

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 terminal blocks



The PREMIUM solution for testing the secondary circuits of current or voltage transformers.

ESSAILEC, approved by the major electricity utilities, remains the premium choice for the energy market.

Implemented in the transformers secondary circuits, ESSAILEC thanks to its intelligent “make before break” design eases and secures any intervention. Cutting the energy supply is avoided with zero risk for the operator.

The plug and socket connection cuts cost installation as well as in-situ wiring errors. ESSAILEC is ideal for the wiring of sub-assemblies in the secondary circuits.

Testing :

The ESSAILEC socket supplies energy to the protection or counting devices. The insertion of the test plug, which is connected to the measurement equipment, allows the testing of the devices, without perturbing the circuit.

ESSAILEC blocks are well adapted to current or voltage measurement :

- Current sockets with make before break contacts and pre-wired test plug for current measures
- Voltage sockets with open contacts and pre-wired test plug for voltage measures
- Up to 4 ammeters or 4 voltmeters connected to the test plug

Distributing :

The ESSAILEC plug is continuously mounted on the socket to supply current or voltage to secondary circuits sub assemblies. ESSAILEC blocks extreme versatility allow :

- Safe current distribution with current socket with mobile contacts since the secondary circuit is not cut when plug is removed
- Voltage distribution with dedicated voltage socket with closed contact

Characteristics and benefits :

Great flexibility :

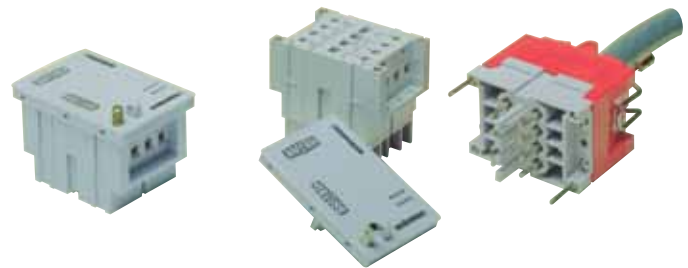
- Connection « plug and play »
- Panel, rail, rack fixed mounting or stand-alone connector
- Two wiring technologies, up to 10 mm²

Extreme reliability :

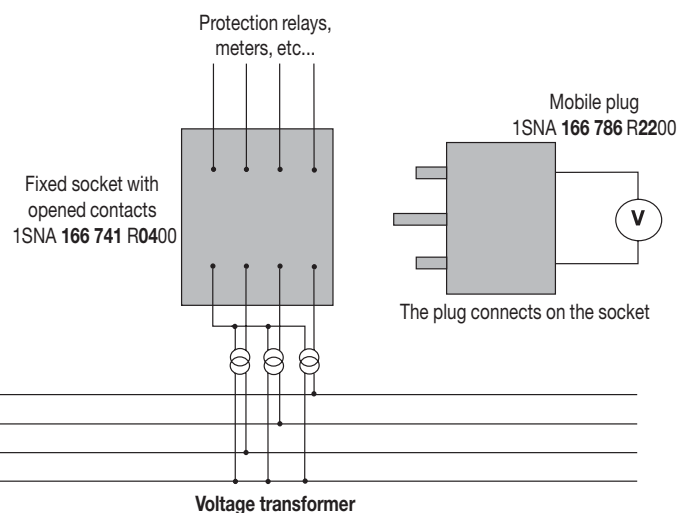
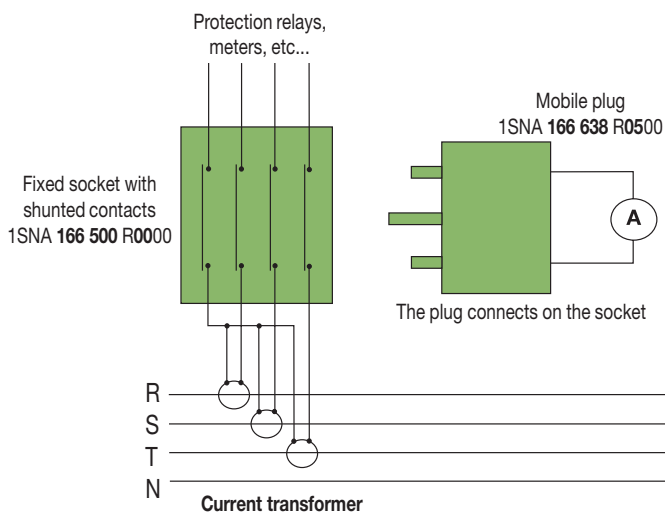
- Non symmetric blocks
- Coding accessories
- IP20 design
- Locking system
- Sealed cover
- Easy identification using colour codes



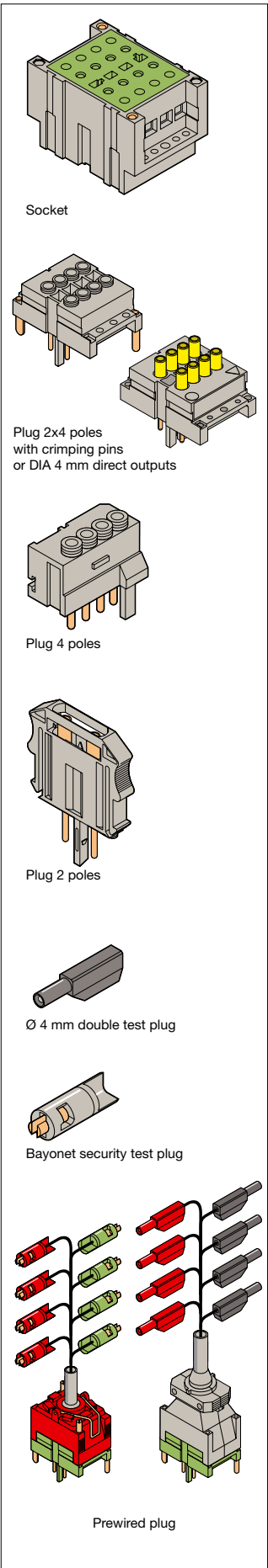
Current ESSAILEC test blocks



Voltage ESSAILEC test blocks



For technical characteristics and complete part numbers list, please ask for the ESSAILEC catalog



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	2 x 4 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

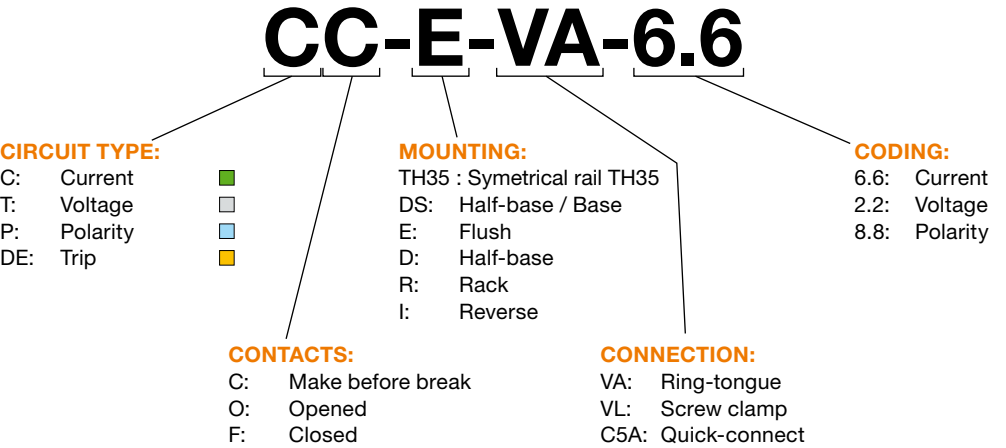
Test accessories and prewired plug

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:

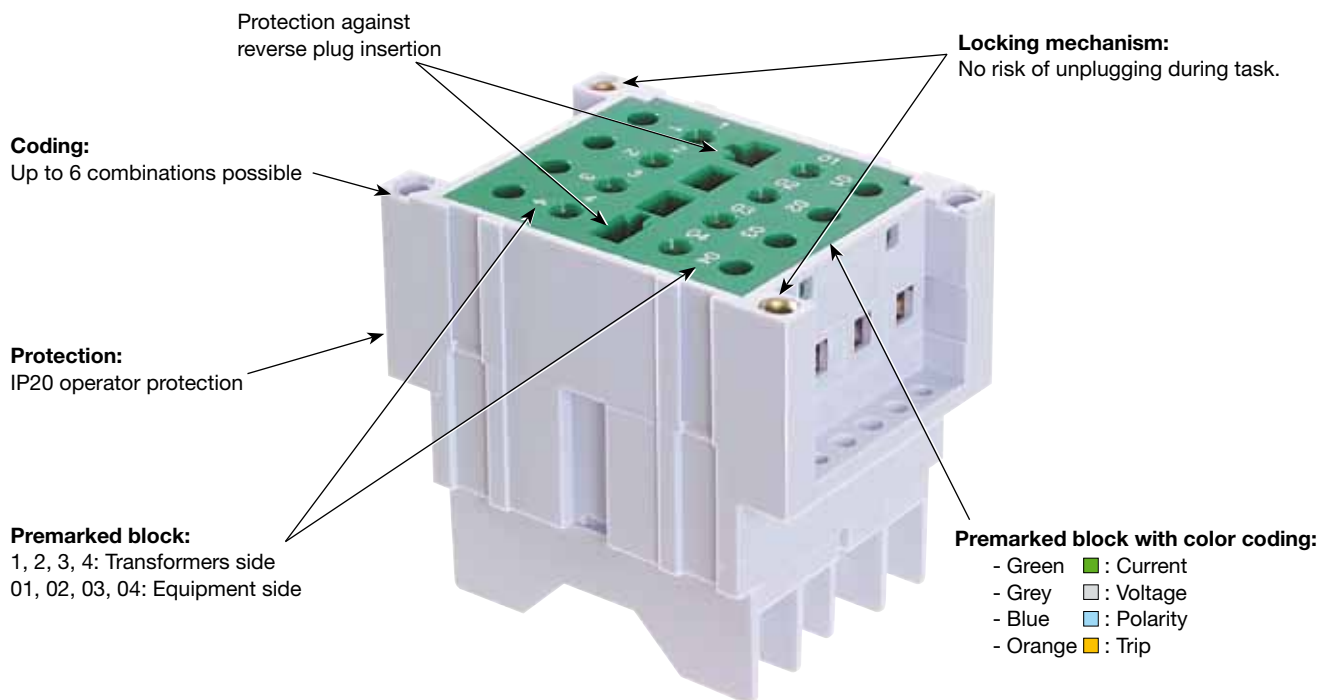
- Security bayonet test plug (bayonet locking mechanism in the test equipment for maximized security during the testing).
- Ø 4mm IP20 test plug.

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.

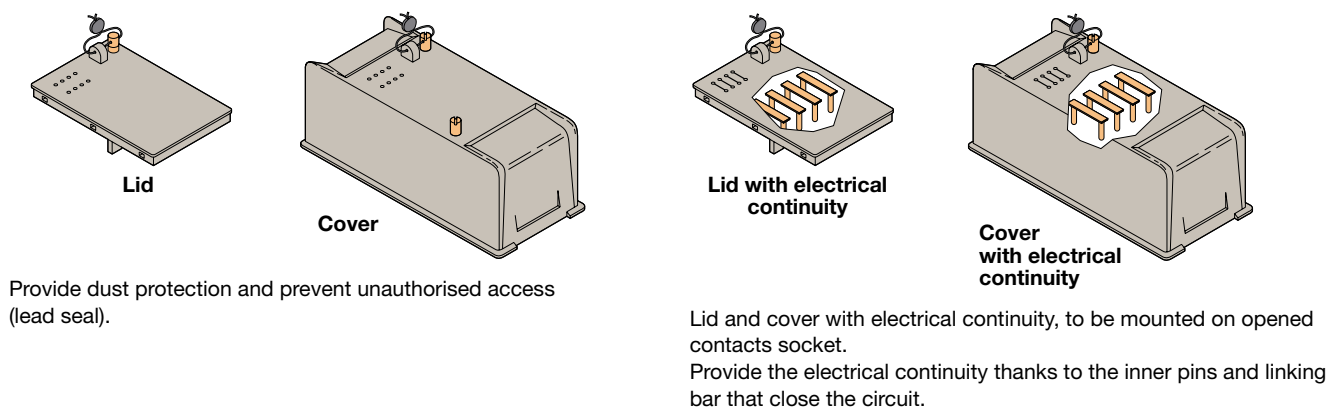
Socket identification:



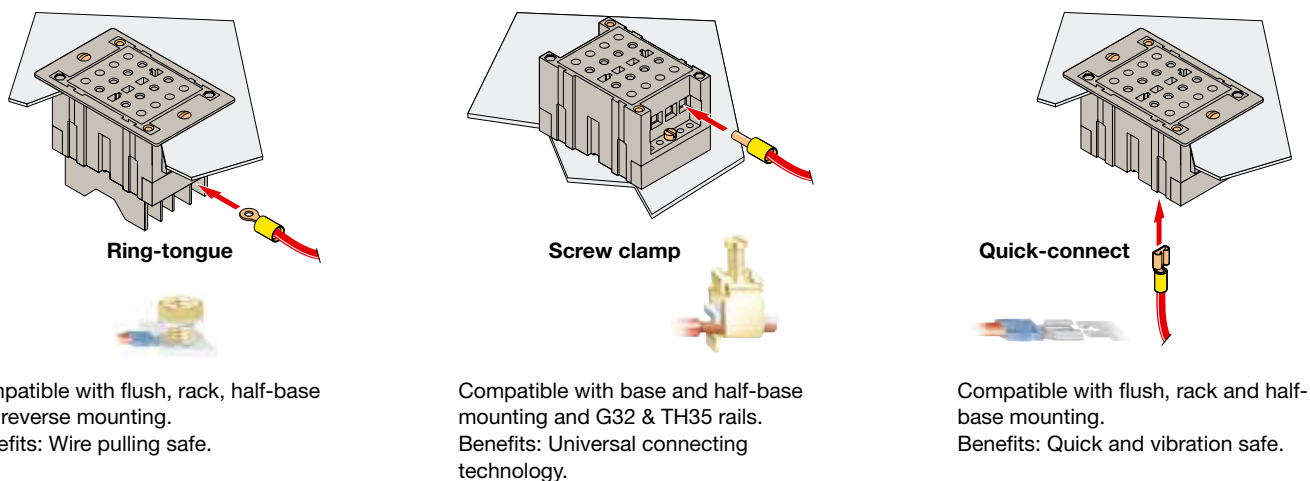
Socket features

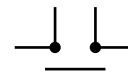


Protection

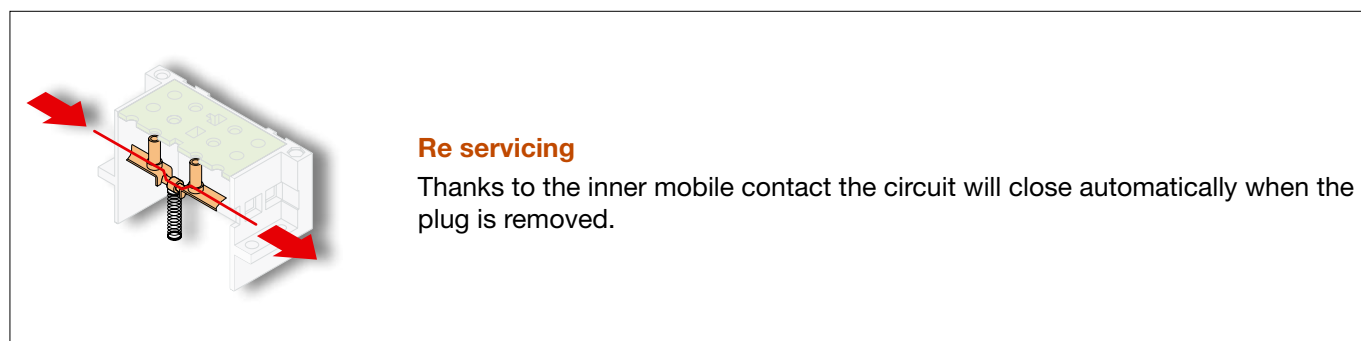
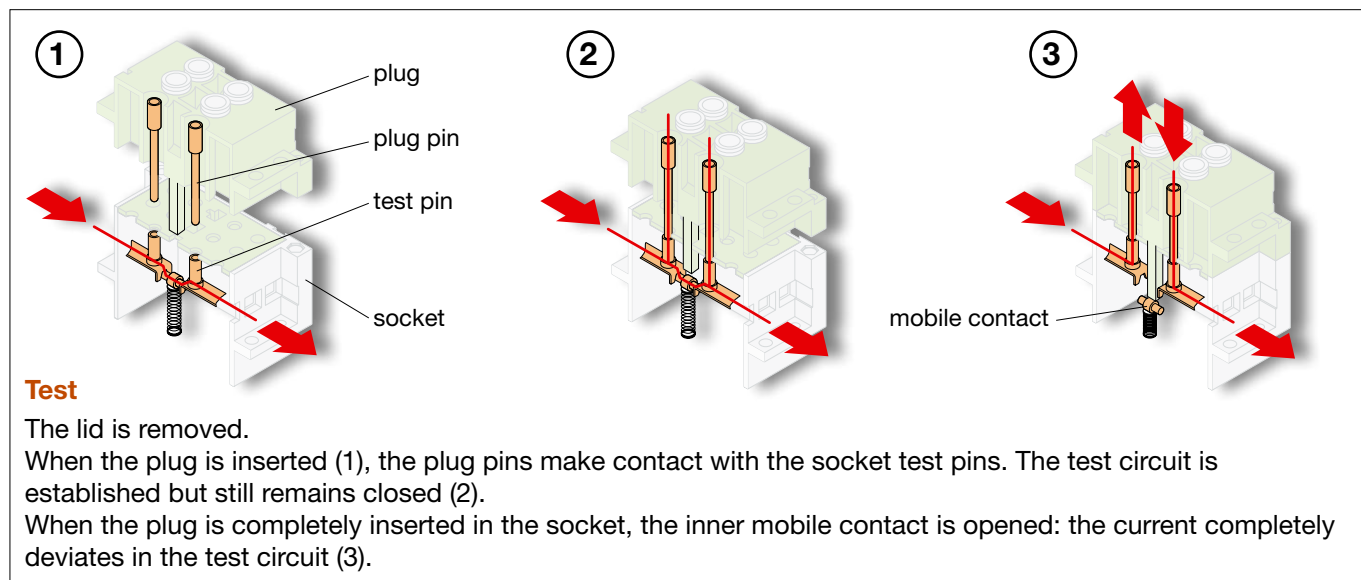
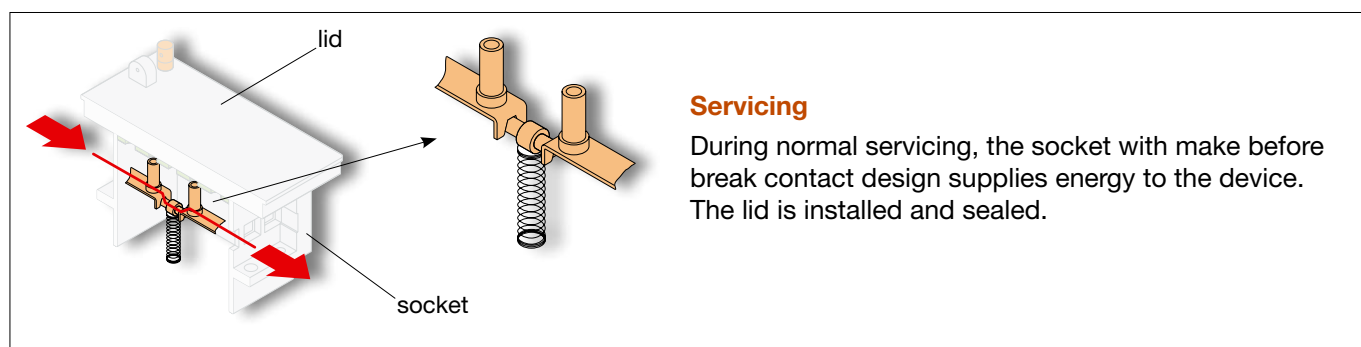


Connection technologies



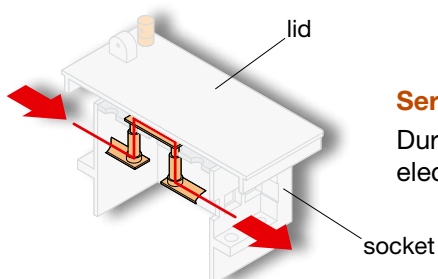
**Applications:**

- Measurement
- Injection
- Distribution

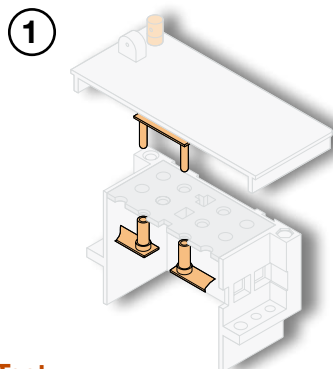


**Applications:**

- Measurement
- Injection

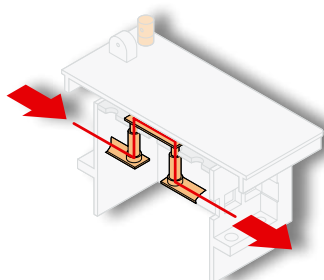
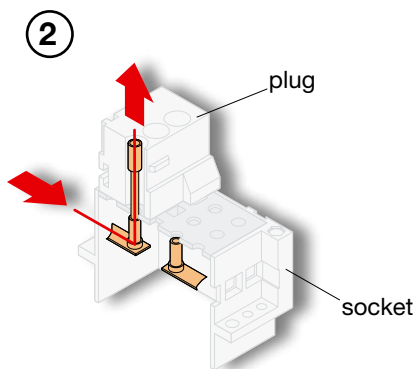
**Servicing**

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

Test principle: Closed contacts

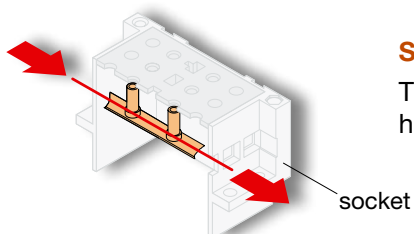


Closed contacts:

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

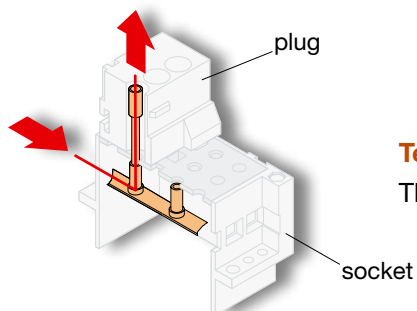
Applications:

- Measurement
- Distribution



Servicing

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



Test

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

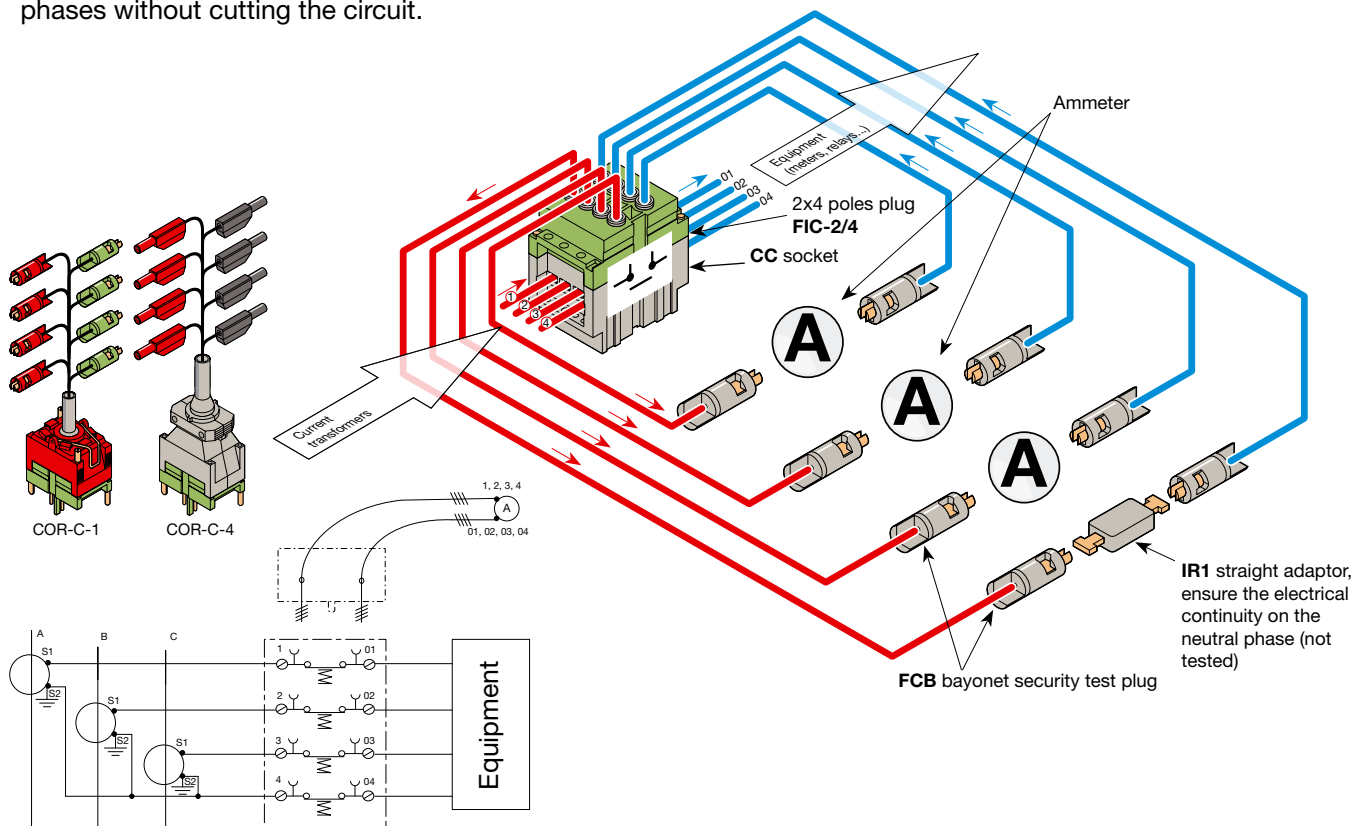
Re servicing

No particular procedure.



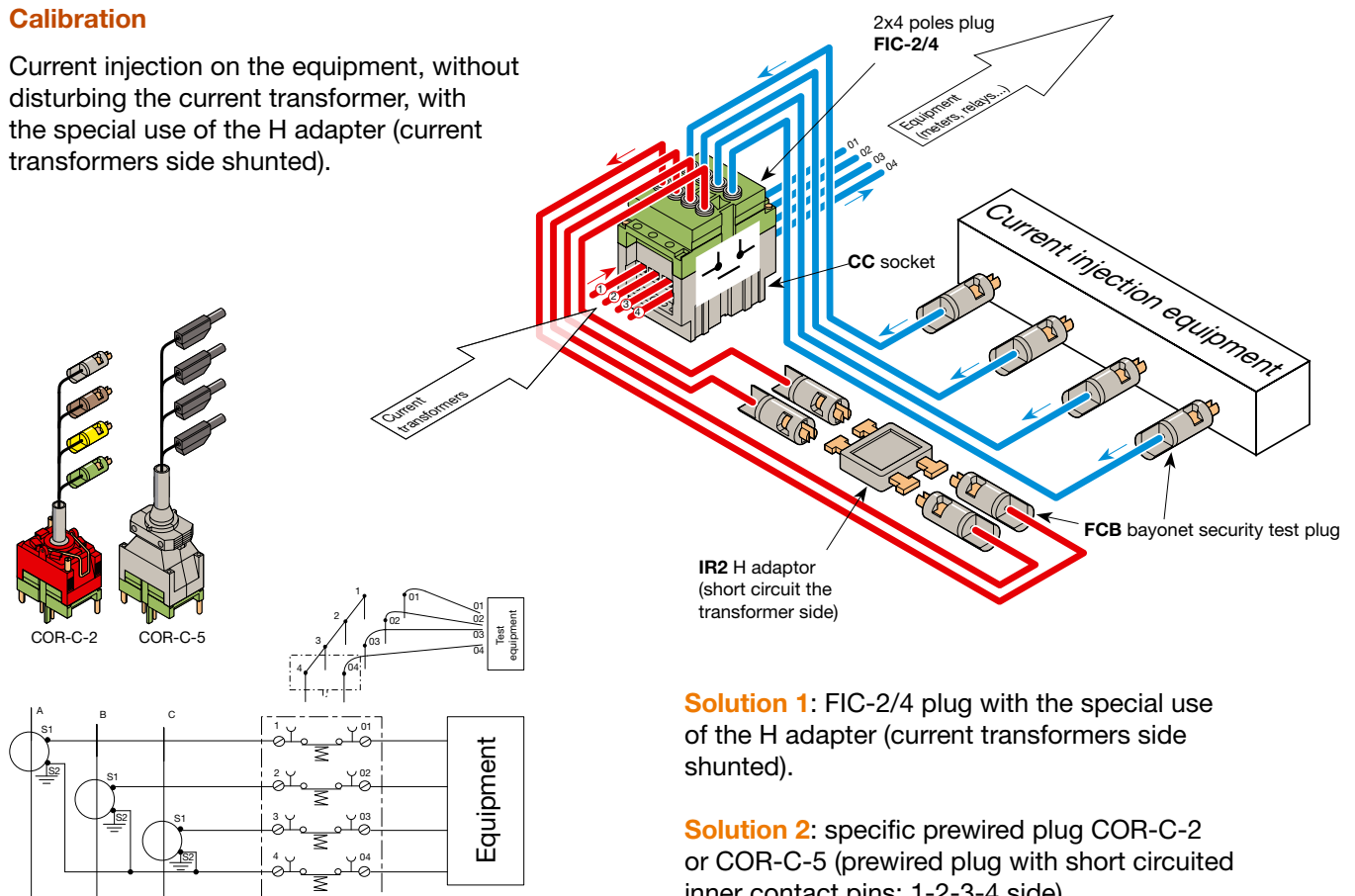
Measurement

Simultaneous current measurement on 3 phases without cutting the circuit.



Calibration

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



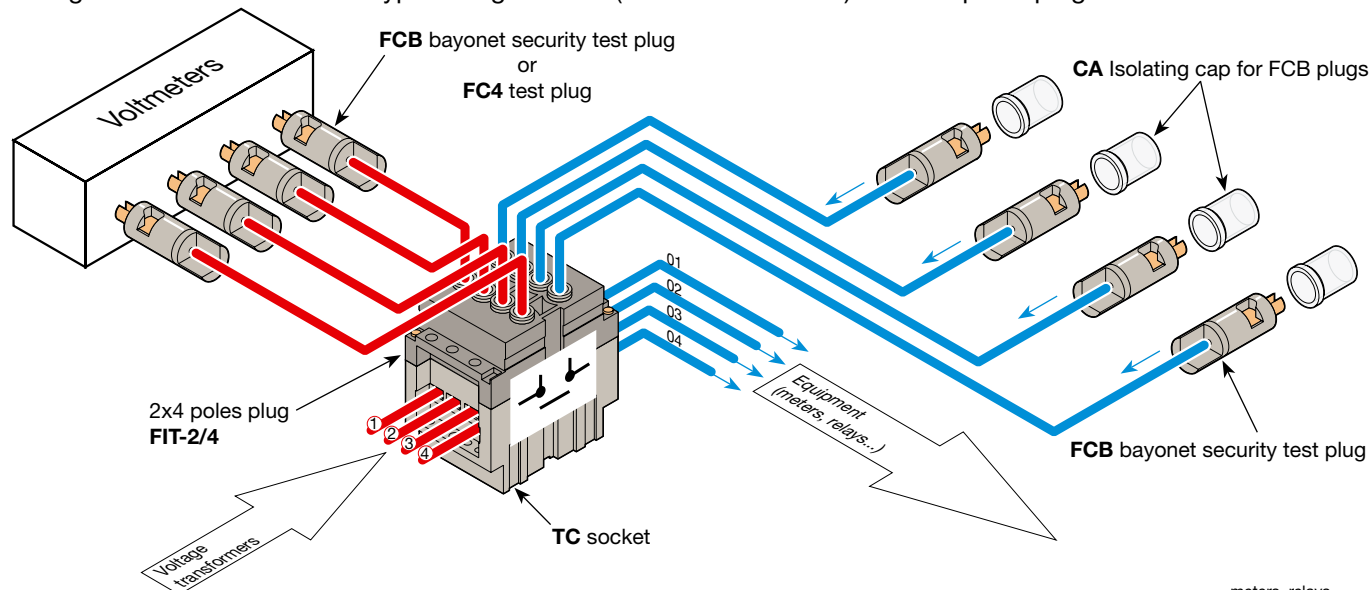
Solution 1: FIC-2/4 plug with the special use of the H adaptor (current transformers side shunted).

Solution 2: specific prewired plug COR-C-2 or COR-C-5 (prewired plug with short circuited inner contact pins: 1-2-3-4 side).

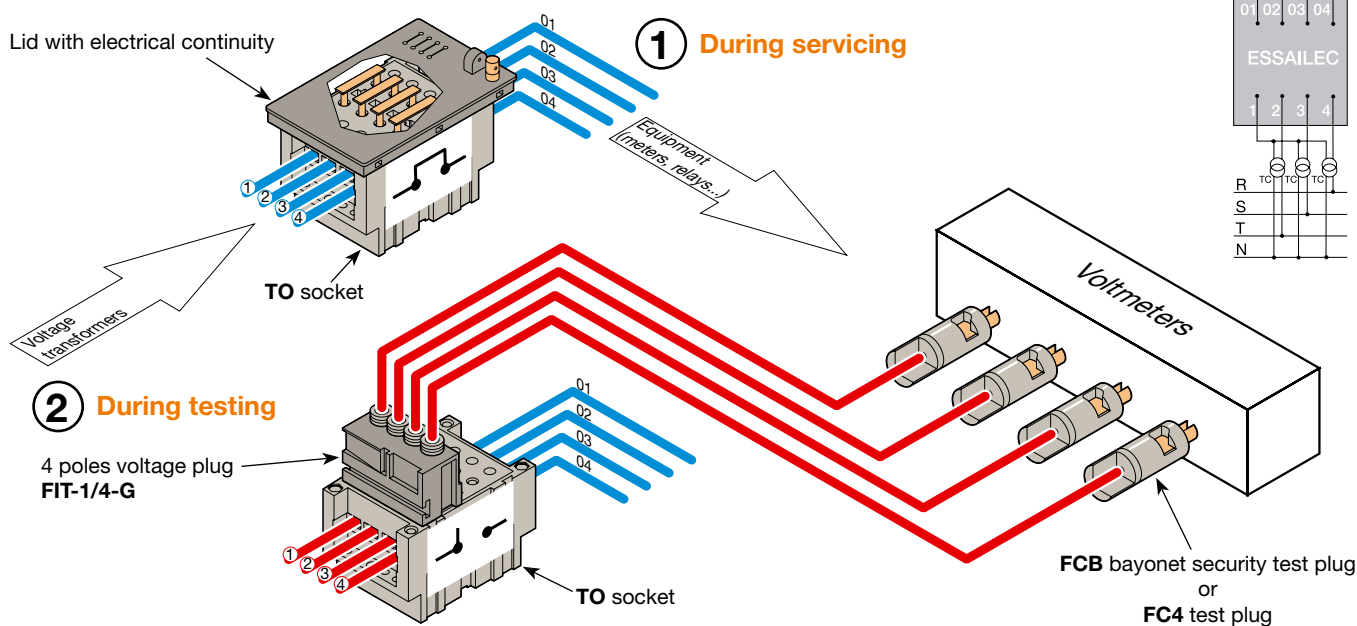


Measurement

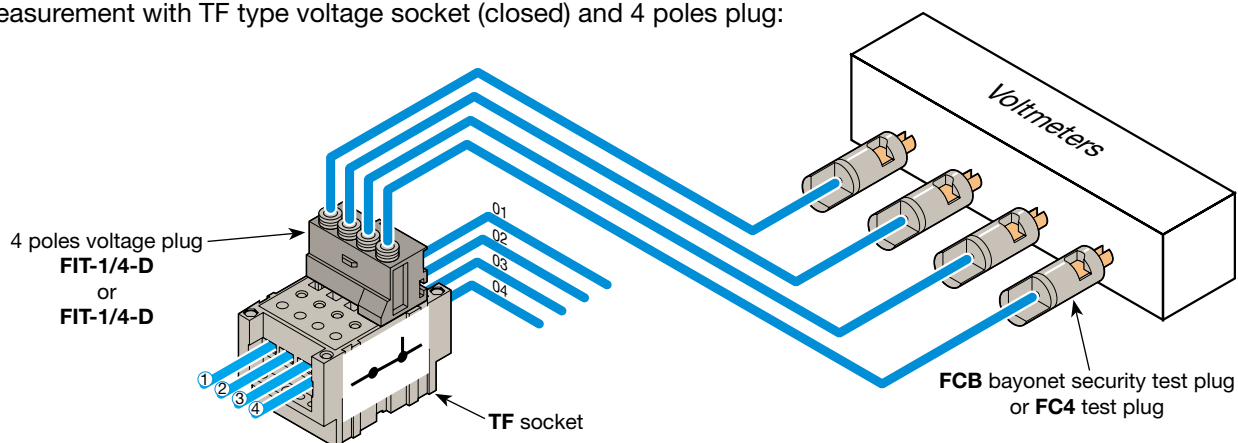
Voltage measurement with TC type voltage socket (make before break) and 2x4 poles plug:



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



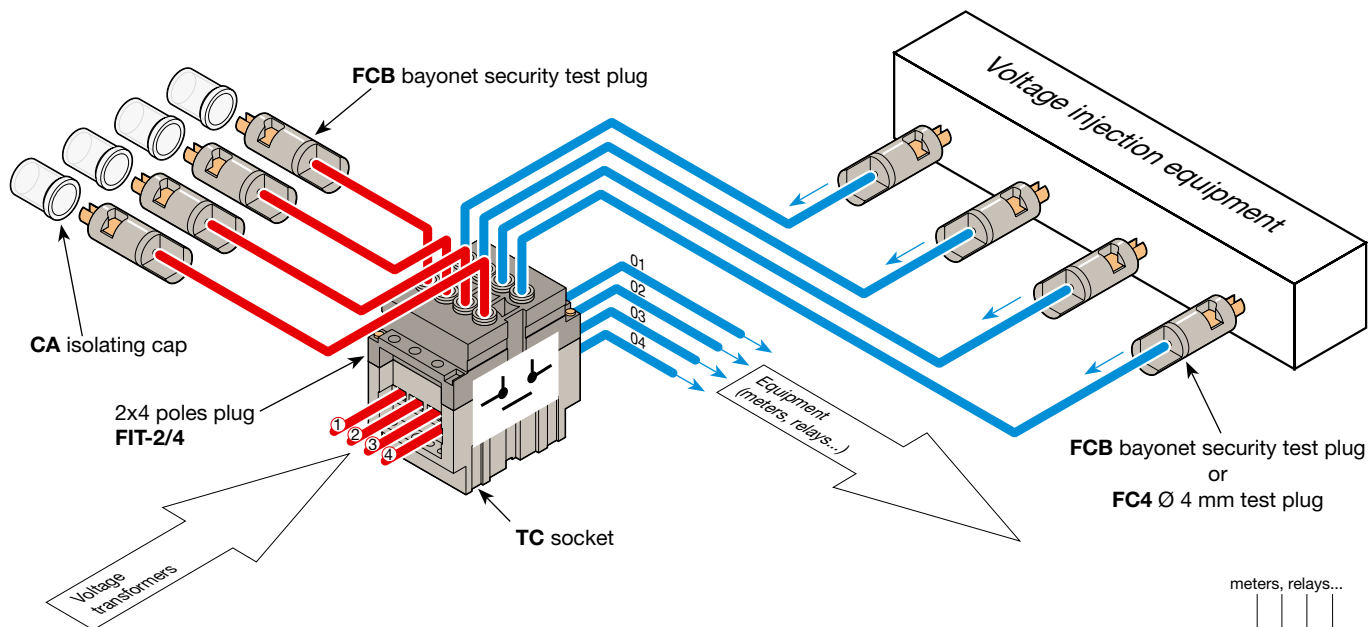
Voltage measurement with TF type voltage socket (closed) and 4 poles plug:



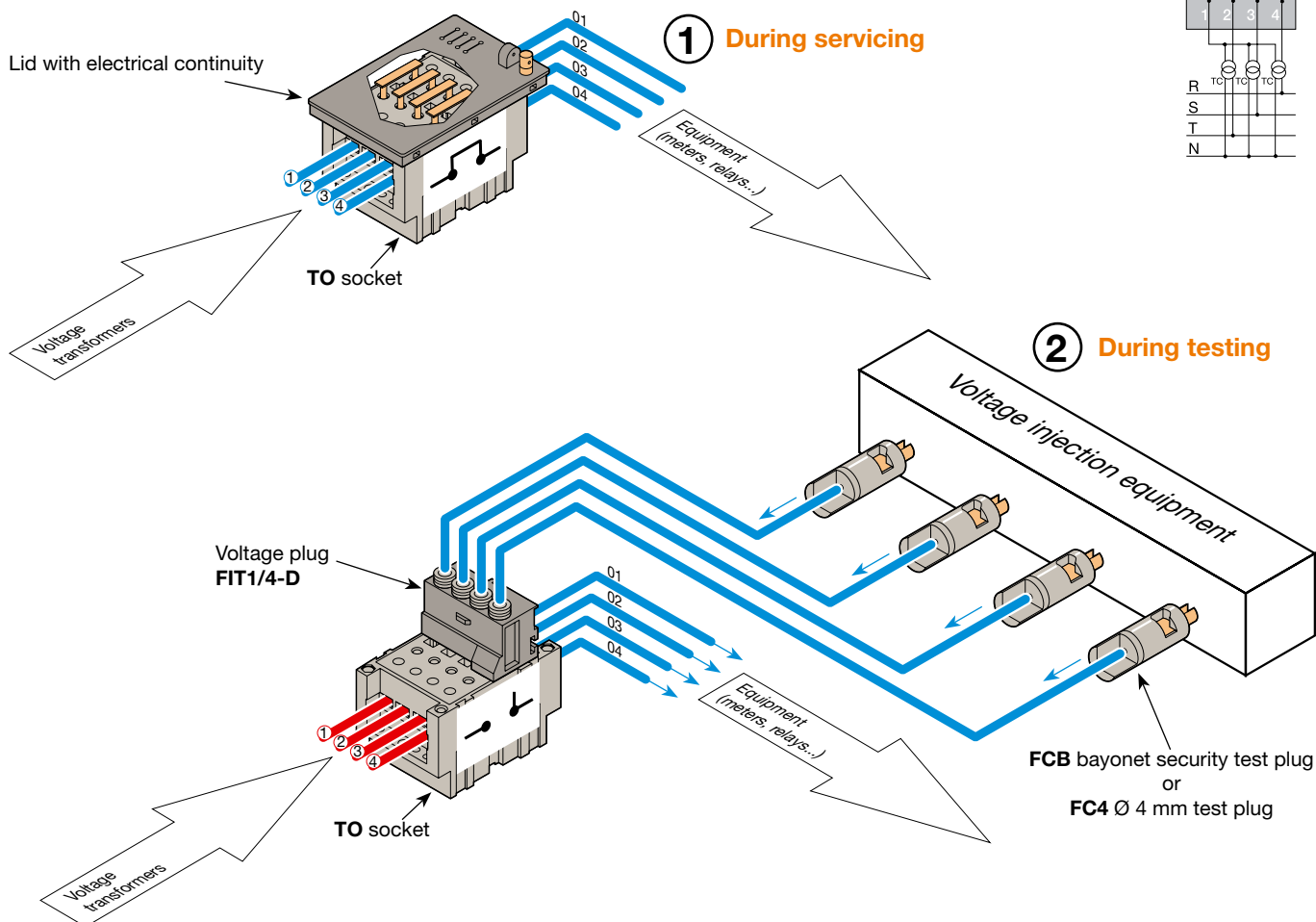
Voltage range: examples of applications

**Calibration**

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

**Calibration**

Voltage injection with TO type socket (opened) and 4 poles plug.

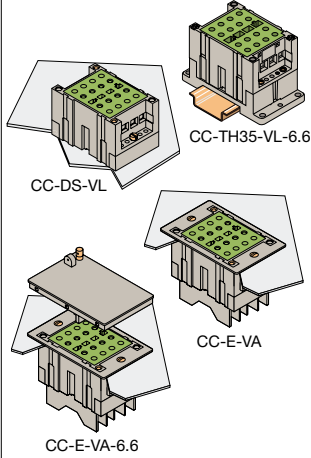


ESSAILEC®

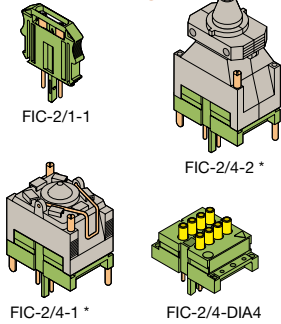
Current range



Sockets

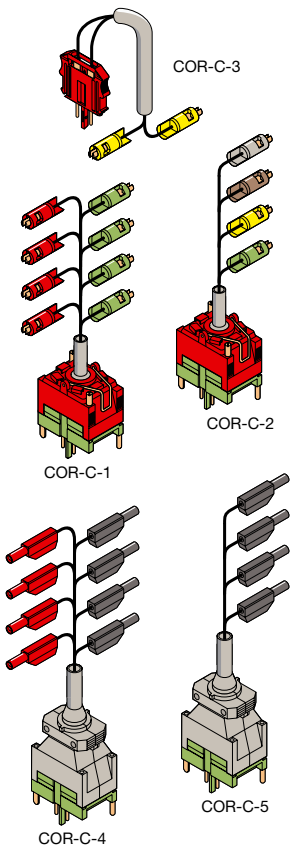


Plugs



* The BRE contacts pins are to be ordered separately

Prewired plugs



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

Technical data

IEC 947-1			
Connecting capacity		Socket	Plug
		Screw clamp (VL)	Ring-tongue (VA)
	Rigid conductor	0.2 - 6 mm ²	
	Flexible conductor	0.22 - 4 mm ²	
Wire stripping length		9.5 mm / .370"	
Recommended screwdriver		4 mm / .157"	
Recommended torque		0.5-0.8 Nm / 4.4-7.1 lb.in	
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			100 A/5 s - 200 A/1 s
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)				
TH35 rail mounting	Screw	CC-TH35-VL-6.6 1SNA 166 963 R0000	1	0.11
Half-base mounting / base mounting	Screw	CC-DS-VL 1SNA 166 500 R0000	1	0.1
Flush mounting	R.tongue	CC-E-VA 1SNA 166 737 R2000	1	0.15
Half-base mounting	R.tongue	CC-D-VA 1SNA 166 738 R0100	1	0.09
Rack mounting	R.tongue	CC-R-VA 1SNA 166 523 R1200	1	
Reverse mounting	R.tongue	CC-I-VA-2 1SNA 166 941 R2500	1	
Flush mounting	R.tongue	CC-E-VA-6.6 1SNA 166 625 R2000	1	
with lid and coding 6.6				
Other preequipped sockets: consult us				
Plugs				
Plug 2 poles with 2.5 mm ² pins		FIC-2/1-1 1SNA 166 819 R2300	1	
Plug 2x4 poles (b)		FIC-2/4-2 1SNA 166 936 R1000	1	0.11
Plug 2x4 poles (b)		FIC-2/4-1 1SNA 166 525 R1400	1	0.09
Plug 2x4 poles, rack mounting R (b)		FIC-2/4-R 1SNA 166 529 R2000	1	
Plug 2x4 poles, reverse mounting I (b)		FIC-2/4-I 1SNA 166 589 R2500	1	
Plug 2x4 poles, with direct insertion Dia. 4 mm		FIC-2/4-DIA4 1SNA 167 937 R0000	1	0.064
Please refer to selection guide for socket compatibility				
Prewired plugs (c)				
2 poles prewired plug made of:				
1 plug 2 poles	Red ■	COR-C-3 1SNA 166 643 R0200	1	
2 bayonet security test plugs	Yellow ■	FIC-2/1-1 FCB..		
2x4 poles prewired plug made of:				
1 plug 2x4 poles	Green ■	COR-C-1 1SNA 166 638 R0500	1	0.87
4 bayonet security test plugs	Green ■	FIC-2/4-1 FCB..		
4 bayonet security test plugs	Red ■	FCB..		
2x4 poles prewired plug made of:				
1 plug 2x4 poles	Green ■	COR-C-4 1SNA 167 932 R1500	1	0.87
4 x Ø 4 mm test plugs	Black ■	FIC-2/4-2 FC4-5		
4 x Ø 4 mm test plugs	Red ■	FC4-4		
2x4 poles prewired plug for injection made of:				
1 plug 2x4 poles	Green ■	COR-C-2 1SNA 166 778 R1100	1	0.47
with 4 short circuited pins (1-2-3-4)		FIC-2/4-1		
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:				
1 plug 2x4 poles	Green ■	COR-C-5 1SNA 167 934 R1700	1	0.47
with 4 short circuited pins (1-2-3-4)		FIC-2/4-2		
4 x Ø 4 mm test plugs	Black ■	FC4-5		

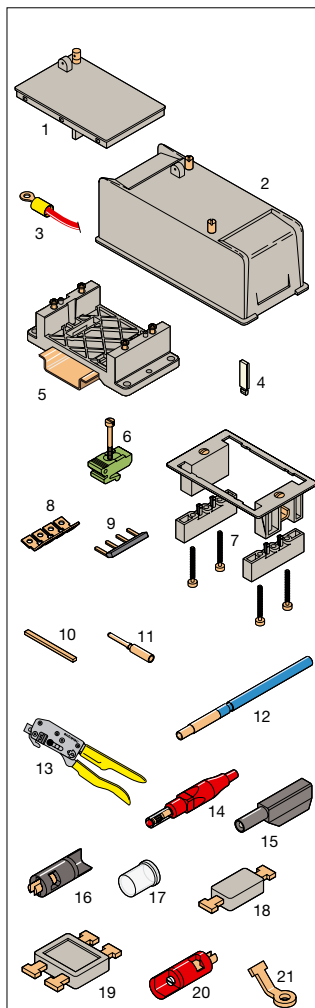
(a) The various accessories necessary for each mounting option are supplied with the socket as well as the 2 coding pins COP-E-1 (see coding section). For rack and reverse mounting sockets drawing, refer to "Outer dimensions, mounting instructions" section.

(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) - Prewired: 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.

ESSAILEC®

Current range



Accessories

Rep.	Description	Type	Order code	Packaging	Weight kg
For sockets					
1	Lid	CPC-1	1SNA 166 578 R0100	1	
2	Cover (a)	CPC-7	1SNA 166 734 R2500	1	0.07
3	Ring-tongue lug for 10 mm² wire	CS-10	1SNA 167 700 R1100	10	
4	Socket interlocking peg	CVABM	1SNA 183 436 R0500	10	
5	TH35 rail mounting kit	KEM-3	1SNA 166 962 R0000	10	0.02
6	Mounting kit for DIN 1 rail (a)	FX	1SNA 167 682 R2300	10	
7	Replacement kit for flush mounting (b)	KEM-1	1SNA 166 928 R2000	50	0.02
8	Comb-type jumper bar (b)	PCVA	1SNA 167 496 R1100	10	
9	Comb-type jumper bar IP20 (c)	PCVL	1SNA 167 681 R2200	10	
10	Jumper bar for 2 sockets (c)	BJ-VL	1SNA 167 680 R0500	10	
For plugs					
11	Pin 1 mm²	BRE-C-1	1SNA 167 264 R0700	10	
	Pin 1.5 mm²	BRE-C-1.5	1SNA 167 265 R0000	10	
	Pin 2.5 mm²	BRE-C-2.5	1SNA 167 260 R1700	10	
	Pin 4 mm²	BRE-C-4	1SNA 205 876 R0400	10	
	Pin 6 mm²	BRE-C-6	1SNA 168 146 R0200	10	
12	Pin extraction tool	EXBR1	1SNA 167 008 R0300	1	
13	Crimping tool for BRE pins	1 to 2.5mm² PSC	1SNA 173 181 R1300	1	
For test					
	Ø 4 mm test plugs				
14	IP20 with mobile protection	Red ■ FC4-1	1SNA 167 927 R1000	10	0.01
15	IP20 with permanent protection	Black ■ FC4-5	1SNA 167 931 R1400	10	0.01
		Red ■ FC4-4	1SNA 167 930 R2700	10	0.01
16	Bayonet security test plug	Black ■ FCB-1	1SNA 167 690 R0700	10	0.01
		Red ■ FCB-2	1SNA 167 692 R2500	10	0.01
17	Isolating cap for FCB plug	CA	1SNA 167 697 R2200	10	
18	Straight adaptor	IR1	1SNA 167 622 R2600	5	
19	H adaptor	IR2	1SNA 167 623 R2700	5	
20	Isolating cap for IR1 & IR2 adaptors	DI	1SNA 167 981 R1700	10	0.01
21	Adaptor between FCB plug and ring-tongue test interface	IR3	1SNA 167 624 R2000	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).

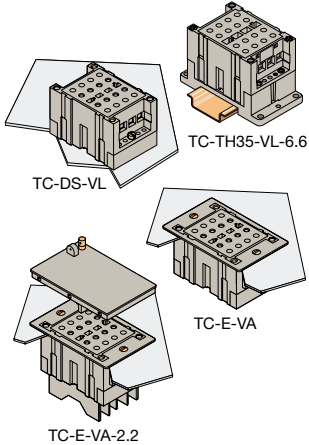
Selection guide

Mounting	Sockets	Lids	Covers	Plugs					
		CPC-1	CPC-7	FC-2/4-DIA4 Universal plug	FC-2/1-1	FC-2/4-2	FC-2/4-1	FC-2/4-R rack mounting R	FC-2/4-I reverse mounting I
TH35 Rail	CC-TH35-VL-6.6	●	●	●	●	●	●		
Base	CC-DS-VL	●	●*	●	●	●	●		
Half-base	CC-E-VA	●		●	●	●	●		
Flush	CC-D-VA	●		●	●	●	●		
Half-base	CC-D-VA	●		●	●	●	●		
Rack	CC-R-VA			●	●			●	
Reverse	CC-I-VA-2				●				●
Flush with lid	CC-E-VA-6.6			●	●	●	●		

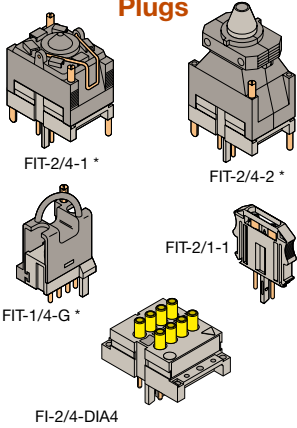
* Nota: CPC-7 compatible with CC-DS-VL socket only in "base" mounting option.



Sockets

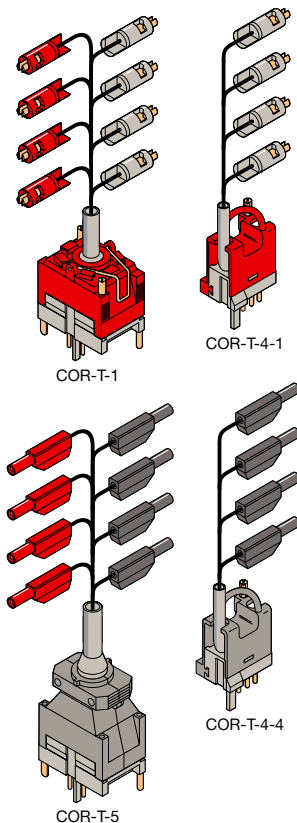


Plugs



* The BRE contacts pins are to be ordered separately

Prewired plugs



Contacts: - Make before break
- Opened
- Closed

Voltage range color code: Grey ☐
Body: Polycarbonate
Conductive parts: Silver-plated

Technical data

IEC 947-1				
		Socket		Plug
		Screw clamp (VL)	Ring-tongue (VA)	Pin BRE
Connecting capacity		0.2 - 6 mm ²		
Rigid conductor		0.22 - 4 mm ²	0.34 - 10 mm ²	
Flexible conductor		9.5 mm / .370"		
Wire stripping length				See Datasheet 1SNC 169 040 D1701
Recommended screwdriver		4 mm / .157"		
Recommended torque		0.5-0.8 Nm / 4.4-7.1 lb.in		
Width			Ø 3 mm	
Rated voltage			400 V	
Impulse withstand voltage			4 kV	
Pollution degree			3	
Rated current			8 A	
Short-circuit current			25 A/5 s - 800 A/25 ms	
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)				
TH35 rail mounting short circuited contacts	Screw	TC-TH35-VL	1 SNA 166 964 R0000	1 0.11
Half-base mounting / base mounting	Screw			
opened contacts		TO-DS-VL	1 SNA 166 741 R0400	1 0.1
short-circuited contacts		TC-DS-VL	1 SNA 166 742 R0500	1 0.1
closed contacts		TF-DS-VL	1 SNA 166 503 R2700	1
Flush mounting	R.tongue			
opened contacts		TO-E-VA	1 SNA 166 743 R0600	1
short-circuited contacts		TC-E-VA	1 SNA 166 747 R0200	1 0.14
closed contacts		TF-E-VA	1 SNA 166 745 R0000	1
Half-base mounting	R.tongue			
opened contacts		TO-D-VA	1 SNA 166 744 R0700	1
short-circuited contacts		TC-D-VA	1 SNA 166 748 R1300	1
closed contacts		TF-D-VA	1 SNA 166 746 R0100	1 0.12
Reverse mounting	R.tongue			
opened contacts		TO-I-VA-2	1 SNA 166 945 R2100	1
Flush mounting with lid	R.tongue			
short-circuited contacts and pre-coded 2.2		TC-E-VA-2.2	1 SNA 166 627 R2200	1 0.15
Other preequipped sockets: consult us				
Plugs				
Plug 2 poles with 2.5 mm ² pins		FIT-2/1-1	1 SNA 166 821 R1500	1
Plug 2x4 poles (b)		FIT-2/4-2	1 SNA 166 937 R1100	1 0.11
Plug 2x4 poles (b)		FIT-2/4-1	1 SNA 166 550 R0100	1 0.09
Plug 2x4 poles, reverse mounting I (b)		FIT-2/4-1	1 SNA 166 672 R0700	1
Plug 4 poles - insertion 1-2-3-4 (c)		FIT-1/4-G	1 SNA 166 547 R2200	1
Plug 4 poles - insertion 01-02-03-04 (c)		FIT-1/4-D	1 SNA 166 546 R2100	1
Plug 2x4 poles, with direct insertion Dia. 4 mm		FI-2/4-DIA4	1 SNA 167 936 R1100	1 0.064
Other 2 poles plugs: consult us				
Please refer to selection guide for socket compatibility				
Prewired plugs (d)				
4 poles prewired plug made of:				
1 plug 4 poles	Grey <input type="checkbox"/>	COR-T-4-1	1 SNA 166 640 R1300	1
4 bayonet security test plugs	Grey <input type="checkbox"/>	FIT-1/4-D		
		FCB..		
4 poles prewired plug made of:				
1 plug 4 poles	Grey <input type="checkbox"/>	COR-T-4-4	1 SNA 167 935 R1000	1
4 x Ø 4 mm test plugs	Black <input type="checkbox"/>	FIT-1/4-D		
		FC4-5		
2x4 poles prewired plug made of:				
1 plug 2x4 poles (pre-coded: 2.2)	Grey <input type="checkbox"/>	COR-T-1	1 SNA 166 639 R0600	1 0.87
4 bayonet security test plugs	Red <input type="checkbox"/>	FIT-2/4-1		
4 bayonet security test plugs	Grey <input type="checkbox"/>	FCB..		
		FCB..		
2x4 poles prewired plug made of:				
1 plug 2x4 poles (pre-coded: 2.2)	Grey <input type="checkbox"/>	COR-T-5	1 SNA 167 933 R1600	1 0.87
4 x Ø 4 mm test plugs	Black <input type="checkbox"/>	FIT-2/4-2		
		FC4-5		
4 x Ø 4 mm test plugs	Red <input type="checkbox"/>	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.

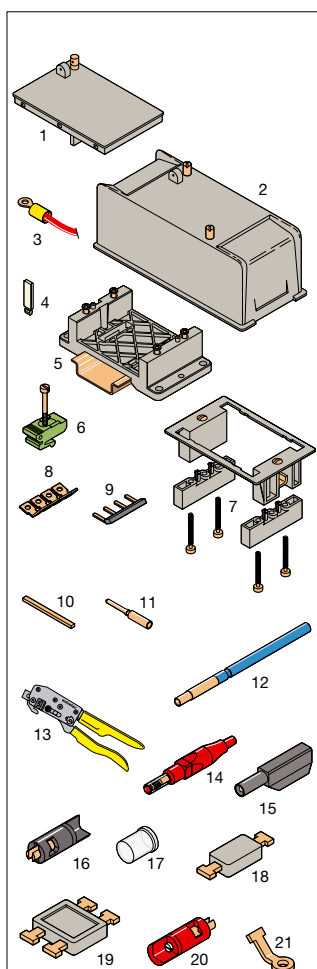
(b) Plugs supplied with 8 locking pins and 2 coding pins COP-F-1, the BRE contacts pins are to be ordered separately.

(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.

ESSAILEC®

Voltage range



Accessories

Rep. Description	Type	Order code	Packaging	Weight kg
For sockets				
1 Lid	CPT-1	1SNA 166 646 R0500	1	
Lid with electrical continuity	CPT-2	1SNA 166 577 R2000	1	
2 Cover (a)	CPT-5	1SNA 166 930 R2600	1	0.07
Cover with electrical continuity (a)	CPT-4	1SNA 166 733 R2400	1	0.08
3 Ring-tongue lug for 10 mm² wire	CS-10	1SNA 167 700 R1100	10	
4 Socket interlocking peg	CVABM	1SNA 183 436 R0500	10	
5 TH35 rail mounting kit	KEM-3	1SNA 166 962 R0000	10	0.02
6 Mounting kit for DIN 1 rail (a)	FX	1SNA 167 682 R2300	10	
7 Replacement kit for flush mounting (b)	KEM-1	1SNA 166 928 R2000	50	0.02
8 Comb-type jumper bar (b)	PCVA	1SNA 167 496 R1100	10	
9 Comb-type jumper bar IP20 (c)	PCVL	1SNA 167 681 R2200	10	
10 Jumper bar for 2 sockets (c)	BJ-VL	1SNA 167 680 R0500	10	
For plugs				
11 Pin 0.22-0.34 mm²	BRE-T-0.34	1SNA 168 160 R1400	50	
Pin 0.75 mm²	BRE-T-0.75	1SNA 167 779 R1300	50	
Pin 1 mm²	BRE-T-1	1SNA 164 921 R1700	50	
Pin 1.5 mm²	BRE-T-1.5	1SNA 164 922 R1000	50	
Pin 2.5 mm²	BRE-T-2.5	1SNA 164 923 R1100	50	
Pin 6 mm²	BRE-T-6	1SNA 168 147 R0300	50	
12 Pin extraction tool	EXBR1	1SNA 167 008 R0300	1	
13 Crimping tool for BRE pins	1 to 2.5mm² PSC	1SNA 173 181 R1300	1	
For test				
Ø 4 mm test plugs				
14 IP20 with mobile protection	Red ■ FC4-1	1SNA 167 927 R1000	10	0.01
15 IP20 with permanent protection	Black ■ FC4-5	1SNA 167 931 R1400	10	0.01
	Red ■ FC4-4	1SNA 167 930 R2700	10	0.01
16 Bayonet security test plug	Black ■ FCB-1	1SNA 167 690 R0700	10	0.01
	Red ■ FCB-2	1SNA 167 692 R2500	10	0.01
17 Isolating cap for FCB plug	CA	1SNA 167 697 R2200	10	
18 Straight adaptor	IR1	1SNA 167 622 R2600	5	
19 H adaptor	IR2	1SNA 167 623 R2700	5	
20 Isolating cap for IR1 & IR2 adaptors	DI	1SNA 167 981 R1700	10	0.01
21 Adaptor between FCB plug and ring-tongue test interface	IR3	1SNA 167 624 R2000	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	FI-2/4-DIA4 Universal plug	FIT-2/4-2	FIT-2/4-1	FIT-1/4-D	FIT-1/4-G	FIT-2/4-I reverse mounting I	
TH35 Rail	TC-TH35-VL	●	●	●	●	●	●	●	●	●		
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.

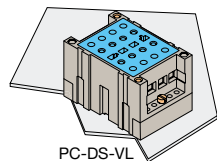
(●) Compatible with some restrictions, please consult us.

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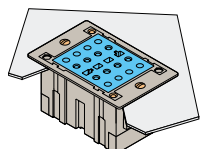
Polarity range



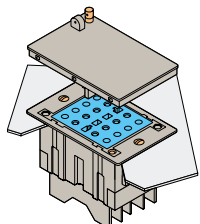
Sockets



PC-DS-VL

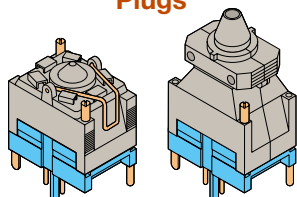


PC-E-VA



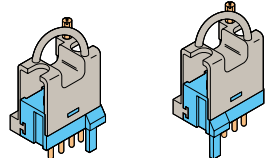
PC-E-VA-8.8

Plugs



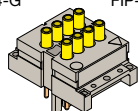
FIP-2/4-1 *

FIP-2/4-2 *



FIP-1/4-G *

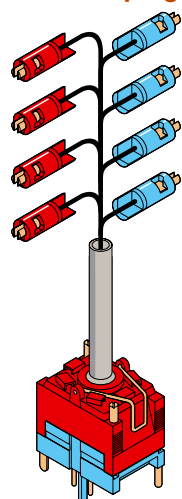
FIP-1/4-D *



FI-2/4-DIA4

* The BRE contacts pins are to be ordered separately

Prewired plugs



COR-P-1

Contacts: - Make before break
- Opened
- Closed

Polarity range color code: Blue ■
Body: Polycarbonate
Conductive parts: Silver-plated

Technical data

	IEC		
	Socket	Ring-tongue (VA)	Plug Pin BRE
Connecting capacity	Screw clamp (VL)		
	Rigid conductor Flexible conductor	0.2 - 6 mm ² 0.22 - 4 mm ²	0.34 - 10 mm ²
Wire stripping length		9.5 mm / .370"	
			See Datasheet 1SNC 169 040 D1701
Recommended screwdriver		4 mm / .157"	
Recommended torque		0.5-0.8 Nm / 4.4-7.1 lb.in	
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		25 A/5 s - 800 A/25 ms	
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	PO-DS-VL	1SNA 166 757 R0400	1	
short-circuited contacts	PC-DS-VL	1SNA 166 758 R1500	1	
closed contacts	PF-DS-VL	1SNA 166 506 R2200	1	
Flush mounting	R.tongue			
opened contacts	PO-E-VA	1SNA 166 759 R1600	1	
short-circuited contacts	PC-E-VA	1SNA 166 763 R0200	1	
closed contacts	PF-E-VA	1SNA 166 761 R0000	1	
Half-base mounting	R.tongue			
opened contacts	PO-D-VA	1SNA 166 760 R1300	1	
short-circuited contacts	PC-D-VA	1SNA 166 764 R0300	1	
closed contacts	PF-D-VA	1SNA 166 762 R0100	1	
Flush mounting with lid	R.tongue			
short-circuited contacts and precoded 8.8	PC-E-VA-8.8	1SNA 166 630 R0100	1	
Other preequipped sockets: consult us				
Plugs				
Plug 2x4 poles (b)	FIP-2/4-2	1SNA 166 939 R2300	1	0.11
Plug 2x4 poles (b)	FIP-2/4-1	1SNA 166 559 R0600	1	0.09
Plug 4 poles - insertion 1-2-3-4 (c)	FIP-1/4-G	1SNA 166 556 R2300	1	
Plug 4 poles - insertion 01-02-03-04 (c)	FIP-1/4-D	1SNA 166 555 R2200	1	
Plug 2x4 poles, with direct insertion Dia. 4 mm	FI-2/4-DIA4	1SNA 167 936 R1100	1	0.064
Please refer to selection guide for socket compatibility				
Prewired plugs (d)				
2x4 poles prewired plug (precoded 8.8) made of:	COR-P-1	1SNA 166 642 R0100	1	0.87
1 plug 2x4 poles	Blue ■ FIP-2/4-1			
4 bayonet security test plugs	Red ■ FCB..			
4 bayonet security test plugs	Blue ■ FCB..			

(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).

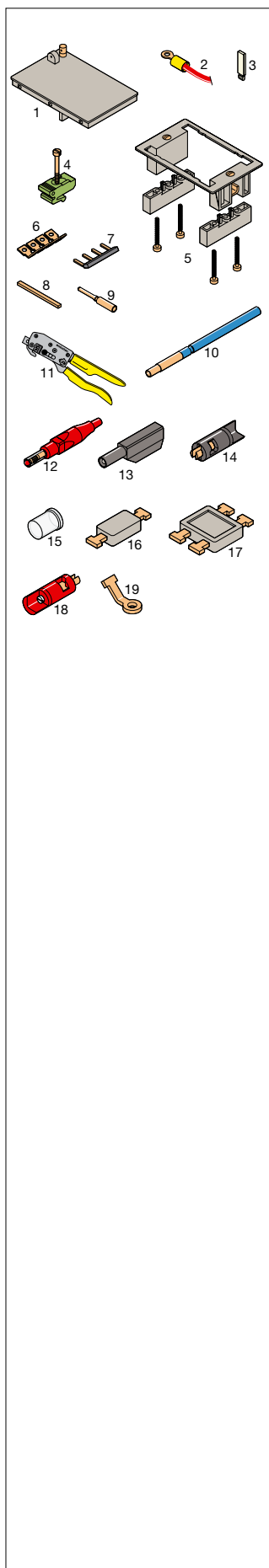
(b) Plugs supplied with 8 locking pins and 2 coding pins COP-F-1, the BRE contacts pins are to be ordered separately.

(c) Plugs supplied with 4 locking pins, the BRE contacts pins are to be ordered separately.

(d) Prewired plug cable length: 2 m / 6.6' - Wire section 2.5 mm²

ESSAILEC®

Polarity range



Accessories

Rep. Description	Type	Order code	Packaging	Weight kg
For sockets				
1 Lid	CPP-1	1SNA 166 647 R0600	1	
Lid with electrical continuity	CPP-2	1SNA 166 645 R0400	1	
2 Ring-tongue lug for 10 mm² wire	CS-10	1SNA 167 700 R1100	10	
3 Socket interlocking peg	CVABM	1SNA 183 436 R0500	10	
4 Mounting kit for DIN 1 rail (a)	FX	1SNA 167 682 R2300	10	
5 Replacement kit for flush mounting (b)	KEM-1	1SNA 166 928 R2000	50	0.02
6 Comb-type jumper bar (b)	PCVA	1SNA 167 496 R1100	10	
7 Comb-type jumper bar IP20 (c)	PCVL	1SNA 167 681 R2200	10	
8 Jumper bar for 2 sockets (c)	BJ-VL	1SNA 167 680 R0500	10	
For plugs				
9 Pin 0.22-0.34 mm²	BRE-T-0.34	1SNA 168 160 R1400	50	
Pin 0.75 mm²	BRE-T-0.75	1SNA 167 779 R1300	50	
Pin 1 mm²	BRE-T-1	1SNA 164 921 R1700	50	
Pin 1.5 mm²	BRE-T-1.5	1SNA 164 922 R1000	50	
Pin 2.5 mm²	BRE-T-2.5	1SNA 164 923 R1100	50	
Pin 6 mm²	BRE-T-6	1SNA 168 147 R0300	50	
10 Pin extraction tool	EXBR1	1SNA 167 008 R0300	1	
11 Crimping tool for BRE pins	1 to 2.5mm² PSC	1SNA 173 181 R1300	1	
For test				
Ø 4 mm test plugs				
13 IP20 with mobile protection	Red ■ FC4-1	1SNA 167 927 R1000	10	0.01
14 IP20 with permanent protection	Black ■ FC4-5	1SNA 167 931 R1400	10	0.01
	Red ■ FC4-4	1SNA 167 930 R2700	10	0.01
14 Bayonet security test plug	Black ■ FCB-1	1SNA 167 690 R0700	10	0.01
	Red ■ FCB-2	1SNA 167 692 R2500	10	0.01
15 Isolating cap for FCB plug	CA	1SNA 167 697 R2200	10	
16 Straight adaptor	IR1	1SNA 167 622 R2600	5	
17 H adaptor	IR2	1SNA 167 623 R2700	5	
18 Isolating cap for IR1 & IR2 adaptors	DI	1SNA 167 981 R1700	10	0.01
19 Adaptor between FCB plug and ring-tongue test interface	IR3	1SNA 167 624 R2000	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

		Lids		Plugs			
		CPP-1	CPP-2	FI-2/4-D/A4	FIP-2/4-2	FIP-2/4-1	FIP-1/4-D
Mounting	Sockets						
Base Half-base	PO-DS-VL		●	●	(●)	(●)	●
	PC-DS-VL	●		●	●	●	(●)
	PF-DS-VL	●		●			●
Flush	PO-E-VA		●	●	(●)	(●)	●
	PC-E-VA	●		●	●	●	(●)
	PF-E-VA	●		●			●
Half-base	PO-D-VA		●	●	(●)	(●)	●
	PC-D-VA	●		●	●	●	(●)
	PF-D-VA	●		●			●
Flush with lid	PC-E-VA-2.2				●	●	

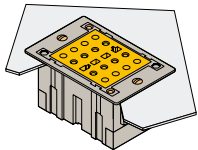
(●) Compatible with some restrictions, please consult us.

ESSAILEC®

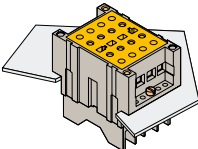
Trip range



Sockets

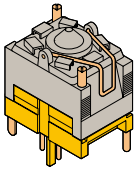


DEO-E-VA

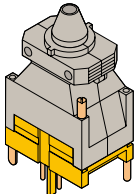


DEO-D-VA
DEF-D-VA

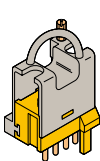
Plugs



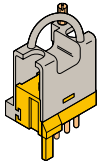
FIDE-2/4 *



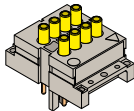
FIDE-2/4-2 *



FIDE-1/4-G *



FIDE-1/4-D *



FI-2/4-DIA4 *

* The BRE contacts pins are to be ordered separately

Contacts: - Opened
 - Closed

Trip range color code: Orange ■
Body: Polycarbonate
Conductive parts: Silver-plated

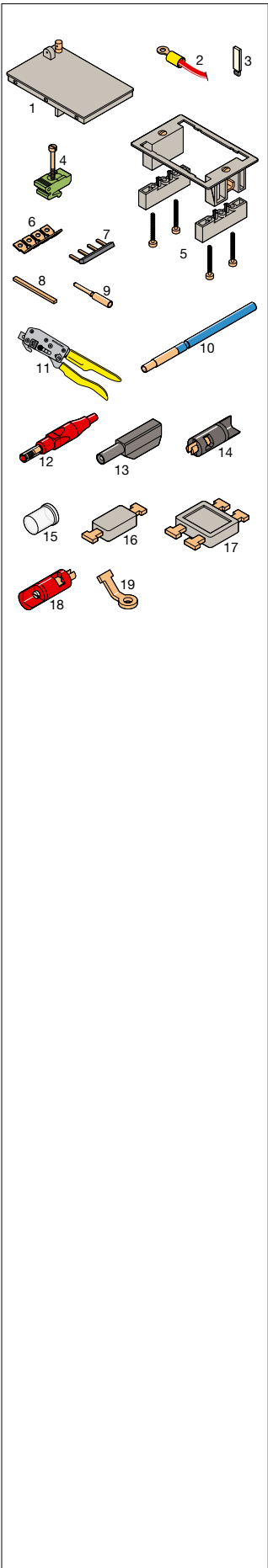
Technical data

		IEC		Plug Pin BRE
		Socket Screw clamp (VL)	Ring-tongue (VA)	
Connecting capacity	Rigid conductor	0.2 - 6 mm ²		
	Flexible conductor	0.22 - 4 mm ²	0.34 - 10 mm ²	
Wire stripping length		9.5 mm / .370"		See Datasheet 1SNC 169 040 D1701
wire 0.22 - 0.34 mm ²				
wire 0.75 - 6 mm ²				
Recommended screwdriver		4 mm / .157"		
Recommended torque		0.5-0.8 Nm / 4.4-7.1 lb.in		
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			25 A/5 s - 800 A/25 ms	
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)					
Flush mounting	R.tongue				
opened contacts		DEO-E-VA	1SNA 166 878 R0600	1	
Half-base mounting	R.tongue				
opened contacts		DEO-D-VA	1SNA 166 874 R2200	1	
closed contacts		DEF-D-VA	1SNA 166 896 R1100	1	
Other sockets: consult us					
Plugs					
Plug 2x4 poles (b)	FIDE-2/4	1SNA 166 877 R2500		1	0.09
Plug 2x4 poles (b)	FIDE-2/4-2	1SNA 166 943 R2700		1	0.11
Plug 4 poles - insertion 1-2-3-4 (c)	FIDE-1/4-G	1SNA 166 898 R2300		1	
Plug 4 poles - insertion 01-02-03-04 (c)	FIDE-1/4-D	1SNA 166 897 R1200		1	
Plug 2x4 poles, with direct insertion Dia. 4 mm	FI-2/4-DIA4	1SNA 167 936 R1100		1	0.064

(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).
(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.



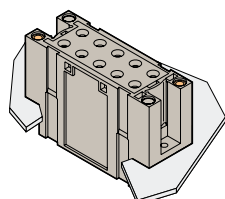
Accessories

Rep. Description	Type	Order code	Packaging	Weight kg
For sockets				
1 Lid	CPDE-1	1SNA 166 876 R2400	1	
Lid with electrical continuity	CPDE-2	1SNA 166 926 R1600	1	
2 Ring-tongue lug for 10 mm² wire	CS-10	1SNA 167 700 R1100	10	
3 Socket interlocking peg	CVABM	1SNA 183 436 R0500	10	
4 Mounting kit for DIN 1 rail (a)	FX	1SNA 167 682 R2300	10	
5 Replacement kit for flush mounting (b)	KEM-1	1SNA 166 928 R2000	50	0.02
6 Comb-type jumper bar (b)	PCVA	1SNA 167 496 R1100	10	
7 Comb-type jumper bar IP20 (c)	PCVL	1SNA 167 681 R2200	10	
8 Jumper bar for 2 sockets (c)	BJ-VL	1SNA 167 680 R0500	10	
For plugs				
9 Pin 0.22-0.34 mm²	BRE-T-0.34	1SNA 168 160 R1400	50	
Pin 0.75 mm²	BRE-T-0.75	1SNA 167 779 R1300	50	
Pin 1 mm²	BRE-T-1	1SNA 164 921 R1700	50	
Pin 1.5 mm²	BRE-T-1.5	1SNA 164 922 R1000	50	
Pin 2.5 mm²	BRE-T-2.5	1SNA 164 923 R1100	50	
Pin 6 mm²	BRE-T-6	1SNA 168 147 R0300	50	
10 Pin extraction tool	EXBR1	1SNA 167 008 R0300	1	
11 Crimping tool for BRE pins	1 to 2.5mm² PSC	1SNA 173 181 R1300	1	
For test				
Ø 4 mm test plugs				
12 IP20 with mobile protection	Red ■ FC4-1	1SNA 167 927 R1000	10	0.01
13 IP20 with permanent protection	Black ■ FC4-5	1SNA 167 931 R1400	10	0.01
	Red ■ FC4-4	1SNA 167 930 R2700	10	0.01
14 Bayonet security test plug	Black ■ FCB-1	1SNA 167 690 R0700	10	0.01
	Red ■ FCB-2	1SNA 167 692 R2500	10	0.01
15 Isolating cap for FCB plug	CA	1SNA 167 697 R2200	10	
16 Straight adaptor	IR1	1SNA 167 622 R2600	5	
17 H adaptor	IR2	1SNA 167 623 R2700	5	
18 Isolating cap for IR1 & IR2 adaptors	DI	1SNA 167 981 R1700	10	0.01
19 Adaptor between FCB plug and ring-tongue test interface	IR3	1SNA 167 624 R2000	10	

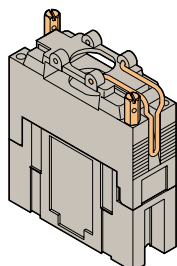
(a) Compatible with base mounting only.
(b) Compatible with ring-tongue connection type socket only (VA).
(c) Compatible with screw connection type socket only (VL).



Sockets

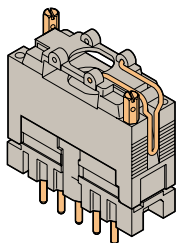


M10-D-C5A

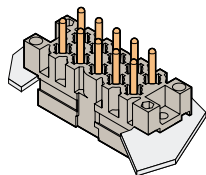


M10-I-C5A-1

Plugs

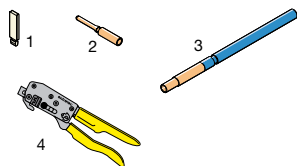


FIM10-1 *



FIM10-I-1 *

* The BRT contacts pins are to be ordered separately



Application:
High density panel board wiring.
Alternative to large terminal strips.

Body: Polycarbonate
Conductive parts: Silver-plated

Technical data

		IEC	
		Socket	Plug
		Quick-connect (C5A)	Pin BRE
Connecting capacity			
	Rigid conductor		
	Flexible conductor	2.5 mm ²	
Wire stripping length			See Datasheet 1SNC 169 040 D1701
	wire 0.22 - 0.34 mm ²		
	wire 0.75 - 6 mm ²		
Quick-connect		5 x 0.8 mm	
Rated voltage		400 V	
Impulse withstand voltage		4 kV	
Pollution degree		3	
Rated current		8 A	
Short-circuit current		25 A/5 s - 800 A/25 ms	
Storage temperature range		-25 °C ~ +70 °C	
Working temperature range		-10 °C ~ +55 °C	
Front panel protection		IP 20	

Ordering details

Description	Type	Order code	Packaging	Weight kg
Sockets				
Half-base mounting	Q-connect	M10-D-C5A 1SNA 166 513 R1000	10	0.06
Rack mounting	Q-connect	M10-R-C5A 1SNA 166 566 R2500	10	
Reverse mounting	Q-connect	M10-I-C5A-1 1SNA 166 774 R0500	10	
Reverse mounting	Q-connect	M20-I-C5A 1SNA 166 777 R0000	1	
Extension mounting	Q-connect	M10-P-C5A 1SNA 166 772 R0300	1	
Other sockets: consult us				
Plugs				
Plug for M10-D-C5A socket	FIM10-1	1SNA 166 516 R1300	10	0.06
Plug for M10-R-C5A socket	FIM10-R	1SNA 166 573 R2400	1	
Plug for M10-I-C5A-1 socket	FIM10-I-1	1SNA 166 574 R2500	1	
Plug for M20-I-C5A socket	FIM20-I	1SNA 166 576 R2700	1	

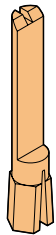
The various accessories necessary for each mounting option are supplied with the socket as well as the 2 coding pins COP-E-1 (see coding section).

Accessories

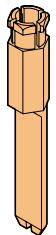
Rep. Description	Type	Order code	Packaging	Weight kg
For sockets				
1 Socket interlocking peg	CVABM	1SNA 183 436 R0500	10	
For plugs				
2 Pin 0.22-0.34 mm ²	BRE-T-0.34	1SNA 168 160 R1400	50	
Pin 0.75 mm ²	BRE-T-0.75	1SNA 167 779 R1300	50	
Pin 1 mm ²	BRE-T-1	1SNA 164 921 R1700	50	
Pin 1.5 mm ²	BRE-T-1.5	1SNA 164 922 R1000	50	
Pin 2.5 mm ²	BRE-T-2.5	1SNA 164 923 R1100	50	
Pin 6 mm ²	BRE-T-6	1SNA 168 147 R0300	50	
3 Pin extraction tool	EXBR1	1SNA 167 008 R0300	1	
4 Crimping tool for BRE pins	1 to 2.5mm ² PSC	1SNA 173 181 R1300	1	

ESSAILEC®

Coding

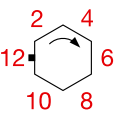


COP-E-1

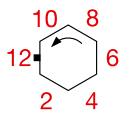


COP-FI-1

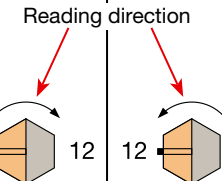
Socket



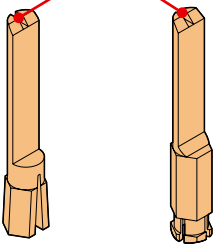
Plug

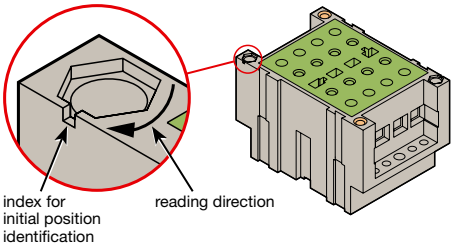


Reading direction

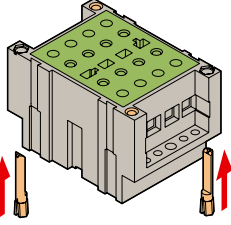
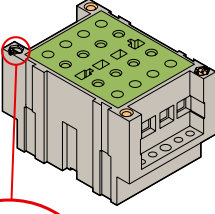


Coding pins index



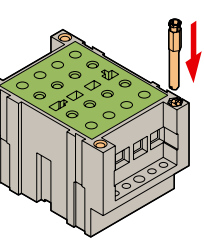
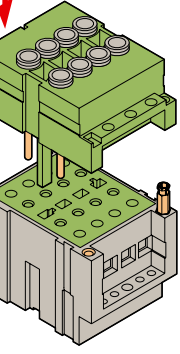
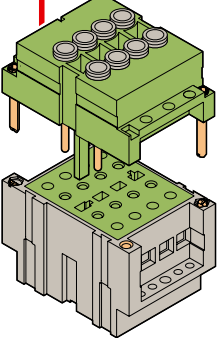


On socket:

- 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:

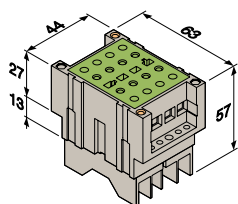
In order to guarantee a perfect compatibility between the socket coding and the plug coding, the following must be done:

- 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.
- 
- 
- 

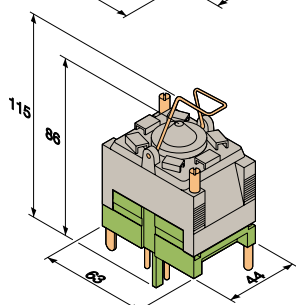
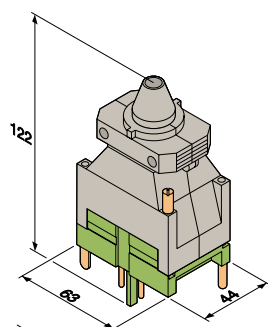
Description	Type	Order code	Packaging	Weight kg
Socket coding pin	COP-E-1	1SNA 167 379 R1200	10	
Plug coding pin	COP-FI-1	1SNA 167 378 R1100	10	
Supplied with sockets and plugs				

Outer dimensions, mounting instructions

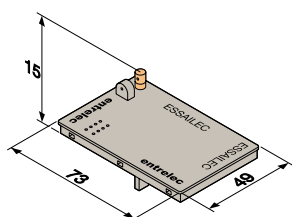
Socket



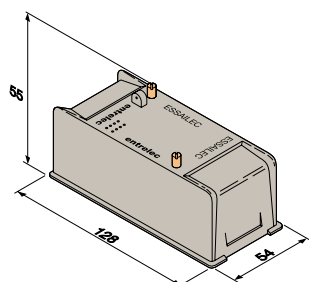
Plugs



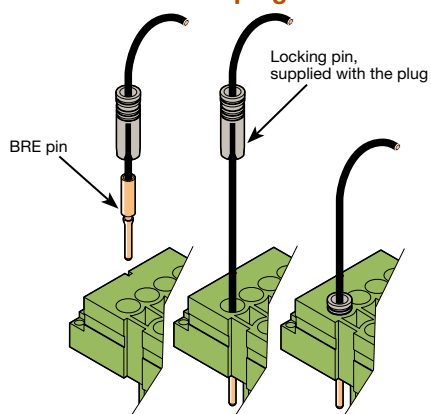
Lid



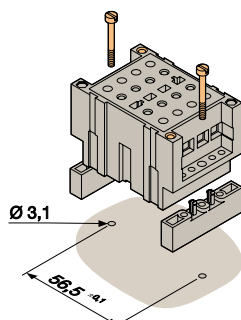
Cover



Pin installation on plug



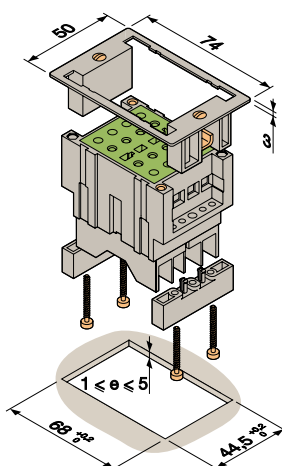
Base mounting



0.5 Nm < Tightening torque < 0.8 Nm

Flush mounting

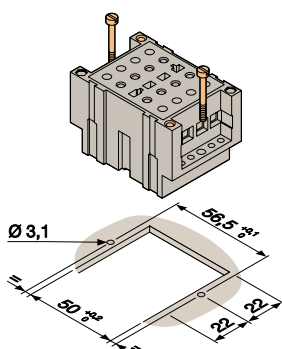
The flush mounting kit must be mounted on the socket prior to the installation on the panel.



Tightening torque = 0.5 Nm maxi.

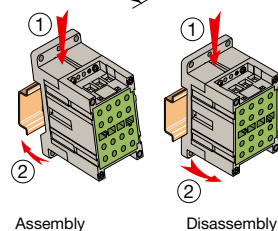
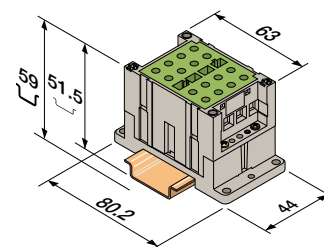
Half-base mounting
Rack mounting

The rack mounting is supplied with 2 additional guiding pins.



0.5 Nm < Tightening torque < 0.8 Nm

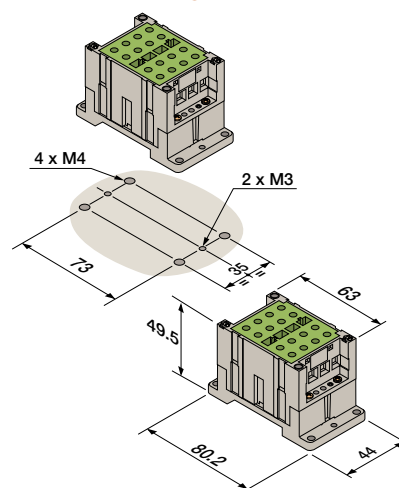
TH35 rail mounting



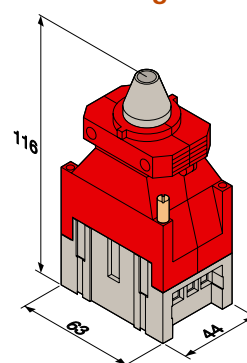
Assembly

Disassembly

Base mounting with KEM-3



Reverse mounting



G32 rail mounting

