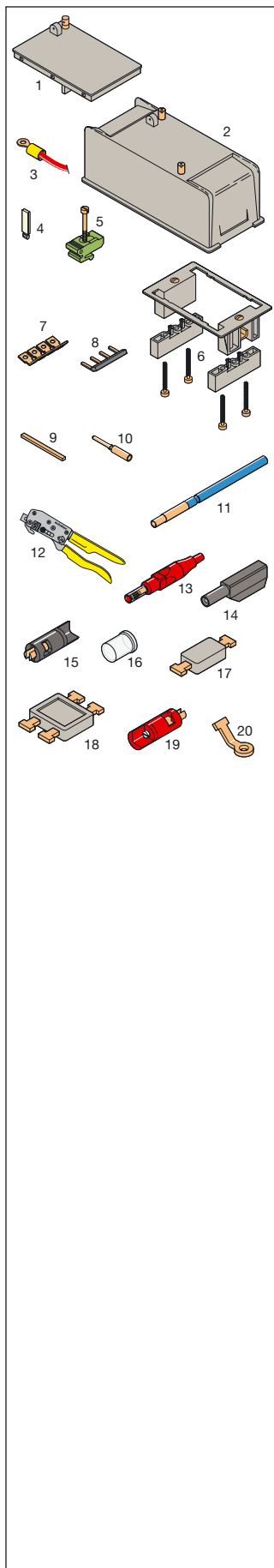
Accessories

Rep.	Description		Type	Order code	Packaging	Weight kg
	For sockets					
1	Lid		**CPC-1**	1SNA **166 578** R**01**00	1	
2	Cover (a)		CPC-7	1SNA **166 734** R**25**00	1	0.07
3	Ring-tongue lug for 10 mm² wire		CS-10	1SNA **167 700** R**11**00	10	
4	Socket interlocking peg		CVABM	1SNA **183 436** R**05**00	10	
5	Mounting kit for DIN 1 rail (a)		FX	1SNA **167 682** R**23**00	10	
6	Replacement kit for flush mounting (b)		KEM-1	1SNA **166 928** R**20**00	50	0.02
7	Comb-type jumper bar (b)		PCVA	1SNA **167 496** R**11**00	10	
8	Comb-type jumper bar IP20 (c)		PCVL	1SNA **167 681** R**22**00	10	
9	Jumper bar for 2 sockets (c)		BJ-VL	1SNA **167 680** R**05**00	10	
	For plugs					
10	Pin 1 mm²		BRE-C-1	1SNA **167 264** R**07**00	10	
	Pin 1.5 mm²		BRE-C-1.5	1SNA **167 265** R**00**00	10	
	Pin 2.5 mm²		**BRE-C-2.5**	1SNA **167 260** R**17**00	10	
	Pin 4 mm²		BRE-C-4	1SNA **205 876** R**04**00	10	
	Pin 6 mm²		BRE-C-6	1SNA **168 146** R**02**00	10	
11	Pin extraction tool		EXBR1	1SNA **167 008** R**03**00	1	
12	Crimping tool for BRE pins	1 to 2.5mm²	PSC	1SNA **173 181** R**13**00	1	
	For test					
	Ø 4 mm test plugs					
13	IP20 with mobile protection	Red ■	FC4-1	1SNA **167 927** R**10**00	10	0.01
14	IP20 with permanent protection	Black ■	FC4-5	1SNA **167 931** R**14**00	10	0.01
		Red ■	FC4-4	1SNA **167 930** R**27**00	10	0.01
15	Bayonet security test plug	Black ■	FCB-1	1SNA **167 690** R**07**00	10	0.01
		Red ■	FCB-2	1SNA **167 692** R**25**00	10	0.01
16	Isolating cap for FCB plug		CA	1SNA **167 697** R**22**00	10	
17	Straight adaptor		IR1	1SNA **167 622** R**26**00	5	
18	H adaptor		IR2	1SNA **167 623** R**27**00	5	
19	Isolating cap for IR1 & IR2 adaptors		DI	1SNA **167 981** R**17**00	10	0.01
20	Adaptor between FCB plug and ring-tongue test interface		IR3	1SNA **167 624** R**20**00	10	

(a) Compatible with base mounting only.
(b) Compatible with ring-tongue connection type socket only (VA).
(c) Compatible with screw connection type socket only (VL).

Selection guide

Mounting	Sockets	Lids	Covers	Plugs				
		CPC-1	CPC-7	FIC-2/1-1	FIC-2/4-2	FIC-2/4-1	FIC-2/4-R rack mounting R	FIC-2/4-I reverse mounting I
Base Half-base	CC-DS-VL	●	●*	●	●	●		
Flush	CC-E-VA	●		●	●	●		
Half-base	CC-D-VA	●		●	●	●		
Rack	CC-R-VA			●			●	
Reverse	CC-I-VA-2			●				●
Flush with lid	CC-E-VA-6.6			●	●	●		

* Nota: CPC-7 compatible with CC-DS-VL socket only in "base" mounting option.

ABB

11

ESSAILEC®
Voltage range

Sockets

TC-DS-VL

TC-E-VA

TC-E-VA-2.2

Plugs

FIT-2/4-1 *

FIT-2/4-2 *

FIT-1/4-G *

FIT-2/1-1

* The BRE contacts pins are to be ordered separately

Prewired plugs

COR-T-1

COR-T-4-1

COR-T-4-4

COR-T-5
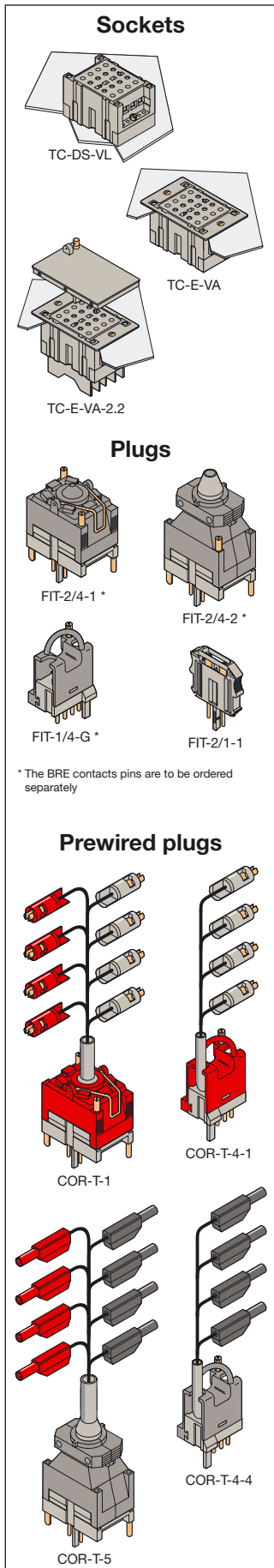
Contacts: - Make before break   Voltage range color code: Grey ☐
        - Opened   Body: Polycarbonate
        - Closed   Conductive parts: Silver-plated

Technical data

		IEC 947-1		
		Socket		Plug
		Screw clamp (VL)	Ring-tongue (VA)	Pin BRE
Connecting capacity	Rigid conductor	0.2 - 6 mm²		
	Flexible conductor	0.22 - 4 mm²	0.34 - 10 mm²	
Wire stripping length		9.5 mm / .370"		
wire 0.22 - 0.34 mm²				7 mm / .270"
wire 0.75 - 6 mm²				9 mm / .350"
Recommended screwdriver		4 mm / .157"		
Recommended torque		0.5-0.8Nm / 4.4-7.1 lb.in		
Crimping outer Ø				
wire 0.22 - 0.34 mm²				2.5 mm
wire 0.75 - 2.5 mm²				4 mm
wire 6 mm²				5 mm
Ø			Ø 3 mm	
Width			7.5 mm	
Rated voltage		400 V		
Impulse withstand voltage		4 KV		
Pollution degree		3		
Rated current		8 A		
Short-circuit current		25A/5s - 800A/25ms		
Storage temperature range		-25 °C ~ +70 °C		
Working temperature range		-10 °C ~ +55 °C		
Front panel protection	with cover	IP40		
	without cover	IP20		

Ordering details

Description		Type	Order code	Packaging	Weight kg
Sockets (a)					
Half-base mounting / base mounting	Screw				
opened contacts		TO-DS-VL	1SNA **166 741** R**04**00	1	0.1
short-circuited contacts		**TC-DS-VL**	1SNA **166 742** R**05**00	1	0.1
closed contacts		TF-DS-VL	1SNA **166 503** R**27**00	1	
Flush mounting	R.tongue				
opened contacts		TO-E-VA	1SNA **166 743** R**06**00	1	
short-circuited contacts		**TC-E-VA**	1SNA **166 747** R**02**00	1	0.14
closed contacts		TF-E-VA	1SNA **166 745** R**00**00	1	
Half-base mounting	R.tongue				
opened contacts		TO-D-VA	1SNA **166 744** R**07**00	1	
short-circuited contacts		TC-D-VA	1SNA **166 748** R**13**00	1	
closed contacts		TF-D-VA	1SNA **166 746** R**01**00	1	0.12
Reverse mounting	R.tongue				
opened contacts		TO-I-VA-2	1SNA **166 945** R**21**00	1	
Flush mounting with lid	R.tongue				
short-circuited contacts and					
precoded 2.2		**TC-E-VA-2.2**	1SNA **166 627** R**22**00	1	0.15
		Other preequipped sockets: consult us			
Plugs					
Plug 2 poles with 2.5 mm² pins		FIT-2/1-1	1SNA **166 821** R**15**00	1	
Plug 2x4 poles (b)		**FIT-2/4-2**	1SNA **166 937** R**11**00	1	0.11
Plug 2x4 poles (b)		FIT-2/4-1	1SNA **166 550** R**01**00	1	0.09
Plug 2x4 poles, reverse mounting I (b)		FIT-2/4-I	1SNA **166 672** R**07**00	1	
Plug 4 poles - insertion 1-2-3-4 (c)		**FIT-1/4-G**	1SNA **166 547** R**22**00	1	
Plug 4 poles - insertion 01-02-03-04 (c)		FIT-1/4-D	1SNA **166 546** R**21**00	1	
		Other 2 poles plugs: consult us			
		Please refer to selection guide for socket compatibility			
Prewired plugs (d)					
4 poles prewired plug made of:		COR-T-4-1	1SNA **166 640** R**13**00	1	
1 plug 4 poles	Grey ☐	FIT-1/4-D			
4 bayonet security test plugs	Grey ☐	FCB..			
4 poles prewired plug made of:		COR-T-4-4	1SNA **167 935** R**10**00	1	
1 plug 4 poles	Grey ☐	FIT-1/4-D			
4 x Ø 4 mm test plugs	Black ■	FC4-5			
2x4 poles prewired plug made of:		COR-T-1	1SNA **166 639** R**06**00	1	0.87
1 plug 2x4 poles (precoded: 2.2)	Grey ☐	FIT-2/4-1			
4 bayonet security test plugs	Red ■	FCB..			
4 bayonet security test plugs	Grey ☐	FCB..			
2x4 poles prewired plug made of:		COR-T-5	1SNA **167 933** R**16**00	1	0.87
1 plug 2x4 poles (precoded: 2.2)	Grey ☐	FIT-2/4-2			
4 x Ø 4 mm test plugs	Black ■	FC4-5			
4 x Ø 4 mm test plugs	Red ■	FC4-4			

(a) The various accessories necessary for each mounting option are supplied with the socket as well as the 2 coding pins COP-E-1 (see coding section). For reverse mounting sockets drawing, refer to "Outer dimensions, mounting instructions" section.
(b) Plugs supplied with 8 locking pins and 2 coding pins COP-F-1, the BRE contacts pins are to be ordered separately.
(c) Plugs supplied with 4 locking pins, the BRE contacts pins are to be ordered separately.
(d) Cable length: 2m/ 6.6" - Conductors section: 2.5 mm², all conductors marked (marking starting with 0 on the equipment side). **Caution**: The prewired test leads must be connected to the equipment prior to the insertion of the ESSAILEC® prewired plug on the socket.

ABB

ESSAILEC®

Voltage range
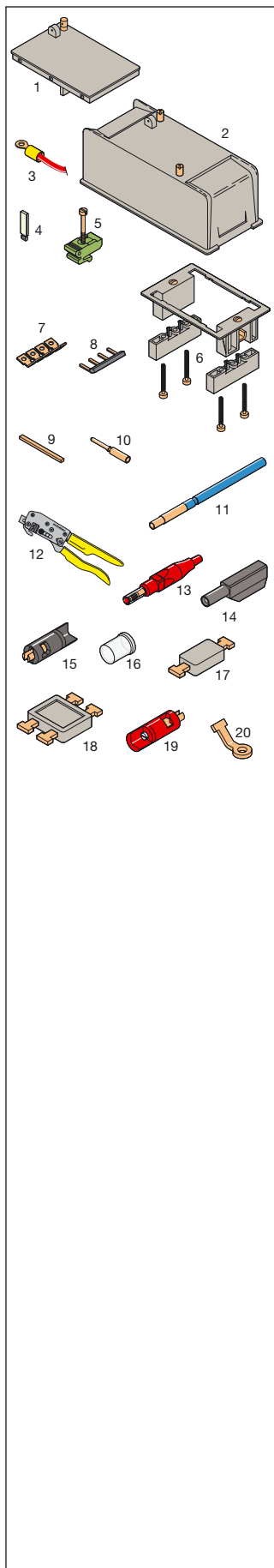
Accessories

Rep.	Description	Type	Order code	Packaging	Weight kg
	For sockets				
1	Lid	**CPT-1**	1SNA **166 646** R**05**00	1	
	Lid with electrical continuity	CPT-2	1SNA **166 577** R**20**00	1	
2	Cover (a)	CPT-5	1SNA **166 930** R**26**00	1	0.07
	Cover with electrical continuity (a)	CPT-4	1SNA **166 733** R**24**00	1	0.08
3	Ring-tongue lug for 10 mm² wire	CS-10	1SNA **167 700** R**11**00	10	
4	Socket interlocking peg	CVABM	1SNA **183 436** R**05**00	10	
5	Mounting kit for DIN 1 rail (a)	FX	1SNA **167 682** R**23**00	10	
6	Replacement kit for flush mounting (b)	KEM-1	1SNA **166 928** R**20**00	50	0.02
7	Comb-type jumper bar (b)	PCVA	1SNA **167 496** R**11**00	10	
8	Comb-type jumper bar IP20 (c)	PCVL	1SNA **167 681** R**22**00	10	
9	Jumper bar for 2 sockets (c)	BJ-VL	1SNA **167 680** R**05**00	10	
	For plugs				
10	Pin 0.22-0.34 mm²	BRE-T-0.34	1SNA **168 160** R**14**00	50	
	Pin 0.75 mm²	BRE-T-0.75	1SNA **167 779** R**13**00	50	
	Pin 1 mm²	BRE-T-1	1SNA **164 921** R**17**00	50	
	Pin 1.5 mm²	BRE-T-1.5	1SNA **164 922** R**10**00	50	
	Pin 2.5 mm²	**BRE-T-2.5**	1SNA **164 923** R**11**00	50	
	Pin 6 mm²	BRE-T-6	1SNA **168 147** R**03**00	50	
11	Pin extraction tool	EXBR1	1SNA **167 008** R**03**00	1	
12	Crimping tool for BRE pins 1 to 2.5mm²	PSC	1SNA **173 181** R**13**00	1	
	For test				
	Ø 4 mm test plugs				
13	IP20 with mobile protection Red ▮	FC4-1	1SNA **167 927** R**10**00	10	0.01
14	IP20 with permanent protection Black ▪	FC4-5	1SNA **167 931** R**14**00	10	0.01
	Red ▮	FC4-4	1SNA **167 930** R**27**00	10	0.01
15	Bayonet security test plug Black ▪	FCB-1	1SNA **167 690** R**07**00	10	0.01
	Red ▮	FCB-2	1SNA **167 692** R**25**00	10	0.01
16	Isolating cap for FCB plug	CA	1SNA **167 697** R**22**00	10	
17	Straight adaptor	IR1	1SNA **167 622** R**26**00	5	
18	H adaptor	IR2	1SNA **167 623** R**27**00	5	
19	Isolating cap for IR1 & IR2 adaptors	DI	1SNA **167 981** R**17**00	10	0.01
20	Adaptor between FCB plug and ring-tongue test interface	IR3	1SNA **167 624** R**20**00	10	

(a) Compatible with base mounting only.
(b) Compatible with ring-tongue connection type socket only (VA).
(c) Compatible with screw connection type socket only (VL).

Selection guide

Mounting	Sockets	Lids		Covers		Plugs				
		CPT-1	CPT-2	CPT-5	CPT-4	FIT-2/4-2	FIT-2/4-1	FIT-1/4-D	FIT-1/4-G	FIT-2/4-I reverse mounting I
Base Half-base	TO-DS-VL		●		●*	(●)	(●)	●	●	
	TC-DS-VL	●		●*		●	●	(●)	(●)	
	TF-DS-VL	●		●*				●	●	
Flush	TO-E-VA		●			(●)	(●)	●	●	
	TC-E-VA	●				●	●	(●)	(●)	
	TF-E-VA	●						●	●	
Half-base	TO-D-VA		●			(●)	(●)	●	●	
	TC-D-VA	●				●	●	(●)	(●)	
	TF-D-VA	●						●	●	
Reverse	TO-I-VA									●
Flush with lid	TC-E-VA-2.2					●	●			

* Nota: CPT-4 and CPT-5 compatible with TO-DS-VL, TC-DS-VL and TF-DS-VL sockets only in "base" mounting option.
(●) Compatible with some restrictions, please consult us.

ESSAILEC®

Coding

index for initial position identification

reading direction

Socket | **Plug**

COP-E-1 | COP-FI-1

Socket:
```
  2   4
12      6
  10  8
```

Plug:
```
  10  8
12      6
  2   4
```

Reading direction

Coding pins index
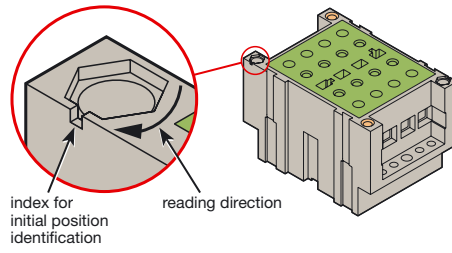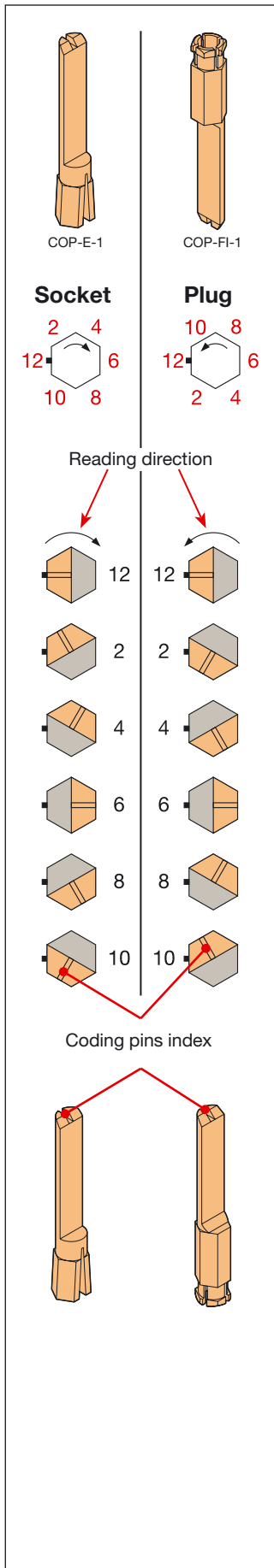
On socket:

1 Choose a coding code (12-12 for instance).
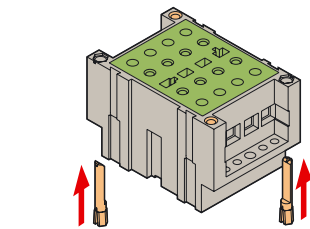
2 Insert completely the coding pin COP-E-1 in its housing.

Position 12
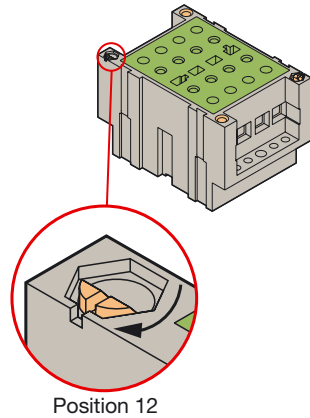
On plug:

In order to guarantee a perfect compatibility between the socket coding and the plug coding, the following must be done:

1 Place the COP-FI-1 coding pin in the opening left by the socket coding pin.
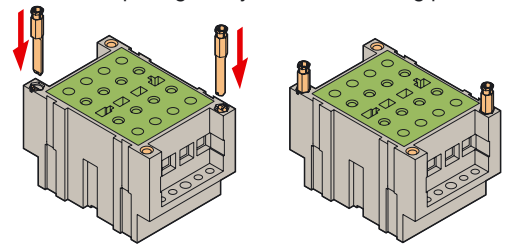
2 Connect the plug on the socket in order to insert the plug coding pin in its housing.
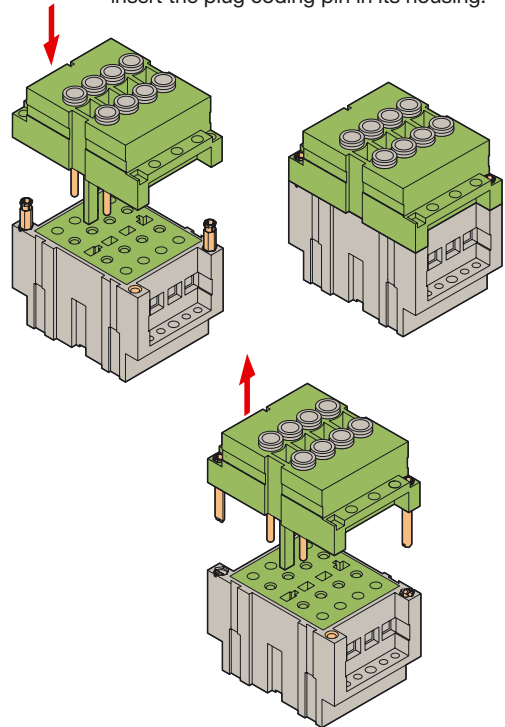
Description	Type	Order code	Packaging	Weight kg
Socket coding pin	COP-E-1	1SNA **167 379** R**12**00	10	
Plug coding pin	COP-FI-1	1SNA **167 378** R**11**00	10	
		Supplied with sockets and plugs		

ABB

ESSAILEC®
Outer dimensions, mounting instructions

Socket
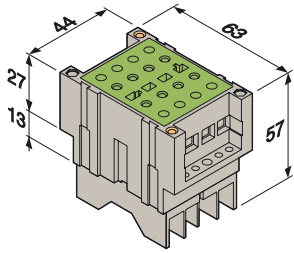
Plugs
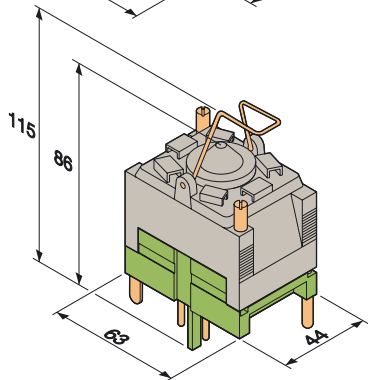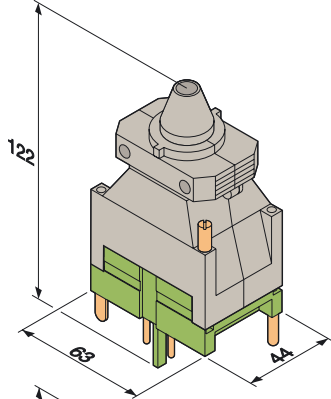
Lid
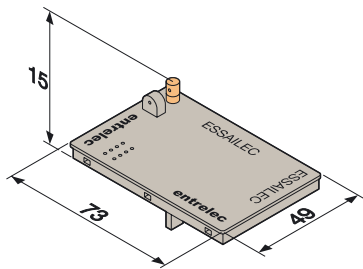
Cover
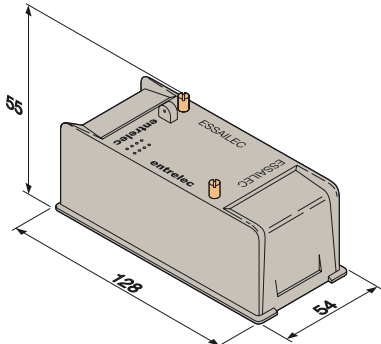
Base mounting
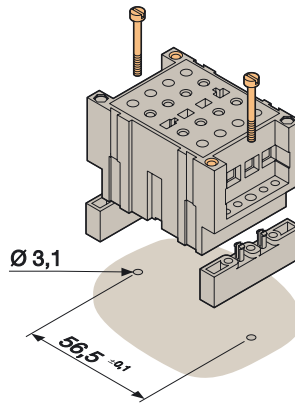
0.5 Nm < Tightening torque < 0.8 Nm

Flush mounting
The flush mounting kit must be mounted on the socket prior to the installation on the panel.

$1 \leqslant e \leqslant 5$
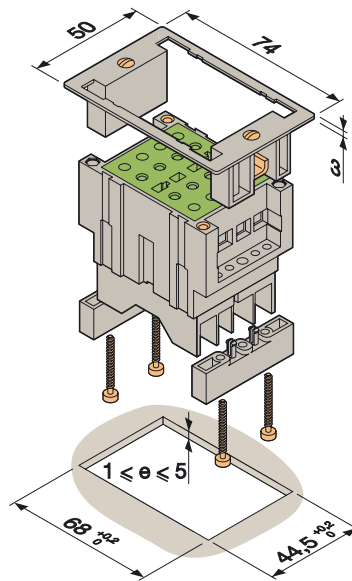
Tightening torque = 0.5 Nm maxi.

Half-base mounting
Rack mounting

The rack mounting is supplied with 2 additional guiding pins.

Ø 3,1
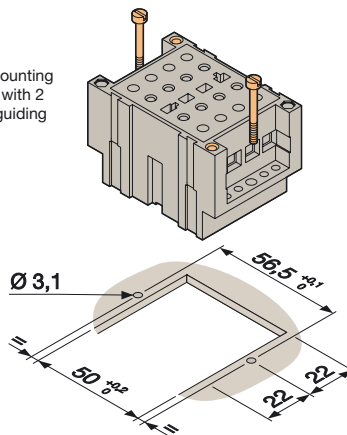
0.5 Nm < Tightening torque < 0.8 Nm

Reverse mounting
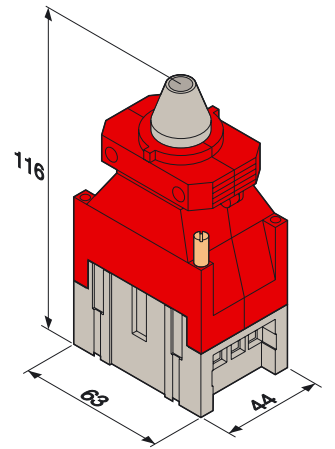
DIN 1 rail mounting
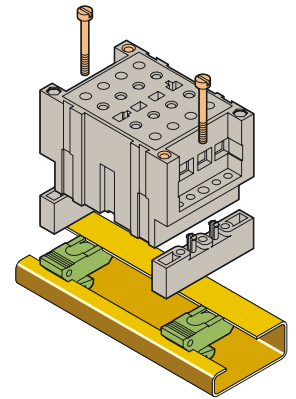
Pin installation on plug

BRE pin

Locking pin, supplied with the plug

Notes

ABB

Index

Contact us

ABB France
Automation Products Division
Export Department
10, rue Ampère Z.I. - B.P. 114
F-69685 Chassieu cedex / France
Tel. : +33 (0)4 7222 1722
Fax : +33 (0)4 7222 1935

Power and productivity
for a better world™

ABB