



**ELECTRIC MATERIAL
OF SAFETY
FOR RAILWAY INSTALLATIONS**



OFFICE AND WAREHOUSE

C/ Thomas Alva Edison, 16-17
Pol. Industrial Plans d'Arau
08787 La Pobla de Claramunt (Barcelona) Spain

FACTORY

C/ Thomas Alva Edison, 12-13
Pol. Industrial Plans d'Arau
08787 La Pobla de Claramunt (Barcelona) Spain

CUSTOMER SERVICE

Tel. +34 93 808 79 80
export@sofamel.es

www.sofamel.com

Sofamel S.L. is a Spanish company dedicated to the production of electrical material of connection as well as safety and electrical protection material.

Sofamel's main objective has been to reach a high degree of specialization with the aim of providing a global solution for our clients. The same backed up by strict quality standards and by important investments in machinery and design for the manufacturing of all those products that our factory produces. This has allowed us to offer one of the most extensive ranges of articles that exists on the market.

Our commitment with excellent quality work allows our company to own the quality management system certificate under standard UNE-EN ISO 9001:2015 and R+D+i certificate under standard UNE 166002:2006, both duly granted by the Spanish Association for Standardization and Certification (AENOR).







index

SAFETY ELECTRICAL EQUIPMENT FOR RAILWAY INSTALLATIONS

Earthing equipment for catenaries	12
Earthing equipment for urban transport	14
Earthing equipment for traction substations	16
Personal protection equipment	34
Isolation	45
Insulating poles	55
AC and DC detectors	71
Rescue kits for substations	80
Padlocks	84
Signalization	92

ORDER NUMBER INDEX	99-100
--------------------	--------

12-13

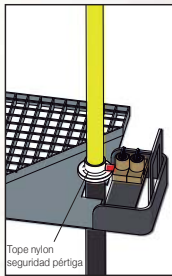
Catenary equipment
or double catenary



TTR
Earthing lathe

55-70

42 / 5.000
Telescopic pole
of multiple sections



Example lockdown with
key.

Optional
Catenary pole with
handle to be used
next to the rail.
(cod. T-615019)



71-79

DC and AC voltage
detectors

Catenaries



34-40

Insulated gloves

41-44

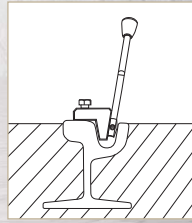
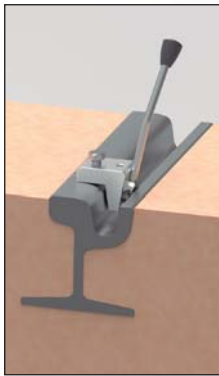
Safety helmets
electric

45-48

Boots and overboots
dielectrics

14-15

Integrated earthing equipment for urban transport



TTIR
Earthing lathe for tram



71-79

DC voltage detectors



55-70

Telescopic pole of multiple sections

Urban transport



34-40

Insulated gloves



41-44

Safety helmets
electric



45-48

Boots and overboots
dielectrics

16-24

Substation Equipment
and medium voltage overhead lines



25-33

Substation Equipment
and airlines high



71-79

CA voltage detectors



49

Insulating mat



50-51

Insulating stool

Electrical substations traction



80-82

Rescue panoplies



84-97

Padlocks, signalization
and beacons

55-70

Telescopic pole
of multiple sections



83

Manoeuvring and rescue kit

Earthing & Short Circuit Protection Equipment

Safety

Catenary earthing equipment

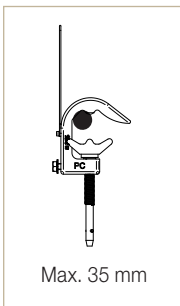
666 PATF-PC

Integrated earthing equipment for railway system catenaries and double catenaries. With one PC clamp to enable earthing of lines for repair work.

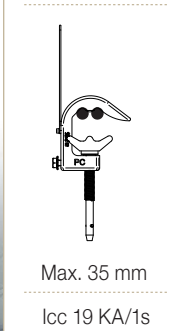
According to IEC 61230 standard.



PC
Medium voltage clamp



Max. 35 mm

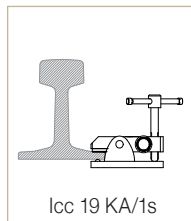


Max. 35 mm

lcc 19 KA/1s



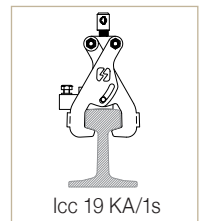
TTR
Earth lathe



lcc 19 KA/1s



TTSR
Earth lathe



lcc 19 KA/1s

Composed of:

- 1 PC aluminium alloy clamps with screw tighten for cylindrical conductors with diameter 35 max.
- 1 copper cables with PVC insulation of 50 mm² section and 7 m of length.
- 1 TTRS or TTR or TTIR milling earthing lathe.
- 1 nylon bags to store and transport the equipment.

Code	Ref.	Short circuit current ICC Max.
666120	PATF-PC-TTR	12 KA/1s
666130	PATF-PC-TTSR	

Earthing & Short Circuit Protection Equipment

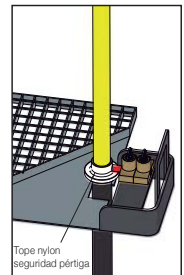
Safety

Catenary earthing equipment

666 PATF-PDC

Integrated earthing equipment for railway system catenaries, double catenaries and rigid catenary. With one PDC clamp to enable earthing of lines for repair work.

According to IEC 61230 standard.

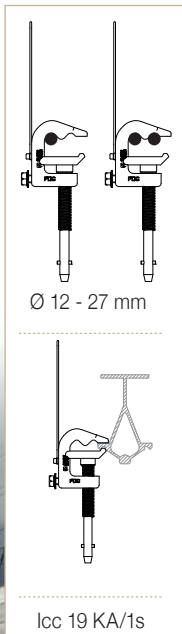


Example lockdown with key.

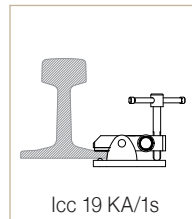
◀ **Optional**
Catenary pole with handle to be used next to the rail. (cod. T-615019)



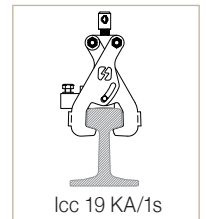
PDC
Medium voltage clamp



TTR
Earth lathe



TTSR
Earth lathe



Composed of:

- 1 PDC aluminium alloy clamps with screw tighten and bayonet for cylindrical conductors with diameter between 12 and 27 mm.
- 1 copper cables with PVC insulation of 50 mm² section and 7 m of length.
- 1 TTRS or TTR or TTIR milling earthing lathe.
- 1 nylon bags to store and transport the equipment

Code	Ref.	Short circuit current ICC Max.
666140	PATF-PDC-TTR	12 KA/1s
666150	PATF-PDC-TTSR	

Earthing & Short Circuit Protection Equipment

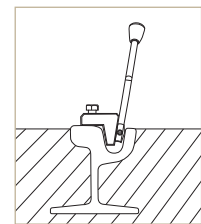
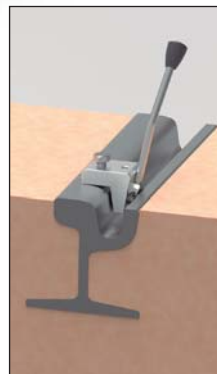
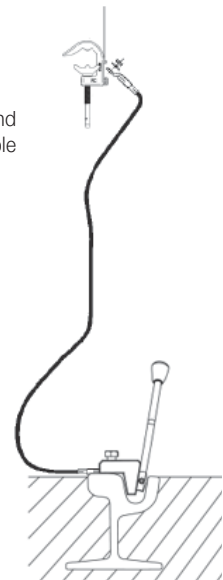
Safety

Buried rail equipment

666 PATF-PC-TTIR

Integrated earthing equipment for underground tramway rails. With one PC clamp to enable earthing of lines for repair work.

According to IEC 61230 standard.

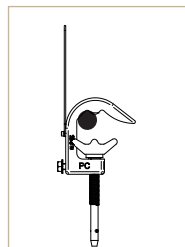


Icc 19 KA/1s

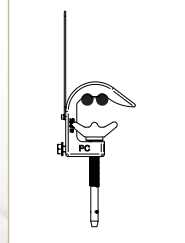
TTIR
Earth lathe



PC
Medium voltage clamp



Max. 35 mm



Max. 35 mm

Icc 19 KA/1s

Composed of:

- 1 PC aluminium alloy clamps with screw tighten for cylindrical conductors with diameter 35 max.
- 1 copper cables with PVC insulation of 50 mm² section and 7 m of length.
- 1 TTIR milling earthing lathe.
- 1 nylon bags to store and transport the equipment.

Code	Ref.	Short circuit current ICC Max.
666110	PATF-PC-TTIR	13 KA/1s

Earthing & Short Circuit Protection Equipment

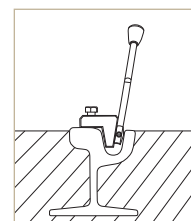
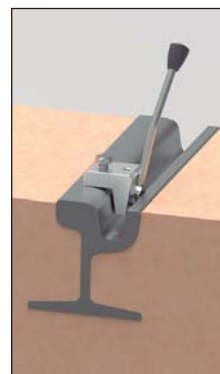
Safety

Buried rail equipment

666 PATF-PDC-TTIR

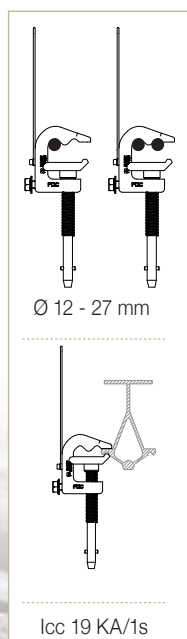
Integrated earthing equipment for underground tramway rails. With one PDC clamp to enable earthing of lines for repair work.

According to IEC 61230 standard.



Icc 19 KA/1s

TTIR
Earth lathe



Ø 12 - 27 mm

Icc 19 KA/1s



PDC
Medium voltage clamp

Composed of:

- 1 PDC aluminium alloy clamps with screw tighten and bayonet for cylindrical conductors with diameter between 12 and 27 mm.
- 1 copper cables with PVC insulation of 50 mm² section and 7 m of length.
- 1 TTIR milling earthing lathe.
- 1 nylon bags to store and transport the equipment

Code	Ref.	Short circuit current ICC Max.
666160	PATF-PDC-TTIR	13 KA/1s

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage overhead lines - Screw clamps



661 PATL-MPUB

Earthing and short-circuit equipment for medium voltage overhead lines.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

The MPUB clamp is fixed on bare conductors by screw-tightening. This equipment has got a MPUP clamp (carrier) which facilitates the lifting and placing of the three clamps at the same time reducing installation time considerably.

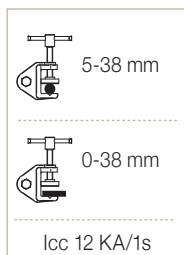
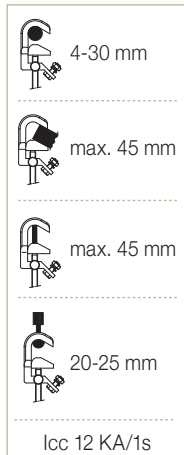
According to IEC 61230 standard.



MPUB
Medium voltage clamp



TT-38A
Earthing lathe



Composed of:

- 2 MPUB aluminium alloy clamps with screw tighten for cylindrical conductors with diameter between 4 and 30 mm.
- 1 MPUP aluminium alloy clamp (carrier) with screw tighten for cylindrical conductors with diameter between 4 and 30 mm.
- 2 copper cables with PVC insulation of 16/25/35 mm² section depending on model and 2.5 m long.
- 1 copper cable with PVC insulation of 16/16/25 mm² section depending on model and 15 m long.
- 1 TT-38A milling earthing lathe.
- 1 earthing rod.
- 1 telescopic pole (1.10 m folded and 2 m extended).
- 1 plastic case to store and transport the equipment.
- 1 bag to store and transport the pole and the earthing rod.

Code	Ref.	Short circuit current Max. ICC
660290	PATL-MPUB/1616	4.0 KA/1s
660300	PATL-MPUB/2516	6.9 KA/1s
660310	PATL-MPUB/3525	9.0 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage overhead lines - Screw clamps

662 PATL-MPLB

Earthing and short-circuit equipment for medium voltage overhead lines.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

The MPL clamp is fixed on bare conductors by screw-tightening. This equipment has got a MPLP clamp (carrier) which facilitates the lifting and placing of the three clamps at the same time reducing installation time considerably.

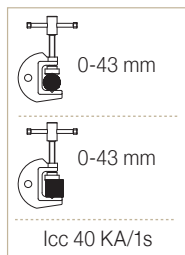
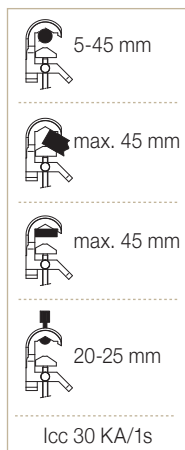
According to IEC 61230 standard.



MPL
Medium voltage clamp



TT-50
Earthing lathe



Composed of:

- 2 MPL aluminium alloy clamps with screw tighten for cylindrical conductors with diameter between 5 and 45 mm.
- 1 MPLP aluminium alloy clamp (carrier) with screw tighten for cylindrical conductors with diameter between 5 and 45 mm.
- 2 copper cables with PVC insulation of 70 mm² section and 2.5 m long.
- 1 copper cable with PVC insulation of 70 mm² section and 15 m long.
- 1 TT-50 milling earthing lathe.
- 1 earthing rod.
- 1 telescopic pole (1.10 m folded and 2 m extended).
- 1 bag to store and transport the equipment.
- 1 bag to store and transport the pole and the earthing rod.

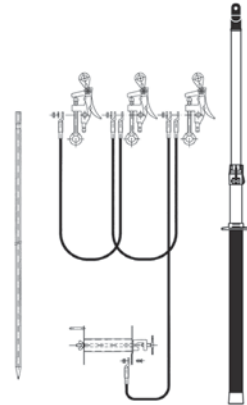
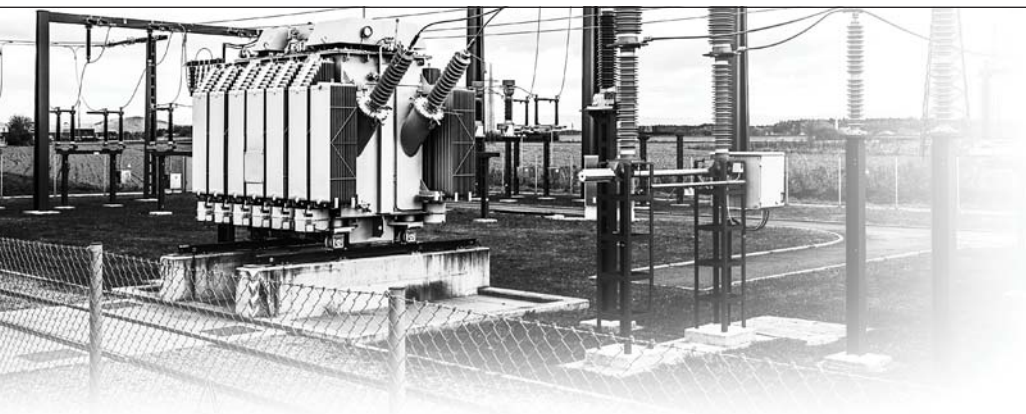
Code	Ref.	Short circuit current Max. ICC
665285	PATL-MPLB/7070	19 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage overhead lines - Automatic Clamps



661 PATL-PCA25-3

3 clamps

Earthing and short-circuit equipment for medium voltage overhead lines.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

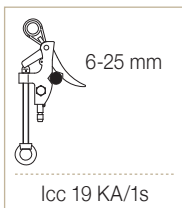
The PCA25 clamp is fixed on bare conductors by pressure and can be removed by an operation hook. The three clamps can be placed at the same time thanks to the dispenser head facilitating operator's work. The new PCA-25 clamp grants an easy and secure installation.

According to IEC 61230 standard.



Composed of:

- 3 PCA-25 aluminium alloy clamps with automatic activation fastening and final mechanical fixing for cylindrical conductors with diameter between 6 and 25 mm.
- 1 dispenser head with hook with M-10 thread.
- 2 copper cables with PVC insulation of 16/25/35 mm² section (depending on model) and 2.5 m long.
- 1 copper cable with PVC insulation of 16/16/25 mm² section (depending on model) and 15 m long.
- 1 metallic spool to store the 15 m of earthing cable.
- 1 telescopic pole (1.10 m folded and 2 m extended).
- 1 earthing rod.
- 1 plastic case to store and transport the equipment.
- 1 bag to store and transport the pole and the earthing rod.



PP-3U
Clamb dispenser



PCA-25
Medium voltage clamp

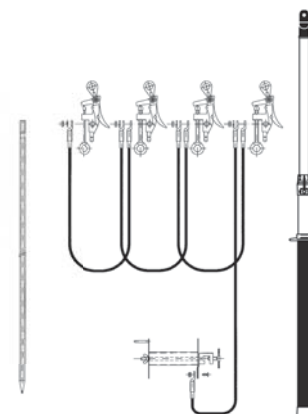
Code	Ref.	Short circuit current Max. ICC
660250	PATL-PCA25-3/1616	4.0 KA/1s
660260	PATL-PCA25-3/2516	6.9 KA/1s
660270	PATL-PCA25-3/3525	9.0 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage overhead lines - Automatic Clamps



661 PATL-PCA25-4

4 clamps

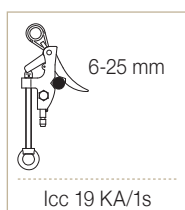
Earthing and short-circuit equipment for medium voltage overhead lines.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

The PCA25 clamp is fixed on bare conductors by pressure and can be removed by an operation hook. The three clamps can be placed at the same time thanks to the dispenser head facilitating operator's work.

The new PCA-25 clamp grants an easy and secure installation.

According to IEC 61230 standard.



PP-4U
Clamb dispenser



PCA-25
Medium voltage clamp

Composed of:

- 4 PCA-25 aluminium alloy clamps with automatic activation fastening and final mechanical fixing for cylindrical conductors with diameter between 6 and 25 mm.
- 1 dispenser head with hook with M-10 thread.
- 3 copper cables with PVC insulation of 16/25/35 mm² section (depending on model) and 2.5 m long.
- 1 copper cable with PVC insulation of 16/16/25 mm² section (depending on model) and 15 m long.
- 1 metallic spool to store the 15 m of earthing cable.
- 1 telescopic pole (1.10 m folded and 2 m extended).
- 1 earthing rod.
- 1 plastic bag to store and transport the equipment.
- 1 bag to store and transport the pole and the earthing rod.

Code	Ref.	Short circuit current Max. ICC
660280	PATL-PCA25-4/1616	4.0 KA/1s
660281	PATL-PCA25-4/2516	6.9 KA/1s
660282	PATL-PCA25-4/3525	9.0 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

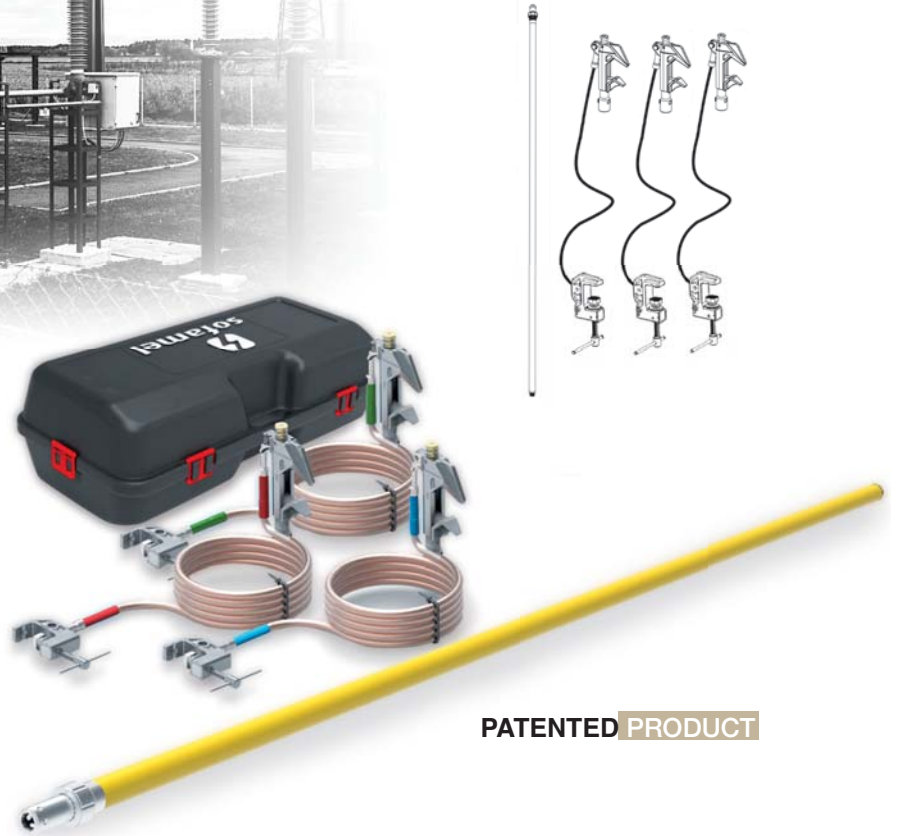
High voltage overhead lines



662 PATL-MPS/9510

Earthing and short-circuit equipment for high overhead lines.

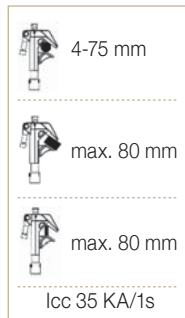
The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations with the control of the manipulation of all the components of the equipment through independent keys, thus preventing third parties from manipulating safety.



PATENTED PRODUCT



MPS
High voltage clamp



The clamps can be fixed to cylindrical conductors, flat bars or flexible distribution bars or fixing points by means of screw tightening. Short-circuit current 31.5kA (Cable 120mm²).
Perform the entire maneuver with a single pole.

Sequence:

- 1. Earthing lathe lock
- 2. clamp lock
- 3. Key recovery
- 4. Repeat until you have all three phases set and locked

Composed of:

- 3 MPS aluminum alloy clamps with screw tighten for cylindrical conductors with a diameter between 4 and 75 mm; flat bars of max. 80mm and bars flexible distribution of max. 80mm
- 3 copper cables with PVC insulation of 95 mm² section and 10 m length.
- 1 special pole of 2.7 m with key mechanism.
- 3 earthing lathes with key lock.
- 3 independently coded keys.
- 3 latch bolt locker.
- 1 plastic case to store and transport the equipment.
- 1 bag to store and transport the pole.



TTS
Earthing lathe



Keys safety station
(not included)

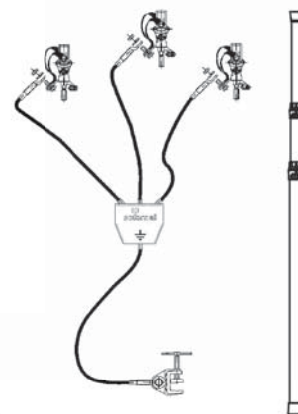
Code	Ref.	Short circuit current Max. ICC
676010	PATL-MPS/9510	25 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage substations - Steerable clamps



662 PATC-5014H

Earthing and short-circuit equipment for medium voltage substations.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

The 5014H clamp is perfect for difficult access areas. The clamp can be adjusted depending on the required inclination thanks to its multi-directional head system.

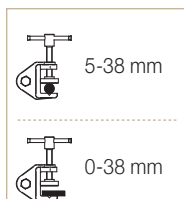
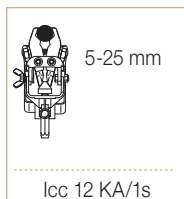
According to IEC 61230 standard.



5014H
Medium voltage clamp



TT-38A
Earthing lathe



Composed of:

- 3 5014H brass steerable clamps with screw tighten and Hexagonal-12 fixing for cylindrical conductors with diameter between 5 and 25 mm.
- 3 copper cables with PVC insulation of 25/35/50 mm² section (depending on model) and 0.75 m long.
- 1 copper cable with PVC insulation of 25/35/50 mm² section (depending on model) and 2 m long.
- 1 insulated trifurcating connector.
- 1 TT-38A milling earthing lathe.
- 1 1.5 m telescopic pole with three sections.
- 1 plastic case to store and transport the equipment.

Code	Ref.	Short circuit current Max. ICC
665250	PATC-5014H/2525	6.9 KA/1s
665255	PATC-5014H/3535	9.0 KA/1s
665260	PATC-5014H/5050	12.0 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage substations - Screw clamps



662 PATC-MPU

Earthing and short-circuit equipment for medium voltage substations.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

The MPU clamp is fixed on bare cylindrical conductors, flat bars, bending bus-bars or fixing points by screw tightening.

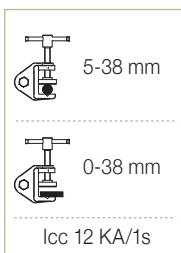
According to IEC 61230 standard.



MPU
Medium voltage clamp



TT-38A
Earthing lathe



Composed of:

- 3 MPU aluminium alloy clamps with screw tighten and Bayonet (MPUB) or Hexagonal-12 (MPU/H) fixing for cylindrical conductors with diameter between 4 and 30 mm, flat bars max.45 mm, bending bus-bars max.45 mm and fixing points between 20 and 25 mm.
- 3 copper cables with PVC insulation of 25/35/50 mm² section (depending on model) and 0.75 m long.
- 1 copper cable with PVC insulation of 25/35/50 mm² section (depending on model) and 2 m long.
- 1 insulated trifurcating connector.
- 1 TT-38A milling earthing lathe.
- 1 1.5 m telescopic pole with three sections.
- 1 plastic case to store and transport the equipment.

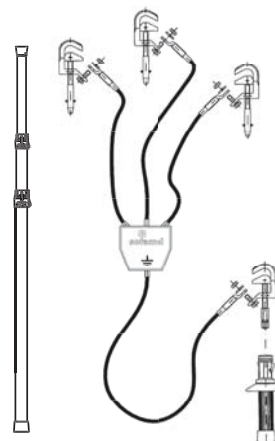
Code	Ref.	Short circuit current Max. ICC
665220	PATC-MPUB/2525	6.9 KA/1s
665225	PATC-MPUB/3535	9.0 KA/1s
665230	PATC-MPUB/5050	12.0 KA/1s
665235	PATC-MPUH/2525	6.9 KA/1s
665240	PATC-MPUH/3535	9.0 KA/1s
665245	PATC-MPUH/5050	12.0 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Medium voltage substations - Screw clamps



662 PATCPF-MPU

Earthing and short-circuit equipment for medium voltage substations.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

The MPU clamp is fixed on bare cylindrical conductors, flat bars, bending bus-bars or fixing points by screw tightening.

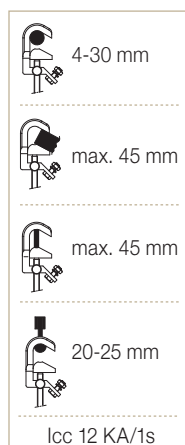
According to IEC 61230 standard.



MPU
Medium voltage clamp



EMP
insulating grip



Composed of:

- 3 MPU aluminium alloy clamps with screw tighten and Bayonet (MPU / B). For cylindrical conductors with a diameter between 4 and 30 mm; plate up to 45 mm and fixed points from 20 to 25 mm.
- 1 clamp MPU/H.
- 3 copper cables with PVC insulation of 25/35/50 mm² section (depending on model) and 0.75 m long.
- 1 copper cable with PVC insulation of 25/35/50 mm² section (depending on model) and 2 m long.
- 1 insulated trifurcating connector.
- 1 1.5 m telescopic pole with three sections.
- 1 insulating grip for the earthing clamp.
- 1 plastic case to store and transport the equipment.

Code	Ref.	Short circuit current Max. ICC
665310	PATCPF-MPU/2525	6.9 KA/1s
665315	PATCPF-MPU/3535	9.0 KA/1s
665320	PATCPF-MPU/5050	12.0 KA/1s

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Overhead lines

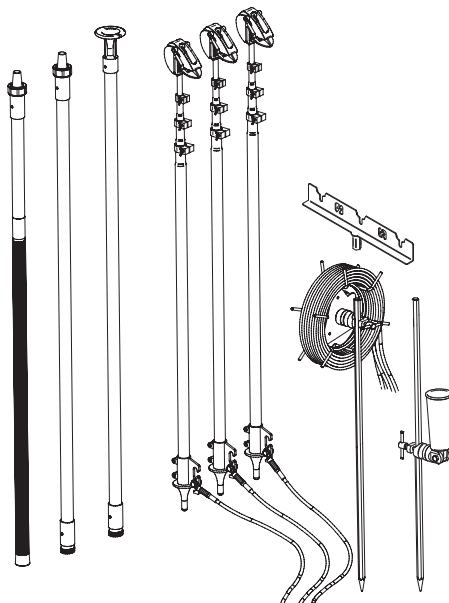


661 ERLAIN

Earthing equipment for overhead lines, easy to use for only one operator that besides facilitates the verification of absence of tension with a voltage detector (not included).

Thanks to the operation sections of the metal pole, it has multiple length adjustments.

According to IEC 61230 standard.



Composed of:

- 3 telescopic metal poles composed of 3 parts with self-locking fixed contact clamp for conductors with diameter between 3 and 22 mm.
- 1 insulating fiberglass pole + Epoxy resin and polyurethane foam filled with 3 sections of 1.72 + 1.65 + 1.63 m; certified by the IEC 60855 Standard. Total length: 5 m (has the option of using it without the middle section with a remaining total length of 3.4 m).
- 1 poles holder.
- 1 coil with 3 copper cables of 35 mm² section and 10 m length.
- 2 galvanized steel earthing rod with hexagonal section of 1 m.
- 1 insulating pole support.
- 1 carrying bag.



Code	Ref.	Extended length metal pole	Folded length metal pole	Nº section metal pole	Short circuit current Max. ICC
660400	ERLAIN-3/11	6.00 m	2.20 m	3	8 KA/1S
660405	ERLAIN-4/10	5.10 m	1.50 m	4	8 KA/1S

Earthing & Short Circuit Protection Equipment

Safety

High voltage overhead lines and substations

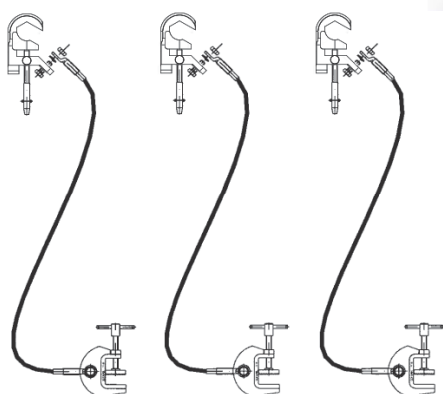


665 PAT-MPL

Phase earthing and short-circuit equipment for high voltage overhead lines.

The main aim for its installation is operator's protection against an accidental commissioning or possible voltage return during repair operations.

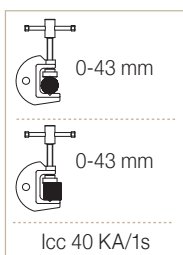
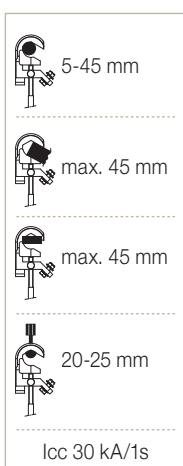
According to IEC 61230 standard.



MPL
Medium voltage clamp



TT-50
Earthing lathe



Composed of:

- 3 MPL aluminium alloy clamps with screw tighten for cylindrical conductors with diameter between 5 and 45 mm and flat bars.
- 3 copper cables with PVC insulation. Section and length depending on model.
- 3 TT-50 milling earthing lathe.
- 3 nylon bags to store and transport the equipment.

Code	Ref.	Cable section (mm ²)	Length (m)	Short circuit current Max. ICC
680176	PAT-MPL/05006		6	
680177	PAT-MPL/05007		7	
680178	PAT-MPL/05008	50	8	12 KA/1s
680179	PAT-MPL/05009		9	
680180	PAT-MPL/05010		10	
680186	PAT-MPL/07006		6	
680187	PAT-MPL/07007		7	
680188	PAT-MPL/07008	70	8	19 KA/1s
680189	PAT-MPL/07009		9	
680190	PAT-MPL/07010		10	
680196	PAT-MPL/09506		6	
680197	PAT-MPL/09507		7	
680198	PAT-MPL/09508	95	8	25 KA/1s
680199	PAT-MPL/09509		9	
680200	PAT-MPL/09510		10	
680206	PAT-MPL/12006		6	
680207	PAT-MPL/12007		7	
680208	PAT-MPL/12008	120	8	30 KA/1s
680209	PAT-MPL/12009		9	
680210	PAT-MPL/12010		10	

IEC 61230

Earthing & Short Circuit Protection Equipment

Safety

Earthing and short circuit cable information



Extra flexible stranded copper cable coated with transparent PVC manufactured according to IEC-61138 standard (cables for portable earthing and short circuit complying with IEC 61230 standard).
 Test voltage: 1000V for 1 hour A.C.
 Temperature: -30°C to +70°C

Code	Nominal cross section (mm ²)	I _{cc} (kA/s)	Weight (Kg/m)	External Ø (mm)
M-03.015.00	16	4.3	0.18	8.6
M-03.025.00	25	6.7	0.26	10
M-03.035.00	35	9.4	0.36	11.4
M-03.050.00	50	13.4	0.515	13.7
M-03.070.00	70	18.8	0.710	16
M-03.095.00	95	25.5	0.95	18.3
M-03.120.00	120	32.1	1.17	20.1
M-03.150.00	150	40.2	1.45	22.3

Equipment accessories



671 Wall earthing equipment holder

Metal holder and lacquered finish.

Code	Ref.
671179	Wall earthing equipment holder

sofamel

FULLY CONFIGURABLE EQUIPMENT

A

SCHEME EARTHING EQUIPMENTS

<p>Clamp model <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>
<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p>
<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Clamp model <input type="checkbox"/></p> <p>Model saddle <input type="checkbox"/></p> <p>Clamp model <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p> <p>Clamp model <input type="checkbox"/></p> <p>Model saddle <input type="checkbox"/></p> <p>Clamp model <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p>	<p>Clamp model <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Mts. <input type="checkbox"/></p> <p>Clamp model <input type="checkbox"/></p> <p>Model saddle <input type="checkbox"/></p> <p>Clamp model <input type="checkbox"/></p> <p>Earthing lathe mod. <input type="checkbox"/></p> <p>Cable section <input type="checkbox"/></p> <p>Meters <input type="checkbox"/></p>	

B

AUXILIARY MATERIAL

<input type="checkbox"/> Pole	Un. <input type="checkbox"/>	Model <input type="text"/>	<input type="checkbox"/> Earthing rod	Un. <input type="checkbox"/>	Model <input type="text"/>
<input type="checkbox"/> Grip	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> Spool	<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/> Plastic case	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> Others	<input type="checkbox"/>	<input type="text"/>
<input type="checkbox"/> Nylon bag	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> Others	<input type="checkbox"/>	<input type="text"/>

C

CODING

ICC /Máx. kA/1s Installation voltage Entry date

Description

Earthing & Short Circuit Protection Equipment

Safety

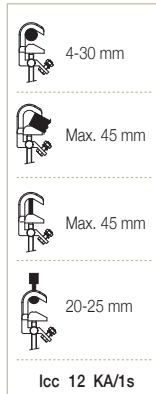
Equipment accessories

667 MEDIUM VOLTAGE CLAMPS

MPUH

Code 671110

Dimensions: 202 x 81 x 40 mm
Weight: 0,48 kg



MPUH-L

Code 671117

Dimensions: 110 x 81 x 40 mm
Weight: 1,16 kg



MPUB

Code 671115

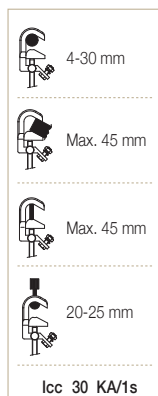
Dimensions: 240 x 81 x 40 mm
Weight: 0,53 kg



MPUB-L

Code 671118

Dimensions: 240 x 81 x 40 mm
Weight: 1,65 kg



PC

Code 666005

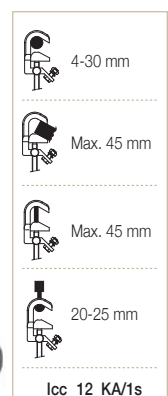
Dimensions: 440 x 157 x 54 mm
Weight: 1,3 kg



MPUP

Code 671116

Dimensions: 240 x 81 x 156 mm
Weight: 0,7 kg



Earthing & Short Circuit Protection Equipment

Safety

Equipment accessories

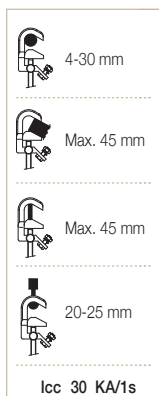
667 MEDIUM VOLTAGE CLAMPS

MPUP-L

Code 671119

Dimensions: 240 x 81 x 156 mm

Weight: 1,34 kg

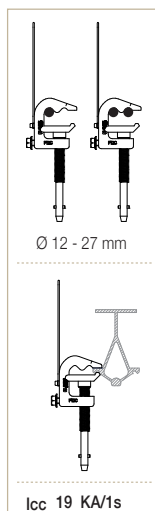


PDC

Code 666010

Dimensions: 413 x 105 x 52 mm

Weight: 0,85 kg

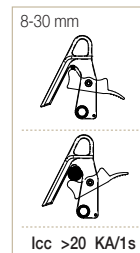


MCL

Code 671121

Dimensions: 182 x 128 x 68 mm

Weight: 0,67 kg

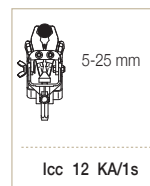


5014H

Code 671100

Dimensions: 167 x 91 x 83 mm

Weight: 0,8 kg



MC

Code 671120

Dimensions: 226 x 102 x 62 mm

Weight: 0,4 kg

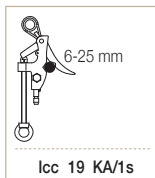


PCA-25

Code 671171

Dimensions: 276 x 123 x 74 mm

Weight: 0,81 kg

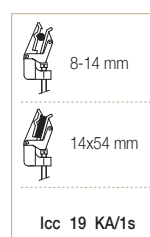


PP15

Code 671166

Dimensions: 241 x 95 x 47 mm

Weight: 0,68 kg



Earthing & Short Circuit Protection Equipment

Safety

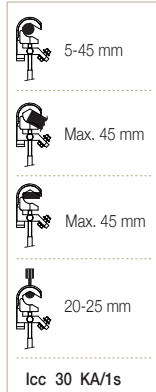
Equipment accessories

667 HIGH VOLTAGE CLAMPS

MPL

Code 671172

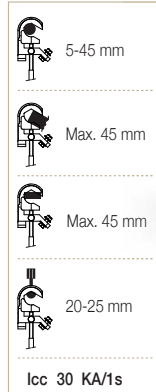
Dimensions: 263 x 105 x 62 mm
Weight: 0,97 kg



MPLE

Code 671178

Dimensions: 263 x 110 x 62 mm
Weight: 1 kg



MPLP

Code 671173

Dimensions: 263 x 105 x 204 mm
Weight: 1,1 kg



PAV-48

Code 673100

Dimensions: 380 x 170 x 120 mm
Weight: 1,6 kg



TML

Code 670100P

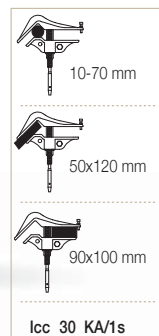
Dimensions: 428 x 133 x 53 mm
Weight: 1,56 kg



TMC

Code 675100P

Dimensions: 273 x 248 x 45 mm
Weight: 1,18 kg



Earthing & Short Circuit Protection Equipment Safety

Equipment accessories

667 HIGH VOLTAGE CLAMPS

PA40A

Code 674100 - Bayoneta
Code 674102 - Hexagonal

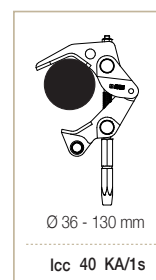
Dimensions: 331 x 206 x 80 mm
Weight: 1,7 kg



PA40ABP

Code 674105 - Hexagonal H22

Dimensions: 341 x 206 x 80 mm
Weight: 1,6 kg



667 HANDLES

EMB

Code 671106

Dimensions: 198 x Ø 52 mm
Weight: 0,3 kg



EMP

Code 659001E

Dimensions: 218 x Ø 52 mm
Weight: 0,25 kg

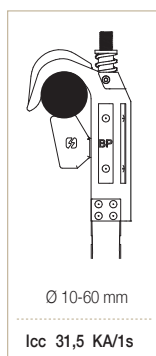


667 POTENTIAL DOWN CLAMP

BPGA

Code 672205

Dimensions: 3262 x 141 x 298 mm
Weight: 7,8 kg



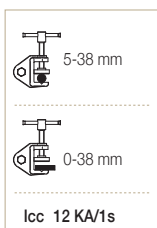
Earthing & Short Circuit Protection Equipment Safety

Equipment accessories

667 EARTHING LATHE

TT-38A

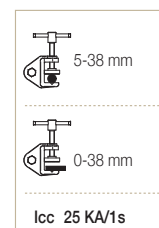
Code 671141



Dimensions: 158 x 92 x 35 mm
Weight: 0,48 kg

TT-38L

Code 671145

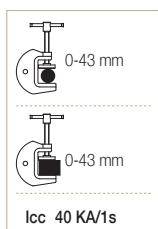


Dimensions: 158 x 92 x 35 mm
Weight: 0,93 kg

TT-50

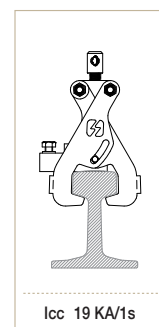
Code 671152

Dimensions: 250 x 147 x 40 mm
Weight: 0,95 kg



TTSR

Code 666015

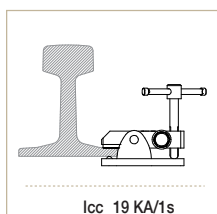


Dimensions: 280 x 214 x 55 mm
Weight: 3,45 kg

TTR

Code 671153

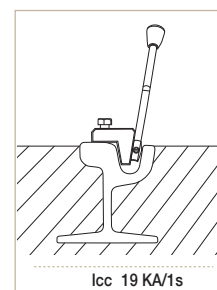
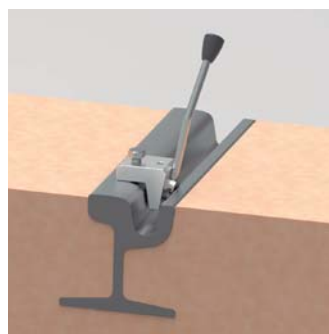
Dimensions: 115 x 117 x 60 mm
Weight: 1,1 kg



TTIR

Code 671154

Dimensions: 54 x 65 x 50 mm
Weight: 0,95 kg



Earthing & Short Circuit Protection Equipment

Safety

Equipment accessories

667 EARTHING LATHE

PEP

EQUIPOTENTIAL CLAMP FOR POST

Code P-671180

Dimensions: 420 x 202 x 70 mm

Weight: 4,5 kg



Max. Ø 400 mm



Min. Ø 90 mm



PEP-ECO

EQUIPOTENTIAL CLAMP FOR POST

Code P-671185

Dimensions: 325 x 200 x 60 mm

Weight: 3,7 kg



Max. Ø 400 mm



Min. Ø 90 mm



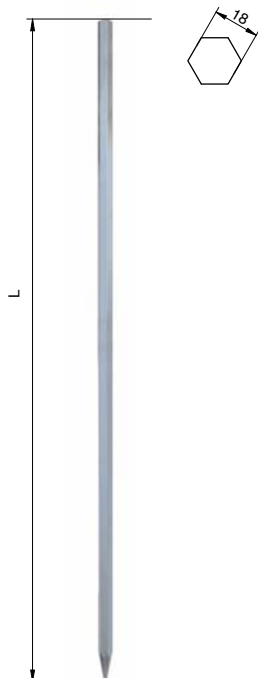
667 EARTHING ROD

HEXAGONAL EARTHING ROD

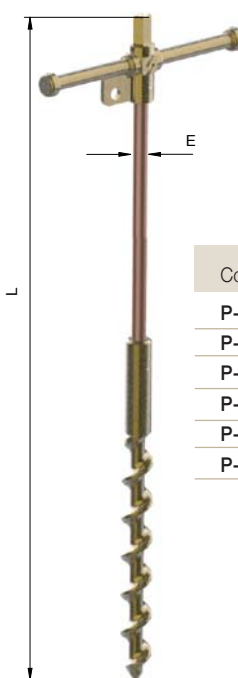
Code X-03.372.00

Dimensions: 1m

Weight: 2,150 g



HELICAL EARTHING ROD



Code	Ref.	L	ØE	Kg.
P-671190	PTB14-1000	1000	14,6	2,7
P-671191	PTB14-1300	1300		2,85
P-671192	PTB14-1500	1500		3
P-671193	PTB18-1000	1000	18,2	3,2
P-671194	PTB18-1300	1300		3,55
P-671195	PTB18-1500	1500		3,86

DIELECTRIC GLOVES



Personal Protection Equipment

Dielectric gloves

530 SG



The natural latex base has excellent dielectric properties. The thicker the glove, the greater the electrical resistance. The ergonomic design provides comfort and a smoother feel, and allows the glove to be put on and taken off very easily.

Insulated gloves are one of the most important pieces of PPE for working in the electrical sector. They are the first line of defence for contact with any live component or cable.

USE:
Electrical production, transport, transformation and distribution, railways, telecommunications, construction, maintenance in industry, solar panels, hybrid car batteries, etc.

RECOMMENDATIONS:
Latex insulated gloves are recommended, together with a suitable leather overglove, to provide mechanical protection against abrasions, cuts, tears and perforations.

The natural latex glove is available in beige.



CE IEC 60903
EN 60903

Available in sizes: 7, 8, 9, 10, 11 and 12

Code	Ref.	Class	Size	Length (mm)	Categories	Working Voltage (V) max.	Proof test Voltage (V) max.	Withstand Voltage (V) max.
530110	SG-25 T9	00	7*	360	AZC	500 V AC	2.500 V AC	5.000 V AC
530120	SG-25 T10							
530150	SG-50 T9	0	8*	360 410 - 460	AZC	1.000 V AC	5.000 V AC	10.000 V AC
530160	SG-50 T10							
530190	SG-10 T9	1	9		RC	7.500 V AC	10.000 V AC	20.000 V AC
530200	SG-10 T10							
530230	SG-20 T9	2	10	360	RC	17.000 V AC	20.000 V AC	30.000 V AC
530240	SG-20 T10							
530270	SG-30 T9	3	12*		RC	26.500 V AC	30.000 V AC	40.000 V AC
530280	SG-30 T10							
530320	SG-40 T10	4		410	RC	36.000 V AC	40.000 V AC	50.000 V AC
530330	SG-40 T11							

Meaning of letters in 'Categories': A: Acid / Z: Ozone / H: Oil / C: Very low temperature / R: A+Z+H resistance.

*For sizes 7, 8 and 12 consult.

MECHANICAL AND THERMAL REQUIREMENTS

- Average tensile strength: ≥ 16 MPa
- Average elongation at break: $\geq 600\%$
- Puncture resistance: ≥ 18 N/mm
- Tension set: $\leq 15\%$
- Resistance to low temperature: conditioning of gloves for 1 hour at $-25 \pm 3^\circ\text{C}$.
- Flame-retardant test: Application of a flame for 10 seconds at a finger tip.



RECOMMENDED SIZE	9	10	11
Contour cm (measured with closed hand)	21	24	26

COMPOSITE INSULATED GLOVES



Composite insulated gloves

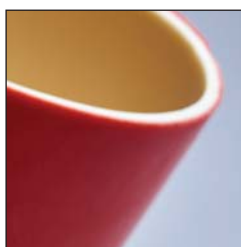
531 SGM



Composite insulated gloves provide electrical, mechanical and arc-flash protection, and as such do not need to be combined with any other kind of glove with mechanical protection.

The Composite glove range is made using a natural latex base covered by an outer layer of polychloroprene, combining mechanical resistance and comfort with a high level of protection.

Arc flash protection: the glove material has excellent properties in the event of a short circuit in the electric arc.



CE IEC 60903
IEC 61482-1-2

Available in sizes: 7, 8, 9, 10, 11 and 12

Outside in red
and beige inside.

Code	Ref.	Class	Thickness (mm) max.	Working Voltage (V) max.	Proof test Voltage (V) max.	Size	Length (mm)	Category				
531110	SGM-25 T9	00	< 2.4	500 V AC	2.500 V AC	7*	360	RC				
531120	SGM-25 T10											
531150	SGM-50 T9	0	< 2.9	1.000 V AC	5.000 V AC	8*	360 410					
531160	SGM-50 T10											
531190	SGM-10 T9	1	< 3.4	7.500 V AC	10.000 V AC	9			360 410			
531200	SGM-10 T10											
531230	SGM-20 T9	2	< 3.9	17.000 V AC	20.000 V AC	10				360 410		
531240	SGM-20 T10											
531270	SGM-30 T9	3	< 4.2	26.500 V AC	30.000 V AC	11					360 410	
531280	SGM-30 T10											
531310	SGM-40 T10	4	< 4.8	36.000 V AC	40.000 V AC	12*						360 410
531320	SGM-40 T11											

Meaning of letters in 'Categories': A: Acid / Z: Ozone / H: Oil / C: Very low temperature / R: A+Z+H resistance.

*For sizes 7, 8 and 12 consult.

MECHANICAL AND THERMAL REQUIREMENTS

- Average tensile strength: ≥ 16 MPa
- Average elongation at break: $\geq 600\%$
- Tension set: $\leq 15\%$
- Complementary test and performance levels to be achieved are as follows:
 - Resistance to cutting: > 20 mm and 5N, according to ISO13997 (equivalent to level 2 according to EN 388)
 - Resistance to abrasion: $\geq 0,05$ mg/t
 - Tearing resistance to: > 25 N (equivalent to level 2 according to EN 388)
 - Resistance to penetration: > 60 N (equivalent to level 2 according to EN 388)
 - Resistance to low temperature: conditioning of gloves for 1 hour at $-25 \pm 3^\circ\text{C}$.
 - Flame-retardant test: Application of a flame for 10 seconds at a finger tip.



RECOMMENDED SIZE	9	10	11
Contour cm (measured with closed hand)	21	24	26

Leather overgloves




539 SG

Leather overgloves must be worn over dielectric gloves to protect against mechanical risks as well as against possible electric arc risks. These leather cowhide gloves with webbed thumbs have a 10 cm cuff with a retightening velcro strap on the back of the hand.

The cowhide leather is treated with silicone to increase its waterproof characteristics.

According to EN 388 standard.

Code	Ref.	EN 388	En 420	Length (mm)	CROSS-REFERENCE UTILIZATION WITH DIELECTRIC GLOVES			
					Dielectric gloves class			
					00 and 0	1 and 2	3	4
540113	SG-B	 Levels of mechanical resistance: Abrasion: 2 Blade cut: 1 Tear: 2 Puncture: 2	Levels of safety, comfort and skill: LEVEL 5	310	●			
540114	SG-C			320	●			
540115	SG-D			330		●		
540116	SG-E			340		●	●	
540117	SG-F			400				●

CE EN 388

Fire-resistant gloves



535 SG-37

Gloves made of NOMEX fiber with fire-resistant properties. They are used under dielectric gloves with the aim of protecting against a possible electric arc.

According to EN 407 standard.

Code	Ref.
535100	SG-37

CE EN 407

Personal Protection Equipment

Safety

Gloves accessories



Polyethylene glove case resistant to impacts and UV rays



545 CG Plastic glove case

Code	Ref.	Dimensions
545112	CG-70	48 x 30 x 7 cm
545113	CG-120	48 x 30 x 12 cm

Bags, plastic and metal cases to transport, store and keep dielectric gloves



545 SG-36 Waterproof nylon bag

Waterproof nylon bag to carry dielectric gloves.
A strap on the back makes it easy to hang the bag on the belt.

Code	Ref.	Dimensions
545100	SG-36	42.5 x 22 cm



545 SG-35 Metallic glove case

Metallic case with a methacrylate window. Ideal for carrying, storing and preserving dielectric gloves.
It can be fixed on the wall thanks to a ring placed on the back.

Code	Ref.	Dimensions
545110	SG-35	45.3 x 19.1 x 7.2 cm



545 SGP

Plastic glove case

Plastic case to store and carry dielectric gloves.

Code	Ref.	Dimensions
545111	SGP	47.5 x 17 x 5 cm



545 SG-117

Pneumatic gauge tester

Before using dielectric gloves for live working, the EN 60903 and IEC 60903 standards recommend a visual inspection by inflating the gloves with air to detect any possible leakages.

The pneumatic tester is a pump system to optimise inflation and visual inspection, especially at the muff level.

Code	Ref.
545120	SG-117



545 ME-60

Fuse extractor handle

It is used to place and remove fuses in Low Voltage.

Incorporates an insulating handle and a hand protector that acts as a glove to protect the operator from possible accidents.

Code	Ref.
545130	ME-60



545 TALCUM

Talcum powder

50 gr talcum powder pot designed to adapt to the boxes and bags used for gloves storage.

Code	Ref.	Capacity
545140	TALCUM	50 g



*Class 1 – BOX TEST 4 kA/0,5 s.
EN 166; GS-ET-29*

565 ARMOUR-1 Safety helmet

Electrically Insulating Safety Helmet with Integrated Face Shield. Basic Protection Against Arc Flash, class 1 according to BOX TEST, 4 kA/0,5 s. EN166, GS-ET-29.

HELMET

- Improved visibility with reflective stickers.
- Manufacturing Date and Utilization Date permanently marked.
- Smooth Head Circumference Adjustment, range 53-63 cm.
- Electrical Class E (**20kV AC**) according to ANSI Z89.1.
- Electrical Class 0 (1000 V AC/1500 V DC) according to EN 50365.
- Compliance with ANSI Z89.1; EN 397; EN 50365 standards.

FACE SHIELD

- Full face, chin and neck protection against thermal hazards caused by electric arc flash.
- Premium class anti-fog and anti-scratch protection.
- Easy to wear with eyeglasses.
- Protection against electric arc flash (**class 1 - BOX test 4 kA/0,5 s.**).
- Compliance with **EN 166; GS-ET-29 standards.**

CHIN STRAP

- 4-point strap recommended for working at height.
- Quick clasp - easy operation with protective gloves.



Code	Ref.
565090	ARMOUR-1

<p>EN 397:2012+A1:2012 EN 50365:2002 EN 166:2001 GS-ET-29:2010 ANSI/ISEA Z89.1.2014</p> <p>CE</p>
--



Safety helmets



*Class 2 – BOX TEST 7 kA/0,5 s.
EN 166; GS-ET-29*

565 ARMOUR-2 Safety helmet

Electrically Insulating Helmet with Integrated Face Shield.
Extended protection against arc flash, class 2 according to BOX TEST,
7 kA/0,5 s.
EN166, GS-ET-29.



HELMET

- Improved visibility with reflective stickers.
- Manufacturing Date and Utilization Date permanently marked.
- Smooth Head Circumference Adjustment, range 53-63 cm.
- Electrical Class E (**20kV AC**) according to ANSI Z89.1.
- Electrical Class 0 (1000 V AC/1500 V DC) according to EN 50365.
- Compliance with ANSI Z89.1; EN 397; EN 50365 standards.

FACE SHIELD

- Full face, chin and neck protection against thermal hazards caused by electric arc flash.
- Premium class anti-fog and anti-scratch protection.
- Easy to wear with eyeglasses.
- Protection against electric arc (**class 2 - BOX test 7 kA/0,5 s.**)
- Compliance with standards: **EN 166; GS-ET-29.**

CHIN STRAP

- 4-point strap recommended for working at height.
- Quick clasp - easy operation with protective gloves.

Code	Ref.
565091	ARMOUR-2

EN 397:2012+A1:2012
EN 50365:2002
EN 166:2001
GS-ET-29:2010
ANSI/ISEA Z89.1.2014
ASTM-F2178 (ARMOUR-2
CE ATPV36)



Safety helmets



Class 2 – according to standard GS-ET-29, BOX TEST, 7kA / 0.5 s.

Category 3 - according to ASTM F2178, ATPV 36 cal / cm²

EN 166; GS-ET-29; ASTM-F2178

565 ARMOUR-2 ATPV 36

Safety helmet

Electrically Insulating Helmet with Integrated Face Shield.
Highest protection against arc flash, class 2 – according to standard GS-ET-29, BOX TEST, 7kA / 0.5 s. and category 3 – according to ASTM F2178, ATPV 36 cal / cm²
EN166, GS-ET-29, ASTM F2178.

HELMET

- Improved visibility with reflective stickers.
- Manufacturing Date and Utilization Date permanently marked.
- Smooth Head Circumference Adjustment, range 53-63 cm.
- Electrical Class E (**20kV AC**) according to ANSI Z89.1.
- Electrical Class 0 (1000 V AC/1500 V DC) according to EN 50365.
- Compliance with ANSI Z89.1; EN 397; EN 50365 standards.

FACE SHIELD

- Full face, chin and neck protection against thermal hazards caused by electric arc flash.
- Premium class anti-fog and anti-scratch protection.
- Easy to wear with eyeglasses.
- Protection against electric arc (**Class 2 – According to standard GS-ET-29, BOX TEST, 7kA / 0.5 s.**
Category 3 - According to ASTM F2178, ATPV 36 cal / cm²).
- Compliance with standards: **EN 166; GS-ET-29; ASTM-F2178.**

CHIN STRAP

- 4-point strap recommended for working at height.
- Quick clasp - easy operation with protective gloves.

Code	Ref.
565093	ARMOUR-2 ATPV36

EN 397:2012+A1:2012
EN 50365:2002
EN 166:2001
GS-ET-29:2010
ANSI/ISEA Z89.1:2014
ASTM-F2178 (ARMOUR-2
ATPV36)



Safety helmets



CE EN 397
UNE-EN 50365:2003

Up to 1.000 V

565 SP-181

Safety helmet manufactured from polyethylene to protect the head from mechanical and electrical risks.

Includes plastic harness with six anchoring points and manual adjustment.

Electric insulation up to 1.000 V

Working temperature: -10°C / +50°C

Supplied in white colour without chin strap.

According to EN 397 standard and UNE-EN 50365:2003 and the health and safety requirements of Royal Decree 1407/1992.

Other colours under request.

Code	Ref.
565099	SP-181



CE EN 397
UNE-EN 50365:2003

Up to 1.000 V

565 SPE

Safety helmet manufactured from polyethylene to protect the head from mechanical and electrical risks.

Includes plastic harness adjustable using sprocket.

Electric insulation up to 1.000 V

Workig temperature: -10°C / +50°C

Supplied in white colour without chin strap.

According to EN 397 standard and UNE-EN 50365:2003 and the health and safety requirements of Royal Decree 1407/1992.

Other colours under request.



Code	Ref.
565102	SPE



CE EN 12492

565 S/CABS-397

Safety helmet for works involving heights manufactured from ABS with high-quality ultraviolet stabilization.

Includes harness comprised of one interior PPE piece and one head band adjustable using sprocket.

The stuffing in contact with the head includes pads to increase comfort.

Working temperature: -10°C / +50°C

Supplied in white colour with textile chin strap with 4 attachment points.

According to EN 12492 standard.

Other colours under request.

Code	Ref.
565106	S/CABS-397

DB2

DIELECTRIC BOOTS

CLASS 2

17.5_{kV}
Maximum Working Voltage

20_{kV}
Test Voltage



- Every boot tested to 20kV (AC testing as standard, DC testing available on request).
- Leakage current less than 5mA at 5kV and less than 18mA at 20kV.
- Meets the requirements of ASTM 1117 (20kV) and ASTM 2413.
- Blue vulcanized rubber sole for maximum grip - 30% better than a conventional safety boot sole.
- Slip resistance performance twice that required by SATRA TM144 standard.
- Two to three times the wear resistance of conventional soles.

715 DB2

Dielectric boots

Code	Ref.	Size
715140	DB2 T39	39
715150	DB2 T41	41
715155	DB2 T42	42
715160	DB2 T43	43
715165	DB2 T44	44
715170	DB2 T45	45



DB3

DIELECTRIC HV3+ BOOTS

CLASS 3

26.5_{kV}

Maximum Working Voltage

30_{kV}

Test Voltage



- Lightweight design for increased wearer comfort.
- Low temperature flexibility down to -40°C.
- Durable, slip resistant vulcanised rubber sole for maximum grip.
- Energy absorbing tunnel system in heel and ergonomic cushioning insole (removable and machine washable) for greater wearer comfort.
- Cold insulation to EN ISO 20345.
- High-visibility green HV3 compound shaft.
- Meets the requirements of ASTM 1117 (20kV) and ASTM 2413.
- Also available in a moulded sole version (without fuel & oil resistance, resistance to hot contact of the sole).

715 DB3

Dielectric HV3+ boots

Code	Ref.	Size
715230	DB3 T39	39
715260	DB3 T41	41
715270	DB3 T42	42
715275	DB3 T43	43
715280	DB3 T44	44
715285	DB3 T45	45



OB2

DIELECTRIC COMPACT OVERBOOTS

CLASS 2

17.5_{kV}

Maximum Working Voltage

20_{kV}

Test Voltage



- Single piece injection moulded construction with integral moulded fastener ensures there are no seams or mounting/fastener holes to leak.
- No metal fasteners or components used in the construction.
- Slip resistant sole in blue dielectric compound.
- Fuel and oil resistant sole.
- Meets the requirements of ASTM 1117 (20kV).

715 OB2

Dielectric compact overboots

Code	Ref.	Size
715300	OB2 T-L	L



OB3

DIELECTRIC HV3 MAXI OVERBOOTS

CLASS 3

26.5_{kV}

Maximum Working Voltage

30_{kV}

Test Voltage



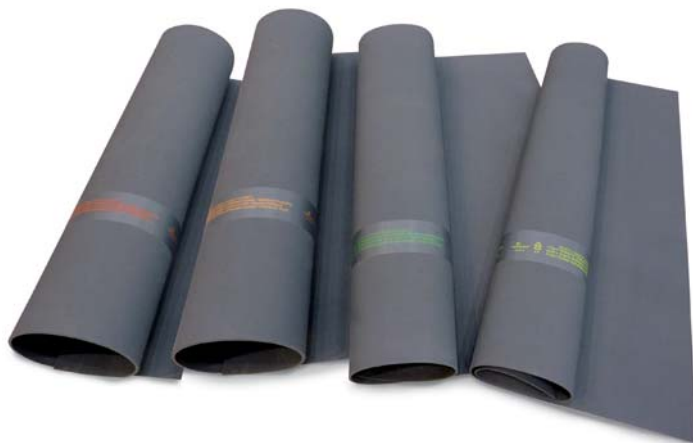
- Ingenious rear entry design ensures the boot is quick and easy to fit and remove.
- Ideal for personnel who have to continually enter and exit high voltage areas.
- Light weight.
- Fluorescent green colour.
- Seamless construction.
- Kick off lug.
- REACH Compliant.

715 OB3

Dielectric HV3 maxi overboots

Code	Ref.	Size
715340	OB3 T-L	L





585 AD Insulating mat

Specific Rubber Base: natural rubber SBR
Specific weight: 1.51 g/cm³ (specific gravity)
Hardness: 71 Shore A
Tensile Strength: 75.5 Kg/cm²
Elongation at break: 362%
Resistance to tearing: 20 Kg/cm²
Resistance to abrasión: 182 mm³
Temperature Field: -40°C / +70 °C

Chemical resistance:
Acids and Bases diluted - Moderate
Acids and Bases Concentrates - Not recommended
Hydrocarbon - Not recommended
Organic solvents - Not recommended

According to IEC 61111.

We can customize the length of the mats as per our clients' requests (max 10 m).

IEC 61111

Code	Ref.	Dimensions (m)	Class	Thickness (mm)	Weight (kg)	Work voltage (V)	Test voltage (V)	Supported voltage (V)
585180	AD0-0606	0,6 x 0,6	0	1,5	1,4	1.000	5.000	10.000
585181	AD0-0610	0,6 x 1,0			2,3			
585182	AD0-06100	0,6 x 10			22,8			
585183	AD0-1010	1,0 x 1,0			3,8			
585184	AD0-10100	1,0 x 10			38,0			
585185	AD0-1210	1,2 x 1,0			4,6			
585186	AD0-12100	1,2 x 10	45,6					
585200	AD2-0606	0,6 x 0,6	2	2,6	1,4	17.000	20.000	30.000
585210	AD2-0610	0,6 x 1,0			2,3			
585220	AD2-06100	0,6 x 10			22,8			
585230	AD2-1010	1,0 x 1,0			3,8			
585240	AD2-10100	1,0 x 10			38,0			
585250	AD2-1210	1,2 x 1,0			4,6			
585260	AD2-12100	1,2 x 10	45,6					
585300	AD3-0606	0,6 x 0,6	3	3,2	1,7	26.500	30.000	40.000
585310	AD3-0610	0,6 x 1,0			2,9			
585320	AD3-06100	0,6 x 10			28,8			
585330	AD3-1010	1,0 x 1,0			4,8			
585340	AD3-10100	1,0 x 10			48,0			
585350	AD3-1210	1,2 x 1,0			5,8			
585360	AD3-12100	1,2 x 10	57,6					
585400	AD4-0606	0,6 x 0,6	4	5,2	2,8	36.000	40.000	50.000
585410	AD4-0610	0,6 x 1,0			4,7			
585420	AD4-06100	0,6 x 10			46,8			
585430	AD4-1010	1,0 x 1,0			7,8			
585440	AD4-10100	1,0 x 10			78,0			
585450	AD4-1210	1,2 x 1,0			9,4			
585460	AD4-12100	1,2 x 10	93,6					

Insulating stool

Insulating stool
for indoor use



High stability
High impact resistance
High slip resistance

580 ST

Made of high impact copolymer polypropylene.
The platform surface is rough and non-slip. Rubber tips are placed under the legs to give it greater adherence to the floor and protection from wear.
Platform: 525x525 mm
Surface: 575x575 mm

According to UNE 204001 standard.

Code	Ref.	Height (mm)	Class	Working voltage
580100	ST-36	206	4	36 kV
580110	ST-45	304	5	45 kV
580115	ST-66	304	6	66 kV

 UNE 204001

Indoor



Insulating stool

Insulating stool
for outdoor use



High stability
High impact resistance
High slip resistance

580 STE

Made of high impact copolymer polypropylene.
The platform surface is rough, non-slip and the legs have deflecting hoods.
Rubber tips are placed under the legs to give it greater adherence to the floor and protection from wear.
Platform: 525x525 mm

According to UNE 204001 standard.
Legs made of IEC 60855 foam filled tube.

Outdoor



Code	Ref.	Height (mm)	Class	Working voltage
580096	STE-26	257	3	26 kV
580111	STE-45	399	5	45 kV
580116	STE-66	449	6	66 kV

 UNE 204001

Insulating slab



580 ST-79

Insulating slab

Made of high impact polyethylene and 500x500 mm modules that can be joined together, makes any surface easier to be covered.
This material can be easily cut as to be adapted to any space.

Code	Ref.
580130	ST-79

Low voltage insulation



595 P-22

Cowl

It is made of rubber and it is used for the provisional insulation of bare conductors as they pass through low voltage insulators. It is bell-shaped and incorporates grooves for the conductors to pass through.
According to IEC 60243-1 standard.

Code	Ref.	Ø
595100	SP-22	90 mm

CE  IEC 60243-1

595 SP-321

Profil

It is made of rubber and it is used as provisional insulation for bare conductors in low voltage or with insufficient protection in small spaces.



Code	Ref.	Ø	Length
595101	SP-321	19 mm	1 m
595103	SP-321	19 mm	1.5 m



595 SP-35

Vinyl cloth

Made of 0,3 mm thick vinyl, it is used to insulate an element in low voltage facilities. According to IEC 61112 standard.

Code	Ref.	Rolls
595102	SP-35	50 m x 1.40 m



595 SP-39

Fixing peg

120 mm long wooden peg used to fix the vinyl cloth sheets on the conductors.

Code	Ref.
595112	SP-39



595 S/PA

Insulated fixing peg 1000V

Manufactured in insulated material. It is used to fix the protective covers during the insulation of a workplace in switches, cables and overhead lines up to 1 kV.

Code	Ref.
595113	S/PA



600 BA Insulating mat bag

Nylon bag with reinforcements to facilitate the transport of the insulating mat.

Code	Ref.	Ø	Length
600150	BA-1,0x10	15 cm	110 cm
600151	BA-0,6x10	15 cm	70 cm

600 FP Bag for pole

Nylon bags used to store and transport poles.



Code	Ref.	Dimensions (mm) width x length
899000	FP-20/140	200 x 1400
899005	FP-20/210	200 x 2100
899010	FP-25/125	250 x 1250
899015	FP-25/175	250 x 1750
899020	FP-25/225	250 x 2250
899025	FP-25/275	250 x 2750
899030	FP-25/325	250 x 3250



FE-40/30



FE-20/120



FE-20/110

600 FE Bag for earthing equipments

Nylon bags used to store and transport earthing equipments

Code	Ref.	Dimensions (mm) width x length
899050	FE-20/120	200 x 1200
899055	FE-20/110	200 x 1100
899060	FE-40/30	400 x 300

Maneuvering poles



U
Universal Head



INDOOR and OUTDOOR Use in dry environment

Maneuvering pole with only one section made of polyester and fibreglass tube Ø 32 mm with humidity-proof seals on each end, hand protector, grip, tip, Universal head and maneuvering hook.

605 BM-45

- Total length: 1.60 meters
- Total length without hook: 1.50 meters
- Working voltage: 45 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
605100	BM-45

605 BM-66

- Total length: 2.10 meters
- Total length without hook: 2.00 meters
- Working voltage: 66 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
605110	BM-66

605 BM-90

- Total length: 2.60 meters
- Total length without hook: 2.50 meters
- Working voltage: 90 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
605115	BM-90

605 BM-132

- Total length: 3.10 meters
- Total length without hook: 3.00 meters
- Working voltage: 132 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
605120	BM-132

Maneuvering poles



U

Universal Head



INDOOR and OUTDOOR
Use in dry and humid environment

Maneuvering pole with only one section made of polyester and fibreglass tube Ø 32 mm with humidity-proof seals on each end, 3 deflecting hoods, hand protector, grip, tip, Universal head and maneuvering hook.

605 BME-45

- Total length: 1.60 meters
- Working voltage: 45 kV
- INDOOR and OUTDOOR use

Code	Ref.
605130	BME-45

605 BME-66

- Total length: 2.10 meters
- Working voltage: 66 kV
- INDOOR and OUTDOOR use

Code	Ref.
605140	BME-66

605 BME-132

- Total length: 3.10 meters
- Working voltage: 132 kV
- INDOOR and OUTDOOR use

Code	Ref.
605150	BME-132

Insulating Poles

Safety

Telescopic poles



M
Metric-10 Head



U
Universal Head



B
Bayonet Head



Easy
Adjustment



P
Hexagonal + Metric Head



INDOOR and OUTDOOR Use in dry environment

Telescopic pole with two sections made of reinforced fibreglass tube \varnothing 37 and 32 mm with humidity-proof seals on each end, hand protector, grip, tip and M (Metric-10), U (Universal), B (Bayonet) or P (Hexagonal + Metric-10) head. The length of each section can be adjusted as needed by means of an adjustment system with locking handles.

615 BMTS-15/45

- Length folded: 0.85 meters
- Length extended: 1.486 meters
- Working voltage: 45 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 0.75 Kg

Code	Ref.
615300	BMTS-15/45M
615301	BMTS-15/45U
615302	BMTS-15/45B
615303	BMTS-15/45P

615 BMTS-20/66

- Length folded: 1.10 meters
- Length extended: 1.986 meters
- Working voltage: 66 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 0.95 Kg

Code	Ref.
615310	BMTS-20/66M
615311	BMTS-20/66U
615312	BMTS-20/66B
615313	BMTS-20/66P

615 BMTS-30/132

- Length folded: 1.65 meters
- Length extended: 3 meters
- Working voltage: 132 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 1.35 Kg

Code	Ref.
615320	BMTS-30/132M
615321	BMTS-30/132U
615322	BMTS-30/132B
615323	BMTS-30/132P

Stable adjusters
Adjust the extended length
of each section as per your needs



Easy Adjustment

*Stable adjusters
Adjust the extended length
of each section as per your needs
Last section foam filled for poles
over 6 m according to IEC 60855
Reinforced fibreglass tube
Up to 12 m*



INDOOR and OUTDOOR Use in dry environment

Telescopic multiple section pole made of reinforced fibreglass tube with variable circular shape that allows to wedge automatically each section. The upper section is filled in with foam according to IEC 60855.

The length of each section can be adjusted as needed by means of an adjustment system with locking handles.

All models are supplied with Universal head and maneuvering hook.
The A section must be always unfolded to be used.

615 BMTS-4/6

- Length folded: 1.70 meters
- Length extended: 5.97 meters (4 sections)
- Working voltage: 380 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 3.40 Kg

Code	Sections	Voltage	Ref.
615325	C+A	132 kV	BMTS-4/6
	C+B+A	380 kV	

615 BMTS-5/9

- Length folded: 2.00 meters
- Length extended: 8.75 meters (5 sections)
- Working voltage: 420 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 5.20 Kg

Code	Sections	Voltage	Ref.
615330	D+A	132 kV	BMTS-5/9
	D+B+A	380 kV	
	D+C+B+A	420 kV	

615 BMTS-6/12

- Length folded: 2.30 meters
- Length extended: 11.80 meters (6 sections)
- Working voltage: 420 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 7.25 Kg

Code	Sections	Voltage	Ref.
615335	E+A	132 kV	BMTS-6/12
	E+B+A	380 kV	
	E+C+B+A	420 kV	
	E+D+C+B+A	420 kV	

INDOOR and OUTDOOR Use in dry environment

Telescopic multiple section pole made of reinforced fibreglass tube with variable circular shape that allows to wedge automatically each section. The upper section is filled in with foam according to IEC 60855.

The length of each section can be adjusted as needed by means of an adjustment system with locking handles.

All models are supplied with Universal head and maneuvering hook.
The A section must be always unfolded to be used.



Easy Adjustment

*Stable adjusters
Adjust the extended length
of each section as per your needs
Last section foam filled for poles
over 6 m according to IEC 60855
Reinforced fibreglass tube
Up to 12 m*



615 BMTS-7/10,3

- Length folded: 1.80 meters
- Length extended: 10.30 meters (7 sections)
- Working voltage: 420 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 6.5 Kg

Code	Sections	Voltage	Ref.
615355	F+A	132 kV	BMTS-7/10,3
	F+B+A	220 kV	
	F+C+B+A	380 kV	
	F+D+C+B+A	380 kV	
	F+E+D+C+B+A	420 kV	

615 BMTS-7/11,6

- Length folded: 2.00 meters
- Length extended: 11.67 meters (7 sections)
- Working voltage: 420 kV (fully extended)
- INDOOR and OUTDOOR use in dry environment
- Weight: 7.3 Kg

Code	Sections	Voltage	Ref.
615350	F+A	132 kV	BMTS-7/11,6
	F+B+A	380 kV	
	F+C+B+A	380 kV	
	F+D+C+B+A	380 kV	
	F+E+D+C+B+A	420 kV	

Insulating Poles

Safety

Connectable poles



M
Metric-10 Head



U
Universal Head



B
Bayonet Head



P
Hexagonal + Metric Head

*Stable adjusters
Reinforced fibreglass tube
Up to 12 m*



INDOOR and OUTDOOR Use in dry environment

Connectable poles with two sections, made of polyester and fibreglass tube Ø 32 mm with humidity-proof seals on each end, hand protector, grip, tip and M (Metric-10), U (Universal), B (Bayonet) or P (Hexagonal + Metric-10) head.

616 BMAI-2

- Total length: 2 meters
- Composed of 2 sections of 1 m each
- Working voltage: 66 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616100	BMAI-2/66M
616101	BMAI-2/66U
616102	BMAI-2/66B
616103	BMAI-2/66P

616 BMAI-2,5

- Total length: 2.5 meters
- Composed of 1 section of 1 m + 1 section of 1.5 m
- Working voltage: 110 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616110	BMAI-2,5/110M
616111	BMAI-2,5/110U
616112	BMAI-2,5/110B
616113	BMAI-2,5/110P

616 BMAI-3

- Total length: 3 meters
- Composed of 2 sections of 1.5 m each
- Working voltage: 132 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616120	BMAI-3/132M
616121	BMAI-3/132U
616122	BMAI-3/132B
616123	BMAI-3/132P

Insulating Poles

Safety

Connectable poles



M
Metric-10 Head



U
Universal Head



B
Bayonet Head



P
Hexagonal + Metric Head

Stable adjusters
Reinforced fibreglass tube
Up to 12 m



INDOOR and OUTDOOR Use in dry and humid environment

Connectable pole with two sections made of polyester and fibreglass tube Ø 32 mm with humidity-proof seals on each end, hand protector, grip, tip, 3 deflecting hoods and M (Metric-10), U (Universal), B (Bayonet) or P (Hexagonal + Metric-10) head.

617 BMAE-2

- Total length: 2 meters
- Composed of 2 sections of 1 m each
- Working voltage: 30 kV
- INDOOR and OUTDOOR use

Code	Ref.
616200	BMAE-2/30M
616201	BMAE-2/30U
616202	BMAE-2/30B
616203	BMAE-2/30P

617 BMAE-2,5

- Total length: 2.5 meters
- Composed of 1 section of 1 m + 1 section of 1.5 m
- Working voltage: 66 kV
- INDOOR and OUTDOOR use

Code	Ref.
616210	BMAE-2,5/66M
616211	BMAE-2,5/66U
616212	BMAE-2,5/66B
616213	BMAE-2,5/66P

617 BMAE-3

- Total length: 3 meters
- Composed of 2 sections of 1.5 m each
- Working voltage: 110 kV
- INDOOR and OUTDOOR use

Code	Ref.
616220	BMAE-3/110M
616221	BMAE-3/110U
616222	BMAE-3/110B
616223	BMAE-3/110P

Connectable poles



M
Metric-10 Head



U
Universal Head



B
Bayonet Head



P
Hexagonal + Metric Head

Stable adjusters
Reinforced fibreglass tube
Up to 12 m



INDOOR and OUTDOOR Use in dry environment

Connectable pole with two or three sections made of polyester and fibreglass tube Ø 38.4 mm with hand protector, grip, tip and M (Metric-10), U (Universal), B (Bayonet) or P (Hexagonal + Metric-10) head.

616 BMAI-3V

- Total length: 3 meters
- Composed of 2 sections of 1.5 m each
- Working voltage: 132 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616500	BMAI-3V/132M
616501	BMAI-3V/132U
616502	BMAI-3V/132B
616503	BMAI-3V/132P

616 BMAI-4V

- Total length: 4 meters
- Composed of 2 sections of 2 m each
- Working voltage: 220 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616510	BMAI-4V/220M
616511	BMAI-4V/220U
616512	BMAI-4V/220B
616513	BMAI-4V/220P

616 BMAI-5V

- Total length: 5 meters
- Composed of 2 sections of 2 m + 1 section of 1 m
- Working voltage: 380 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616520	BMAI-5V/380M
616521	BMAI-5V/380U
616522	BMAI-5V/380B
616523	BMAI-5V/380P

616 BMAI-6V

- Total length: 6 meters
- Composed of 3 sections of 2 m each
- Working voltage: 380 kV
- INDOOR and OUTDOOR use in dry environment

Code	Ref.
616530	BMAI-6V/380M
616531	BMAI-6V/380U
616532	BMAI-6V/380B
616533	BMAI-6V/380P

Insulating Poles

Safety

Connectable poles



M
Metric-10 Head



U
Universal Head



B
Bayonet Head



P
Hexagonal + Metric Head

*Stable adjusters
Reinforced fibreglass tube
Up to 12 m*



*INDOOR and OUTDOOR
Use in dry and humid environment*

Connectable pole with two or three sections made with polyester and fibreglass tube Ø 38.4 mm with hand protector, grip, tip, 3 deflecting hoods and M (Metric-10), U (Universal), B (Bayonet) or P (Hexagonal + Metric-10) head.

617 BMAE-3V

- Total length: 3 meters
- Composed of 2 sections of 1.5 m each
- Working voltage: 110 kV
- INDOOR and OUTDOOR use

Code	Ref.
616600	BMAE-3V/110M
616601	BMAE-3V/110U
616602	BMAE-3V/110B
616603	BMAE-3V/110P

617 BMAE-4V

- Total length: 4 meters
- Composed of 2 sections of 2 m each
- Working voltage: 220 kV
- INDOOR and OUTDOOR use

Code	Ref.
616610	BMAE-4V/220M
616611	BMAE-4V/220U
616612	BMAE-4V/220B
616613	BMAE-4V/220P

617 BMAE-5V

- Total length: 5 meters
- Composed of 2 sections of 2 m + 1 section of 1 m
- Working voltage: 380 kV
- INDOOR and OUTDOOR use

Code	Ref.
616620	BMAE-5V/380M
616621	BMAE-5V/380U
616622	BMAE-5V/380B
616623	BMAE-5V/380P

617 BMAE-6V

- Total length: 6 meters
- Composed of 3 sections of 2 m each
- Working voltage: 380 kV
- INDOOR and OUTDOOR use

Code	Ref.
616630	BMAE-6V/380M
616631	BMAE-6V/380U
616632	BMAE-6V/380B
616633	BMAE-6V/380P

Insulating Poles

Safety

Condenser discharging poles

Insulating condenser discharging pole with earthing system. It is also suitable for devices with static electricity.

Pole with only one section made of polyester and fiberglass tube Ø 32 mm, with hand protector, grip and tip.



*INDOOR and OUTDOOR
Use in dry environment*

625 BDC

- Length: 1.6 meters
- Working voltage: 45 kV
- INDOOR and OUTDOOR use in dry environment
- Copper earthing cable: 16 mm² section and 2 meters long

Code	Ref.
625110	BDC

Insulating Poles

Safety

Rescue pole



Rescue pole with only one section made of polyester and fibreglass tube $\text{\O} 32$ mm with humidity-proof seals on each end, hand protector, grip, tip, M-10 metric head and rescue hook.

Used to remove the casualty from the danger area in rescue operations.

610 BS-45

- Length: 1.79 meters
- Working voltage: 45 kV

Code	Ref.
610100	BS-45

610 BS-66

- Length: 2.29 meters
- Working voltage: 66 kV

Code	Ref.
610110	BS-66

610 BS-90

- Length: 2.79 meters
- Working voltage: 90 kV

Code	Ref.
610115	BS-90





630 AVPM

Detector adapter to maneuvering pole

Adapter for Medium Voltage detectors that allows their fixing to the maneuvering poles with Universal head. It permits the maneuvering operations without damaging the detector. Immediately afterward you can check if the power is off.

Code	Ref.
630175	AVPM



630 GSP

Hook for pole suspension

PVC device that fits to the maneuvering poles allowing their suspension while doing the job.

Code	Ø	Ref.
630170	32 mm	GSP-32



630 GPB

Coil holder hook

Insulating band coil holder hook, Universal-K connection.

Code	Ref.
630177	GPB



630 GS-49

Rescue hook

Rescue hook with M-10 thread.

Code	Ref.
630130	GS-49



630 Wall support for poles

Product supplied with screws and nail plugs.

Code	Ø	Ref.
615206	40	ROBUST PLASTIC WALL SUPPORT FOR POLES

630 Fuse Holder

Product supplied with screws and nail plugs.

Code	Ref.
545135	PLASTIC HOLDER FOR FUSES



630 SM-02R

Metric-10 maneuvering hook

Maneuvering hook with M-10 thread.

Code	Ref.
630100	SM-02R



630 SM-02C

Hexagonal-12 maneuvering hook

Maneuvering hook with Hexagonal-12 head.

Code	Ref.
630110	SM-02C



630 SM-02K

Universal-K maneuvering hook

Maneuvering hook with Universal-K head.

Code	Ref.
630120	SM-02K



630 SM-03K

Straight Universal-K maneuvering hook

Maneuvering hook with straight Universal-K connection.

Code	Ref.
630122	SM-03K



630 SM-90K

Universal-K 90° maneuvering hook

Maneuvering hook with Universal-K 90° connection.

Code	Ref.
630123	SM-90K



630 ADAP. B-UK

Bayonet to Universal-K adapter

Adapter from Bayonet to Universal-K head.

Code	Ref.
630107	ADAP. B-UK



630 ADAP. B-M10

Bayonet to M-10 adapter

Adapter from Bayonet head to M-10 thread.

Code	Ref.
630108	ADAP. B-M10



630 ADAP. B-P

Bayonet to Polivalent adapter

Adapter from Bayonet head to Polivalent.

Code	Ref.
630167	ADAP. B-P



630 ADAP. H12-M10

Hexagonal-12 to M-10 adapter

Adapter from Hexagonal-12 head to M-10 thread.

Code	Ref.
630101	ADAP. H12-M10



630 GA-TML

Operating hook

Operating hook for the high voltage overhead lines earthing equipments model PATL-TML.

Code	Ref.
630116	GA-TML



630 ADAP. UK-B

Universal-K to Bayonet adapter

Adapter from Universal-K to Bayonet head.

Code	Ref.
630162	ADAP. UK-B



630 ADAP. UK-P

Universal-K to Polivalent adapter

Adapter from Universal-K to Polivalent head.

Code	Ref.
630163	ADAP. UK-P



630 ADAP. H12-UK

Hexagonal-12 to Universal-K adapter

Adapter from Hexagonal-12 to Universal-K head.

Code	Ref.
630109	ADAP. H12-UK



630 ADAP. M10-UK

M-10 to Universal-K adapter

Adapter from M-10 thread to Universal-K head.

Code	Ref.
630106	ADAP. M10-UK



630 ADAP. UK-M10

Universal-K to M-10 adapter

Adapter from Universal-K head to M-10 head.

Code	Ref.
630102	ADAP. UK-M10



630 ADAP. H12-B

Hexagonal-12 to bayonet adapter

Adapter from Hexagonal-12 to bayonet head.

Code	Ref.
630166	ADAP. H12-B

Voltage Detectors

Safety

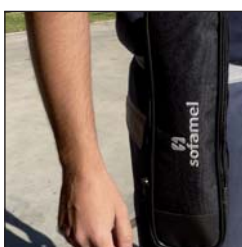
Medium voltage detector - Indoor / Outdoor

Optical



Compact voltage detector with pole Medium Voltage - Optical

Voltage presence is indicated by three red LED lights.
Self-checking system by means of an incorporated piezoelectric generator.
It works with no battery.
Indoor use through integrated insulating telescopic pole.
Insulated pole according to RD 614/2001 standard.
Outdoor use in dry condition only.



640 PEKE-5/36

- Rated voltage: from 5 to 36 kV
- Frequency: 50 / 60 Hz
- Insulating telescopic pole included
- Total extended length with voltage detector: 125.5 cm
- Total folded length with voltage detector: 44.3 cm
- Supplied with bag to transport the voltage detector that can be attached to the belt.

The smallest portable
voltage detector



Code	Ref.
640104	PEKE-5/36



Voltage Detectors

Safety

Medium voltage detector - Indoor & Outdoor

POWER LIGHT

Electronic voltage detector
Medium Voltage - Optical & Acoustic



MORE VOLTAGE RANGES
from 1 to 5 kV or from 5 to 79 kV

Optical & Acoustic

Lamp in the top part with high-brightness, low-consumption LEDs, for use in dark places. Lamp use is independent of the detection system.

Voltage present indicator using multiple high-brightness red LEDs over 360° and buzzer-type intermittent acoustic signal.

Absence of voltage indicator with multiple high-brightness green LEDs over 360°.

Low battery indication by orange LED.

Self-checking system for the full circuit by pressing the test button.

Stops operating when the battery is low.

Working temperature range: -25°C to +55°C.

Auto-start-up with voltage presence.

Auto-power-down to standby after two minutes with absence of voltage. Power consumption is less than 1 µA in this mode.

Indoor and outdoor use by means of insulating pole appropriate to the detector voltage range. Coupling to pole using Universal head.

2xAA high-capacity and high-durability batteries included.

Supplied in reinforced case.

Manufactured according to IEC 61243:2003+A1:2009 and UNE-EN 61243-1:2006+A1:2011 standards (except voltage range).

645 POWER LIGHT

- Rated voltage: from 1-5 kV
- Frequency: 50 / 60 Hz

Code	Ref.
645280	POWER-1/5

645 POWER LIGHT

- Rated voltage: from 5-79 kV
- Frequency: 50 / 60 Hz

Code	Ref.
645285	POWER-5/79



Voltage Detectors

Safety

Medium voltage detector - Outdoor

Optical & Acoustic



AC voltage detector for fast speed train networks Optical & Acoustic

Electronic voltage detector with micro controller and direct contact detection. New advanced technology acquisition that guarantees a perfect and safe indication even in conflicting electric field environments.

Voltage presence is indicated by high luminosity red LED and high acoustic pressure buzzer.

Voltage absence is indicated by high luminosity green LED.

Low battery is indicated by orange LED.

Self-checking system for its complete circuit by pressing test button.

Stops working when low battery.

Work temperature range: from -25°C to +55°C.

Self-ignition when voltage presence.

Auto turn-off into sleep mode after two minutes of voltage absence.

In this mode consumption in less than 1µA.

Power supply: 9V alkaline battery, type 6LR61 (included).

Indoor and outdoor use by appropriate insulating pole to the detector voltage range. Connection to the pole by Universal head.

Manufactured according to IEC 61243:2003+A1:2009 and UNE-EN 61243-1:2006+A1:2011 standards (except voltage range).

645 VTE-25-U

- Rated voltage: 25 kV AC
- Frequency: 50 / 60 Hz
- Supplied with carrying bag for pole and metallic box to store and transport the voltage detector.

Code	Ref.
641120	VTE-25-U



Voltage Detectors

Safety

DC voltage detector

Optical & Acoustic

With AC induced voltage indication
Optical & Acoustic



* Magnet applicable to the detector
VTC-OAD I

Code	Ref.
645215	VTC-OAD
645216	VTC-OAD I *



647 VTC-OAD

- **Field of application:** To be used in DC voltage electrical systems of up to 5000 DC, where there are adjacent AC systems of up to 25 kVA, not to be used in installations with only alternating current service voltage.
- **Working voltage range:** Direct current: $500\text{ V} < V_{\text{dcd}} < 5000\text{ V}$
AC induced voltage: $500\text{ V} < V_{\text{tac}} < 5000\text{ V}$
- **Usage frequency:** DIRECT current
ALTERNATING current 50-60 Hz
- **Operating Temperature:** -25°C to 55°C
- **Humidity range:** 20 to 96 %. Not apt for use in rainfall.
- **Indication of alert status:** By means of high luminosity green LED light. There is no voltage or it is below the detection thresholds.
- **Voltage presence indication:** **Optical:** fixed orange LED light when DC voltage presence.
Flashing red LED light when AC induced voltage presence.
Acoustic: Fixed buzzer when DC voltage presence. Alternated buzzer when AC voltage presence.
- **Battery:** 9 V, type 6LR61.
Low battery indication by flashing green LED light and off when battery level is critical.
- **Ground cable:** Extra flexible cable with silicon sheath and 6m length (possibility of other lengths at customer's request).
- **Insulation pole:** With universal head.
- **Self-checking:** Full self-checking system with automatic disconnection after 2 minutes. WITHOUT DETECTION.
- **Automatic start-up:** Automatic start-up system using detection of voltage (approx. 400 Vdc).
- **Electrode:** Non-exchangeable. L type (without contact electrode extension).
- **Threshold voltage:** Between 350 to 490 V

Voltage Detectors

Safety

DC voltage detector

Optical & Acoustic



* Magnet applicable to the detector VTC-OA I

Code	Ref.
645210	VTC-OA
645211	VTC-OA I *



647 VTC-OA

- **Voltage range:** 500 V < Vt < 5000 V
- **Usage frequency:** DIRECT current
- **Operating temperature:** -25°C to 55°C
- **Humidity Range:** 20 to 96 %
- **Indication of alert status:** Through high luminosity green LED.
There is no voltage or it is below the established detection threshold.
- **Indication of voltage presence:** Optical/Acoustic indication through high luminosity red LED and high pressure acoustic buzzer*
- **Battery:** 9 V battery, type 6LR61
Low battery indication by flashing green LED, when battery level is critical green led is off.
- **Earthing cable:** Extra flexible cable with silicon sheath and 6m long
(possibility of other lengths at customer's request)
With universal head
- **Insulating pole:** With universal head
- **Self-checking:** Full self-checking system with automatic disconnection after two minutes WITHOUT DETECTION.
- **Automatic start-up:** Automatic start-up system using detection of voltage (approx. 400V dc)
- **Electrode:** Possibility of exchanging electrode
- **Threshold voltage:** Threshold 1 - From 350 to 490 V: Red led
Threshold 2 - From 900 to 1100 V: Red and orange led

D-TUERI

OMNI-DIRECTIONAL PERSONAL ELECTRIC FIELD DETECTOR

EXPERT
10/66 kV
WORK CLOSE,
BE ALWAYS PROTECTED

PRO
7.9/69 kV
GIVING CONFIDENCE
IN WIDE AREAS



EASY PLACEMENT
inside or outside the helmet

Includes an accessory set that ensures a perfect fit in any helmet.



Accessory attached to the support to hold the detector

OUTSIDE



Power supply: Li Ion battery 3.7V 1050mAh

Water-tightness level: IP65

Light output: 2W

INSIDE



USB connection



Medium voltage



Acoustic Signal

Voltage Detectors

Safety

Personal voltage detector

Omni-directional personal electric field detector Medium Voltage - Optical & Acoustic

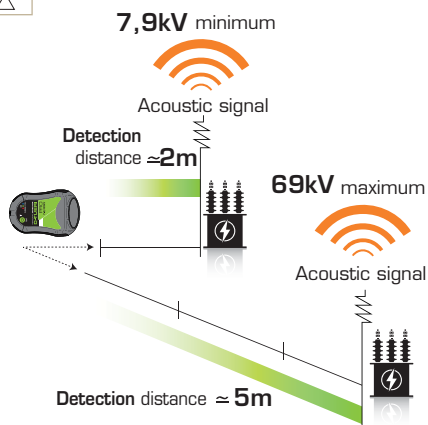
648 D-TUERI PRO

Additional security element for individual use.
When the user is close to an electric field between 7.9 kV – 69 kV and exceeds a distance of approximately 2 metres for 7.9 kV and 5 metres for 69 kV, the detector emits a signal. The alarm does not stop sounding until you move away from the dangerous zone.



- Use in Distribution / Transformation centers and AC Airlines
- Utilization range: Between 7.9-69kV
- Operating frequency: 50 and 60Hz
- Degree of protection: IP 65
- Luminous power: 2W
- Power supply: Li ion battery 3.7V 1050mAh
- Supplied in an insulated box that includes the detector, a nylon carrying case, charger and USB cable.

Code	Ref.
645257	D-TUERI PRO



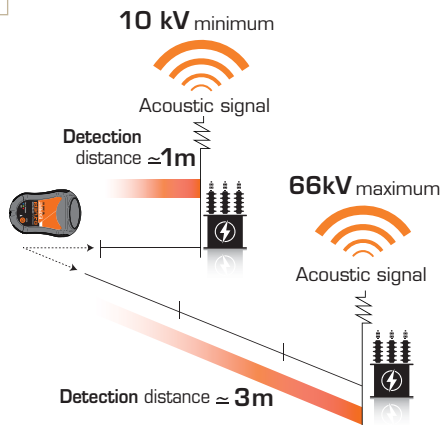
648 D-TUERI EXPERT

Additional security element for individual use.
When the user is close to an electric field between 10 kV – 66 kV and exceeds a distance of approximately 1 metres for 10 kV and 3 metres for 66 kV, the detector emits a signal. The alarm does not stop sounding until you move away from the dangerous zone.



- Use in Distribution / Transformation centers and AC Airlines
- Utilization range: Between 10-66kV
- Operating frequency: 50 and 60Hz
- Degree of protection: IP65
- Luminous power: 2W
- Power supply: Li ion battery 3.7V 1050mAh
- Supplied in an insulated box that includes the detector, a nylon carrying case, charger and USB cable.

Code	Ref.
645255	D-TUERI EXPERT



Optical & Acoustic



635 Multimeter CTL-600

Optical & Acoustic

High-quality digital multimeter with AC/DC current clamp and non-contact voltage detection function. Current and voltage can be measured at the same time and frequency displayed simultaneously. Includes data storage, low power indication and auto power off functions. Easy to carry and use.

Code	Ref.	Box
635310	Multimeter CTL-600	1

Technical information

- Resistance: 0 ~ 10 MΩ
- Continuity: <30 Ω
- AC current range: (40 ~ 65 Hz) 200 mA ~ 400 A
- DC current range: 400 A ~ 600 A / 300 mA ~ 600 A
- Frequency: 40 Hz - 1000 Hz
- Range: Automatic
- Other functions: Continuity test
Data storage
Backlight
VCN
Low battery indicator
Auto power off
Dual Display
- Category: CAT III 600 V
- Certificates: CE, RoHS
- Power supply: 2 x 1.5 V AAA batteries
- Weight: 250 g
- Dimensions: 187 x 65 x 38 mm
- Clamp size: 24 mm

Supplied with a nylon case for transport and storage.
Conforms to EN61010-1, EN61010-2-032, EN61326 and IEC 62321.


635 Ground Resistance Meter IER-4000

Digital

The high-performance IER-4000 ground tester is a professional device that tests the grounding resistance using the 2-pole and 3-pole methods. It also allows the grounding voltage to be pre-tested, protecting the user from dangerous voltages.



Digital

Code	Ref.	 Box
635340	Ground resistance meter IER-4000	1

Technical information

- **Screen:** Digital LCD
- **Data storage:** 100 groups
- **Resistance ranges:** 0 Ω ~ 29.99 Ω / 30 Ω ~ 99.9 Ω / 100 Ω ~ 999 Ω / 1 kΩ ~ 4 kΩ
- **Voltage ranges:** 0 V ~ 200 V (50/60 HZ)
- **Continuity check**
- **Values:** MAX/MIN/PRO, relative measurements
- **Results recorded in memory**
- **Auto power off, display backlight and low battery indicator.**
- **Category:** CAT III 600 V
- **Certificates:** CE, RoHS
- **Power supply:** 6 x 1.5 V AA batteries
- **Dimensions:** 180 x 140 x 65 mm
- **Weight:** 950 g

Supplied with a case for transport and storage.
Conforms to EN61010-1, EN61010-2-032, EN61326 and IEC 62321.

Rescue panoplies



POSSIBILITY OF CONFIGURATION TO MEASURE

690 SZ-51S

In the event of an electrical accident, fast intervention is essential. The panel contains all the rescue tools in a single place making it accessible to all users when an intervention is necessary.

Code	Description	Ref.
690100	Spanish	SZ-51S
690100 I	English	SZ-51S
690100 F	French	SZ-51S

Composed of a 1 x 1.6 m board that contains the following elements:

- 1 BS-45 rescue pole
- 1 plastic case for gloves
- 1 pair of dielectric gloves (class 3)
- 1 VC-300/25 insulated wire cutter
- 1 pipette
- 1 45 kV insulating stool
- 1 first aid plate
- 1 instruction plate

Product supplied with screws and nail plug (to hang).



Code: 580110
Ref: ST-45

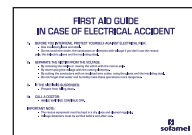
Code: 715121
Ref: VC-300/25

Code: 545113
Ref: CG-120

Code: 530270
Ref: SG-30

Code: 610100
Ref: BS-45

Code	Ref.
ES X690165	SZ08 E
EN X690166	SZ08 I
FR X690167	SZ08 F



Code	Ref.
ES X690170	PA-29P E
EN X690171	PA-29P I
FR X690172	PA-29P F



Code: 695120
Ref: SZ-01

POSSIBILITY
OF CONFIGURATION
TO MEASURE



690 SZ-51B

In the event of an electrical accident, fast intervention is essential. The panel contains all the rescue tools in a single place making it accessible to all users when an intervention is necessary.

Code	Description	Ref.
690130	Spanish	SZ-51B
690130I	English	SZ-51B
690130F	French	SZ-51B

Composed of a 1 x 1.6 m board that contains the following elements:

- 1 BS-45 rescue pole
- 1 5-36 kV voltage detector with pole
- 1 plastic case for gloves
- 1 pair of dielectric gloves (class 3)
- 1 VC-300/25 insulated wire cutter
- 1 pipette
- 1 45 kV insulating stool
- 1 pair of insulating boots (class 2)
- 1 first aid plate
- 1 instruction plate

Product supplied with screws and nail plug (to hang).



Rescue and First Aid Safety

Rescue panoplies



POSSIBILITY
OF CONFIGURATION
TO MEASURE

690 SZ-51M

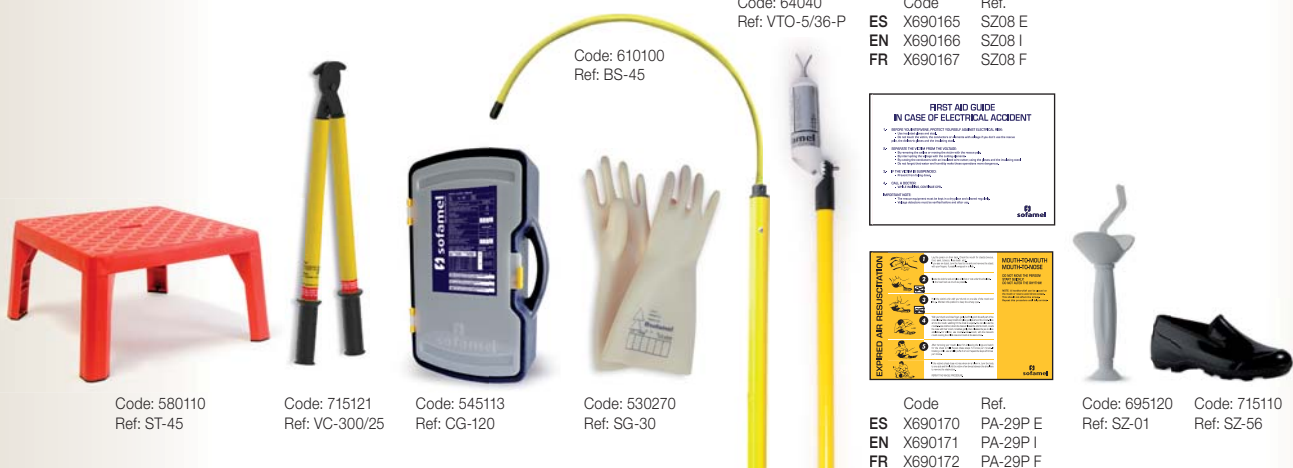
In the event of an electrical accident, fast intervention is essential. The panel contains all the rescue tools in a single place making it accessible to all users when an intervention is necessary.

Code	Description	Ref.
690110	Spanish	SZ-51M
690110 I	English	SZ-51M
690110 F	French	SZ-51M

Composed of a 1 x 1.6 m board that contains the following elements:

- 1 BS-45 rescue pole
- 1 5-36 kV voltage detector with pole
- 1 plastic case for gloves
- 1 pair of dielectric gloves (class 3)
- 1 VC-300/25 insulated wire cutter
- 1 pipette
- 1 45 kV insulating stool
- 1 pair of insulating shoes
- 1 first aid plate
- 1 instruction plate

Product supplied with screws and nail plug (to hang).



Code: 64040
Ref: VTO-5/36-P

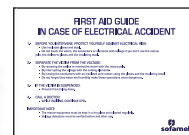
Code	Ref.
ES X690165	SZ08 E
EN X690166	SZ08 I
FR X690167	SZ08 F

Code: 580110
Ref: ST-45

Code: 715121
Ref: VC-300/25

Code: 545113
Ref: CG-120

Code: 530270
Ref: SG-30



Code	Ref.
ES X690170	PA-29P E
EN X690171	PA-29P I
FR X690172	PA-29P F



Code: 695120
Ref: SZ-01

Code: 715110
Ref: SZ-56

Manoeuvring and rescue kit

The essential and handy safety kit



691 KRM-4001

The kit is sold in one special black plastic box.

Code	Ref.
690114	KRM-4001

* For other compositions, please consult.

Elements of the kit:

- 1 1.5 m telescopic pole of three sections
- 1 optical and acoustical detector from 5 to 36 kV with bag
- 1 rescue hook with universal head
- 1 pair of dielectric gloves SG-40 T10 stored in a nylon bag
- 1 insulating mat AD4-0610/40C of 60 cm x 1 m, working voltage 36 kV
- 1 respiration pipette
- 1 neck immobilizer
- 1 fire resistant blanket SZ-180 of 1.2 x 1.8 m
- 1 stretcher



Fire resistant blanket
SZ-180



Optical & Acoustical
Detector VTE-5/36U



Dielectric gloves
SG-40 T10



Rescue hook,
respiration pipette
and neck immobilizer



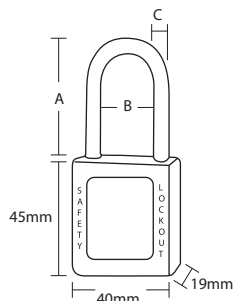
Insulating mat
AD4-0610/40C



Stretcher

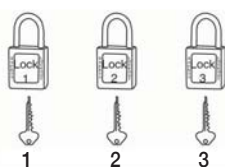


Telescopic pole



Metal shank padlocks

Padlocks for blocking off a single work area and/or area in discharge.
Available in three different colours depending on their use.



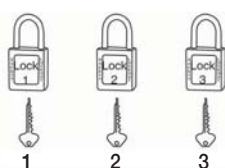
DIFFERENT KEYS

761 C/ABS-25

ABS security padlock

Body made of ABS with high impact resistance, UV protection, low and high temperature resistance.
Includes "danger" and "property of" markings.
Blue, red and yellow colours.
Dimensions: 40x45x19 mm
With a different key for each padlock.

Code	Ref.	Colours	A	B	C
761100	C/ABS-25 AZ		25	20	6
761103	C/ABS-25 RJ		25	20	6
761106	C/ABS-25 AM		25	20	6



DIFFERENT KEYS

761 C/ABS-38

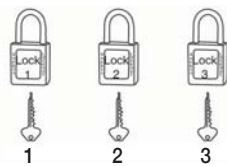
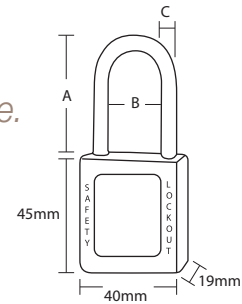
ABS security padlock

Body made of ABS with high impact resistance, UV protection, low and high temperature resistance.
Includes "danger" and "property of" markings.
Blue, red and yellow colours.
Dimensions: 40x45x19 mm
With a different key for each padlock.

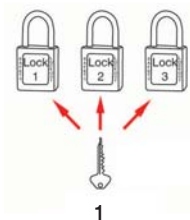
Code	Ref.	Colours	A	B	C
761101	C/ABS-38 AZ		38	20	6
761108	C/ABS-38 RJ		38	20	6
761110	C/ABS-38 AM		38	20	6

Nylon shank padlocks

Padlocks for blocking off a single work area and/or area in discharge.
Available in three different colours depending on their use.



DIFFERENT KEYS



SINGLE KEYS

761 C/COM-38-DK Composite security padlock

Body made of composite.
Non-conductive. Does not produce sparks. Dielectric test.
Appropriate for use in environments which entail inflammable or explosive risk.
Blue, red and yellow colours.
Dimensions: 40x45x19 mm
With a different key for each padlock.

Code	Ref.	Colours	A	B	C
761102	C/COM-38-DK AZ		38	20	6
761107	C/COM-38-DK RJ		38	20	6
761109	C/COM-38-DK AM		38	20	6

761 C/COM-38-SK Composite security padlock

Body made of composite.
Non-conductive. Does not produce sparks. Dielectric test.
Appropriate for use in environments which entail inflammable or explosive risk.
Blue, red and yellow colours.
Dimensions: 40x45x19 mm
With same key for each padlock.

Code	Ref.	Colours	A	B	C
761112	C/COM-38-SK RJ		38	20	6
761113	C/COM-38-SK AZ		38	20	6
761114	C/COM-38-SK AM		38	20	6

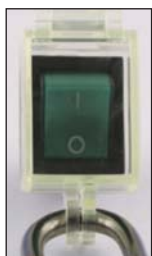


762 P/PU-22

Protective cover for pushbutton

Made of transparent resin.
Used for preventing an unwanted operation being carried out by mistake.
Used for pushbuttons up to Ø22 mm.

Code	Ref.
762100	P/PU-22



762 P/IN-28

Protective cover for switch

Made of transparent resin.
Used for preventing an unwanted operation being carried out by mistake.
Used for switches of 28 mm long x 22.5 mm wide.

Code	Ref.
762101	P/IN-28



762 P/EM

Cover for pushbutton

Made of transparent resin.
Used for preventing an unwanted operation being carried out by mistake.

Code	Ref.
762102	P/EM-22
762103	P/EM-30,5

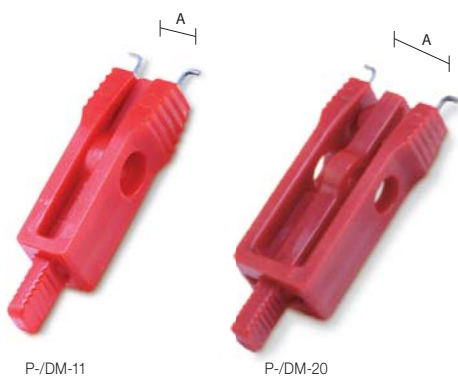


762 P/DMT

Lockout for switches

Made of nylon.
Automatic lockout for switches using stainless steel sawtooth mechanism.
Adjustable to cover a wider range.

Code	Ref.	Dimensions
762110	P/DMT	47x32x15 mm



P-/DM-11

P-/DM-20

762 P/DM

Lockout for switches

Made of nylon.
Lockout for switches, circuit breakers, differentials and power control switches.



Code	Ref.	Dimensions	A
762104	P/DM-11	57.4x14.5x14 mm	For space smaller than 11 mm
762105	P/DM-20	68.3x23.3x314 mm	For space smaller than 20 mm

762 P/DIG-41

Lockout for switches

Made of nylon.
Lockout for automatic switches using a stainless steel saw-tooth system. Thanks to its full adjustability, it allows encompassing a wider range.



Code	Ref.	Dimensions	Description
762106	P/DIG-41	68.3x48.3x27.6 mm	For circuit breakers with maximum dimensions of 41x15.8 mm



762 P/DIP-9

Lockout for switches

The shell is made of ABS resin material and the main body is made of durable material. Its design allows an easy and fast installation.



Code	Ref.	Dimensions	Description
762107	P/DIP-9	68.5x23.5x14 mm	For circuit breaker ≤10mm, no width limit.



762 P/DIPA-9

Lockout for switches

Made of nylon. Lockout for automatic switches using a stainless steel saw-tooth system. Thanks to its full adjustability, it allows encompassing a wider range.



Code	Ref.	Dimensions
762108	P/DIPA-9	93x34.3x28 mm



762 P/BOL-450

Pouch for storing plugs

Made of break-resistant nylon. Ideal for safe-keeping of any size electrical connectors.

Code	Ref.	Dimensions
762109	P/BOL-450	450x250 mm





763 P/VAL

Protective for valves

Made of ABS, anti-blow with high wear resistance.
Efficient operation in extreme conditions.
Temperature range from -20°C to 100°C.
Protects from accidental opening of the valve.
Label for identifying the person responsible.



Code	Ref.	Dimensions
763100	P/VAL-63R	25 mm - 63 mm
763101	P/VAL-127	63 mm - 127 mm
763102	P/VAL-165	127 mm - 165 mm
763103	P/VAL-254	165 mm - 254 mm



763 EV-52

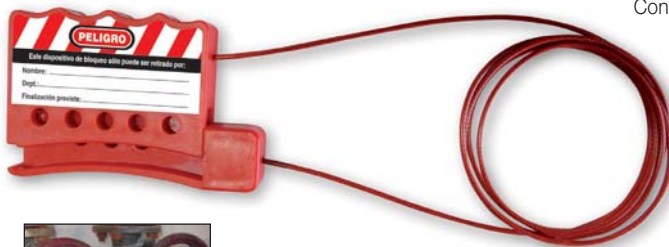
Lockout hasps

Used for blocking different sized gate valves as well as multiple valves.
Lighter than chains, the device is easy to transport and use.
Cable made of Ø 5 mm plasticised steel and 2.0 m long.
Holds six padlocks.

Code	Ref.
763104	EV-52

763 EV-318

Lock-and-tag device with adjustable tie cable



Consists of safety clamp and 4 mm multi-filament strong and flexible steel cable insulated with a clear plastic coating (PVC-free).
Adhesive safety label to identify the person responsible for installation of device.
Used to block gate valves of different sizes, and to block multiple valves at once.
Lighter than chains, the device is easy to carry and use.
Cable made from laminated steel Ø 3 mm and 1.8 m. long.
Can fit five locks.

Code	Ref.
763105	EV-318

Lockouts



EN-6/38

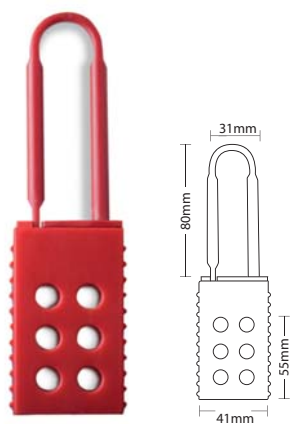
EN-6/25

764 EN-6

Lockout hasps

Protects the equipment from being opened accidentally.
Holds six padlocks.
Shackle made of steel with polypropylene-covered handle.

Code	Ref.	Dimensions	Ø Ring
764100	EN-6/25	115x45 mm	26 mm
764101	EN-6/38	130x60 mm	39 mm



764 EA-7818

Lockout hasps

Protects the equipment from being opened accidentally. Holds six padlocks. Fully insulated lockout. Made of polyamide.
Dielectric protection.
Non-conductive. Anti-spark.

Code	Ref.	Dimensions	Dimensions ring
764102	EA-7818	157x45 mm	78x78 mm



764 EAL-3628

Lockout hasps

Made of anodized aluminium with high anti-corrosion protection.
Identification by name, department and comments label.
Holds six padlocks.

Code	Ref.	Dimensions	Dimensions ring
764103	EAL-3628	188x76 mm	36x28 mm

Containers



765 SB-12

Lock box

After machine or process is locked out, the keys can be kept in the lock box.
Each authorised person can place a personal padlock in the box as to prevent it from being opened.
Ensures that no single employee has access to the box unless all the employees have removed their padlocks.
Holds 12 padlocks + master padlock.
Supplied without products.

Code	Ref.	Dimensions
765100	SB-12	260x103x152 mm

Lockout station

Panel made of ABS.

Door made of high-resistance polycarbonate.

Used for organising daily use of padlocks and labels.



765 LS-4

Code	Ref.	Dimensions	Capacity
765101	LS-4	300x210x60 mm	Supplied without products
765111	LS-4-D	300x210x60 mm	Supplied with: 4 padlocks (cod. 761108) 2 lockout hasps (cod. 764101) 25 labels (cod. 765103)



765 LS-10

Code	Ref.	Dimensions	Capacity
765102	LS-10	486x300x60 mm	Supplied without products
765112	LS-10-D	486x300x60 mm	Supplied with: 10 padlocks (cod. 761108) 3 lockout hasps (cod. 764101) 25 labels (cod. 765103)

Triangle with lightning screen-printing, black border and yellow background.

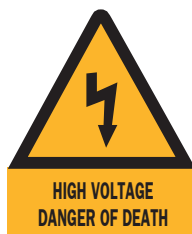


720 Electrical hazard

Code	Ref.	Dimensions
720100	AE-10S	105 mm
720110	AE-14S	148 mm
720120	AE-21S	210 mm
720130	AE-29S	297 mm

UNE-EN ISO 7010

Triangle with lightning screen-printing, black border and yellow background. Text: "HIGH VOLTAGE DANGER OF DEATH".



720 High voltage

Code	Ref.	Dimensions
720140	CE-10S	105 mm
720150	CE-14S	148 mm
720160	CE-21S	210 mm
720170	CE-29S	297 mm

UNE-EN ISO 7010

English and French edition under request.

Triangle with lightning screen-printing, black border and yellow background. Text: "RETURN VOLTAGE DANGER OF DEATH".



720 Return voltage

Code	Ref.	Dimensions
720180	CR-10S	105 mm
720190	CR-14S	148 mm
720200	CR-21S	210 mm
720210	CR-29S	297 mm

UNE-EN ISO 7010

English and French edition under request.

Circular sign of manoeuvre prohibition.



720 Manoeuvring forbidden

Code	Ref.	Dimensions
720220	PM-10S	105 mm
720230	PM-21S	210 mm

UNE-EN ISO 7010

Triangle with lightning screen-printing, black border and yellow background.



725 Electrical hazard

Code	Ref.	Dimensions
725100	AE05ADH	52 mm
725110	AE10ADH	105 mm
725115	AE21ADH	210 mm

UNE-EN ISO 7010

Triangle with lightning and 230V screen-printing, black border and yellow background.



725 Electrical hazard 230V

Code	Ref.	Dimensions
725120	VT230V55	52 mm
725130	VT230V10	105 mm

UNE-EN ISO 7010

Triangle with lightning and 400V screen-printing, black border and yellow background.



725 Electrical hazard 400V

Code	Ref.	Dimensions
725140	VT400V55	52 mm
725150	VT400V10	105 mm

UNE-EN ISO 7010

Triangle with Earthing symbol screen-printing, black border and yellow background.

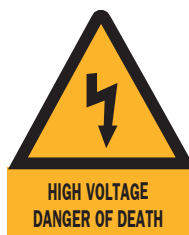


725 Earthing

Code	Ref.	Dimensions
725155	TT05ADH	52 mm
725160	TT10ADH	105 mm

UNE-EN ISO 7010

Triangle with lightning screen-printing, black border and yellow background.
Text: "HIGH VOLTAGE DANGER OF DEATH".

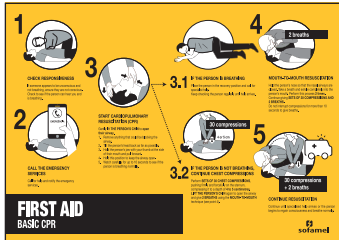


735 High voltage

Code	Ref.	Dimensions
735100	CE-14PCI	148 mm
735110	CE-21PCI	210 mm

UNE-EN ISO 7010

English and French edition under request.



730 First aid

Code	Ref.	Language	Dimensions
730100	PA-42P	Spanish	297 x 420 mm
730101	PA-42P	English	297 x 420 mm
730102	PA-42P	French	297 x 420 mm
730110	PA-29P	Spanish	210 x 297 mm
730111	PA-29P	English	210 x 297 mm
730112	PA-29P	French	210 x 297 mm

UNE-EN ISO 7010

730 Prerequisites

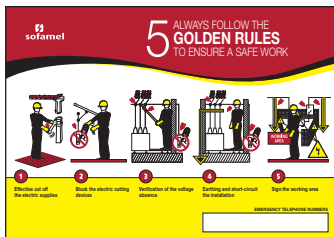
Code	Ref.	Language	Dimensions
730120	RTE-42P	Spanish	297 x 420 mm
730121	RTE-42P	English	297 x 420 mm
730122	RTE-42P	French	297 x 420 mm
730130	RTE-29P	Spanish	210 x 297 mm
730131	RTE-29P	English	210 x 297 mm
730132	RTE-29P	French	210 x 297 mm

UNE-EN ISO 7010

730 Five golden rules

Code	Ref.	Language	Dimensions
730140	CRO-42P	Spanish	420 x 297 mm
730144	CRO-42P	English	420 x 297 mm
730146	CRO-42P	French	420 x 297 mm

UNE-EN ISO 7010



Signs tapes



For underground cables signalling. Made of 150 mm yellow color PVC. 500 m rolls. Text: "WARNING! ELECTRIC CABLES UNDERGROUND".

740 Sign tape

Code	Ref.	Language	Dimensions
740100	CCS-01AM	Spanish	150 x 500 mm

English and French edition under request.

UNE-EN ISO 7010

Signs tapes



740 ST-62A

Work area delimiting

25 m work area delimiting tape reel. Please consult for other dimensions.

Code	Ref.
740180	ST-62A

UNE-EN ISO 7010



Beacon tapes

Tapes for other uses in work areas. Ideal for areas where access cannot be prevented and there is a specific work area to tape off. These tapes are not a substitute for work area cordons. Made from polyethylene laminate 80 mm wide and printed on both sides in yellow/black and white/red colour strips.



Beacon tapes



740 ST-63

Beacon tapes

Red and white polyethylene beacon tape. 250 m rolls and 8 cm wide.

Code	Ref.	Color
740160	ST-63	Red and white

UNE-EN ISO 7010

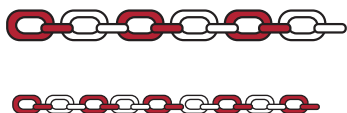
740 ST-64

Beacon tapes

Black and yellow polyethylene beacon tape. 250 m rolls and 8 cm wide.

Code	Ref.	Color
740170	ST-64	Black and yellow

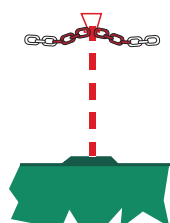
UNE-EN ISO 7010



745 Polyethylene chain

High resistant red and white sign chain. 25 m rolls.

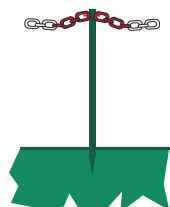
Code	Ref.	Dimensions
745110	SP-52A	29 x 52 x 7,5 mm
745100	SP-35A	20 x 35 x 5 mm



745 SP-01A

Chain support

Code	Ref.	Model
745140	SP-01A	With base



745 Mod. SP-02B

Chain support

Code	Ref.	Model
745150	SP-02B	With pick



745 ST-70

Signs flags

Red flag with lightning.

Code	Ref.	Dimensions
750100	ST-70	60 x 35 cm

UNE-EN ISO 7010



745 ST-71

Banner

Red banner with lightning.

Code	Ref.	Dimensions
750110	ST-71	60 x 35 cm

UNE-EN ISO 7010



745 ST-72

Hangings signs

Code	Ref.	Length
750120	ST-72	1.20 mts

English and French edition under request.

UNE-EN ISO 7010



745 ST-73

Hangings signs

Code	Ref.	Length
750130	ST-73	1.20 mts

English and French edition under request.

UNE-EN ISO 7010



745 ST-74

Hangings signs

Code	Ref.	Length
750140	ST-74	1.20 mts

English and French edition under request.

UNE-EN ISO 7010



745 ST-75

Hangings signs

Code	Ref.	Length
750150	ST-75	1.20 mts

English and French edition under request.

UNE-EN ISO 7010



745 VS-80

Extending barriers

Iron extending barrier with 3.5 m reflective band.

Code	Ref.
755100	VS-80



Order Number Index

Code	Ref.	Page	Code	Ref.	Page	Code	Ref.	Page
530110	SG-25 T9	35	585400	AD4-0606	49	616503	BMAI-3V/132P	62
530120	SG-25 T10	35	585410	AD4-0610	49	616510	BMAI-4V/220M	62
530150	SG-50 T9	35	585420	AD4-06100	49	616511	BMAI-4V/220U	62
530160	SG-50 T10	35	585430	AD4-1010	49	616512	BMAI-4V/220B	62
530190	SG-10 T9	35	585440	AD4-10100	49	616513	BMAI-4V/220P	62
530200	SG-10 T10	35	585450	AD4-1210	49	616520	BMAI-5V/380M	62
530230	SG-20 T9	35	585460	AD4-12100	49	616521	BMAI-5V/380U	62
530240	SG-20 T10	35	595100	SP-22	52	616522	BMAI-5V/380B	62
530270	SG-30 T9	35	595100	SP-22	53	616523	BMAI-5V/380P	62
530280	SG-30 T10	35	595101	SP-321	52	616530	BMAI-6V/380M	62
530320	SG-40 T10	35	595101	SP-321	53	616531	BMAI-6V/380U	62
530330	SG-40 T11	35	595102	SP-35	53	616532	BMAI-6V/380B	62
531110	SGM-25 T9	37	595103	SP-321	52	616533	BMAI-6V/380P	62
531120	SGM-25 T10	37	595103	SP-321	53	616600	BMAE-3V/110M	63
531150	SGM-50 T9	37	595112	SP-39	53	616601	BMAE-3V/110U	63
531160	SGM-50 T10	37	595113	S/PA	53	616602	BMAE-3V/110B	63
531190	SGM-10 T9	37	600150	BA-1,0x10	54	616603	BMAE-3V/110P	63
531200	SGM-10 T10	37	600151	BA-0,6x10	54	616610	BMAE-4V/220M	63
531230	SGM-20 T9	37	605100	BM-45	55	616611	BMAE-4V/220U	63
531240	SGM-20 T10	37	605110	BM-66	55	616612	BMAE-4V/220B	63
531270	SGM-30 T9	37	605115	BM-90	55	616613	BMAE-4V/220P	63
531280	SGM-30 T10	37	605120	BM-132	55	616620	BMAE-5V/380M	63
531310	SGM-40 T10	37	605130	BME-45	56	616621	BMAE-5V/380U	63
531320	SGM-40 T11	37	605140	BME-66	56	616622	BMAE-5V/380B	63
535100	SG-37	38	605150	BME-132	56	616623	BMAE-5V/380P	63
540113	SG-B	38	610100	BS-45	65	616630	BMAE-6V/380M	63
540114	SG-C	38	610110	BS-66	65	616631	BMAE-6V/380U	63
540115	SG-D	38	610115	BS-90	65	616632	BMAE-6V/380B	63
540116	SG-E	38	615206	Wall support for poles	67	616633	BMAE-6V/380P	63
540117	SG-F	38	615300	BMTS-15/45M	57	625110	BDC	64
545100	SG-36	39	615301	BMTS-15/45U	57	630100	SM-02R	68
545110	SG-35	39	615302	BMTS-15/45B	57	630101	ADAP. H12-M10	69
545111	SGP	40	615303	BMTS-15/45P	57	630102	ADAP. UK-M10	80
545112	CG-70	39	615310	BMTS-20/66M	57	630106	ADAP. M10-UK	80
545113	CG-120	39	615311	BMTS-20/66U	57	630107	ADAP. B-UK	69
545120	SG-117	40	615312	BMTS-20/66B	57	630108	ADAP. B-M10	69
545130	ME-60	40	615313	BMTS-20/66P	57	630109	ADAP. H12-UK	70
545135	Fuse Holder	67	615320	BMTS-30/132M	57	630110	SM-02C	68
545140	TALCUM	40	615321	BMTS-30/132U	57	630116	GA-TML	69
565090	ARMOUR-1	41	615322	BMTS-30/132B	57	630120	SM-02K	68
565091	ARMOUR-2	42	615323	BMTS-30/132P	57	630122	SM-03K	68
565093	ARMOUR-2 ATPV36	43	615325	BMTS-4/6	58	630123	SM-90K	68
565099	SP-181	44	615330	BMTS-5/9	58	630130	GS-49	66
565102	SPE	44	615335	BMTS-6/12	58	630162	ADAP. UK-B	70
565106	S/CABS-397	44	615350	BMTS-7/11,6	59	630163	ADAP. UK-P	70
580096	STE-26	51	615355	BMTS-7/10,3	59	630166	ADAP. H12-B	70
580100	ST-36	50	616100	BMAI-2/66M	60	630167	ADAP. B-P	69
580110	ST-45	50	616101	BMAI-2/66U	60	630170	GSP-32	66
580111	STE-45	51	616102	BMAI-2/66B	60	630175	AVPM	66
580115	ST-66	50	616103	BMAI-2/66P	60	630177	GPB	66
580116	STE-66	51	616110	BMAI-2,5/110M	60	635340	IER-4000	79
580130	ST-79	52	616111	BMAI-2,5/110U	60	635360	CTL-1000	78
585180	AD0-0606	49	616112	BMAI-2,5/110B	60	640104	PEKE-5/36	71
585181	AD0-0610	49	616113	BMAI-2,5/110P	60	641120	VTE-25-U	73
585182	AD0-06100	49	616120	BMAI-3/132M	60	645210	VTC-OA	75
585183	AD0-1010	49	616121	BMAI-3/132U	60	645211	VTC-OA I	75
585184	AD0-10100	49	616122	BMAI-3/132B	60	645215	VTC-OAD	74
585185	AD0-1210	49	616123	BMAI-3/132P	60	645216	VTC-OAD I	74
585186	AD0-12100	49	616200	BMAE-2/30M	61	645255	D-TUERI EXPERT	77
585200	AD2-0606	49	616201	BMAE-2/30U	61	645257	D-TUERI PRO	77
585210	AD2-0610	49	616202	BMAE-2/30B	61	645280	POWER-1/5	72
585220	AD2-06100	49	616203	BMAE-2/30P	61	645285	POWER-5/79	72
585230	AD2-1010	49	616210	BMAE-2,5/66M	61	659001E	EMP	31
585240	AD2-10100	49	616211	BMAE-2,5/66U	61	660250	PATL-PCA25-3/1616	18
585250	AD2-1210	49	616212	BMAE-2,5/66B	61	660260	PATL-PCA25-3/2516	18
585260	AD2-12100	49	616213	BMAE-2,5/66P	61	660270	PATL-PCA25-3/3525	18
585300	AD3-0606	49	616220	BMAE-3/110M	61	660280	PATL-PCA25-4/1616	19
585310	AD3-0610	49	616221	BMAE-3/110U	61	660281	PATL-PCA25-4/2516	19
585320	AD3-06100	49	616222	BMAE-3/110B	61	660282	PATL-PCA25-4/3525	19
585330	AD3-1010	49	616223	BMAE-3/110P	61	660290	PATL-MPUB/1616	16
585340	AD3-10100	49	616500	BMAI-3V/132M	62	660300	PATL-MPUB/2516	16
585350	AD3-1210	49	616501	BMAI-3V/132U	62	660310	PATL-MPUB/3525	16
585360	AD3-12100	49	616502	BMAI-3V/132B	62	660400	ERLAIN-3/11	25

Order Number Index

Code	Ref.	Page	Code	Ref.	Page	Code	Ref.	Page
660405	ERLAIN-4/10	24	680209	PAT-MPL/12009	25	745100	SP-35A	96
665220	PATC-MPUB/2525	22	680210	PAT-MPL/12010	25	745110	SP-52A	96
665225	PATC-MPUB/3535	22	690100	SZ-51S	80	745140	SP-01A	96
665230	PATC-MPUB/5050	22	690100 F	SZ-51S	80	745150	SP-02B	96
665235	PATC-MPUH/2525	22	690100 I	SZ-51S	80	750100	ST-70	96
665240	PATC-MPUH/3535	22	690110	SZ-51M	82	750110	ST-71	96
665245	PATC-MPUH/5050	22	690110 F	SZ-51M	82	750120	ST-72	97
665250	PATC-5014H/2525	21	690110 I	SZ-51M	82	750130	ST-73	97
665255	PATC-5014H/3535	21	690114	KRM-4001	83	750140	ST-74	97
665260	PATC-5014H/5050	21	690130	SZ-51B	81	750150	ST-75	97
665285	PATL-MPLB/7070	17	690130F	SZ-51B	81	755100	VS-80	97
665310	PATCPF-MPU/2525	23	690130I	SZ-51B	81	761100	C/ABS-25 AZ	84
665315	PATCPF-MPU/3535	23	715140	DB2 T39	45	761101	C/ABS-38 AZ	84
665320	PATCPF-MPU/5050	23	715150	DB2 T41	45	761102	C/COM-38-DK AZ	85
666005	PC	28	715155	DB2 T42	45	761103	C/ABS-25 RJ	84
666010	PDC	29	715160	DB2 T43	45	761106	C/ABS-25 AM	84
666015	TTSR	32	715165	DB2 T44	45	761107	C/COM-38-DK RJ	85
666110	PATF-PC-TTIR	14	715170	DB2 T45	45	761108	C/ABS-38 RJ	84
666120	PATF-PC-TTR	12	715230	DB3 T39	46	761109	C/COM-38-DK AM	85
666130	PATF-PC-TTSR	12	715260	DB3 T41	46	761110	C/ABS-38 AM	84
666140	PATF-PDC-TTR	13	715270	DB3 T42	46	761112	C/COM-38-SK RJ	85
666150	PATF-PDC-TTSR	13	715275	DB3 T43	46	761113	C/COM-38-SK AZ	85
666160	PATF-PDC-TTIR	15	715280	DB3 T44	46	761114	C/COM-38-SK AM	85
670100P	TML	30	715285	DB3 T45	46	762100	P/PU-22	86
671100	5015H	29	715300	OB2 T-L	47	762101	P/IN-28	86
671106	EMB	31	715340	OB3 T-L	48	762102	P/EM-22	86
671110	MPUH	28	720100	AE-10S	92	762103	P/EM-30,5	86
671115	MPUB	28	720110	AE-14S	92	762104	P/DM-11	87
671116	MPUP	28	720120	AE-21S	92	762105	P/DM-20	87
671117	MPUH-L	28	720130	AE-29S	92	762106	P/DIG-41	87
671118	MPUB-L	28	720140	CE-10S	92	762107	P/DIP-9	88
671119	MPUP-L	29	720150	CE-14S	92	762108	P/DIPA-9	88
671120	MC	29	720160	CE-21S	92	762109	P/BOL-450	88
671121	MCL	29	720170	CE-29S	92	762110	P/DMT	87
671141	TT-38A	32	720180	CR-10S	92	763100	P/VAL-63R	89
671145	TT-38L	32	720190	CR-14S	92	763101	P/VAL-127	89
671152	TT-50	32	720200	CR-21S	92	763102	P/VAL-165	89
671153	TTR	32	720210	CR-29S	92	763103	P/VAL-254	89
671154	TTIR	32	720220	PM-10S	92	763104	EV-52	89
671166	PP15	29	720230	PM-21S	92	763105	EV-318	89
671171	PCA-25	29	725100	AE05ADH	93	764100	EN-6/25	90
671172	MPL	30	725110	AE10ADH	93	764101	EN-6/38	90
671173	MPLP	30	725115	AE21ADH	93	764102	EA-7818	90
671178	MPLP	30	725120	VT230V55	93	764103	EAL-3628	90
671179	Wall earthing equip. holder	26	725130	VT230V10	93	765100	SB-12	90
672205	BPGA	31	725140	VT400V55	93	765101	LS-4	91
673100	PAV-48	30	725150	VT400V10	93	765102	LS-10	91
674100	PA40A-B	31	725155	TT05ADH	93	765111	LS-4-D	91
674100	PA40A-H	31	725160	TT10ADH	93	765112	LS-10-D	91
674105	PA40ABP	31	730100	PA-42P	94	899000	FP-20/140	54
675100P	TMC	30	730101	PA-42P	94	899005	FP-20/210	54
676010	PATL-MPS/9510	20	730102	PA-42P	94	899010	FP-25/125	54
680176	PAT-MPL/05006	25	730110	PA-29P	94	899015	FP-25/175	54
680177	PAT-MPL/05007	25	730111	PA-29P	94	899020	FP-25/225	54
680178	PAT-MPL/05008	25	730112	PA-29P	94	899025	FP-25/275	54
680179	PAT-MPL/05009	25	730120	RTE-42P	94	899030	FP-25/325	54
680180	PAT-MPL/05010	25	730121	RTE-42P	94	899050	FE-20/120	54
680186	PAT-MPL/07006	25	730122	RTE-42P	94	899055	FE-20/110	54
680187	PAT-MPL/07007	25	730130	RTE-29P	94	899060	FE-40/30	54
680188	PAT-MPL/07008	25	730131	RTE-29P	94	P-671180	PEP	33
680189	PAT-MPL/07009	25	730132	RTE-29P	94	P-671185	PEP-ECO	33
680190	PAT-MPL/07010	25	730140	CRO-42P	94	P-671190	PTB14-1000	33
680196	PAT-MPL/09506	25	730144	CRO-42P	94	P-671191	PTB14-1300	33
680197	PAT-MPL/09507	25	730146	CRO-42P	94	P-671192	PTB14-1500	33
680198	PAT-MPL/09508	25	735100	CE-14PCI	93	P-671193	PTB18-1000	33
680199	PAT-MPL/09509	25	735110	CE-21PCI	93	P-671194	PTB18-1300	33
680200	PAT-MPL/09510	25	740100	CCS-01AM	94	P-671195	PTB18-1500	33
680206	PAT-MPL/12006	25	740160	ST-63	95	X-03.372.00	PICA HEX.	33
680207	PAT-MPL/12007	25	740170	ST-64	95			
680208	PAT-MPL/12008	25	740180	ST-62A	95			



www.sofamel.com

Tel. +34 93 808 79 80 - export@sofamel.es