

ELECTRICAL SAFETY EQUIPMENT
FOR THE **AUTOMOTIVE SECTOR**





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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 166002:2021, both duly granted by the Spanish Association for Standardization and Certification (AENOR).







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Signs and beacons



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and overboots

Personal Protection Equipment

Safety

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*, 8*, 9,	360	AZC	500 V AC	2.500 V AC	5.000 V AC
530120	SG-25 T10							
530150	SG-50 T9	0	10, 11, 12*	360 410 - 460	AZC	1.000 V AC	5.000 V AC	10.000 V AC
530160	SG-50 T10							

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

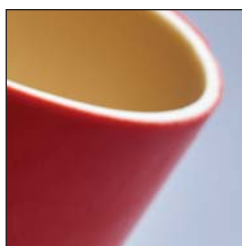
531 SGM



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* - 8*	360	RC
531120	SGM-25 T10					9 - 10 - 11		
531150	SGM-50 T9	0	< 2.9	1.000 V AC	5.000 V AC	12*	360	
531160	SGM-50 T10					410		

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 CGS Plastic glove case

Code	Ref.	Dimensions
545115	CGS	43 x 23 x 7,6 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 cuff level.

Code	Ref.
545120	SG-117

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



ARMOUR
by SOFAMEL

*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.**

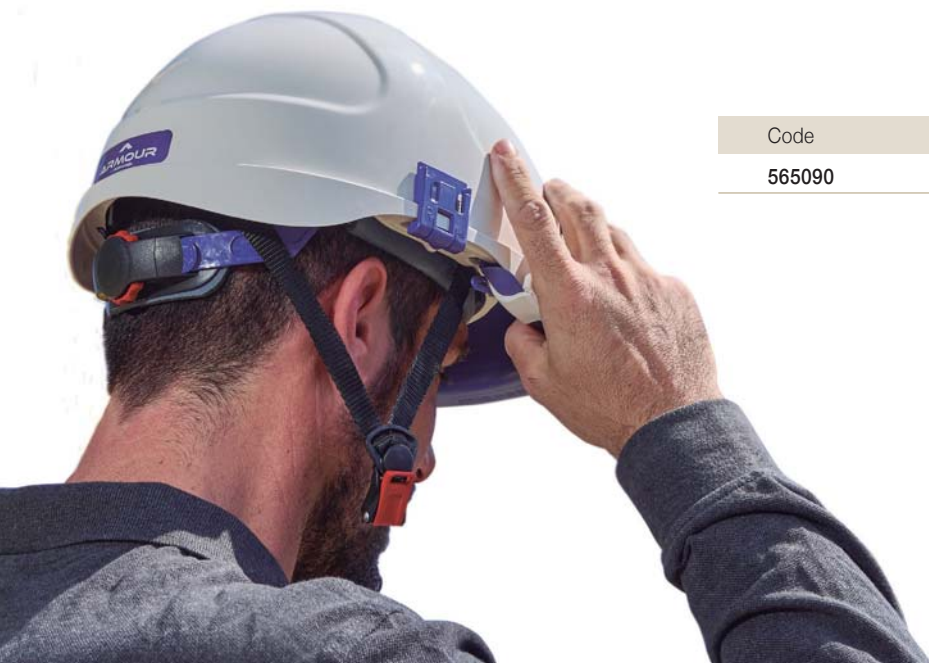
CHIN STRAP

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

Code	Ref.
565090	ARMOUR-1



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



Personal Protection Equipment

Safety

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

Face shield



CE EN 166

570 SP-182

Face shield for short circuit arc

Face shield that can be adjusted to mostly all kind of safety helmets without needing to modify its characteristics, but mod. S / CABS-397.

It is composed of a nylon adapter and a reclining visor. It repels molten metals, impacts at its highest level, liquid splashes, and the electric arc risk. It filters I.R. solar radiation. ATPV of serious viewer 6 cal/cm².

According to EN 166 standard.

Code	Ref.
570120	SP-182

Personal Protection Equipment

Safety

Face shield



EN 166
EN 169
EN 170

570 SP-183

Protective glasses

Glasses according to EN 166, EN 169 and EN 170 standards.
Made with propionate front and polycarbonate temples.
Side and top protection.
IR / UV5 anti-abrasion green polycarbonate lenses.

Code	Ref.
570100	SP-183



570 SP-183F

Glasses case

Code	Ref.
570110	SP-183F

Head torch



565 LTE-CP400

Head torch

Multi-functional torch; turned on and off with a simple gesture with the palm of the hand. Gesture recognition saves the operator from removing insulating gloves, making it easier to perform any task.

- Use: Indoor / Outdoor
- Range: 100 m
- Waterproof, shockproof, anti-fog
- Illumination time: 3-8 h
- Material: Aluminium / ABS

350 LM
IP64



USB charging



Forehead placement
or in the helmet.



HEAD CAN BE TURNED 45° UP OR DOWN

Adjust the lamp head to easily control
the angle of light irradiation

Code	Ref.
555010	LTE-CP400



LED RED LIGHT



POWER DISPLAY



GESTURE
SENSING



DROP RESISTANT



MULTI-LEVEL
ADJUSTMENT



LIFE WATERPROOF



LASTING BATTERY

Multifunction torch with magnet



565 LTE-FM400

Multifunction torch with magnet

Multifunction LED torch with rechargeable battery and magnetic support for use in any work environment.

- Mobile and portable
- Rechargeable 3 W LED lamp
- Compact size adapts to different environments.
- **Adjustable support**
180° adjustable support, easy to set up in different locations.
- 400 LM IP66
- IP66



USB charging

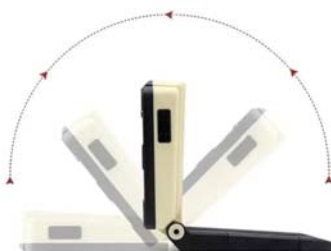
Code	Ref.
555000	LTE-FM400



Magnetic support



Support rotates 180°



DIELECTRIC OVERBOOTS

OB1

DIELECTRIC MAXI OVERBOOTS

CLASE 1

7.5_{kV}

Maximum working voltage

20_{kV}

Test voltage



- Class 1 electrically insulated dielectric overboots with vulcanised rubber soles for increased slip resistance.
- They are designed to be worn over safety boots and are ideal for workers who have to continually enter and exit hazardous areas.
- One-piece injection moulded construction with integral moulded handle ensures no leakage at seams or assembly/handle holes.
- Vulcanised rubber sole for superior slip resistance in wet and oily conditions (SRC); durable and cut resistant for significantly longer life, even in rough terrain; heat resistant EN 20347:2011 HRO, 60 seconds at 300 °C and resistant to fuel and oil.
- Complies with ASTM 1117 requirements (20kV).

715 OB1

Dielectric maxi overboots

Code	Ref.	Size
715290	OB1 T-L	L



Insulating Poles

Safety

Rescue pole



Rescue pole with only one section made of polyester and fibreglass tube \varnothing 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-3

- Length: 1 meters
- Working voltage: 3 kV

Code	Ref.
610090	BS-3

610 BS-25

- Length: 1,2 meters
- Working voltage: 25 kV

Code	Ref.
610095	BS-25





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

UNE 61112:2010
IEC 61112:2009



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



595 PACE-1.5

1000 V Insulated Clamp

Made with insulating material. Suitable for clamping blankets up to 1 kV AC / 1.5 kV DC.

Code	Ref.	Length
595114	PACE-1.5	50 mm



595 CS

Insulating cable caps class 0

Caps for insulating cables during low voltage operations.
Operating voltage: 1000 V for alternating current and 1500 V for direct current.
Complies with NFC 18-425 (class 0).

Code	Ref.	Capacity	Diameters	Length
595200	CS1	6-16 mm ²	Ø 5 to 9 mm	45 mm
595210	CS2	25-35 mm ²	Ø 8 to 11 mm	50 mm
595220	CS3	35-70 mm ²	Ø 10 to 16 mm	70 mm
595230	CS4	95-120 mm ²	Ø 15 to 20 mm	90 mm

CE NFC 18-425



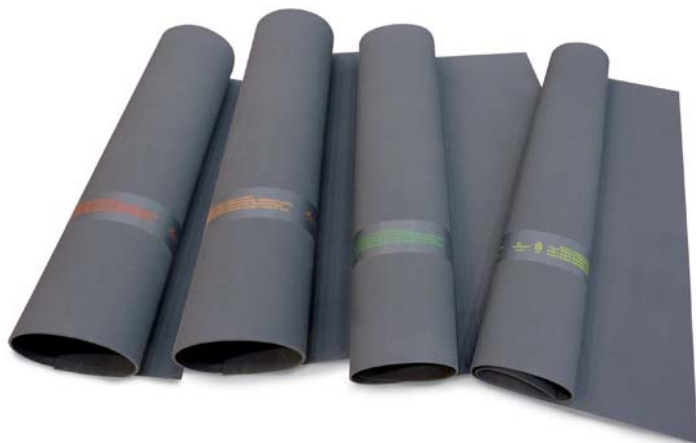
600 BA

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

Insulating mat



IEC 61111

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).

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			



Insulating blanket



IEC 61111

585 MA
Insulating blanket

Insulating blanket made of high quality resistant rubber. Used to protect workers from low voltage electrical hazards. The blanket is a bright colour so it can be easily identified and seen by the operator in the work area. These blankets are category AZ, which means they are certified to be resistant to acids (Category A), ozone present in electrical equipment (Category Z)-

- Base:** Vulcanized elastomer
- Minimum tensile strength:** 12 MPa
- Elongation at break:** 300%.
- Hardness:** 60 Sh A
- Mechanical resistance to perforation**
- Flame retardant**
- Aging tests**
- Low temperature bending test**

The length of the blankets can be customised according to the customers' requests (maximum 20 m).

Conforms to IEC 61112:2009: Live working - Electrical insulating mats.

Code	Ref.	Width (m)	Length (m)	Class	Thickness (mm)	Weight (kg/m ²)	Working tension
585001	MA0-1010	1	1	0	1,5 (+/-0,2)	1,6	1 kV CA / 1,5 kV CC
585010	MA0-10100	1	10				

Voltage Detectors

Safety

Measuring instruments of low voltage

Optical & Acoustic

635 Tester PTL-1000

Optical & Acoustic

Non-contact voltage tester that is easy to handle and use. Adjustable voltage detection range. Automatically distinguishes neutral and phase wires. Distinct alarm sounds and different coloured LEDs to indicate high, medium and low voltage intensity. Suitable for a wide range of applications.



Code	Ref.	Box
635330	Tester PTL-1000	1

Technical information

- **Alarm mode:** Acoustic and light
- **Measuring range:** 12 V_{CA} - 1000 V_{CA} / 48 V_{CA} - 1000 V_{CA}
- **Power supply:** 2 x 1.5 V AAA batteries
- **Frequency:** 50 Hz / 60 Hz
- **Overload category:** CAT III 1000 V / CAT IV 600 V
- **Certificates:** CE, RoHS
- **Torch:** White light LED lamp
- **Colour:** Yellow
- **Dimensions:** 156 x 20 x 20 mm
- **Weight:** 45 g

Supplied with a nylon case for transport and storage.
According with standards EN 61010-1, IEC 62321 and EN 61326-1.

635 Tester BTL-600

Optical & Acoustic

Compact and convenient, highly accurate digital multimeter. Manual and automatic range adjustment. Pen type design that is easy to hold and use. Very safe, non-contact voltage detector function gives the user more confidence. Illuminated screen and torch allow use in all working environments, including in the dark. Diode test and continuity test functions.



Code	Ref.	Box
635300	Tester BTL-600	1

Technical information

- **PScreen:** 2000 digits
- **Measuring range:** Automatic and manual
- **Voltage range:** DC 200 mV / 2 V / 20 V / 200 V / 600 V
AC 200 mV / 2 V / 20 V / 200 V / 600 V
- **Current range:** DC 20 mA / 200 mA
AC 20 mA / 200 mA
- **Resistance range:** 200 Ω / 2 kΩ / 20 kΩ / 200 kΩ / 2 MΩ / 20 MΩ
- **Other functions:** Diode test and Continuity test.
Data storage function
- **VCN mode:** Non-contact voltage detection
- **Category:** CAT III 600 V
- **Certificates:** CE, RoHS
- **Power supply:** 2 x 1.5 V AAA batteries
- **Colour:** Yellow
- **Dimensions:** 248 x 42 x 34 mm
- **Weight:** 110 g

Supplied with a nylon case for transport and storage.
According with standards EN61010-1, EN61010-2-033, EN61326 and IEC 62321.

Voltage Detectors

Safety

Measuring instruments of low voltage

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.



Accessories included.

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
CAT III 600 V
- **Category:** CAT III 600 V
- **Certificates:** CE, RoHS
- **Power supply:** 2 x 1.5 V AAA batteries
- **Dimensions:** 187 x 65 x 38 mm
- **Weight:** 250 g
- **Clamp size:** 24 mm

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

635 Professional multimeter CTL-1000 with True RMS

Optical & Acoustic

Digital AC/DC, T-RMS clamp meter with automatic and manual ranges and a VFD frequency converter.

The CTL-1000 has a large 13 mm HD display with 6000 digits and a backlight for easy reading.

It has functions for measuring AC and DC voltage, AC and DC current, resistance, capacitance, temperature, low impedance voltage, continuity and NCV (non-contact voltage detection).



Accessories included.

Code	Ref.	Box
635360	Multimeter CTL-1000	1

Technical information

- **Measurement of actual/real values**
- **Non-contact voltage detection (NCV)**
- **TDC voltage:** 6 V / 60 V / 600 V / 1000 V
- **AC voltage:** 6 V / 60 V / 600 V / 1000 V
- **Alternating Current:** 60 A / 600 A / 1000 A
- **Direct Current:** 60 A / 600 A / 1000 A
- **Resistance:** 600 Ω / 6 KΩ / 60 KΩ / 600 KΩ / 6 MΩ / 60 MΩ
- **Capacitance:** 60 nF / 600 nF / 6 uF / 60 uF / 600 uF / 6 mF / 60 mF
- **Frequency:** 100 Hz / 1000 Hz / 10 KHz
- **Temperature measurements:** °C/°F -20 ~ 1000°C / -4 ~ 1832°F
- **Continuity Test**
- **LowZ DC:** 1000 V / AC1000 V
- **DCμA:** 200 μA / VFD
- **Clamp Ø:** 40 mm
- **LED lamp**
- **Memory Min / Max and peak values**
- **Low battery indicator**
- **Stores relative measurement data**
- **Backlight**
- **Power supply:** 3 x 1.5 V AAA batteries
- **Size:** 246 x 85 x 40 mm
- **Weight:** 314.5 g

Supplied with a nylon case for transport and storage.
According with standards EN61010-1, EN61010-2-033, EN61326, CAT III 600 V / CAT IV 1000 V.

Optical & Acoustic



635 IPR-400 Phase/Rotation Indicator

Optical

Used to check the direction of the rotating magnetic field in the three-phase system, the phase rotation and the direction of motor rotation.

The direction of motor rotation (direction of rotation) is detected by placing the IPR-400 on the motor and aligning it with the drive shaft with no need to connect any probes or cables.

A durable, lightweight and reliable device, ideal for electrical work with three-phase motors and systems. Includes different types of probes for any possible application.

Code	Ref.	Box
635320	IPR-400 Phase/Rotation Indicator	1

Technical information

- Operating voltage: 120 V ~ 400 VAC
- Current consumption: ≤ 20 mA
- Frequency range: 2 Hz ~ 400 Hz
- Non-contact rotating field indication function
- Operating temperature: 0 °C a +40 °C
- Operating altitude: 2000 m
- Category: CAT III 600 V
- Certificates: CE, RoHS
- Power supply: 3 x 1.5 V AA batteries
- Dimensions: 128 x 70 x 30 mm
- Weight: 168 g

Supplied with a nylon case for transport and storage.

According with standards EN61010-1, EN61010-2-032, EN61326 and IEC 62321.



Accessories included.

Voltage Detectors

Safety

Measuring instruments of low voltage

635 Digital multimeter DM-600

Optical


Portable digital multimeter with LCD screen with backlight, which allows reading the values even in dark places.

The entire system is based on integrated circuits, equipped with overload protection.


It can be used to measure AC and DC voltage, AC and DC current, resistance, capacitance, frequency, diodes, continuity test, and NCV (non-contact voltage detection) test.



Optical

Code	Ref.	 Box
635380	Digital multimeter DM-600	1

Technical information

- Automatic range
- Display: 3 1/2 LCD
- Overload protection: PTC protection circuit is used to measure resistance and frequency
- Data storage
- Maximum measurement
- Upper range display: OL
- Low battery voltage display: 
- Auto power off: 15 minutes. Press "HOLD/BL" to wake up
- Operating conditions: 0~40 °C (32~ 104 °F); <80% HR
- Storage conditions: -10~50 °C (14~122 °F); <70% HR
- Power supply: 1 No. 9 V battery (type 6F22, 1604A)
- Safety requirements: IEC61010-1 600 V CAT III
- Size (LxWxH) and weight: 147:5x74x42.5 mm, approx. 174 g

635 BVD-1500


Portable bipolar voltage detector

The BVD-1500 voltage and continuity tester includes functions of AC and DC voltage check, phase sequence test, diode test and RCD test.

Allows you to quickly measure voltage levels in any environment. It meets the IP65 waterproof and dustproof rating, making it completely safe to use, even in wet locations.



Optical & Acoustic

Code	Ref.	 box
653430	BVD-1500	1

Technical information

- Backlit display
- Power supply: 1.5V*2 AAA
- Low battery alert
- Working temperature: -15°C~+45°C
- Storage temperature: -20°C~+60°C
- Operating humidity: ≤85%
- Surge protection category: CAT IV 1000V
- Degree of pollution: II
- Protection degree: IP65
- Automatic shutdown: 30s
- Safety requirements: CAT 600 V, CAT IV 1000 V

Earthing & Short Circuit Protection Equipment

Safety

Earthing and short-circuit equipment for cars



F-600
Insulating clamp

657 PAT-2/F-600

Earthing and short-circuit equipment for car. The main aim of installing this item is to protect workers from induced voltage and/or static electricity during maintenance and repair work on electric and hybrid cars.



Consists of:

- 2 F-600 insulated clamps
- 1 16 mm² copper cable with PVC insulating sheath (length depending on model)
- 1 bag for transporting and storing the equipment

Code	Ref.	Length	Maximum working current
657010	PAT-2/F-600/L/01606	6 m	600 A
657020	PAT-2/F-600/L/01607	7 m	
657030	PAT-2/F-600/L/01608	8 m	

Earthing & Short Circuit Protection Equipment

Safety

Earthing and short-circuit equipment for trucks



TT-38L
Earth lathe

657 PAT-TT38L/03515

Earthing and short-circuit equipment for trucks. The main aim of installing this item is to protect workers from induced voltage and/or static electricity during maintenance and repair work on electric and hybrid cars.



Consists of:

- 2 T-38L milling earthing lathe.
- 1 15 m copper cable with PVC insulating sheath.
- 1 bag for transporting and storing the equipment

Code	Ref.	Length	Short circuit current Max. ICC
657040	PAT-TT38L/03515	15 m	9 KA/1s

POSSIBILITY
OF CONFIGURATION
TO MEASURE



690 SZ-51A

In the event of an electrical accident, speed of intervention is essential.

This kit contains all the life-saving tools in one accessible location to allow rapid intervention when needed.

Code	Description	Ref.
690210	Spanish	SZ-51A
690210I	English	SZ-51A
690210F	French	SZ-51A

Consists of a 1 x 1.6 m board with the following items:

- 1 rescue pole BS-25
- 1 plastic box for gloves
- 1 pair of class 0 gloves
- 1 60 cm x 1 m insulating mat with working voltage 1 kV
- 1 1 m x 1 m insulating blanket working voltage 1 kV
- 1 pipette
- 1 pair of class 1 insulating overboots
- 1 first aid diagram
- 1 diagram with the five golden rules for automotive

Product supplied with screws and nails (for hanging).

Insulating mat
Ref.: ADO-0610
Code: 585181

Insulating blanket
Ref.: MA0-1010
Code: 585001

Rescue pole
Ref.: BS-25
Code: 610095

Plastic box for gloves
Ref.: CGS
Code: 545115

Dielectric gloves
Ref.: SG-50 T-10
Code: 530160

Code
ES X725000
EN X725001
FR X725002



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



Pipette
Ref.: SZ-01
Code: 695120



Overboots Class 1
Ref.: OB1 T-L
Code: 715290 (Size 43-45)
Different sizes available.

POSSIBILITY
OF CONFIGURATION
TO MEASURE



690 SZ-51AB

In the event of an electrical accident, speed of intervention is essential. This kit contains all the life-saving tools in one accessible location to allow rapid intervention when needed.

Code	Description	Ref.
690209	Spanish	SZ-51AB
690209I	English	SZ-51AB
690209F	French	SZ-51AB

Consists of a 1 x 1.6 m board with the following items:

- 1 36 kV insulating stool
- 1 rescue pole BS-25
- 1 CTL-1000 professional multimeter with True RMS
- 1 plastic box for gloves
- 1 pair of class 0 gloves
- 1 60 cm x 1 m insulating mat with working voltage 1 kV
- 1 pipette
- 1 first aid diagram
- 1 diagram with the five golden rules for automotive

Product supplied with screws and nails (for hanging).



Insulating stool
Ref.: ST-36
Code: 580100



Insulating blanket
Ref.: MA0-1010
Code: 585001



Plastic box for gloves
Ref.: CGS
Code: 545115



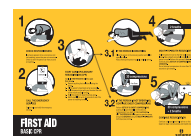
Multimeter
Ref.: CTL-10000
Code: 635360



Dielectric gloves
Ref.: SG-50 T-10
Code: 530160



Rescue pole
Ref.: BS-25
Code: 610095



Code
ES X725000
EN X725001
FR X725002



Pipette
Ref.: SZ-01
Code: 695120

POSSIBILITY
OF CONFIGURATION
TO MEASURE



690 SZ-51AC

In the event of an electrical accident, speed of intervention is essential.

This kit contains all the life-saving tools in one accessible location to allow rapid intervention when needed.

Code	Description	Ref.
690230	Spanish	SZ-51AC
690230I	English	SZ-51AC
690230F	French	SZ-51AC

Consists of a 1 x 1.6 m board with the following items:

- 1 36 kV insulating stool
- 1 rescue pole BS-45
- 1 plastic box for gloves
- 1 pair of class 0 gloves
- 1 60 cm x 1 m insulating mat with working voltage 1 kV
- 1 pneumatic glove tester SG-117
- 1 first-aid kit SZ-06
- 1 1.2 x 1.8 m fireproof blanket
- 1 pipette
- 1 first aid diagram
- 1 diagram with the five golden rules for automotive

Product supplied with screws and nails (for hanging).



Insulating stool
Ref.: ST-36
Code: 580100

Insulating blanket
Ref.: AD0-0610
Code: 585181



Plastic box for gloves
Ref.: CGS
Code: 545115



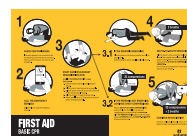
Fire resistant blanket
Ref.: SZ-180
Code: 710120



Dielectric gloves
Ref.: SG-50 T-10
Code: 530160

Rescue pole
Ref.: BS-45
Code: 610100

Code
ES X725000
EN X725001
FR X725002



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



Pneumatic gauge tester
Ref.: SG-117
Code: 545120



Pipette
Ref.: SZ-01
Code: 695120



Box first aids kit
Ref.: SZ-06
Code: 700110

Rescue and First Aid

Safety

Manoeuvring and rescue kit



The essential and handy safety kit



691 KRM-5002

The kit is sold in one special black plastic box.

Code	Ref.
690220	KRM-5002

* For other compositions, please consult.

Elements of the kit:

- 1 1.5 m telescopic pole of three sections
- 1 professional Multimeter CTL-1000
- 1 rescue hook with universal head
- 1 pair of dielectric gloves SG-40 T10 stored in a nylon bag
- 1 insulating blanket of 60cm x 1m working voltage 1 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
Ref.: SZ-180
Code: 710120



Professional Multimeter
Ref.: CTL-1000
Code: 635360



Dielectric gloves
Ref.: SG-50 T-10
Code: 630160



Rescue hook,
respiration pipette
and neck immobilizer



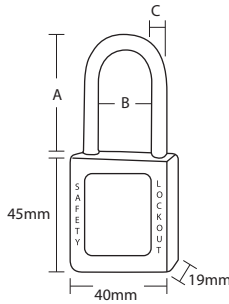
Insulating blanket
Ref.: MA0-1010
Code: 585001



Telescopic pole
Ref.: BMTS-3T
Code: X671200

Stretcher
Ref.: SZ-07
Code: 705100

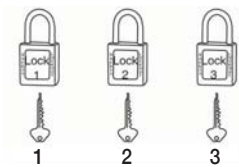




Metal shank padlocks

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

Metal shank padlocks

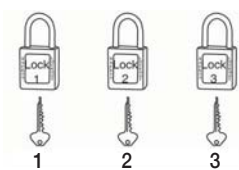


DIFFERENT KEYS

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

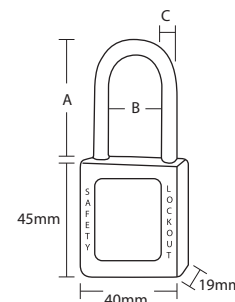
761 C/ABS-38 ABS security padlock

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

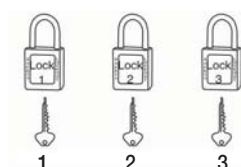
Nylon shank padlocks

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



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.



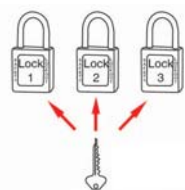
DIFFERENT KEYS

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.



SINGLE KEYS

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

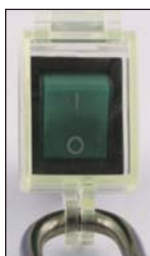


762 P/PU-22

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.	Installation hole Ø
762102	P/EM-22	22 mm
762103	P/EM-30,5	30.5 mm

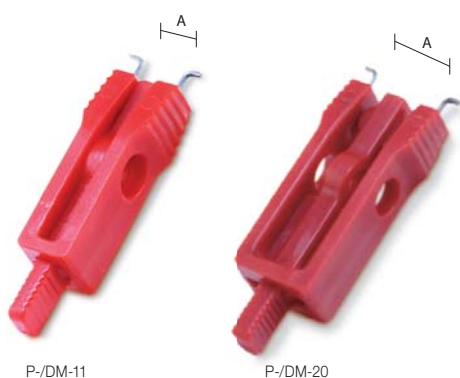


762 P/DMT

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

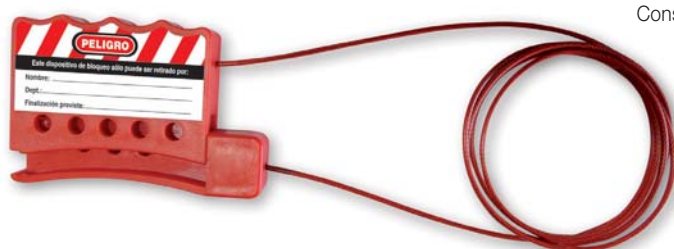
Lockout hasps

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

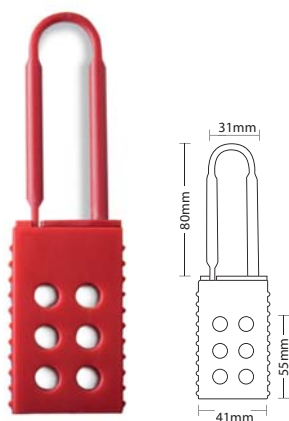
EN-6/25

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.



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



725 Risk electric / hybrid car

Self-adhesive label to place on windows and windshields of damaged electric and hybrid vehicles.

Code	Ref.	Dimensions
725010	SA-HEV	280 x 110 mm

UNE-EN ISO 7010

Aluminium signs

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



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



Circular sign of manoeuvre prohibition.



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

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

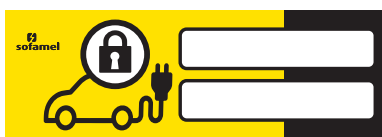
English and French edition under request.

720 Manoeuvring forbidden

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

UNE-EN ISO 7010

PVC signs



730 Electric / hybrid car

Sign for lockout tagout operations on electric and hybrid vehicles.

Code	Ref.	Dimensions
730001	CP-HEV	450 x 150 mm

UNE-EN ISO 7010



730 Sign for post electric / hybrid car risk

Signal for poles used to delimit the repair and maintenance area of electric and hybrid cars.

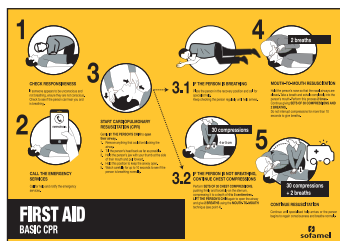
Code	Ref.	Dimensions
730002	SS-HEV	450 x 150 mm

UNE-EN ISO 7010



Aluminium signs

PVC signs



730 First aid

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

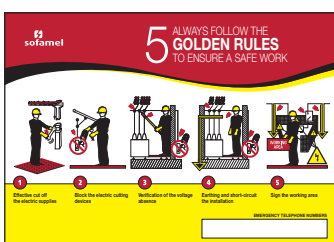
UNE-EN ISO 7010



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



730 Five golden rules for electric / hybrid cars

Code	Ref.	Language	Dimensions
730003	CRO-HEV	Spanish	297 x 420 mm
730003I	CRO-HEV	English	297 x 420 mm
730003F	CRO-HEV	French	297 x 420 mm

UNE-EN ISO 7010



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.



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

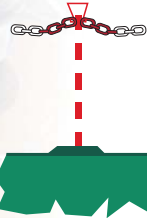
Beacons



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

Electrician Kits

1000V insulated tools

Tool kit



Code	Version	Dimensions
410220	KT-1000/37	300 x 430 x 200 mm
600161	MAF-430 case without tools	

410 KT-1000/37

- **Contents:**
1000 V Insulated Tools
(according to EN 60900, IEC 900 VDE 0682-201)

Code	Description:
410005	Universal insulated pliers 175 mm
410015	Needle nose pliers 200 mm
410025	Cutting pliers 200 mm
410035	Insulated knife 180 mm
410046	Insulated flathead screwdriver 3 x 100 mm
410047	Insulated flathead screwdriver 4 x 100 mm
410048	Insulated flathead screwdriver 5.5 x 125 mm
410049	Insulated flathead screwdriver 8 x 175 mm
410050	Insulated "Phillips" screwdriver 0 x 60 mm
410051	Insulated "Phillips" screwdriver 1 x 80 mm
410052	Insulated "Phillips" screwdriver 2 x 175 mm
410053	Insulated "Phillips" screwdriver 3 x 200 mm
410056	Insulated 4 mm hex key
410057	Insulated 5 mm hex key
410058	Insulated 6 mm hex key
410059	Insulated 8 mm hex key
410060	Insulated 9 mm hex key
410061	Insulated 10 mm hex key
410065	Ratchet wrench 3/8"
410075	Insulated long extension 3/8" 300 mm
410086	Insulated 8 mm socket spanner 3/8"
410087	Insulated 9 mm socket spanner 3/8"
410088	Insulated 10 mm socket spanner 3/8"
410089	Insulated 13 mm socket spanner 3/8"
410090	Insulated 14 mm socket spanner 3/8"
410091	Insulated 16 mm socket spanner 3/8"
410092	Insulated 18 mm socket spanner 3/8"
410093	Insulated 19 mm socket spanner 3/8"
410094	Insulated 17 mm socket spanner 3/8"
410096	Insulated open-ended spanner 10 mm
410097	Insulated open-ended spanner 13 mm
410098	Insulated open-ended spanner 14 mm
410099	Insulated open-ended spanner 16 mm
410100	Insulated open-ended spanner 17 mm
410101	Insulated open-ended spanner 19 mm
410105	Cable cutting pliers 230 mm
600161	Small front-opening tool case MAF-430



Electrician Kits

1000V insulated tools

Tool kit



410 KBT-1000/19

- **Contents:**
1000 V Insulated Tools (according to EN 60900, IEC 900 VDE 0682-201) and voltage meters

Code	Description:
410005	Universal insulated pliers 175 mm
410015	Needle nose pliers 200 mm
410025	Cutting pliers 200 mm
410035	Insulated knife 180 mm
410046	Insulated flathead screwdriver 3 x 100 mm
410047	Insulated flathead screwdriver 4 x 100 mm
410048	Insulated flathead screwdriver 5.5 x 125 mm
410050	Insulated "Phillips" screwdriver 0 x 60 mm
410051	Insulated "Phillips" screwdriver 1 x 80 mm
410052	Insulated "Phillips" screwdriver 2 x 175 mm
410096	Insulated open-ended spanner 10 mm
410097	Insulated open-ended spanner 13 mm
410098	Insulated open-ended spanner 14 mm
410099	Insulated open-ended spanner 16 mm
410100	Insulated open-ended spanner 17 mm
410101	Insulated open-ended spanner 19 mm
410105	Cable cutting pliers 230 mm
635310	Multimeter CTL-600
600162	Protective case with pouches for organising tools OHB-350

Code	Version	Dimensions
410200	KBT-1000/19	200 x 350 x 50 mm
600162	OHB-350 Briefcase without tools	



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Electrician Kits

1000V insulated tools

Tool kit



410 KTS-1000/56

Code	Version	Dimensions
410210	KTS-1000/56	280 x 430 x 250 mm
600160	BKE-1680D M bag without tools	



■ Contents:

Code Description:

410005 Universal insulated pliers 175 mm
 410015 Needle nose pliers 200 mm
 410025 Cutting pliers 200 mm
 410035 Insulated knife 180 mm
 410046 Insulated flathead screwdriver 3 x 100 mm
 410047 Insulated flathead screwdriver 4 x 100 mm
 410048 Insulated flathead screwdriver 5.5 x 125 mm
 410049 Insulated flathead screwdriver 8 x 175 mm
 410051 Insulated "Phillips" screwdriver 1 x 80 mm
 410070 Insulated "Phillips" screwdriver 2 x 100 mm
 410071 Insulated "Phillips" screwdriver 3 x 150 mm
 410105 Cable cutting pliers 230 mm
 410072 Insulated 3 mm Allen key
 410073 Insulated 4 mm Allen key
 410074 Insulated 6 mm Allen key
 410081 Insulated adjustable spanner 250 mm
 410082 Insulated pliers wrench 250 mm
 410065 Ratchet wrench 3/8"
 410075 Insulated long extension 3/8" 300 mm
 410086 Insulated 8 mm socket spanner 3/8"
 410087 Insulated 9 mm socket spanner 3/8"
 410088 Insulated 10 mm socket spanner 3/8"
 410001 Insulated 12 mm socket spanner 3/8"
 410089 Insulated 13 mm socket spanner 3/8"
 410090 Insulated 14 mm socket spanner 3/8"
 410091 Insulated 16 mm socket spanner 3/8"
 410092 Insulated 18 mm socket spanner 3/8"
 410093 Insulated 19 mm socket spanner 3/8"
 410094 Insulated 17 mm socket spanner 3/8"

410003 Wrench 3/8" LV-22
 410004 Wrench 3/8" LV-23
 410201 Insulated open-ended spanner 8 mm
 410096 Insulated open-ended spanner 10 mm
 410202 Insulated open-ended spanner 11 mm
 410203 Insulated open-ended spanner 12 mm
 410097 Insulated open-ended spanner 13 mm
 410098 Insulated open-ended spanner 14 mm
 410099 Insulated open-ended spanner 16 mm
 410100 Insulated open-ended spanner 17 mm
 410101 Insulated open-ended spanner 19 mm
 565099 White helmet SP-181
 570120 Face shield SP-182
 600151 Holdall bag BA-0.6 x 10
 585001 Insulating blanket class 0 MA0-1010 1x1 m
 595114 Insulated clamp for blankets 50 mm 1 kV AC / 1.5 kV DC
 595200 Insulating cable cap class 0 6-16 mm²
 530160 Dielectric glove SG-50 T10
 540114 Leather over glove SG-C
 653430 Tester BVD-1500
 595010 Black insulating tape 10 m 0.15 mm PVC
 595030 Yellow/green insulating tape 20 m 0.15 mm PVC
 595040 Blue insulating tape 10 m 0.15 mm PVC
 595060 Grey insulating tape 10 m 0.15 mm PVC
 595070 Brown insulating tape 10 m 0.15 mm PVC
 595080 Red insulating tape 10 m 0.15 mm PVC
 600160 Bag for insulated tools and electrical kits BKE-1680D M

1000 V Insulated Tools

According to EN 60900, IEC 900 VDE 0682-201 and 1000 V electrical insulation



Insulated Kits Tools




1000V insulated tools

Screwdrivers



1000V / 22
IEC 60900





410 Insulated "Phillips" crosshead screwdriver

Code	Ref.	 mm	 mm	 mm
410050	PH0x60	3	30	60
410051	PH1x80	4.5		80
410052	PH2x175	6		175
410053	PH3x200	8		200



1000V / 22
IEC 60900

410 Insulated flathead screwdriver

Code	Ref.	 mm	 mm	 mm	 mm
410046	PL3x100	3	0.6	30	100
410047	PL4x100	4	0.8		100
410048	PL5.5x125	5.5	1	50	125
410049	PL8x175	8	1.6		175



1000V / 22
IEC 60900

410 Set of insulated flathead and "Phillips" crosshead screwdrivers

Contents:

Flathead Screwdrivers:

Insulated flathead screwdriver FL3 x 100 mm

Insulated flathead screwdriver FL4 x 100 mm

Insulated flathead screwdriver FL5.5 x 125 mm

Insulated flathead screwdriver FL8 x 175 mm

Crosshead screwdrivers:

Insulated "Phillips" screwdriver PH0 x 3 x 60 mm

Insulated "Phillips" screwdriver PH1 x 4.5 x 80 mm

Insulated "Phillips" screwdriver PH2 x 6 x 175 mm

Insulated "Phillips" screwdriver PH3 x 8 x 200 mm

Code	Ref.
410045	Set of insulated flathead and "Phillips" crosshead screwdrivers

Insulated Kits Tools

1000V insulated tools

Pliers



1000V / 22
IEC 60900

410 Insulated universal pliers 175 mm

Code	Ref.	Length
410005	Plier AU-175	175 mm / 7"

- With gripping zones for flat and round materials, very versatile.
- For cutting soft and hard wire.
- Head with extra flat shape and laterally rounded.
- Made of tempered steel and chrome finish.



1000V / 22
IEC 60900

410 Insulated wire-cutting pliers 200 mm

Code	Ref.	Capacity	Length
410025	Plier AC-200	Ø 1.6 mm	200 mm / 8"

- To cut cable, nails, metal mesh and plates.
- Suitable for cutting copper and aluminum cables.



1000V / 22
IEC 60900

410 Insulated needle nose pliers 200 mm

Code	Ref.	Length
410015	Plier PF-200	200 mm / 8"

- Stretched gripping surface.
- For holding cables, thin parts or small components size.
- To access narrow places that are difficult to access.



1000V / 22
IEC 60900

410 Insulated wire-cutting pliers 230 mm

Code	Ref.	Length
410105	Plier AC-230	230 mm

- Suitable for cutting copper and aluminum cables.
- Ergonomic bi-material handles for a comfortable grip.
- It allows repetitive operations to be carried out, without causing fatigue.

Insulated Kits Tools

1000V insulated tools

Adjustable spanner



1000V / 22
IEC 60900

410 Adjustable spanner 250 mm

Code	Ref.	Length
410081	LAJ-250	250 mm

- Excellent performance and long service life.
- It has a manual adjustment screw for a fast and precise adjustment of the width of the mouth.
- For fixing elements of all sizes, thanks to its mobile jaw.

Pliers wrench



1000V / 22
IEC 60900

410 Pliers wrench

Code	Ref.	Length
410082	APL-250	250 mm

- Large opening capacity, to hold rods/tubes.
- Easy access to nuts and connections.
- High resistance to torsion and bending.

Insulated Kits Tools

1000V insulated tools

Knife and spanners



1000V / 22
IEC 60900

410 Insulated knife - 180 mm

Code	Ref.	Length
410035	Knife CA-180	180 mm

- Blade specially adapted to cut the outer sheath of cables without damaging the inner conductors.
- With hook blade.
- Double edged blade.
- Comfortable dual component handle.



1000V / 22
IEC 60900

410 Insulated open-ended spanner

Code	Ref.	spanner	Length
410201	Spanner LF-8	8	80 mm
410096	Spanner LF-10	10	100 mm
410202	Spanner LF-11	11	110 mm
410203	Spanner LF-12	12	120 mm
410097	Spanner F-13	13	130 mm
410098	Spanner F-14	14	140 mm
410099	Spanner F-16	16	160 mm
410100	Spanner F-17	17	170 mm
410101	Spanner F-19	19	190 mm

- Angled head to facilitate tightening.
- Material: hardened steel.
- Insulation material: PP/TPR.
- Treatment of the insulating layer: dipping.



410 Set of insulated open-ended spanners

Code	Ref.
410095	Set of insulated open-ended spanners

Contents:

- 8 mm open-ended spanner - 80 mm long.
- 10 mm open-ended spanner - 100 mm long.
- 11 mm open-ended spanner - 110 mm long.
- 12 mm open-ended spanner - 120 mm long.
- 13 mm open-ended spanner - 130 mm long.
- 14 mm open-ended spanner - 140 mm long.
- 15 mm open-ended spanner - 150 mm long.
- 16 mm open-ended spanner - 160 mm long.
- 17 mm open-ended spanner - 170 mm long.
- 19 mm open-ended spanner - 190 mm long.



410 Insulated T shaped hex key

Code	Ref.	Spanners	Dimensions
410056	Key T HEX - 4	4	90 x 200 mm
410057	Key T HEX - 5	5	
410058	Key T HEX - 6	6	
410059	Key T HEX - 8	8	
410060	Key T HEX - 9	9	
410061	Key T HEX - 10	10	

- Material: hardened steel.
- Insulation material: PP/TPR.
- Treatment of the insulating layer: dipping.



410 L-shaped hex key

Code	Ref.	Length
410073	L-shaped hex key	4 mm
410074		6 mm

- Material: hardened steel.
- Insulation material: PP/TPR.
- Treatment of the insulating layer: dipping.



410 Set of insulated T shaped hex keys

Code	Ref.
410055	Set of insulated T shaped hex keys

Contents:

- 4 mm T shaped hex key - 90 x 200 mm
- 5 mm T shaped hex key - 90 x 200 mm
- 6 mm T shaped hex key - 90 x 200 mm
- 8 mm T shaped hex key - 90 x 200 mm
- 9 mm T shaped hex key - 90 x 200 mm
- 10 mm T shaped hex key - 90 x 200 mm

410 Insulated short extension for 3/8" ratchet



Code	Ref.	Length
410075	Extension for 3/8" ratchet	300 mm

- Material: hardened steel.
- Insulation material: PP/TPR.
- Treatment of the insulating layer: dipping.

Insulated Kits Tools

1000V insulated tools

Keys



410 Insulated ratchet wrench for 3/8" ratchet

Code	Ref.	Dimensions
410065	Insulated ratchet LC-3/8	3/8"

- Material: hardened steel.
- Insulation material: PP/TPR.
- Treatment of the insulating layer: injection.

410 Set of insulated 3/8" sockets Hexagon/female sockets

Code	Ref.
410085	Set of insulated 3/8" sockets Hexagon/female sockets.

Contents:

- 8 mm insulated socket 3/8"
- 9 mm insulated socket 3/8"
- 10 mm insulated socket 3/8"
- 13 mm insulated socket 3/8"
- 14 mm insulated socket 3/8"
- 16 mm insulated socket 3/8"
- 17 mm insulated socket 3/8"
- 18 mm insulated socket 3/8"
- 19 mm insulated socket 3/8"

Insulated collar on each socket to prevent arcing.





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