

LV earthing systems



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SHORT-CIRCUITING SYSTEMS

Set of 4, 5, 6 or 7 clamps MT-411.

An extra-flexible 16 mm² copper cable assembly.

An insulated socket that can be locked with a bayonet, for connecting a grounded system.

Telescopic stick 2 m CE-2-21-C.

Waterproof bag MT-400-01.

Reference	Composition	kg
MT-404	3 MT-411 + 1 MT-411-C	3.4
MT-405	4 MT-411 + 1 MT-411-C	3.8
MT-406	5 MT-411 + 1 MT-411-C	4.2
MT-407	6 MT-411 + 1 MT-411-C	4.6



icc : 3 kA/1s



EARTHING EQUIPMENT FOR OVERHEAD LINES SYSTEMS

Grounding device connecting with the earth rod MT-650.

Insulated pin connecting to a short circuit socket.

Référence	⊗ m x mm ²	Earth Clamp	kg
MT-242	2 x 16	MT-840/1	1
MT-244	10 x 10	MT-840	2.5
MT-245	10 x 16	MT-840/1	3
MT-249	15 x 16	MT-840/1	3.8

Packaging: polypropylene case 310 x 280 x 105 mm.



SHORT-CIRCUITING AND EARTHING SYSTEMS NEVERS ERDF TYPE

Short-circuit ERDF networks for the work of pruning trees.

Implementation from the ground up to 10.5 m (sticks + operator) without climbing the support.

Insulating stick made of resin polyester/ glass fiber tube diameter 36.

Reference	Composition	kg
MT-509/3	3 Telescopic metallic sticks 3 elements L = 2.37/6.15 m + 1 Telescopic metallic stick 3 elements (the last one insulating yellow) L = 2.37/6.15 m + 1 insulating stick 2 elements L = 1.65/3.3 m + 1 multi-strand of 4 cables L = 6 x 16 mm 2 with 2 female sockets + 1 stick raise-up + 1 stick support	19 (3 bags) mm²
MT-509/3EP	1 Telescopic metallic stick 3 elements L = 2.37/6.15 m + 1 cable L = 6 x 16 mm 2 with male socket	2.3
MT-509/3VAT	1 Telescopic metallic stick 3 elements (the last one insulating yellow) L = 2.37/6.15 m	2.5

Equipment packed in carrying bags.

Reference	Description	kg
CC-127-ERDF-C	Specific voltage detector Range : 127-400 V	0.45

Accessories :

Reference	Description
M952567	Multi strand of 5 copper cables
M952570	Insulating sticks support
MT-546	Insulating sticks raise up
M611386	Raise up sticks
M952568	Earth cable

Voltage detector
CC-127-ERDF-C.

IEC 61230

Earth cable
M952568.

Multi strand of 5 copper cables
M952567.

Insulating sticks
raise up MT-546.

Insulating sticks support
M952570.



Insulating sticks Nevers type.

Insulating sticks.

Insulating sticks bag.



LOWLOCK SYSTEM

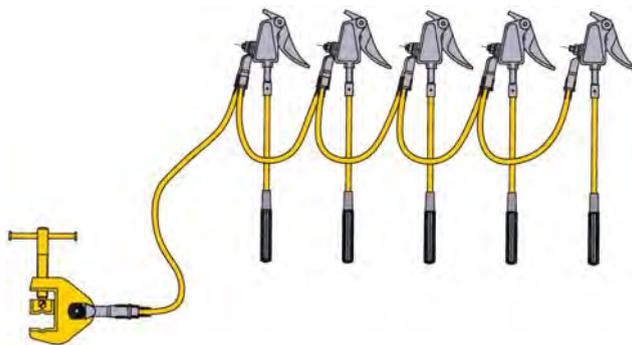
For conductors 3 to 21 mm Ø.

With clamps type "snap-on/screw-on".

Connecting cables: 35 mm² copper.

Short-circuiting and earthing systems.

Reference	Rating	Composition	kg
MT-615/1-7.5	7.5	5 MT-616/1-03 contact clamps on handles (l = 0.35 m each) 4 braids of M-24-35 copper cable (1.00 m) 1 M-87-153 carrying bag 250 x 85 x 750 mm	3
MT-615/2-7.5	7.5	5 MT-616/1-03 contact clamps on handles 4 braids of M-24-35 copper cable (1.00 m) 1 braid of M-24-35 copper cable (7.00 m) 1 MT-840/1 earth clamp	6.5



SHORT-CIRCUITING SYSTEMS

Equipment includes either 5 or 6 copper-aluminium alloy stubs.

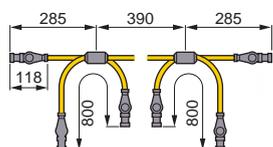
Connector for conductor MT-222 or MT-223, see below, to be ordered separately.

Set of 4, 5, 6 ou 7 clamps.

An extra-flexible 16 mm² copper cable assembly.

Reference	Socket	kg
MT-205	5	1.1
MT-206	6	1.5
MT-207	7	1.9

Packaging : polypropylene case 234 x 215 x 75 mm.

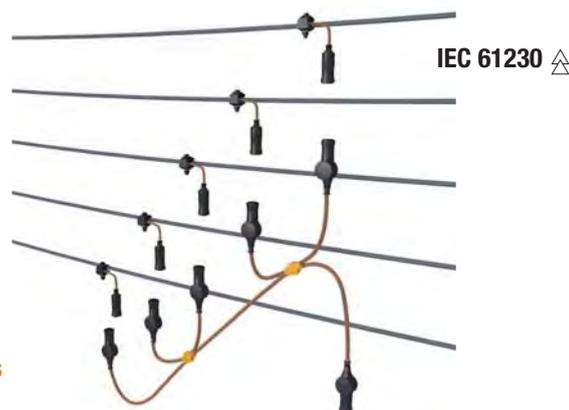


Connectors for conductors :

Reference	m x mm ²
MT-222	16 x 25
MT-223	35 x 70



Icc: 4 kA/1s



EARTHING EQUIPMENT

Earth rod.

Earthing equipment with bayonet splicing for overhead lines systems.

Galvanized steel. Hexagonal 18 mm per side.

Reference	↔	kg
MT-650	1 m	2.2

To be ordered in addition to short circuit and grounding equipment.



SHORT CIRCUITING DEVICE FOR LV CABINET

The earthing works is a mandatory operation in the NFC 18510 (chp 7.1 - Processes log) standard. Tinned copper insulated cable silicone core 16 mm². Authorized employment ERDF equipment.

Composition A: for connection.

Composition B: for network.

Composition C: for connection and network.
Maximum Icc: 4kA/1s

IEC 61230 

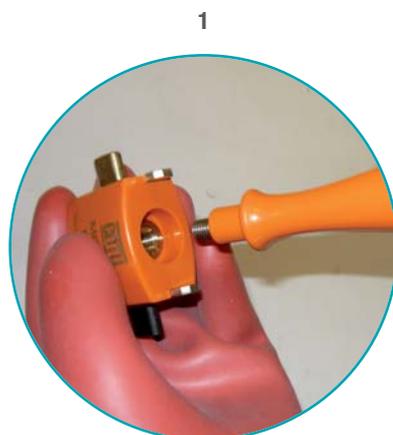


Reference	Composition
MC-296-A	4 multi-strand copper cables 16mm ² MC-296-440 + 1 micro clamps MC-296-P* + 1 connecting blade M-95627/4* + 1 round cartridge M-95626/4* + 1 cartridge size 00 MC-296-00/08* + 1 open end spanners 13/14/16/17 MO-687-D + 1 handle MC-296-M + 1 Case with foam and notice M-91209
MC-296-B	4 multi-strand copper cables 16mm ² MC-296-440 + 5 multi-strand copper cables 16mm ² M-952656 + 1 micro clamps MC-296-P* + 1 cartridge size 115 MC-296-115/08* + 1 cartridge size 160 MC-296-160/08* + 1 threaded adapters MC-181* + 1 pipe wrench 10x17mm M-882462 + 1 open end spanners 13/14/16/17 MO-687-D + 1 handle MC-296-M + 1 case with foam and notice M-91209
MC-296-C	4 multi-strand copper cables 16mm ² MC-296-560 + 5 multi-strand copper cables 16mm ² M-952656 + 5 micro clamps + 1 connecting blade M-95627/4* + 1 round cartridge M-95626/4* + 1 cartridge size 00 MC-296-00/08* + 1 cartridge size 115 MC-296-115/08* + 1 cartridge size 160 MC-296-160/08* + 1 threaded adapters MC-181* + 1 pipe wrench 10x17mm M-882462 + 1 open end spanners 13/14/16/17 MO-687-D + 1 handle MC-296-M + 1 case with foam and notice M-91209

* Sold in packs of 4.
Other composition on request.



Intervention :
On LV Cabinets.



SHORT CIRCUITING DEVICE FOR LV INDUSTRIES CABINET

Icc : 4 kA/1s

IEC 61230 

The earthing works is a mandatory operation in the NFC 18510 (- Processes log chp 7.1) standard.

Multi strand isolated copper silicon cable 16 mm².

Reference	Composition
MC-296-NFC	5 multi-strand copper cables 16mm ² M-952650 + 5 micro clamps + 1 Case and notice M-76768



Threaded adapter

Smooth threaded terminals for positioning shunts (live working tools) or earthing equipment and short circuit cabinets terminals LV.

Reference	Description	Composition	
MC-184-6F	Smooth threaded terminal M6	Set of 4 adapters by reference, delivered in a vinyl bag	0.12
MC-182	Smooth threaded terminal M8	Set of 4 adapters by reference, delivered in a vinyl bag	0.15
MC-185-10F	Smooth threaded terminal M10	Set of 4 adapters by reference, delivered in a vinyl bag	0.20
MC-183	Smooth threaded terminal M12	Set of 4 adapters by reference, delivered in a vinyl bag	0.25



Reference	Description	Composition	
MC-184-6M	Smooth threaded terminal M6	Set of 4 adapters by reference, delivered in a vinyl bag	0.12
MC-182-8M	Smooth threaded terminal M8	Set of 4 adapters by reference, delivered in a vinyl bag	0.15
MC-185-10M	Smooth threaded terminal M10	Set of 4 adapters by reference, delivered in a vinyl bag	0.20
MC-181	Smooth threaded terminal M12	Set of 4 adapters by reference, delivered in a vinyl bag	0.25



LV Live working tools



Insulated tools	112
Jumper clamps, cables and accessories	144
Cable identifier	147





Find the tools to meet your needs!

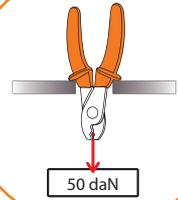
Insulated tools must comply with the NF EN 60900 and IEC 60900 standards. To meet these standards, insulated tools undergo 10 000 volts through electrical testing and many mechanical tests, including impact tests, tearing tests, and puncture tests. For working live at nominal voltage up to 1000 V AC and 1500 V DC.



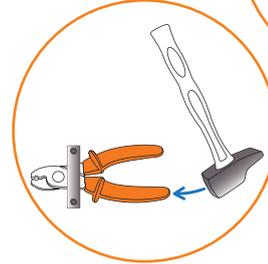
IEC 60900 2012



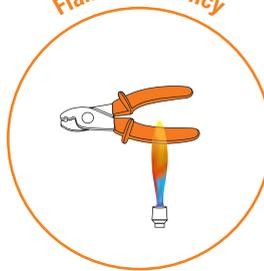
Test for adhesion of the insulating material



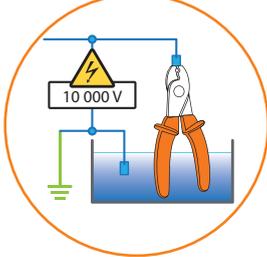
Impact Test



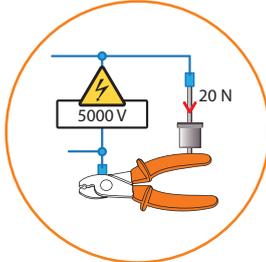
Flame retardancy



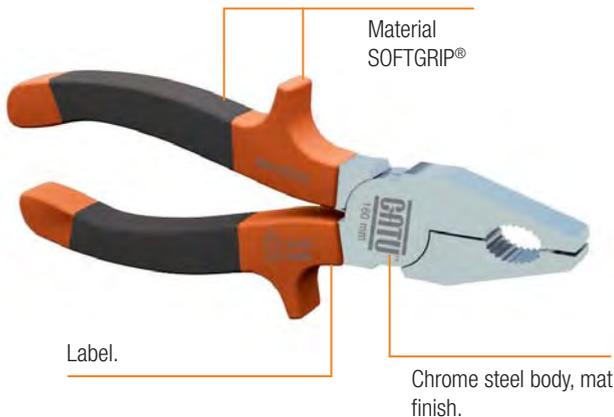
Dielectric Test



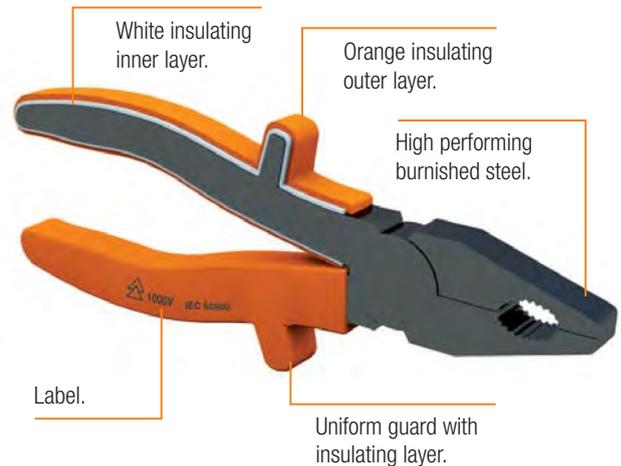
Indentation



Dual Material Insulated Tools



Dual Layer Insulated Tools



THE ⊕

- Products suitable for work on live cables, particularly low voltage (30 cm area of a live bare wire).
- Ergonomic.
- Dual material with non-skid "SOFTGRIP"® injected material for operator comfort.

THE ⊕

- Extensive product line for work on live cables; mainly used by LV Live Line Working teams.
- Ergonomic.
- Dual-layer with a white insulating layer.
- High mechanical strength in the layers due to dipping technique.
- Steel with high mechanical properties.

FLAT BLADE SCREWDRIVER, DUAL MATERIAL

IEC 60900 



Chrome - molybdenum vanadium steel blade.

Reference	∅ mm	 mm	 g
MO-72002	2.5	60	30
MO-72003	3	100	40
MO-72004	4	125	50
MO-72005	5	150	70
MO-72006	6	150	90
MO-72008	8	175	150
MO-72010	10	200	220



POZIDRIV SCREWDRIVER, DUAL MATERIAL

Dual material handle. Anti slip material. Chrome - molybdenum vanadium steel blade. Injection molded insulation.

Reference	PZ N°	 mm	 g
MO-72040	PZ 0	60	25
MO-72042	PZ 1	100	60
MO-72044	PZ 2	125	90
MO-72046	PZ 3	150	150
MO-72048	PZ 4	200	220



PHILLIPS SCREWDRIVER, DUAL MATERIAL

Chrome - molybdenum vanadium steel blade. Dual material handle. Anti slip material.

Reference	PH N°	 mm	 g
MO-72030	PH 0	60	25
MO-72032	PH 1	100	60
MO-72034	PH 2	125	90
MO-72036	PH 3	150	150
MO-72038	PH 4	200	220



TORX SCREWDRIVER, DUAL MATERIAL

Chrome - molybdenum vanadium steel blade. Dual material handle. Anti slip material.

Reference	N°	 mm	 g
MO-72056	T 6	50	25
MO-72057	T 7	50	25
MO-72058	T 8	50	25
MO-72059	T 9	75	35
MO-720510	T 10	75	35
MO-720515	T 15	75	50
MO-720520	T 20	100	70
MO-720525	T 25	100	80
MO-720527	T 27	115	90
MO-720530	T 30	125	100
MO-720540	T 40	125	120
MO-720545	T 45	150	160
MO-720550	T 50	175	200





HEXAGONAL SCREWDRIVER ALLEN, DUAL MATERIAL

Chrome - molybdenum vanadium steel blade. Dual material handle. Anti slip material.

Reference	On flats (mm)	 mm	 g
MO-68402	2.5	75	40
MO-68403	3	75	50
MO-68404	4	100	70
MO-68405	5	100	80
MO-68406	6	125	100
MO-68408	8	150	150



CABLE CUTTER PLIER, DUAL MATERIAL

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 mm Cu / Al	 kg
MO-72200	160	Ø 5 max	0.23



WIRE STRIPPING PLIER, DUAL MATERIAL

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 mm Cu / Al	 kg
MO-72172	160	0.5 to 10 mm ²	0.17



UNIVERSAL PLIER, DUAL MATERIAL

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 mm			 kg
		 Ø 3.5	 Ø 2.2	 Ø 1.5	
MO-72102	180	Ø 3.5	Ø 2.2	Ø 1.5	0.28



FLAT NOSE PLIER, DUAL MATERIAL

IEC 60900 

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 kg
MO-72132	160	0.17



BENT SNIPE NOSE PLIER, DUAL MATERIAL

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 mm			 kg
					
MO-72142	160	Ø 2.5	Ø 1.6	Ø 1	0.17



ROUND NOSE PLIER, DUAL MATERIAL

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 kg
MO-72122	160	0.16



WATER PUMP PLIER, DUAL MATERIAL

Chrome-vanadium steel. Double rack slipt joint. Dual material handle. Anti slip material.

Reference	 mm	 mm	 kg
MO-72155	250	32	0.35



SIDE CUTTER PLIER, DUAL MATERIAL

Chrome-vanadium steel. Dual material handle. Anti slip material.

Reference	 mm	 mm			 kg
					
MO-72162	160	Ø 3	Ø 2.2	Ø 1.5	0.21



 Total length

 Blade length

 Cutting capacity

 Stripping capacity

 Maximal opening

 Weight

● Steel: 75 daN / mm² ● Steel: 180 daN / mm² ● Steel: 220 daN / mm²

LV Live working tools / Insulated tools



SCREWDRIVERS KIT, DUAL MATERIAL

Reference	Composition
KIT-23	Flat blade screwdriver de 4 x 125 mm MO-72004 Flat blade screwdriver 6 x 150 mm MO-72006 Flat blade screwdriver 8 x 175 mm MO-72008 POZIDRIV screwdriver N°1 MO-72042 POZIDRIV screwdriver N°2 MO-72044



IEC 60900

PLIERS KIT, DUAL MATERIAL

Reference	Composition
KIT-27	Universal plier 180 mm MO-72102 Water pump plier 250 mm MO-72155 Wire stripping plier 160 mm MO-72172 Bent snipe nose plier 160 mm MO-72142 Cable cutter 160 mm MO-72200



INTERVENTION KIT, DUAL MATERIAL

Reference	Composition
KIT-24	Flat blade screwdriver 4 x 125 mm MO-72004 Flat blade screwdriver 6 x 150 mm MO-72006 Flat blade screwdriver 8 x 175 mm MO-72008 POZIDRIV screwdriver N°1 MO-72042 POZIDRIV screwdriver N°2 MO-72044 Wire stripping plier 160 mm MO-72172 Bent snipe nose plier 160 mm MO-72142 Cable cutter 160 mm MO-72200



COMPLETE INTERVENTION KIT, DUAL MATERIAL

Reference	Composition
KIT-25	Flat blade screwdriver 4 x 125 mm MO-72004 Flat blade screwdriver 6 x 150 mm MO-72006 Flat blade screwdriver 8 x 175 mm MO-72008 POZIDRIV screwdriver N°1 MO-72042 POZIDRIV screwdriver N°2 MO-72044 Universal plier 180 mm MO-72102 Water pump plier 250 mm MO-72155 Wire stripping plier 160 mm MO-72172 Bent snipe nose plier 160 mm MO-72142 Cable cutter 160 mm MO-72200



SCREWDRIVERS KIT DUAL MATERIAL

IEC 60900 



Photo of KIT-23SCP

	KIT-23C	KIT-23S	KIT-23SC2	KIT-23SH	KIT-23P	KIT-23SP2	KIT-23SCP	KIT-23CH	KIT-23PH
MO-72003 flat blade screwdriver 3 x 100		•	•	•		•	•		
MO-72004 flat blade screwdriver 4 x 125		•	•	•		•			
MO-72005 flat blade screwdriver 5 x 150		•	•	•		•	•		
MO-72006 flat blade screwdriver 6 x 150		•	•			•			
MO-72008 flat blade screwdriver 8 x 175		•							
MO-72030 screwdriver PH 0 x 60	•								
MO-72032 screwdriver PH 1 x 100	•		•				•	•	
MO-72034 screwdriver PH 2 x 125	•		•				•	•	
MO-72036 screwdriver PH 3 x 150	•							•	
MO-72040 screwdriver PZ 0 x 60					•				
MO-72042 screwdriver PZ 1 x 100					•	•	•		•
MO-72044 screwdriver PZ 2 x 125					•	•	•		•
MO-72046 screwdriver PZ 3 x 150					•				•
MO-68403 hexagonal screwdriver 3 x 75				•				•	•
MO-68404 hexagonal screwdriver 4 x 100				•				•	•
MO-68404 hexagonal screwdriver 5 x 100				•				•	•

Delivered under blister.





FLAT BLADE SCREWDRIVER

IEC 60900

Chrome - molybdenum vanadium steel blade.

Reference	∅ mm	 mm	 g
MO-65202	6.5	40	38
MO-65203	3	100	33
MO-65204	3.5	100	37
MO-65205	4	100	46
MO-65206	5.5	125	75
MO-65207	6.5	150	94
MO-65209	8	175	165
MO-65211	10	200	195
MO-650-D	Set of 3 screwdrivers MO-65205 / MO-65207 / MO-65209		
MO-652-D	Set of 4 screwdrivers MO-65203 / MO-65205 / MO-65207 / MO-65209		



FLAT BLADE SCREWDRIVER WITH RECESSED BLADE

Chrome - molybdenum vanadium steel blade.

Reference	∅ mm	 mm	 g
MO-65200D	6.5	40	36
MO-65202D	2	70	16
MO-65203D	3	100	30
MO-65204D	4	120	52
MO-65205D	5.5	100	50
MO-652055D	5.5	150	72
MO-65206D	6.5	150	36
MO-65208D	8	150	92
MO-652082D	8	200	142
MO-65210D	10	150	166
MO-652102D	10	250	282
MO-65212D	12	250	318



PHILLIPS SCREWDRIVER

Chrome - molybdenum vanadium steel blade.

Reference	∅ mm	 mm	 g
MO-65230	PH 0	60	25
MO-65232	PH 1	80	50
MO-65234	PH 2	100	75
MO-65236	PH 3	150	150
MO-65238	PH 4	200	230
MO-653-D	Set of 3 screwdrivers N°0, N°2 et N°3		



PHILLIPS SCREWDRIVER WITH RECESSED BLADE

Chrome - molybdenum vanadium steel blade.

Reference	∅ mm	 mm	 g
MO-65232D	PH 0 (4)	75	50
MO-652321D	PH 0 (4)	150	55
MO-65233D	PH 1 (5)	100	60
MO-65234D	PH 2 (6)	125	82
MO-65236D	PH 3 (8)	150	146
MO-65238D	PH 4 (10)	200	256



POZIDRIV SCREWDRIVER

IEC 60900 

Chrome - molybdenum vanadium steel blade..

Reference	PZ N°	 mm	 g
MO-65240	PZ 0	60	25
MO-65242	PZ 1	80	50
MO-65244	PZ 2	100	75
MO-65246	PZ 3	150	150
MO-65248	PZ 4	200	230



POZIDRIV SCREWDRIVER WITH RECESSED BLADE

Chrome - molybdenum vanadium steel blade.

Reference	 mm	 mm	 g
MO-652405D	5	40	34
MO-652406D	6	40	34
MO-65244D	PZ 0 (4)	75	50
MO-652441D	PZ 0 (4)	150	55
MO-65245D	PZ 1 (5)	100	60
MO-65246D	PZ 2 (6)	125	82
MO-65248D	PZ 3 (8)	150	146
MO-652410D	PZ 4 (10)	200	256



SCREWDRIVER BLOCK TERMINAL FLAT/PHILLIPS

Chrome - molybdenum vanadium steel blade.

Reference	 mm	 mm	 g
MO-65405	5	80	50
MO-65406	6	100	60



SCREWDRIVER BLOCK TERMINAL FLAT/POZIDRIV

Chrome - molybdenum vanadium steel blade.

Reference	 mm	 mm	 g
MO-65505	5	80	50
MO-65506	6	100	60



For fuse boxes, connecting boxes, circuit breaker terminal blocks.





UNIVERSAL PLIER

Special steel, oil-hardened. Burnished head.

Reference	mm	kg
MO-66001	160	0.21
MO-66002	180	0.26
MO-66003	200	0.30
MO-66005	250	0.51



MO-66002

IEC 60900



MO-66005

FLAT NOSE PLIER

Chrome-vanadium steel.

Reference	mm	kg
MO-66300	145	0.11
MO-66301	160	0.16
MO-66302	170	0.18



BENT SNIPE NOSE PLIER

Chrome-vanadium steel.

Reference	mm	kg
MO-66402	160	0.16
MO-66404	200	0.18



ROUND NOSE PLIER

Chrome-vanadium steel.

Reference	mm	kg
MO-66202	160	0.15



LONG NOSE PLIER WITH SIDE CUTTER

Chrome-vanadium steel.

Referencia	mm	kg
MO-66102	160	0.14



PLUG PLIER FOR PREINSULATING PIN TERMINALS

Chrome-vanadium steel for pin terminals 2.8/5/6.35 mm.

Reference	mm	kg
MO-66105	210	0.20



INSULATING UNIVERSAL PLIER

Composite insulation. Entirely insulating.

Reference	mm	mm	kg
MO-66000C	200	16 mm ² copper	0.17



INSULATING FLAT NOSE PLIER

Composite insulation. Entirely insulating.

Reference	mm	mm	kg
MO-66303C	190	16 mm ² copper	0.11



INSULATING BENT HALF ROUND NOSE PLIER

Composite insulation.

Reference	mm	mm	kg
MO-66404CC	210	16 mm ² copper	0.11



WATERPUMP PLIER

Chrome-vanadium steel.

Reference	mm	mm	kg
MO-66502	250	33	0.25
MO-66505*	250	33	0.40
MO-66500	410	45	1.00

* Double rack slip joint (MO-66505 only).



END CUTTING PLIERS

Chrome-vanadium steel.

Reference	mm	mm		kg
		mm	mm	
MO-67401	140	∅ 2	∅ 1	0.16
MO-67402	160	∅ 3	∅ 2	0.21
MO-67404	200	∅ 4	∅ 3	0.45



mm Total length mm Maximal opening mm Cutting capacity

kg Weight

● Steel: 75 daN / mm² ● Steel: 180 daN / mm² ● Steel: 220 daN / mm²



DIAGONAL CUTTING PLIER

IEC 60900

Chrome-vanadium steel.

Reference	mm	mm			kg
MO-67101	140	Ø 2	Ø 1	Ø 0.5	0.15
MO-67102	160	Ø 3	Ø 2.2	Ø 1.5	0.18
MO-67103	190	Ø 3.2	Ø 2.5	Ø 2	0.21



CABLE CUTTER

Chrome-vanadium steel.

Reference	mm	mm	kg
MO-67500	180	Ø 5 Cu / Al	0.42



CABLE CUTTER

Chrome-vanadium steel.

Reference	mm	mm	kg
MO-67501	170	Ø 15	0.28
MO-67502	230	Ø 20	0.52



CABLE CUTTER

Chrome-vanadium steel.

Reference	mm	mm	mm	é
MO-67700	590	30	185 mm ² Copper/ Aluminium	2.5
MO-67701	765	20	Ø 12 Alu	2.8



WIRE STRIPPING PLIER

Chrome-vanadium steel.

IEC 60900 

Reference	 mm	 mm Stripping capacity mm ²	 kg
MO-67302	160	from 0.5 to 10 mm ²	0.17



WIRE STRIPPING PLIER FULLY INSULATED

Reference	 mm	 mm Stripping capacity mm ²	 kg
MO-67302C	175	from 0.5 to 10 mm ²	0.26



STRIPPING TOOL FOR LV CABLES

Aluminium casting plier.

Reference	 mm	 mm Stripping capacity	Section mm ²	 kg
MO-67304	220	Ø 8 to 21	16 to 150	0.47



STRIPPING TOOL FOR LV CABLES

Aluminium casting plier.

Reference	 mm	 mm Stripping capacity	Section mm ²	 kg
MO-67305	265	Ø 21 to 35	16 to 150	0.65
MO-67306	270	Ø 26 to 52	50 to 250	0.67



INSULATED KNIFE

Curved blade.

Reference	 mm	 mm	 kg
MO-61001	180	62	0.11
MO-61002	180	50	0.11

Delivered with pouch.



MO-61001



MO-61002

 Total length

 Cutting capacity

 Thickness

 Stripping capacity

 Maximal opening

 Weight

 Steel: 75 daN / mm²  Steel: 180 daN / mm²  Steel: 220 daN / mm²

LV Live working tools / Insulated tools





RATCHET CABLE CUTTER

IEC 60900

Treated forged steel blade.

Reference	mm	Copper section mm ²	Aluminium section mm ²	kg
MO-67599	Ø 32 max	260	320	0.90
MO-67600	Ø 38 max	300	350	0.95
MO-67601	Ø 55 max	400	450	0.97



MO-67599



MO-67600

FRONTAL RATCHET CABLE CUTTER

Treated forged steel blade.

Reference	mm	Copper section mm ²	Aluminium section mm ²	kg
MO-67611	Ø 32 max	180	250	0.90



HACKSAW

Protected hard forged steel. Two blade positions. Flush and 90° cutting supplied. Tension blade by screw.

Reference	mm	mm	kg
MO-64501	263	130	0.15
MO-64502*	450	300	0.78

* Delivered with 2 blades.



MO-64502



MO-64501

IEC 60900 

ADJUSTABLE SPANNER

Reference	 mm	 mm	 kg
MO-69002	210	24 max	0.29
MO-69003	250	28 max	0.45
MO-69004	310	34 max	0.55
MO-69005	385	43 max	1.35



REVERSIBLE RATCHET RING SPANNER

Special steel, oil-hardened.

Reference	 mm	 daN	 kg
MO-69210	10	5	0.16
MO-69213	13	9.5	0.19
MO-69216	16	16	0.35
MO-69217	17	18.5	0.37
MO-69218	18	20.5	0.38
MO-69219	19	24	0.39



COMBINATION WRENCH

Special steel insulated inserts using one-piece injection.

Reference	 mm	 mm	 kg
MO-68701	150 x 150	6-8-10-12	0.22
MO-68702	150 x 150	8-10-12-14	0.26
MO-68703	150 x 150	7-9-11-13	0.25
MO-68704	150 x 150	8-10-13-17	0.25
MO-68705	150 x 150	14-17-18-21	0.40



RIGHT ANGLE MALE HEXAGONAL KEY

Reference	 mm	 mm	 g
MO-69903	83 x 123	3	30
MO-69904	84 x 124	4	40
MO-69905	85 x 125	5	50
MO-69906	85 x 125	6	70
MO-69908	86 x 126	8	110
MO-69910	88 x 128	10	150
MO-69912	90 x 130	12	240



 mm Total length

 mm Blade length

 Weight

 daN Deca-newton

 On flats

 mm Maximal opening

 mm Cutting capacity

 mm Diameter

LV Live working tools / Insulated tools

CATUTM

#125



OPEN JAW SPANNER

IEC 60900

Reference	mm	g	Reference	mm	kg
MO-68006	6	20	MO-68019	19	0.17
MO-68007	7	20	MO-68020	20	0.18
MO-68008	8	40	MO-68021	21	0.20
MO-68009	9	40	MO-68022	22	0.22
MO-68010	10	45	MO-68023	23	0.25
MO-68011	11	50	MO-68024	24	0.26
MO-68012	12	60	MO-68025	25	0.28
MO-68013	13	80	MO-68026	26	0.30
MO-68014	14	100	MO-68027	27	0.34
MO-68015	15	110	MO-68028	28	0.36
MO-68016	16	120	MO-68029	29	0.40
MO-68017	17	140	MO-68030	30	0.50
MO-68018	18	160	MO-68032	32	0.57
MO-68008/19	8 open end spanners set: 8/10/11/12/13/14/17/19 mm				0.68



CRANKED RING SPANNER

Reference	mm	g	Reference	mm	kg
MO-68106	6	30	MO-68119	19	0.20
MO-68107	7	35	MO-68120	20	0.24
MO-68108	8	40	MO-68121	21	0.26
MO-68109	9	45	MO-68122	22	0.26
MO-68110	10	50	MO-68123	23	0.27
MO-68111	11	65	MO-68124	24	0.28
MO-68112	12	80	MO-68125	25	0.30
MO-68113	13	100	MO-68126	26	0.36
MO-68114	14	120	MO-68127	27	0.40
MO-68115	15	150	MO-68128	28	0.44
MO-68116	16	180	MO-68129	29	0.48
MO-68117	17	190	MO-68130	30	0.50
MO-68118	18	195	MO-68132	32	0.54



PIPE WRENCH

Reference	Socket head	mm	g	Reference	Socket head	mm	kg
MO-68205	6 sided	5	20	MO-682181	12 sided	18	0.33
MO-68206	6 sided	6	30	MO-682191	12 sided	19	0.43
MO-68207	6 sided	7	35	MO-682211	12 sided	21	0.50
MO-68208	6 sided	8	45	MO-682221	12 sided	22	0.63
MO-68209	6 sided	9	60	MO-682231	12 sided	23	0.68
MO-682101	12 sided	10	85	MO-68224	12 sided	24	0.73
MO-682111	12 sided	11	100	MO-68226	12 sided	26	0.81
MO-682121	12 sided	12	130	MO-68227	12 sided	27	1.00
MO-682131	12 sided	13	160	MO-68228	12 sided	28	1.08
MO-682141	12 sided	14	185	MO-68229	12 sided	29	1.13
MO-682151	12 sided	15	220	MO-68230	12 sided	30	1.31
MO-682161	12 sided	16	230	MO-68232	12 sided	32	1.55
MO-682171	12 sided	17	285				



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HEXAGONAL SPANNER WITH T HANDLE, LENGTH 130 mm

Reference	 mm	 mm	 kg
MO-68610	135	10	0.14
MO-68613	135	13	0.2
MO-68614	135	14	0.25
MO-68620	135	20	0.35
MO-68621	135	21	0.37



HEXAGONAL SPANNER WITH T HANDLE, LENGTH 300 AND 400 mm

Reference	 mm	 mm	 kg
MO-68310	305	10	0.35
MO-68311	305	11	0.36
MO-68312	305	12	0.37
MO-68313	305	13	0.40
MO-68314	305	14	0.45
MO-68316	305	16	0.56
MO-68317	305	17	0.65
MO-68319	305	19	0.75
MO-68321	305	21	0.80
MO-68322	305	22	0.85
MO-68713	405	13	0.65
MO-68714	405	14	0.80
MO-68717	405	17	0.90
MO-68719	405	19	1.00
MO-68721	405	21	1.20



6 SIDED FEMALE SOCKET 3/8" (9.53 mm) SQUARE DRIVE LONG SERIES

Chrome steel. L: 65 mm.

Reference	 mm	 g	Reference	 mm	 kg
MO-69608	8	55	MO-69616	16	0.13
MO-69609	9	65	MO-69617	17	0.14
MO-69610	10	75	MO-69618	18	0.16
MO-69611	11	85	MO-69619	19	0.18
MO-69612	12	95	MO-69621	21	0.20
MO-69613	13	100	MO-69622	22	0.22
MO-69614	14	115	MO-69623*	23	0.23
MO-69615	15	120	MO-69624	24	0.24

* the dimensions 23 and 24 have 12 sides.



 Maximal opening

 Total length

 Weight

 On flats

 Diameter



6 SIDED FEMALE SOCKET 3/8" (9.53 mm) SQUARE DRIVE - METRIC AND U.S STANDARD

IEC 60900

Reference	mm	g	Reference	Inch	kg
MO-69306	6	25	MO-69323*	23	0.10
MO-69307	7	30	MO-69324*	24	0.12
MO-69308	8	30	MO-697-1/4SAE	1/4	0.25
MO-69309	9	30	MO-697-5/16	5/16	0.30
MO-69310	10	35	MO-69735	3/8	0.30
MO-69311	11	35	MO-69736	7/16	0.35
MO-69312	12	35	MO-69737	1/2	0.40
MO-69313	13	45	MO-69738	9/16	0.45
MO-69314	14	45	MO-69739	5/8	0.55
MO-69315	15	50	MO-69740	11/16	0.60
MO-69316	16	55	MO-69741	3/4	0.70
MO-69317	17	60	MO-69742	13/16	0.85
MO-69318	18	65	MO-697-7/8	7/8	0.90
MO-69319	19	70	MO-697-15/16*	15/16	0.10
MO-69321	21	85	MO-697-1SAE*	1	0.11
MO-69322	22	90			

*12 sided



6 SIDED MALE HEX KEY / SOCKET 3/8" SQUARE DRIVE

Reference	mm Male	g
MO-69393	3	16
MO-69394	4	18
MO-69395	5	20
MO-69396	6	22
MO-69397	7	24
MO-69398	8	25
MO-693100	10	35



MALE TORX 3/8" SQUARE DRIVE

Reference	mm	mm	g
MO-69T15	60	TX15 ★	50
MO-69T20	60	TX20 ★	55
MO-69T30	105	TR30 ★	60
MO-69T40	105	TR40 ★	80
MO-69T50	105	TR50 ☆	100



EXTENSION PIECES 3/8" SQUARE DRIVE

Reference	mm	mm	kg
MO-69523	140	21.5	0.12
MO-69533	264	21.5	0.27



SOCKET 6 WITH 1/4" FEMALE SIDES

Reference	 Female	
MO-69804	4	12
MO-69805	5	12
MO-698055	5.5	12
MO-69806	6	14
MO-69807	7	14
MO-69808	8	16
MO-69809	9	22
MO-69810	10	22
MO-69811	11	26
MO-69812	12	28
MO-69813	13	28
MO-69814	14	32



SOCKET 6 WITH 1/4" MALE SIDES

Reference	 Male	
MO-698M03	3	16
MO-698M04	4	18
MO-698M05	5	20
MO-698M06	6	22
MO-698M07	7	24
MO-698M08	8	25



EXTENSION 1/4"

Reference		
MO-69522	170	75



SHRINK FITTED EXTENSION 1/4"

Reference			
MO-69540	270	150	0.15





SOCKET WITH 12 1/2" FEMALE SIDES METRIC AND US SERIES

Reference			Reference		
MO-69408	8	60	MO-694-3/8	3/8	0.10
MO-69409	9	60	MO-694-7/16	7/16	0.15
MO-69410	10	60	MO-694-1/2SAE	1/2	0.15
MO-69411	11	65	MO-694-9/16	9/16	0.15
MO-69412	12	70	MO-694-5/8	5/8	0.15
MO-69413	13	70	MO-694-11/16	11/16	0.16
MO-69414	14	70	MO-694-3/4	3/4	0.20
MO-69415	15	75	MO-694-13/16	13/16	0.22
MO-69416	16	75	MO-694-7/8	7/8	0.26
MO-69417	17	80	MO-694-15/16	15/16	0.30
MO-69418	18	80	MO-694-1SAE	1	0.32
MO-69419	19	85	MO-694-1-1/16SAE	1-1/16	0.35
MO-69420	20	90	MO-694-1-1/8	1-1/8	0.38
MO-69421	21	100	MO-694-1-3/16SAE	1-3/16	0.42
MO-69422	22	100	MO-694-1-1/4	1-1/4	0.47
MO-69423	23	115			
MO-69424	24	125			
MO-69425	25	130			
MO-69426	26	135			
MO-69427	27	140			
MO-69428	28	145			
MO-69429	29	150			
MO-69430	30	155			
MO-69432	32	170			



6 SIDED MALE HEX KEY / SOCKET 1/2" SQUARE DRIVE

Reference	Male	
MO-694M04	4	0.10
MO-694M05	5	0.10
MO-694M06	6	0.10
MO-694M08	8	0.10
MO-694M10	10	0.10
MO-694M12	12	0.16
MO-694M14	14	0.16
MO-694M17	17	0.18
MO-694M19	19	0.22



EXTENSION PIECES 1/2" SQUARE DRIVE

Reference			
MO-69524	130	27	0.17
MO-69534	250	27	0.35



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1/2" REDUCER FOR A 3/8" SOCKET

Reference	 mm	 g
MO-69539	79	60

3/8" REDUCER FOR A 1/4" SOCKET

Reference	 mm	 g
MO-69535	64	20



SOCKET 6 WITH 1/4" FEMALE SIDES TOWARDS MALE 3/8"

Reference	 mm	 g
MO-69537	54	30

EXPANDER 3/8" FEMALE TOWARDS MALE 1/2"

Reference	 mm	 g
MO-69536	75	40





MO-69308/23

SOCKETS 3/8" (9.53 mm) - 6 SIDED

Reference		
MO-69308/23	Tools composition on plastic case 410 x 120 x 75	1250

Composition

MO-69308	8	30
MO-69310	10	35
MO-69312	12	35
MO-69313	13	45
MO-69314	14	45
MO-69317	17	60
MO-69319	19	70
MO-69321	21	85
MO-69322	22	90
MO-69323	23	100
MO-69513	Reversible ratchet	600
MO-69523	Extension 130	124

SOCKETS 1/2" (12.7 mm) - 12 SIDED

Reference		
MO-69408/23	Tools composition on plastic case 410 x 120 x 75	1500

Composition

MO-69408	8	60
MO-69410	10	60
MO-69412	12	70
MO-69413	13	70
MO-69414	14	70
MO-69417	17	80
MO-69419	19	85
MO-69421	21	100
MO-69422	22	100
MO-69423	23	115
MO-69514	Reversible ratchet	600
MO-69524	Extension 125	250

Other references 1/2", consult us.

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RACHET SPANNERS

With mechanical locking.

Reference		 mm	 kg
MO-69512	1/4"	125	0.15
MO-69513*	3/8"	200	0.45
MO-69514*	1/2"	250	0.75

* With mechanical locking.



MO-69512



TORQUE WRENCH 3/8" SQUARE DRIVE

MO-69050 non-reversible with right hand thread.

MO-69051 with reversible pawl and right or left hand thread.

MO-69054 with reversible spindle function.

Reference	 mm	\vec{F}_{Nm}	 kg
MO-69050	340	8 to 60	0.9
MO-69051	230	4 to 20	0.9
MO-69054	340	8 to 60	0.9



MO-69050 no reversible



MO-69051 reversible



MO-69054 reversible

FULLY INSULATED SCISSORS

Completely insulated pair of scissors, ambidextrous.

Reference	 mm	 g
MO-72100E	132	80



 On flats

 Diameter

 Dimensions

\vec{F}_{Nm} Clamping torque

 Weight



SCREWDRIVERS KIT

IEC 60900 ⚡

Reference	Composition
KIT-03	POZIDRIV screwdriver N°1 MO-65242 POZIDRIV screwdriver N°2 MO-65244 Flat blade screwdriver 3.5 x 100 mm MO-65204 Flat blade screwdriver 5.5 x 125 mm MO-65206 Flat blade screwdriver 8 x 175 mm MO-65209



PLIERS KIT

Reference	Composition
KIT-07	Universal plier overall length 180 mm MO-66002 Water pump plier overall length 250 mm MO-66502 End stripping plier 160 mm MO-67302 Bent snipe nose plier overall 160 mm MO-66402 Cable cutter 170 mm MO-67500



INTERVENTION KIT

Reference	Composition
KIT-04	POZIDRIV screwdriver N°1 MO-65242 POZIDRIV screwdriver N°2 MO-65244 Flat blade screwdriver 3.5 x 100 mm MO-65204 Flat blade screwdriver 5.5 x 125 mm MO-65206 Flat blade screwdriver 8 x 175 mm MO-65209 End stripping plier overall 160 mm MO-67302 Bent snipe nose plier overall 160 mm MO-66402 Cable cutter 170 mm MO-67500



COMPLETE INTERVENTION KIT

Reference	Composition
KIT-05	POZIDRIV screwdriver N°1 MO-65242 POZIDRIV screwdriver N°2 MO-65244 Flat blade screwdriver 3.5 x 100 mm MO-65204 Flat blade screwdriver 5.5 x 125 mm MO-65206 Flat blade screwdriver 8 x 175 mm MO-65209 Universal plier overall 180 mm MO-66002 Water pump plier overall 250 mm MO-66502 End stripping plier overall 160 mm MO-67302 Bent snipe nose plier overall 160 mm MO-66402 Cable cutter 170 mm MO-67500



COMPOSITION OF INSULATED TOOLS 3/8" METRIC DIMENSIONS

Reference	Composition
MO-69308/30	Ratchet wrench 3/8" with mechanical locking MO-69513. Extension 3/8" length 130 mm MO-69523
	4 male sockets with sides 3/8" 4, 5, 6, 8 mm (MO-69394, MO-69395, MO-69396, MO-69398)
	12 female sockets 6 sides 3/8" 8, 10, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23 mm (MO-69308, MO-69310, MO-69312, MO-69313, MO-69314, MO-69316, MO-69317, MO-69318, MO-69319, MO-69321, MO-69322, MO-69323)
	6 female sockets 6 sides 3/8" lanyard 16, 17, 18, 19, 21, 22 mm (MO-69616, MO-69617, MO-69618, MO-69619, MO-69621, MO-69622)
	Plastic box + foam 440 x 320 x 100 mm



IEC 60900 



COMPOSITION OF INSULATED TOOLS 3/8" US DIMENSIONS

Reference	Composition
MO-69308/30US	Ratchet wrench 3/8" with mechanical locking MO-69513. Extension 3/8" length 130 mm MO-69523 T wrench 3/8" length 200 mm MO-69543
	7 male sockets 6 sides 3/8" SAE 1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8" (MO-6939M18, MO-6939M532, MO-6939M316, MO-6939M732, MO-6939M14, MO-6939M516, MO-6939M38)
	13 female sockets 6 sides 3/8" SAE 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1" (MO-69714SAE, MO-697516, MO-69735, MO-69736, MO-69737, MO-69738, MO-69739, MO-69740, MO-69741, MO-69742, MO-69778, MO-6971516, MO-6971SAE)
	Plastic box + foam 440 x 320 x 100 mm



COMPOSITION OF INSULATED TOOLS 3/8" METRIC DIMENSIONS

Reference	Composition
MO-69308/31	Ratchet wrench 3/8" with mechanical locking MO-69513 Extension 3/8" length 140 mm MO-69523 Male socket 6 sides 3/8" MO-69395
	Female sockets 6 sides 3/8" 8, 10, 12, 13, 14, 16, 17, 19, 21, 22, 23 (MO-69308, MO-69310, MO-69312, MO-69313, MO-69314, MO-69316, MO-69317, MO-69319, MO-69321, MO-69322, MO-69323)
	Plastic box + foam 440 x 320 x 100 mm





COMPOSITION OF INSULATED TOOLS 3/8" METRIC DIMENSIONS

Reference	Composition
MO-69308/32	Ratchet wrench 3/8" with mechanical locking MO-69513 Extension 3/8" length 140 mm MO-69523 Male socket 6 sides 3/8" 5 mm (MO-69395)
	12 Female sockets 6 sides 3/8" 8, 10, 12, 13, 14, 16, 7, 18, 19, 21, 22, 24 MO-69608, MO-69610, MO-69612, MO-69613, MO-69614, MO-69616, MO-69617, MO-69618, MO-69619, MO-69621, MO-69622, MO-69624 - Plastic box + foam 440 x 320 x 100 mm



COMPOSITION OF INSULATED TOOLS 3/8" METRIC DIMENSIONS

Reference	Composition
MO-69308/33	Ratchet wrench 3/8" with mechanical locking MO-69513 Extension 3/8" length 250 mm MO-69533 T wrench 3/8" length 200 mm MO-69543 5 male sockets 6 sides 3/8" 4, 5, 6, 7, 8 mm (MO-69394, MO-69395, MO-69396, MO-69397, MO-69398)
	18 Female sockets 6 sides 3/8" 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24 mm MO-69306, MO-69307, MO-69308, MO-69309, MO-69310, MO-69311, MO-69312, MO-69313, MO-69314, MO-69315, MO-69316, MO-69317, MO-69318, MO-69319, MO-69321, MO-69322, MO-69323, MO-69324 + expander 3/8" - 1/2" MO-69536 Plastic box + foam 440 x 320 x 100 mm



COMPOSITION OF INSULATED TOOLS 1/2" METRIC DIMENSIONS

Reference	Composition
MO-69408/30	Ratchet wrench 1/2" MO-69513 Extension 1/2" length 130 mm MO-69524 T wrench 1/2" length 300 mm MO-69544 5 male sockets 6 sides 1/2" 8, 10, 12, 14, 17 mm (MO-694M08, MO-694M10, MO-694M12, MO-694M14, MO-694M17)
	24 female sockets 12 sides 1/2" 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32 mm (MO-69408, MO-69409, MO-69410, MO-69411, MO-69412, MO-69413, MO-69414, MO-69415, MO-69416, MO-69417, MO-69418, MO-69419, MO-69420, MO-69421, MO-69422, MO-69423, MO-69424, MO-69425, MO-69426, MO-69427, MO-69428, MO-69429, MO-69430, MO-69432) Plastic box + foam 440 x 320 x 100 mm



COMPOSITION OF INSULATED TOOLS 1/2" US DIMENSIONS

Reference	Composition
MO-69408/30US	Ratchet wrench 1/2" MO-69513 Extension 1/2" length 130 mm MO-69524 T wrench 1/2" length 300 mm MO-69544 7 male sockets 6 sides 1/2" 5/16", 3/8", 7/16", 1/2", /16", 5/8", 3/4" (MO-694M516, MO-694M38, MO-694M716, MO-694M12SAE, MO-694M916, MO-694M58, MO-694M34) 15 female sockets 12 sides 1/2" SAE , 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1-1/16", 1-1/8", 1-3/16", 1-1/4" (MO-69438, MO-694716, MO-69412SAE, MO-694916, MO-69458, MO-6941116, MO-69434, MO-6941316, MO-69478, MO-6941516, MO-6941, MO-69421116SAE, MO-694118, MO-6941316, MO-694114) Plastic box + foam 440 x 320 x 100 mm



IEC 60900



COMPOSITION OF INSULATED TOOLS 1/2" METRIC DIMENSIONS

Reference	Composition
MO-69408/31	Ratchet wrench 1/2" MO-69513 Extension 1/2" length 130 mm MO-69524 10 female sockets 12 sides 1/2" 8, 10, 12, 13, 14, 17, 19, 21, 22, 23 mm (MO-69408, MO-69410, MO-69412, MO-69413, MO-69414, MO-69417, MO-69419, MO-69421, MO-69422, MO-69423) Plastic box + foam 440 x 320 x 100 mm



COMPOSITION OF INSULATED TOOLS 1/4" METRIC DIMENSIONS

Reference	Composition
MO-69804/23	Ratchet wrench 1/4" MO-69512 Extension 1/4" length 150 mm MO-69522 Shrink fitted extension 1/4" length 270 mm MO-69540 6 male sockets 6 sides 1/4" 4, 5, 6, 7, 8 mm (MO-698M03, MO-698M04, MO-698M05, MO-698M06, MO-698M07, MO-698M08) 11 female sockets 6 sides 1/4" 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 (MO-69804, MO-69805, MO-69806, MO-69807, MO-69808, MO-69809, MO-69810, MO-69811, MO-69812, MO-69813, MO-69814) Plastic box + foam 440 x 320 x 100 mm





COMPOSITION OF INSULATED TOOLS 1/4" US DIMENSIONS

IEC 60900

Reference	Composition
MO-69804/23US	<p>Ratchet wrench 1/4" MO-69512</p> <p>Extension 1/4" length 150 mm MO-69522</p> <p>Shrink fitted extension 1/4" length 270 mm MO-69540</p> <p>6 male sockets 6 sides 1/4" SAE 1/8", 9/64", 5/32", 3/16", 7/32", 1/4" (MO-698M18, MO-698M964, MO-698M532, MO-698M316, MO-698M732, MO-698M14)</p> <p>10 female sockets 6 sides 1/4" 3/16", 7/32", 1/4", 3/32", 5/16", 11/32", 3/8", 7/16", 1/2", 9/16" (MO-698316, MO-698732, MO-69814SAE, MO-698932, MO-698516, MO-6981132, MO-69838, MO-698716, MO-69812SAE, MO-698916)</p> <p>Plastic box + foam 440 x 320 x 100 mm</p>



COMPOSITION OF INSULATED TOOLS 3/8" METRIC DIMENSIONS

Reference	Composition
MO-69608DYN	<p>Torque wrench with uni-directional ratchet 3/8" MO-69050</p> <p>Extension 3/8" length 140 mm MO-69523</p> <p>T wrench 3/8" length 130 mm MO-69542</p> <p>Male socket 3/8 and six sides of 6 mm MO-69396</p> <p>10 female sockets 3/8 and six female sides of 8, 10, 12, 13, 14, 16, 17, 18, 19, 21 mm (MO-69608, MO-69610, MO-69612, MO-69613, MO-69614, MO-69616, MO-69617, MO-69618, MO-69619, MO-69621)</p> <p>Plastic box + foam 440 x 320 x 100 mm</p>



BTR 4 SCREW TIGHTENING KIT

Tightening tool kit for screw with BTR head BTR (CHC) six sides of 4. Suitable particularly for identically tightening connection circuit breakers, meters and various kits used by the ERDF for the equipment of the control panels.

Reference	Composition
KIT-MO68404DYN	<p>1 torque screwdriver with limited torque set delivered with short blades (30 mm) and long blades (95 mm) MO-68404-DYN</p> <p>1 short blade screwdriver with "ball" handle MO-68404C</p> <p>1 male offset right angle wrench with hexagonal end with 4 flat sections MO-69904C</p> <p>1 screwdriver with hexagonal end with 4 flat sections MO-68404</p>

Delivered in a bag.



ELECTRICIAN TOOL BAG

Foamed structure and reinforced base.

Adjustable shoulder strap. Delivered without tools.

- M-87370 : 8 outside pockets.

Interior: mesh pocket and removable tool holder.

- MO-37 : 4 outside pockets and large compartment inside. Transport handles.

Reference	mm	kg
M-87370	440 x 330 x 160	1.1
MO-37	400 x 310 x 250	0.6

THE +

1 Moving to the rear side for mounting on trolley.



M-87370



MO-37

BACKPACK FOR TOOLS

Semi-rigid and foamed structure. Reinforced handle.

4 exterior pockets. Velcro and straps for storage for insulating mat.

Interior: pocket for a laptop, pockets, detachable reversible tray and elastic straps for tools.

Support pads and reinforced bottom. Delivered without tools.

Reference	mm	kg
MO-38	400 x 330 x 180	0.6

THE +

1 For transporting tools, laptops and insulating mats.



TOOL BOX

Flexible and detachable protective flap for direct access to tools. Metal up-and-over handle, with foam padding.

8 exterior pockets, including one adjustable pocket for a saw and 10 vertical internal pockets. Adjustable shoulder strap. Support pads and reinforced bottom. Delivered without tools.

Reference	mm	kg
MO-39	480 x 320 x 230	0.9

THE +

1 Bulky size for direct access to tools.





BACKPACK WITH WHEELS FOR TECHNICIANS

2 methods of use: backpack or trolley mode.
 Flexible shock-absorbent structure. Front and side pockets for documents and PPE (helmet, gloves, mat and rod).
 Ergonomic straps and foam padded back.
 Silent rubber wheels, replaceable.
 Extremely comfortable to use.
 Reflective stripes.

MO-102 : For measuring equipment.

Pockets for laptop, documents and 3 rigid trays with adjustable height. Detachable rolling base (MO-101) and quick assembly on the bag. Black.

MO-102-0 : For electric tools

Vertical tray for arranging tools in several slots. Central pocket for large tools. Fixed rolling base. Blue.

Accessory (MO-103) : pocket with transparent cover for quickly viewing the contents. Sold empty.



MO-102



Reference	Characteristics	mm	kg	Capacity
MO-102	Bag for measuring tools	500 x 350 x 230	4.6	40 L
MO-102-0	Bag for tools	550 x 410 x 250	4.1	35 L
MO-101	Only rolling base	410 x 230	1.4	-
MO-103	Pocket	330 x 170	0.6	-



Ergonomic straps



Storage for protective helmet



Storage for laptop

THE +

- 1 Stability and direct access to contents.
- 2 Arranging the tools and PPE.
- 3 Adjustable arrangement (MO-102).
- 3 Ergonomic straps.
- 4 Storage for protective helmet.
- 5 Storage for laptop.
- 6 Pocket.



Pocket MO-103



MO-102-0



FLAT TOOL CASE

Made of high-resistance textile Carry handle. Elastic straps for holding tools on the two interior surfaces. Reversible and removable tool-holder tray. Sold without tools.

Reference	mm	kg
M-87303	400 x 350 x 40	0.5



TOOL BAG

Made of split grain leather, black. Carry handle. 1 hold-all pocket, 1 separation forming a tool-holder tray and 1 tool-holder flap. Closed using 2 straps with loops. Riveted assembly and reinforced bottom. Delivered without tools.

Reference	mm	kg
MO-34	410 x 280 x 150	3.2



THE +

1 For organized and optimized storage.

TOOL BAG

Made of full grain leather, natural colour. Transport handle and adjustable shoulder strap. 2 interior pockets separated by a tool-holder tray Closed using 3 straps with loops. Reinforced bottom. Sewn bag assembly. Delivered without tools.

Reference	mm	kg
MO-36	200 x 250 x 450	4.8



ROLL BAG FOR PPE

Large capacity for storing PPE (gloves, helmet, carpet, boots and other accessories). Adjustable carry straps. Double-zip closing. Exterior transparent pocket.

Reference	mm	kg
MO-50	Ø 250 x L 620	0.5

THE +

1 Allows storing all PPE and a 60 cm wide insulating mat





LOW VOLTAGE COMPLETE SET. COMPLETE EQUIPMENT FOR LIVE LINE (LV) INTERVENTIONS.



face shield with MO-510-03 or electrician helmet with MO-510-03/2

Reference
MO-510-03 *
MO-510-03/2 *

Composition

PERSONAL EQUIPMENT	
MO-286	1 face shield with MO-510-03
MO-185-BL	1 electrician helmet with MO-510-03/2
CG-98-C	1 working gloves size C
CG-05-C	1 rubber gloves size B
CG-36-1	1 carrying bag for rubber gloves
MP-42/16	1 insulating mat 3 mm
VOLTAGE DETECTOR	
MS-917	1 voltage detector
INSULATING	
MP-26-A	10 insulating caps
MP-35/12	1 insulating blanket
MP-4110	10 wood clamps for insulating blanket
MP-32/15	6 line protectors 1.50 m
MP-19LOT	insulating adhesive tapes
INSULATING TOOLS	
MO-61001	1 stripping knife
MO-67502	1 cable cutter 230 mm
MO-68008/19	1 open end spanners set with 8/10/11/12/13/14/17/19 mm

following

INSULATED TOOLS IEC 60900 	
MO-69903	1 right angle hexagonal key wrench 3 mm
MO-69904	1 right angle hexagonal key wrench 4 mm
MO-69906	1 right angle hexagonal key wrench 6 mm
MO-751	1 insulating folding rule
MO-69003	1 adjustable spanner 250 mm
MO-66002	1 universal pliers 180 mm
MO-66202	1 round nose pliers 160 mm
MO-66502	1 water pump pliers 250 mm
MO-67102	1 side cutter 160 mm
MO-69308/23	1 sockets 3/8" wrench set with 10 sockets: 8, 10, 12, 13, 14, 17, 19, 21, 22, 23
MO-65205	1 flat blade screwdriver 4 x 100
MO-65207	1 flat blade screwdriver 6.5 x 150
MO-65209	1 flat blade screwdriver 8 x 175
MO-65232	1 Phillips screwdriver n° 1
MO-65234	1 Phillips screwdriver n° 2
MO-65236	1 Phillips screwdriver n° 3

* Delivered without tool bag.

Tool bag to order separately

Reference	Characteristics
MO-34	Leather tool bag , see page 141
MP-01	Bag for insulating mats, see page 33

Reference	Characteristics
M-87384	Bag for face shield and helmet, see page 37
M-87386	Multi-pocket electrician bag, see page 33

INTERVENTION KIT FOR ELECTRICIANS

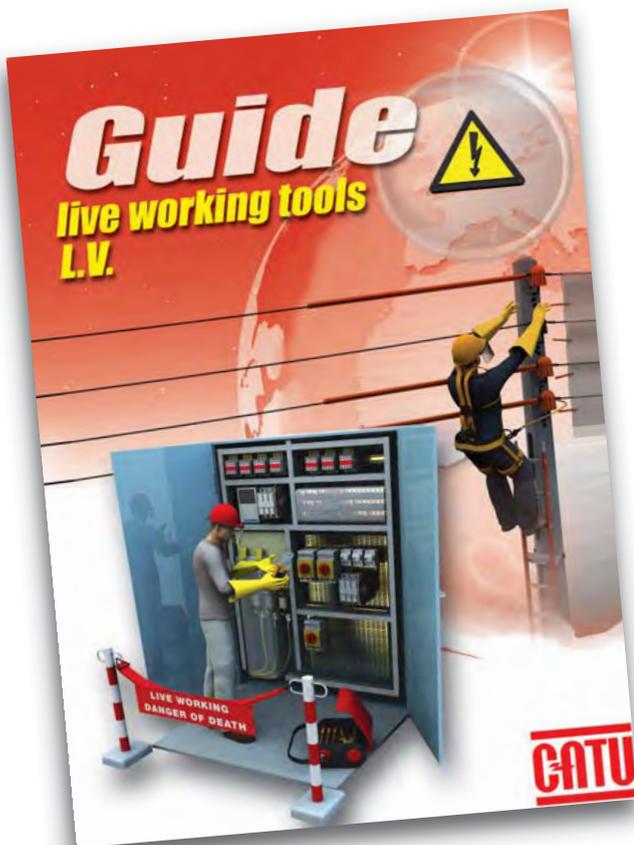
IEC 60900 



Reference
MO-38510

Composition

TRANSPORT	
M-87370	1 tool bag
PERSONAL EQUIPMENT	
CG-05-C	1 pair of insulating gloves size C
MO-11001	1 safety glasses
LOCKING	
AL-230-111	1 safety padlock
INSULATED TOOLS	
MO-65204	Flat blade screwdriver - 3.5 x 100 mm
MO-65206	Flat blade screwdriver - 5.5 x 125 mm
MO-65209	Flat blade screwdriver - 8 x 175 mm
MO-65242	POZIDRIV screwdriver - N°1 4.5 x 80 mm
MO-65244	POZIDRIV screwdriver - N°2 6 x 100 mm
MO-66002	Universal plier - length 180 mm
MO-66402	Bent snipe nose plier - length 160 mm
MO-67302	End stripping plier - length 160 mm
MO-67500	Cable cutter - length 180 mm
MO-66502	Water pump plier - length 250 mm



Our LV Live line working guide is available.

All our guides and catalogues are available on request or downloadable from our website.

www.catuelec.com



MINI JUMPER CLAMPS FULLY INSULATED FOR SWITCHBOARD USE

These clamps are specially designed for use on energized parts in LV installations (switchboards, etc.) to make temporary connections. Isolated bronze jaws designed to axially grip conductors can be used on threaded bolts or shanks and nuts. All other models in this series tighten with T-handle screw, and receive cable terminals

Reference	 mm	 kg
MC-141	150 x 75 x 25	0.20
MC-142	33 x 38 x 58	0.13
MC-143	115 x 70 x 25	0.15
MC-144	23 x 75 x 150	0.28
MC-145	23 x 70 x 110	0.22
MC-146	23 x 70 x 110	0.23
MC-147	100 x 70 x 25	0.10
MC-147/1	100 x 70 x 25	0.10
MC-148	80 x 70 x 25	0.15
MC-148/1	80 x 65 x 25	0.10
MC-149	160 x 60 x 55	0.30

MC-141



Six-sided
17-19 mm.

MC-142



Adjustable clamp
round Ø 6-10 mm
flat 5 mm.

MC-143



Flat bar,
thickness
2-25 mm.

MC-144



Round 8-12
square 9-10 mm.

MC-145

Wire clamp for
stripped cables
Ø 3 to 10 mm.



MC-146

Wire clamp for
stripped
cables
Ø 10 to 24 mm.



MC-149

Flat bar,
thickness
20-30.



MC-147

Threaded rod M8
MC-147.
Threaded rod M10
MC-147/1.



MC-148

For shunt 200 A.



Clamp with tapped revolving rod end M8, 200 A shunt. To be used with an insulating six-sided male hex key 5 mm.

MC-148/1

For 10
to 50 mm² cable.

Clamp with tapped revolving rod end M8.



JUMPER CABLES

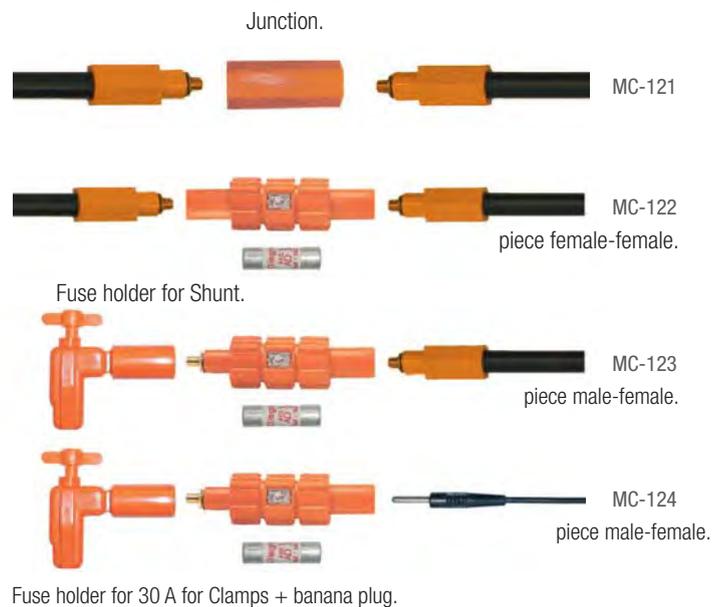
LV live working tools. Delivered with socket screwing ISO M8. Insulated copper cable H 07 RN-F. Nominal intensity 200 A. Insulated cover.

Reference	↔	Section mm ²	Intensity A	kg
MC-153/05	0.5 m	35	200	0.27
MC-153/10	1 m	35	200	0.57
MC-153/30	3 m	35	200	1.72
MC-153/60	6 m	35	200	3.46
MC-155/05	0.5 m	50	250	3.80
MC-155/10	1 m	50	250	7.60
MC-155/20	2 m	50	250	1.52
MC-155/30	3 m	50	250	2.28
MC-155/60	6 m	50	250	4.56
MC-155/80	8 m	50	250	6.08



JUMPER CABLE WITH INSULATED JUMPER CLAMPS

Reference	↔ mm	g
MC-121	60 x 25	50
MC-122	125 x 35	100
MC-123	125 x 35	100
MC-124	125 x 35	100



JUMPER CABLE WITH INSULATED JUMPER CLAMPS

Cable H 07 RN-F of 25 mm². Continuous rating: 75 A. 2 clamps MC-120. 150 x 100 x 60 mm and 190 g each. Tightening capacity. 12 mm (- flat). Spring tightening. Connector for cable 8 mm. Rated insulation: 1 500 V. Icc = 5 kA/1 s.

Reference	↔ mm	kg
MC-120/15	1.5 m	0.85
MC-120/50	5 m	1.95
MC-120/100	10 m	4

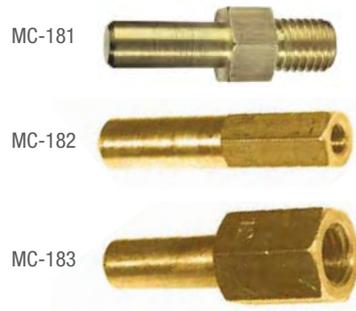




THREADED ADAPTER

Cylindrical body diameter 10 mm to fits on panel network thread of switchboard etc... Total length 50 mm.

Reference	 mm	 mm	
MC-181	50 x 13	M10	50
MC-182	50 x 10	M8	27
MC-183	50 x 17	M12	48



SHUNT TELESCOPIC PROBE

Connector with insulated probe. Retractable cover.

Reference	Sections mm ²	Intensity A
MC-126	1.5 to 16	60
MC-126/1	10 to 70	100

Reference	 mm	
MC-150	173 x Ø 32	185



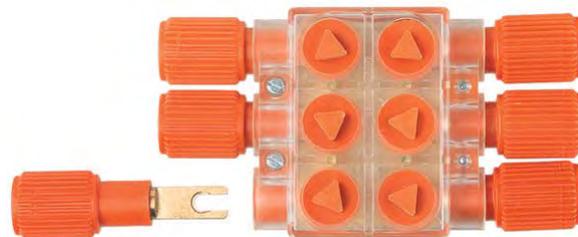
Connector with insulated probe.

Retractable cover.

BYPASS HOUSING

The six removable fittings can be separated by the triangular spanner. The housing allows on each side to connect 3 by pass jumpers.

Reference	Composition
MC-156	Box 40 x 80 x 158 mm
MC-156/1	Spare part
MO-237-D	Triangular spanner witch T hande



JUMPER CONNECTING BOX WITH FUSE

Shunt for collective pipes.

Reference	Intensity A
MC-116	from 30 to 200

The shunt for collective channeling is a box used to make sure, before proceeding to the replacement of a molten fuse situated on a channeling, that the defect which brought about the molten is eliminated. This box is used with a fuse when the (nominal) assigned intensity of the channeling is < 100 A and with 2 fuses when this intensity is included between 100 A and 200 A. It can also be used to open a circuit in load, for example to change a damaged accessory such as a pin.



CABLE IDENTIFIER

The MX-400 includes a modulator A and a receiver B.

The MX-400 is a cable identifier that is particularly well suited for quickly identifying underground cables and insulating overhead lines. It is also designed for identifying phases. This identifier is used on any type of power distribution network with rated voltages of 230 to 400 Volts.

Operating voltage: 230/400 V +/- 10%.

Frequency: 50 Hz +/- 10%.

Operating temperature: - 10° to + 55°C.

Storage temperature: - 20° to + 70 .

Class II modulator. 

The **modulator** is an electronic power system that draws current pulses in 10-millisecond intervals at a frequency of 1 Hertz. Current limited by fuse, HPC 100 kA aM 10 A.

Reference	 mm	 kg
MX-400	510 x 465 x 216	10.6

Comes complete with an ABS case, 2 cables, and 1 amperemetric clamp.



H07RNF power cables. (6 mm² and 3 m length). The connection is made between phases for identifying the cable or between phase and neutral for identifying a phase. After connection, the device is immediately live, as indicated by two 230 and 400 Volts lights.

The receiver is equipped with two sensors that detect the passage of pulses drawn by the modulator. Once these pulses are received, the device emits a light signal, confirmed with a beep after three seconds. Receiver powered by 9 V lithium type 6LR61 battery. Sensor sensitivity adjustable to 15 levels. Detection can easily be adjusted, which accordingly affects identification accuracy.



The phase is identified with an amperemetric clamp connected to the receiver and positioned around the phase to be identified. When the clamp detects pulses drawn by the modulator, the receiver emits a light signal, confirmed by a beep after three seconds.

Accessories

Reference	Characteristics
MX-400/1	Modulator + receiver
MX-400/6	Receiver
MX-400/7	Amperemetric clamp
MC-1421	Connection clamp



Ask for your own **LV** Voltage Detector

Detex™

The family grows again!

Generation of voltage check (VAT) operations and voltage detectors see page 96.

EN 61243-3 (2010) / 
IEC 61243-3 (2009)
EN 50110-1
CE

MS-917-VE



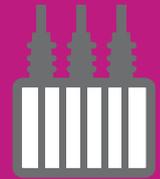
917-L



920-EX



MV Substation equipment



Safety equipment	150
Substation equipment	151
Voltage detectors and short-circuiting systems for substations with bare conductors	152
Voltage detectors	153
Phase comparators	155
Two-pole phase comparator and permanent indicator	156
IEC short-circuiting and earthing systems for MV substations	157
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Short-circuiting and earthing systems	160
VPIS and VDS systems for M.V. cubicles	163
Additional safety equipment	165
Life saving kits	167





Keep your substations in compliance

SPECIAL REGULATORY SIGNALING

The standard recommends the following signaling in substations :

- A substation poster,
- Two posters about what to do in the event of an indoor or outdoor electrical emergency,
- A poster displays the service rules.

All of these posters come in kits that were specially designed by CATU to get your substations in compliance.

NF C 13-100



SAFETY EQUIPMENT

The standard recommends the following service equipment :

- An insulating platform or an insulated mat,
- A rescue stick,
- A pair of insulating gloves adjusted to the substation's rated voltage,
- A voltage detector (see below for information)
- A grounding and short circuit device (see below for information)
- A glove box,
- A fuse holder.

CATU has assembled all of the service equipment into kits to simplify your selection and to bring your facilities into compliance right away. This equipment must include a suitable voltage detector.



INTERVENTION KITS

Reference	Characteristics
KIT-01	Intervention kit with insulating platform 24 kv
KIT-02	Intervention kit with insulating platform 36 kv
KIT-10	Intervention kit with insulating mat delivered with a protective P.V.C. container

KIT-01	KIT-02	KIT-10	Composition of kits	Characteristics	mm	
•	–	•	CG-3-10-NR	Insulating rubber gloves Class 3	26 500 V max	Size (10)
–	•	–	CG-4-10-NR	Insulating rubber gloves Class 4	36 000 V max	Size (10)
•	•	•	CG-35/2 *	Rubber gloves box	–	101 x 224 x 476
•	•	•	CI-23 *	Fuse holder	Ø maxi 85 mm	90 x 240 x 260
•	•	•	CS-45 **	Rescue stick	45 000 V max	Long. 1.65 m
•	•	•	CI-06-D	Wall mounted supports	Delivered with CS-45	–
•	–	–	CT-7-25/1	Insulating platform	24 000 V max	500 x 500 x 220
–	•	–	CT-7-40/1	Insulating platform	40 000 V max	500 x 500 x 220
–	–	•	MP-42/16	1 insulating MAT IEC-61111 Thickness 3 mm	Class 3 - 26.5 kV	0.6 x 1 m
–	–	•	MP-20	Mat storage box	–	Ø 100 x 700 mm

* Delivered with fixations. **Delivered with wall mounted supports CI-06-D.



CG-35/2



CI-23



CI-06-D



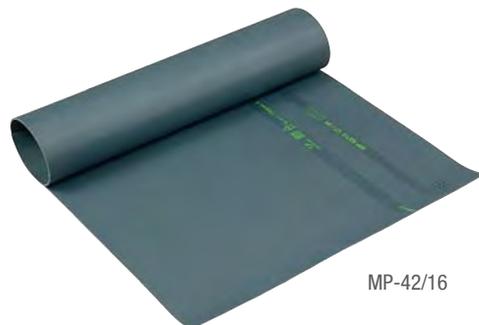
CG-3-10-NR
CG-4-10-NR



MP-20



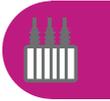
CT-7-25/1
CT-7-40/1



MP-42/16



CS-45





IEC ELECTRONIC VOLTAGE DETECTORS, "COMPACT SERIE" FOR INDOOR AND OUTDOOR USE

Ultimate technology of voltage detector "Head Capacitive Technology".
Compact and light, it offers a wide band (10/36 kV).

Operating check :

By pressing the TEST button:

- A **RED** LED flashes on.
- Powerful rated audible signal > 60 dB(A)/2 m.
- When loosening the button, the timed **GREEN** LED lights up.

While remaining on, it indicates the good working order of the detector.

Characteristics :

- Precise and stable operating threshold.
- High environmental resistance (impacts, vibrations, moisture).
- Temperature conditions: class N (IEC -61243-1 standard).
- Use from 50 to 60 Hz.



IEC VOLTAGE DETECTOR

In compliance with IEC-61243-1.

CC-765 high environmental resistance : impacts, vibrations, moisture.

Recommended stick CE-4-21-C or K.

Refer to technical specifications on page 201.

IEC 61243-1



Reference	Characteristic	~	mm	g
CC-765-55/20*	In storage box	5.5 - 20	Ø 59 x 270	350
CC-765-3/10*	In storage box	3 - 10	Ø 59 x 270	350
CC-765-10/36*	In storage box	10 - 36	Ø 59 x 270	350
CC-765-10/30*	In storage box	10 - 30	Ø 59 x 270	350

(*) Specify type of mounting when ordering : C or K.
Devices delivered with instructions in plastic box and batteries, mixed contact electrode
Centring bracket/flag for use with Nevers equipment (refer to page 178) and instruction manual.
Dimensions Ø 59 x 270 mm.
FOR OTHER VOLTAGE RANGE : CONTACT US.



CC-765-10/30 - C

IEC INSULATING STICK FOR VOLTAGE DETECTOR

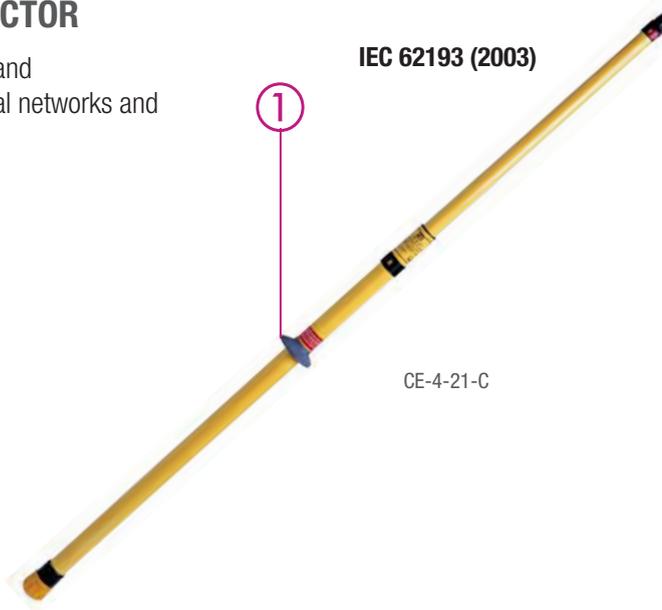
Parts made of composite epoxy resin and glass fibre tubes and polyurethane foam. Locked with a push button. Rod for aerial networks and electrical installations.

For VAT and Grounding.

Reference	~	↔	kg
CE-4-21-(*)	90 kV	2 m	1.5

(*) Add end-fitting: C-E-K.

IEC 62193 (2003)



CE-4-21-C

THE

1 Hand guard.

IEC ELECTRONIC VOLTAGE DETECTOR, WITH ANTENNA FOR INDOOR AND OUTDOOR USES

Ultimate "head capacitive technology" of voltage detector.

- Universal application 50 / 60 Hz and wide band of voltage from 5 to 30 kV.
- Type S (Substation) with electrode extension.
- The electrode extension is designed to ensure no inside failure.
- Equipped with its insulating stick : Assembly by screwing.

Voltage presence is indicated by:

RED flashing LED (very bright, visible at more than 20 m in direct lighting).
Powerful rated audible signal > 67 dB (A) / 1.5 m.

Characteristics:

- Temperature conditions: class N (-25 to 55°C).
- Type S (with electrode extension).
- Electrode extension diameter : 14 mm.
- Power supply: 1 standard 9 V battery 6LR61.
- Network frequencies : 50 and 60 Hz.
- Contact electrodes fitted by screwing and easily interchangeable.
- Packaging: supplied in a carrying bag with zip (930 mm x 200 mm) and transparent side pocket.
- In compliance with the standard IEC 61243-1 Ed 2 (2003).
- CE marking complies with EMC immunity regulations.

Reference	~	↔	g
CC-965-10/30	10 to 30	Length: 1.55 m Diameter: 59 mm	850
CC-965-5/15	5 to 15	Length: 1.45 m Diameter: 59 mm	820



Accessory

Plastic carrying case: REF. M78723.

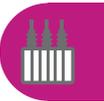


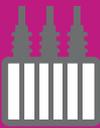
Canvas bag



THE +

- 1 360 ° light indication.
- 2 Delivered in a waterproof canvas bag.
- 3 With insulating stick





VOLTAGE DETECTOR FOR M.V. SUBSTATION (INDOOR USE)

It's equipped with its built-in device for the checking operation.

The indication "voltage present" is visualized on 360° by a high brightness red LED.

High environmental resistance: Shocks, drop, vibration.

Rugged molded thermoplastic housing.

Powered with a lithium battery.

The battery life is more than 8 years.

External Ø 58.5 mm compatible with the passoped glasses. Telescopic stick version for reduced space requirement.

EN 61243-1
CE

Reference				
CL-465-10/30-M *	10 - 30 kV	-	1.35 m	1
CL-465-10/30-2 **	10 - 30 kV	0.75 m	1.18 m	0.9

* Delivered in vinyl sheath with wall brackets CI-06-D.

** Delivered in canvas, waterproofed with ramp.

THE

- 1 The battery life is more than 8 years.
- 2 The indication "voltage presence" is visualized on 360°.



CL-465-10/30-M



CL-465-10/30-2

TWO-POLE PHASE COMPARATORS FOR INDOOR USE

The **DETEX CL-8-36** detects differences in voltage between any two points of an installation indicated by LED's. It also enables assessment of the order of magnitude of the residual voltage induced by nearby live lines or circuits, and thus differentiates it from the one provided directly from a high voltage source.

Two 1.25 m elements with removable probes, connected via a high-insulation lead. High dielectric quality insulating material.

Reference	Voltage (AC)	aerial		kg
		assembled	dismantled	
CL-8-36	2 to 36 kV	1.25 m	0.62 m	1.1
CL-8-36/1 *	2 to 36 kV	1.25 m	0.62 m	1.3

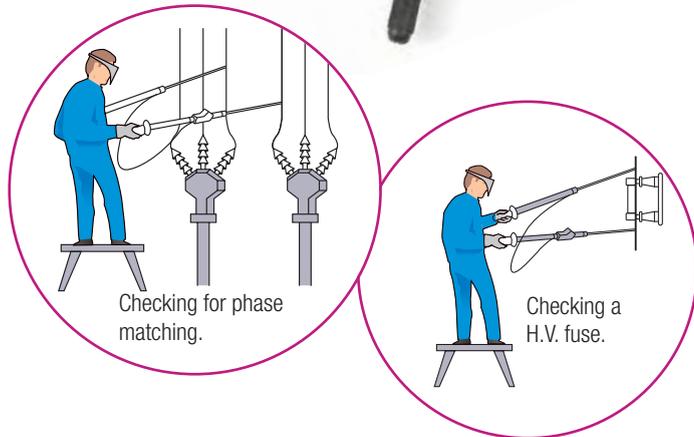
* As CL-8-36 tester with 2 probes extenders 0.550 m.
Cable 1.5 m for CL-8-36 and 3 m for CL-8-36/1. Delivered in plastic case.

Accessories :

Reference	Description
C-92-20	Spare probe 0.550 m
CL-8-05	Probe extenders 0.550 m



CL-8-36



Checking for phase matching.

Checking a H.V. fuse.

OPERATING TESTERS

To perform mandatory testing on the controllers before and after each use.

Reference	Characteristic	Voltage	mm	kg
CL-1-06	Delivered in case with lead	Adjustable 10, 20, 30 kV	190 x 32 x 65	0.32



CL-1-06

INFO

Unlike single-core voltage testers, dual core testers can recognize potential differences between any two points in an MV installation. Primarily reserved for conductors of the same phase (matching), they can also be used for dual core detection and for testing MV fuses.

CE



↔ Total length

mm Dimensions

kg Weight



TWO-POLE PHASE COMPARATOR FOR INDOOR AND OUTDOOR USE

Complete function testing: built-in, with TEST push-button (battery supplied).

Composition

- 2 elements connected by a high-insulation lead,
- 2 removable handles,
- metal case: 0.40 x 0.25 x 0.85 m.

Indications provided by the galvanometer needle; dials are calibrated according to voltage. High isolated materials characteristics.

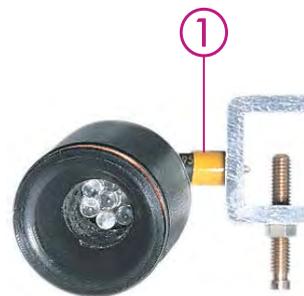


Reference	Graduation cadran (kV)		Type 6 LR-61	
CL-5-36	5 - 10 - 15 - 20 - 25 - 30 - 33 - 36	6 - 36 kV	9V	7.5
CL-5-03	0.750 - 1 - 1.25 - 1.5 - 3	0.75 - 3 kV	9V	

PERMANENT LUMINOUS INDICATOR FOR INDOOR USE

Single-pole 5 to 75 kV indicator. On bus bars. Rings with Ø 5 to 20 mm and planes 1 to 20 mm. Fixing on conductors. Signaling the presence of voltage by 7 electroluminescent diodes.

Reference	
CL-40010	Sold in box of 3 units



THE

- 1 Flexible stem for adjusting the orientation of the LEDs.

BIPOLAR VOLTAGE ABSENCE DETECTOR FOR CONTINUOUS CURRENT

The presence of voltage is indicated by:

- the lighting of 6 red LEDs + 1 blue polarity LED
- the activation of an audio signal (60 dBA / m2).

Continuous voltage absence detector from 100 to 30000V. Integrated device for ensuring the proper functioning of all the detector's functions. Delivered in a plastic case. High resistance body of the detector. 2 elements connected by a flexible, high insulation cable.

Reference			Type 6 LR-61	
CL6-100-30000	100-30 000 V	1.02 m	9V	1.5



INSTALLATION ON PERMANENT FIXED POINTS

3 contact clamps. 3 copper cables, IEC extra flexible silicone sheath, L = 1.5 m. Insulating stick. Earth clamp.
1 trifurcation connector earthed by an extra-flexible copper cable with silicone sheath, L = 2.5 m.



Reference	Rating (kA/1 s)	Installation on fixed points (mm)	Composition	Connection set
MT-1910	20	Ø 20 MT-2951 range	3 clamps MT-1911-E 1 MT-1911	3 cables 95 mm ² 1 earth cable 35 mm ²
MT-1920	30	Ø 25 MT-3951 range	3 clamps MT-1921-E 1 MT-1921	3 cables 150 mm ² 1 earth cable 50 mm ²

Fixed points
(characteristic page 160).



MT-2951



MT-3951



Plastic case.
M-78665



CF-5-40-E
Insulating stick to be
ordered separately.

IEC 61230



EARTH CLAMPS

Claw for "T" or round fixed points for round conductors.

Reference	Characteristic	Rating (kA/1 s)	kg
MT-1911-E	Claw for "T" fixed points Ø 20 mm round conductors Ø 8 to 18 mm	20	0.58
MT-1921-E	Claw for "T" fixed points Ø 25 mm round conductors Ø 10 to 25 mm	30	0.69
MT-1911	Same characteristics with handle MT-1911-E	20	-
MT-1921	Same characteristics with handle MT-1921-E	30	-
M-9573	Handle alone C end fitting	-	-



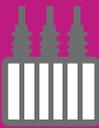
MT-1911-E
MT-1921-E



MT-1911
MT-1921

IEC 61230





INSTALLATION ON BARE CONDUCTORS

Contact clamps. 3 copper cable extra-flexible silicone sheath. L = 1.5 m. 1 trifurcation connector earthed by an extra-flexible copper cable with silicone sheath, L = 2.5 m. Earth clamp.

IEC 61230



Reference	Rating (kA/1 s)	Installation on fixed points	Composition	Connection set
MT-5805	20	<ul style="list-style-type: none"> • Ø 5-35 — 16-40 — 5-40 	3 clamps MT-815-C 1 MT-840/1	3 cables 95 mm ² 1 earth cable 35 mm ²
MT-8408	12.5	<ul style="list-style-type: none"> • Ø 18-33 — — — — 	3 clamps MT-814/3 1 MT-840/1	3 cables 70 mm ² 1 earth cable 35 mm ²
MT-9801	10	<ul style="list-style-type: none"> • Ø 5-16 — 0-16 • Ø 5-28 	3 clamps MT-817-C 3 clamps MT-814/2 1 MT-840/1	3 cables 50 mm ² 1 earth cable 25 mm ²

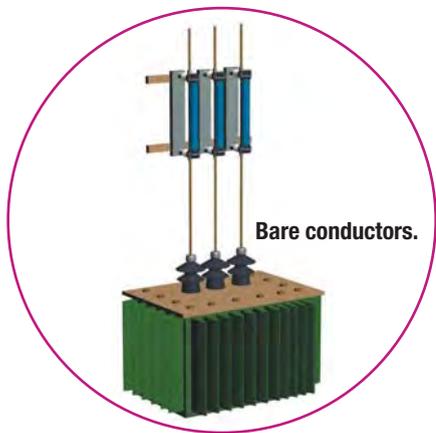
Delivered in case. Clamp characteristics : see page 159.

Installation on permanent fixed points:

Reference	Characteristic
MT-890	Clamps 3 claws
MT-891	Earth clamp fixation
MT-893	Cable tensioner
MT-895	Cable kit support
CI-06-D	Wall mounted support



MT-5805



Bare conductors.



Plastic case included.
M-78665



CE-4-21-C
Insulating stick to be ordered separately.

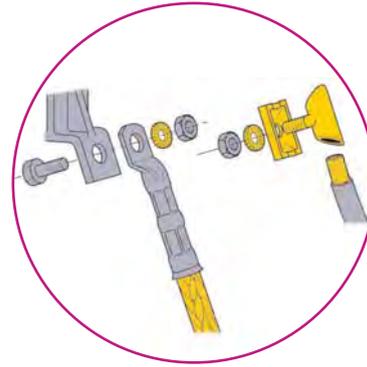
CLAMPS FOR INSTALLATION ON BARE CONDUCTORS

Attachment (C-Type)

Hexagonal end-fitting. A circumferential braking system prevents the clamp from turning under the weight of the cable. Separate by simple pulling. Earth cable connection. With a crimped lug (12 mm Ø hole).

Material

Aluminium alloy except **MT-814/2** and **MT-814/3**: copper-aluminium bronze.



Recommended stick:

CE-4-21-C / CF-5-90-E / MG-115-S.

Reference	Rating (kA/1 s)	Dimensions (mm)	Ø (mm)	Weight (kg)
MT-811-C	21	35 x 77 x 157	• Ø 5-16	0.33
MT-812-C	21	35 x 79 x 143	• Ø 5-16 ■ 0-16	0.32
MT-813-C	21	35 x 79 x 169	■ 40 x 16	0.33
MT-814/2	14.5	85 x 56 x 192	• Ø 5-28	0.66
MT-817-C	21	30 x 90 x 140	• Ø 5-16 ■ 40 x 16	0.33
MT-814/3 *	14.5	85 x 56 x 195	• Ø 18-33	0.62
MT-818-C *	14.5	37 x 85 x 155	• Ø 10-32	0.44
MT-815-C **	30	44 x 100 x 180	• Ø 5-35	0.65
MT-815-E **	30	44 x 100 x 180	■ 16-40	0.65
MT-815-S **	30	44 x 100 x 180	■ 5-40	0.65

C



Hexagonal end-fitting. Rings with Ø 5 to 20 mm and planes 1 to 20 mm. Fixing on conductors.

E



Bayonet end-fitting.

S



Clamp stick mounting type.



MT-811-C



MT-812-C



MT-813-C



MT-814/2
MT-814/3



MT-815-C



MT-817-C



MT-818-C

EARTH CLAMPS

Copper aluminium bronze earth clamps.

Earth cable connection by connector, lug, TO- system...

Reference	Rating (kA/1 s)	Dimensions (mm)	Connection	Clamp capacity (mm)	Weight (kg)
MT-840	20	40 x 73 x 135	TO-08 connector 35 mm ²	• Ø 6 - 25 ■ 0 - 25	0.48
MT-840/1	20	40 x 73 x 135	Thread: Ø 12.5 mm	• Ø 6 - 25 ■ 0 - 25	0.48
MT-841	30	40 x 73 x 135	Connect. Fontenay ≤ 50 mm ²	• Ø 6 - 25 ■ 0 - 30	0.48



MT-840



MT-840/1



MT-841

Dimensions Diameter Clamp capacity Weight





FIXED POINTS FOR PERMANENT PLACEMENT

The advantages of grounding and short circuiting using permanently installed fixed points on existing conductors include:

- Using the same grounding and short circuiting equipment regardless of the conductor shape, section, or configuration.
- Accessibility from variable angles.
- Eliminating the risk of errors because grounding locations appear at first glance.

Reference	Rating (kA/1 s)	Sphere dimension Ø	Fixing	Conductors	kg
MT-951/1	10	18 mm	Bolt: M 10 - L = 25 mm	Flat conductors	0.09
MT-951/2			Bolt: M 10 - L = 35 mm		0.10
MT-951/3			Bolt: M 10 - L = 45 mm		0.10
MT-952/1			Bolt: M 10 - L = 25 mm		0.11
MT-952/2			Bolt: M 10 - L = 35 mm		0.12
MT-952/3			Bolt: M 10 - L = 45 mm		0.13
MT-953/08			Ø 6-8	Round conductors	0.13
MT-953/12			Ø 10-12		0.18
MT-955/08			Ø 6-8		0.15
MT-955/12			Ø 10-12		0.20
MT-956	Thread: Ø 12.5 mm		Terminal fitting	0.75	
MT-2951	20	20 mm	Taraudage : M 12	-	0.13
MT-2951/1			Bolt: M 12 - L = 35 mm		0.18
MT-2951/2			Bolt: M 12 - L = 45 mm		0.20
MT-2950/35			Bolt: M 12 - L = 45 mm		0.24
MT-3951	30	25 mm	Bolt: M 12	-	0.24
MT-3952			Bolt: M 16		0.24
MT-3951/1			Bolt: M 12 - L = 45 mm		0.30
MT-3952/1			Bolt: M 16 - L = 45 mm		0.35
MT-3950/35			Bolt: M 12 - L = 35 mm		0.30



MT-2951
MT-3951
MT-3952

MT-2950/35
MT-3950/35

MT-2951/1
MT-2951/2
MT-3951/1
MT-3952/1

ACCESS POINTS

To be used with clamps type MT-1911, MT-1921.

Reference	Rating (kA/1 s)	Fixing	kg
MT-1951/10	20	Bolt: M 10 - L = 35 mm	0.12
MT-1951/12	20	Bolt: M 12 - L = 35 mm	0.12

Clamps

Reference	Rating (kA/1 s)	Fixing	kg
MT-920-E	20	For fixed points Ø 20 mm	0.35
MT-925-E	20	For fixed points Ø 25 mm	0.40



MT-1951/10
MT-1951/12



MT-920-E

INSULATING STICKS FOR SUBSTATION USE

Short circuiting and earthing systems for substation.
Telescopic sticks for voltage detectors and earthing systems for use in dry and wet conditions.

Reference	~	Ø mm	Folded	Unfolded length	kg
CE-3-24-C	36 kV	Ø 32/27.5	0.56 m	0.80 m	0.37
CE-75-(**)	75 kV	41/32	1.15 m	2 m	2
CE-4-21-(*)	90 kV	41/32	1.15 m	2 m	1.5
CE-4-30-C	150 kV	41/32	1.75 m	3 m	2
GM-7-10-A	Extension	36	-	1 m	1

(*) Specify type of mounting when ordering : C, K or E.
(**) Specify type of mounting when ordering : C or K.

Reference	~	Ø mm	Folded	Unfolded length	kg
CE-5-105-X	220 kV	63.5/27.5	1.66 m	10.75 m	5.4
CE-5-90-X	220 kV	57.5/27.5	1.61 m	9.25 m	4.2
CE-5-70-X	220 kV	52.5/27.5	1.56 m	7.8 m	3.3
CE-5-60-X	220 kV	47.5/27.5	1.51 m	6.4 m	2.5
CE-5-50-X	220 kV	42.5/27.5	1.46 m	5 m	1.9

X : Specify type of mounting when ordering.
(K : universal ; C : hexagonal, 12 mm on flat surfaces)

THE +

- 1 **CE-4-21-(*) et CE-4-30-C** : Certified telescopic rod IEC 62193 (2003) and IEC 61235. Hand shield.
CE-75-(*) : Certified telescopic rod IEC 62193 (2003) and tube IEC 60855-1.
CE-75-C : EDF authorisation: 18-130 B
- 2 **CE-5-(**)** : Certified telescopic rod IEC 61235.

STANDARD STICKS

For short circuiting and earthing system.
For use in dry conditions.

Reference	~	Ø mm	↔	kg
CF-3-72...-(*)	72.5 kV	36	1.50 m	0.88
CF-3-90...-(*)	90 kV	36	2 m	1.06

(*) Specify type of mounting when ordering : C, K or E.
Delivered with wall mounting CI-10-D

STICKS WITH SKIRTS

For short circuiting and earthing system.
Epoxy resin / fiberglass composite tubes on foam
Polyurethane. With polycarbonate insulating skirt Ø 100mm,
Height 90mm, impact resistant. Use in rain.

Reference	~	Ø mm	↔	kg
CF-5-40-(*)	40 kV	36	1.50 m	1.15
CF-5-90-(*)	90 kV	36	2 m	1.55

(*) Specify type of mounting when ordering : C, K or E.

An upper orange element made of glass fiber/resin epoxy foam filled of 32 mm diameter (**).

Insulating skirts polycarbonate, shock resistant.



Hand guard

CE-4-21-C

CE-75-C

CE-5

CF-3

CF-5

Terminal element in resin of polyester/glass fiber foam filled.

GM-7-10-A

CE-3-24-C

Ø mm Diameter ↔ Total length □ mm Dimensions 📦 Weight



STATIC DISCHARGE STICK

Field of use :

Medium voltage static ground discharger.

Characteristics :

- For use on medium voltage lines up to : 33 kV.
- Insulating orange tube Ø 39 mm made of epoxy fiberglass and in accordance with IEC 60855 standard.
- Equipped with 6 m of copper cable, section 6 mm², PVC insulated.
- Hand guard at length 0.65 m.
- Copper alloy contact probe, length : 80 mm.

Reference		 mm	 kg
CM-50	33 kV	1.6 m	2.3



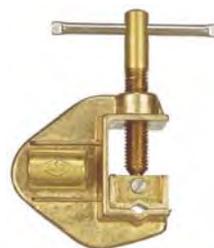
Examples of possible compositions:

Residual voltage discharge rod

Bag CM-1-15 + telescopic stick CE-4-21-C + 35 mm² Copper cable and length 5 m with silicon coating: M-2435SX5 + MCC35 + FM DIRECTE + insulated clamps MC-132-D on one side

Static discharge stick

Hook CM-05-K + Copper cable 16 mm² with silicon sheath, Length 2 m, crimped lugs at both end + Earth clamp MT-840/1, capacity round 0 to 25 mm and flat 0 to 25 mm + Insulating stick CF-5-40-K length 1.5 m.



IEC 61230



We can deliver complete set with foot capacitance, head capacitance and wirings to your own specifications. Please consult us.



INTEGRATED VOLTAGE PRESENCE INDICATING SYSTEM (V.P.I.S)

IEC 61958

Indicates the voltage presence on M.V. cubicles by being installed on the capacitive dividers. Voltage of use behind capacitive dividers: 1 000 V (between phase and neutral). Light threshold: 90 V. Signaling: 3 neons. Attachment: male/female plugs. Sound phase comparator. **MX-404**.

Reference	Characteristics	 mm	 kg
CL-495-3	Delivered complete with connector assembly	130 x 30	0.85



INTEGRATED VOLTAGE DETECTING SYSTEM (V.D.S)

IEC 61243-5

Indicates the voltage presence on M.V. cubicles by being installed on the capacitive dividers. Voltage of use behind capacitive dividers: 1 000 V (between phase and earth). Light threshold: 70/90 V. Input impedance: 36 MΩ. Signalling by 3 red diodes. Sound phase comparator.

Reference	Characteristics	 mm	 kg
CL-497-00	Delivered complete with connector assembly	146 x 30	0.90



SOUND PHASE COMPARATOR***

The MX-404 sound phase comparator checks the concordance between 2 phases. The comparator's operation is indicated by: Emission of an audible signal when there is discrepancy between the two phases. Absence of an audible signal when there is no discrepancy between the two phases. Power supply: 9 V type 6LR battery.

Reference	Characteristics	 mm	 Type 6 LR-61
MX-404 ***	Delivered with case	145 x 80	0.90

*** This comparator does not work on Schneider electric cells V2 type.



 Diameter  Total length  Dimensions  Weight





INTERFACE FOR INTEGRATED VOLTAGE DETECTING SYSTEM (V.D.S)

*IEC 61243-5



Indicates the voltage presence on M.V cubicles by being installed on the capacitive dividers. For High impedance detecting systems Input impedance: 36/43 MV. Voltage indication by 4 mm standard sockets on the front of the indicator. Voltage indicator by 4 mm standard socket.



Reference	Characteristics	 mm	 kg
CL-498-00*	Delivered with connection set	146 x 30	90

SEPARABLE VOLTAGE DETECTING SYSTEM (V.D.S)

This device enables to check the absence or presence of voltage on three phases (L1, L2, L3). HR high impedance. Voltage max: 1 080 V rms. 50/60 Hz. Voltage presence: **RED** flashing LED > 1 Hz. Fits in CL-498 devices.



Reference	Characteristics	 mm
CL-499/101	Delivered in plastic bag	145 x 80

VOLTAGE TESTER FOR M.V. SEPARABLE CONNECTORS 10-36 KV

Checks the absence of voltage on the capacitive terminals of plug-in M.V. bushings. Sensor in the form of a bent finger enabling removal and reinstallation of the terminal insulating cover. For a nominal voltage from 10 to 36 kV. Signal via beeping and bright red flashing of electro-luminescent diodes. Built-in function test via the "TEST" button which covers the entire device. Permanent stand-by state. Power supply: four 1.5 V, R-6 batteries. Mounting on insulating stick via a universal end.



Reference	Characteristics	 kg
CC-151-K	Tester in rigid case with batteries 70 x 100 x 165 mm	0.70
CC-45-K	Stick to use with the CC-151K. L = 1.25 m	0.60
CI-06-D	Wall mounted supports	-

SAFETY LAMPS

Compatible with **NF C 13-100**.

Reference	Characteristics	 mm	 kg
CD-128	2 operating modes: BAPI (factory setting) or BAES (automatic mode is triggered during power cut) 1 LED 1W white Autonomy 1 H to 3 H depending on the position of the switch 45 lm / 3 H: 1st support / 100 lm / 1 H: 2nd support In compliance with the standard BAPI NFC 71810 Battery Ni Cd 1 battery 2.4V 1.5Ah - Power supply 230V - 50 / 60HZ Operating Temperature 0 °C to + 40 °C Protection indices IP42 and IK10 I - Class II	240 x 138 x 60	0.68
CD-124	Delivered with a wall mounted support. Operates: 1 hour (12 W), 2 hours (6 W) Rechargeable on 230 V 50/60 Hz	100 x 190 x 220	1.9



THE

1 100% LED - up to 3 hours of battery life - Small and very light - Adjustable handle.

MANŒUVERING AND RESCUE STICKS

White resin polyester/glass fiber foam filled tube.

Reference			
CM-45	45 kV	1.50 m	7.50
CS-45 *	45 kV	1.65 m	1.00
CM-90	90 kV	1.85 m	0.80
CS-90 *	90 kV	2.05 m	1.10
CM-225	225 kV	2.25 m	0.85
CS-225 *	225 kV	2.45 m	1.35

* Delivered complete with non-removable hook and wall supports.
Cannot be used in rain.



APERTURE HOUSING

Compatible with NF C 13-100.

Moulded plastic. Installed outside by tightening three screws on a steel clamp.

Reference	Passage	
CI-70	60 mm	0.14



 Dimensions  Weight  Total length





LIFE SAVING KITS FOR M.V. SUBSTATIONS

Complete equipment allowing intervention on victims in case of an electrical hazard. Delivered in a plastic box with transparent cover for immediate visualization of contents and wall mounting kit.

Composition :

- Insulated cable cutter. Forged steel blades. Maximum opening 30 mm. (CZ-60)
- Insulating platform 24 or 36 kV. (CT-7-25/1)
- Rescue telescopic stick. (M952160)
- Voltage detector with flexible antenna contact (with autotest). (M952170)
- Safety instructions on the plastic board. (CG-3-10-NR/CZ-54)
- High voltage insulating gloves, talcum powder can. (CG-4-10-NR/CZ-55) - (CG-3-10-NR/CZ-54)
- Insulating boots. (MV-137-45)
- Wall mounted cabinet.



Reference	Characteristics		 mm	
CZ-54-R	English instructions	24 kV	840 x 754 x 270	21
CZ-54-RM	English/Arabic instructions	24 kV	840 x 754 x 270	21
CZ-55-R	English instructions	36 kV	840 x 754 x 270	21
CZ-55-RM	English/Arabic instructions	36 kV	840 x 754 x 270	21

THE

- 1 Emergency supplies at your fingertips.
- 2 Protection against dust and shock.

INFO

In case of an electrical accident, quick action is essential: by saving seconds, you get more chance to save life. Our life saving equipment is designed to make all necessary equipment immediately available to rescue people.

INSULATED CABLE CUTTER

Insulated handles 25 kV.
 Maxi cable : 30 mm.
 Section ≈ 150 mm².
 Maximum opening: 30 mm.

Reference		
CZ-60	0.630 m	2.2



WALL MOUNTED SUPPORTS

For sticks and voltage detectors. Plastic.

Reference	∅ mm	Top	∅ mm	Bottom
CI-06-D		28-30		36 max.
CI-08		16-20		36 max.
CI-10-D		32-36		58 max.
CI-12-D		28-30		58 max.



RESCUE HOOK

On stick equipped with a "C" end-fitting. Delivered with wall mounted supports.

Reference	Characteristics	mm	kg
CS-01-C	Adaptor C	345 x 335	0.35



COMPACT CARRYING KIT

This compact kit is designed especially to be carried in a vehicle for safety electrical intervention. Made of two parts of moulded material (PEHD), the red case cover is also an insulating platform.

Composition :

- Insulated cutter cable.
- Adhesive tape (black and yellow). L = 100 m.
- Telescopic insulating stick. L = 1.5 m.
- Talcum powder can.
- Pair of insulating boots.
- Voltage detector with autotest. Rescue hook. (127 V - 90 kV alternatif)
- Pair of insulating gloves with reinforced carrying bag.
- Safety instructions and safety first aid posters.
- Insulating platform.

Reference	Characteristics with instructions in English	~	mm	kg
CZ-53-R	With instructions in English	25 kV	710 x 570 x 240	21
CZ-53-MR	With instructions in English/Arabic	25 kV	710 x 570 x 240	21
CZ-53-R/2	With instructions in English	36 kV	710 x 570 x 240	21
CZ-53-MR/2	With instructions in English/Arabic	36 kV	710 x 570 x 240	21

THE 

1 Stability of the suitcase when stored vertically or horizontally.



∅ Diameter ← Total length □ Dimensions 📖 Weight



OIL & GAS

Offshore installations, shipbuilding,
heavy industry



The world of electrical safety

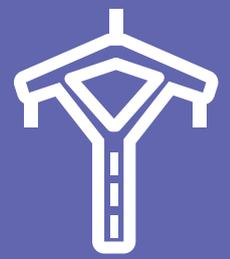


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all your electrical safety equipment needs**

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CATU™

Medium voltage equipment



<u>IEC voltage detectors</u>	170
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IEC ELECTRONIC VOLTAGE DETECTORS, "COMPACT SERIE" FOR INDOOR AND OUTDOOR USE

IEC 61243-1
CE

Ultimate technology of voltage detector "Head Capacitive Technology"

Compact and light, it offers a wide band (10/36 kV).

Operating check :

By pressing the TEST button:

- A **RED** LED flashes on.
- Powerful rated audible signal > 60 dB(A)/2 m.
- When loosening the button, the timed **GREEN** LED lights up.

While remaining on, it indicates the good working order of the detector.

Characteristics :

- Precise and stable operating threshold.
- High environmental resistance (impacts, vibrations, moisture).
- Temperature conditions: class N (IEC 61243-1 standard).
- Use from 50 to 60 Hz.

Composition :

- Robust housing.
- Weight of the detector: 350 gr.
- Size of the detector: Ø 59 x 270 mm.



Reference		Operating voltage (KV)		
			Type 6 LR-61	kg
CC-765-55/20*	50/60 Hz	5,5 - 20 kV	9 V	0.35
CC-765-3/10*	50/60 Hz	3 - 10 kV	9 V	0.35
CC-765-10/36*	50/60 Hz	10 - 36 kV	9 V	0.35
CC-765-10/30*	50/60 Hz	10 - 30 kV	9 V	0.35

(*) Specify type of mounting when ordering: C or K.

Packaging : unit supplied complete in a case with batteries and contact electrodes (straight and V-shaped).

For other voltages, please consult us.

Voltage presence is indicated by:

- **RED** flashing LED (very bright -visible at more than 20 m in direct lighting),
- powerful rated audible signal > 60 dB(A)/2 m.

THE

1 Light indication 360° visibility.

NEW Dual voltage range detector : CC-775.
This voltage detector is also available with two voltage ranges without a manual selector switch, in compliance with the standard IEC 61243-1.
Example: from 2 to 7 kV & from 12 to 25 kV.
Please contact us in order to determine together your appropriate need in the respect of the standard.



End fittings:

C : hexagonal 12 mm, for hexagonal end-fitting sticks, K: universal, for universal end-fitting sticks.

Recommended stick: **CE-4-21**, **CE-75**.

STANDARD ELECTRONIC VOLTAGE DETECTOR FOR INDOOR AND OUTDOOR USE

Checking

By pressing the test button :

- extremely bright **RED** flashing LED's (visible at more than 50 meters even in unfavourable light),
- powerful rated audible signal > 60 dB/2 m

The test button is released :

- a timed **GREEN** LED lights.

Indicating both the detector is operational and the self testing of the unit continues.

Characteristics :

- Precise and stable operating threshold.
- High environmental resistance (impacts, vibrations, moisture).

Reference		Operating voltage	 Type 6 LR-61	
CC-365-3/10-(*)	50 Hz	3-10 kV	1.5 V	0.50
CC-365-10/30-(*)	50 Hz	10-30 kV	1.5 V	0.50

(* Specify type of mounting when ordering: C or K.
Packaging : unit supplied complete in a case with batteries and contact electrodes (straight and V-shaped).
Total weight : 1100 g, Total size : 340 x 275 x 83 mm.
For other voltages, please consult us.

Accessories :

Reference	Characteristics
CC-365-101	Flag/Vee contact electrode
C-92-492	Contact electrode for installations L = 310 mm, insulating on 300 mm



End fittings:

C : hexagonal 12 mm, for hexagonal end-fitting sticks, K: universal, for universal end-fitting sticks.
Recommended stick: **CE-4-21**, **CE-75**.

C 18-311
CE



CC-365-K



CC-365-C

GREEN LED



Double signaling:

Voltage presence is indicated by both:
- extremely bright **RED** flashing LED's (visible at more than 50 meters even in unfavourable light),
- powerful rated audible signal > 60 dB/2 m.





SINGLE POLE PHASE COMPARATOR FOR INDOOR AND OUTDOOR USES

IEC 61481
CE

Unipolar device used to check phase concordance in 2 steps.

- Step 1: storage of the reference phase.
- Step 2: search for the phase in concordance with the one memorised in step 1.

The operator has 15 seconds to complete step 2.

After this time, step 1 must be started again.

To be used on 50 and 60 Hz networks.

Reference		 Type LF 22	 aerial	 kg
CL-7-06/18-(*)	6-18 kV	9 V	0.55 m	0.85
CL-7-10/30-(*)	10-30 kV	9 V	0.90 m	0.90
CL-7-10/30-1-(*)	10-30 kV	9 V	1.15 m	0.95
CL-7-12/36-(*)	12-36 kV	9 V	0.90 m	0.90

(*) Please specify type C or K when ordering.
Delivered in carrying case.



Fixation C or K.

GREEN LED = phasing indication.

ORANGE LED = memorized phase status voltage are in memory.

RED LED = non-phasing indication.

Press the button to test the device and to reset its memory.



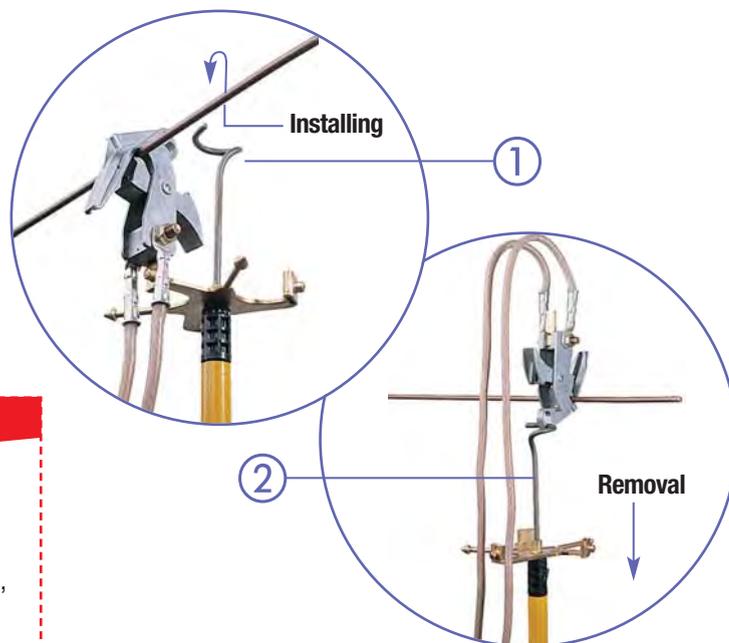
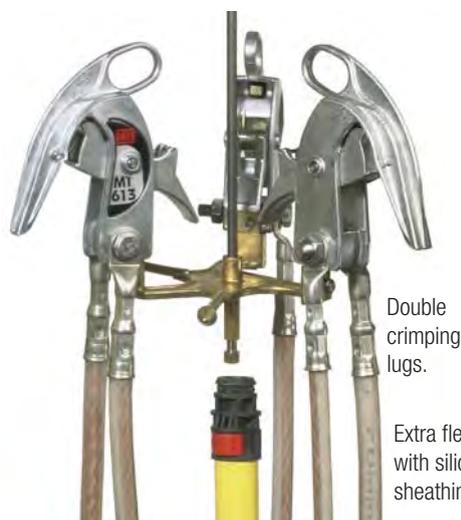
IEC SHORT-CIRCUITING AND EARTHING SYSTEMS (THREE-PHASE CROSSARM NETWORKS)

MT-613 clamps are automatic contact clamps. They are put into position from above the conductor, using the clamp dispenser head MT-635/1-C.

Reference	Equipment composition
MT-6613	3 automatic contact clamps MT-613 Connection cables 35 mm ² , max. gap between clamps: 2.75 m 1 clamp dispenser head MT-635/1-C 1 spool with earthing cable connection MT-640-S 1 carrying bag M-87295
MT-6613/1	3 automatic contact clamps MT-613 Connection cables 95 mm ² , max. gap between clamps: 3 m 1 clamp dispenser head MT-635/1-C 1 earthing cable connection 15 m x 35 mm ² 1 earthing clamp MT-840/1 1 carrying bag M-87295

Reference	Rating (kA/1 s)	Connection copper cable between clamps (mm ²)	Earth connection copper cable (mm ²)	∅ mm conductor
MT-6613 *	8	35	16	5 to 30
MT-6613/1 **	17.5	95	35	5 to 30

* Recommended sticks: CE-4-21-C.
 ** Recommended sticks: CM-4, CF-5, CM-7 et CM-4000.



THE +

- 1 Remarkable rapidity and ease of handling.
- 2 Removal is carried out by pulling down the clamp, which revolves around the conductor by means of the pig tail fixed in the centre of the clamp dispenser head.

IEC 61230





TELESCOPIC STICKS FOR VOLTAGE DETECTOR

Suitable for wet conditions.

Reference	~	∅ mm	Folded up	↔	kg
CE-4-21-(*)	90 kV	41/32	1.15 m	2 m	1.5
CE-4-30-C	150 kV	41/32	1.75 m	3 m	2
CM-7-10-A	Extension*	36	-	1 m	1
CE-75-(*)	75 kV	41/32	1.15 m	2 m	2

(*) Please specify type C, K and E when ordering.
Delivered with wall mounted supports CI-10-D.
* For CE-4-21.

Reference	~	∅ mm	Folded up	↔	kg
CE-5-105-X	220 kV	63.5/27.5	1.66 m	10/75 m	5.4
CE-5-90-X	220 kV	57.5/27.5	1.61 m	9.25 m	4.2
CE-5-70-X	220 kV	52.5/27.5	1.56 m	7.8 m	3.3
CE-5-60-X	220 kV	47.5/27.5	1.51 m	6.4 m	2.5
CE-5-50-X	220 kV	42.5/27.5	1.46 m	5 m	1.9

X : Please specify type C or K when ordering.

THE ⊕

- 1 CE-4-21-(*) and CE-4-30-C : Certified IEC 62193 (2003) and IEC 61235. Hand shield.
- CE-75-(*) : Certified IEC 62193 (2003) and IEC 60855-1.
- E-75-C : EDF authorisation: 18-130 B

FIXED LENGTH STICKS

Suitable for wet conditions.

Reference	~	↔	∅ mm	Skirt nbr	kg
CF-5-40-(*)	40 kV	1.50 m	36	1	1.15
CF-5-90-(*)	90 kV	2 m	36	1	1.55
CF-5-110-(*)	110 kV	2.50 m	36	2	2
CF-5-170-(*)	170 kV	3 m	36	3	2.4

(*) Please specify type C, K or E when ordering.

THE ⊕

- 1 CF-5 : Insulating skirts (∅ 100 mm, H90 mm) for use in rain.

WALL MOUNTED SUPPORTS

For sticks and voltage detectors. Plastic.

Reference	Top ∅ mm	Bottom ∅ mm
CI-06-D	28-30	36 max
CI-10-D	32-36	58 max
CI-12-D	28-30	56 max
CI-08	16-20	36 max

An upper orange element made of glass fiber/resin epoxy foam filled of 32 mm diameter.

Isolated skirts polycarbonate ∅ 100 mm, height 90 mm, Shock resistant.



Hand guard.

Element made of resin polyester/glass fiber.

CE-4-21-C
CE-4-30-C

CM-7-10-A

CE-75-C

CE-5

Series CF-5

Top

Bottom



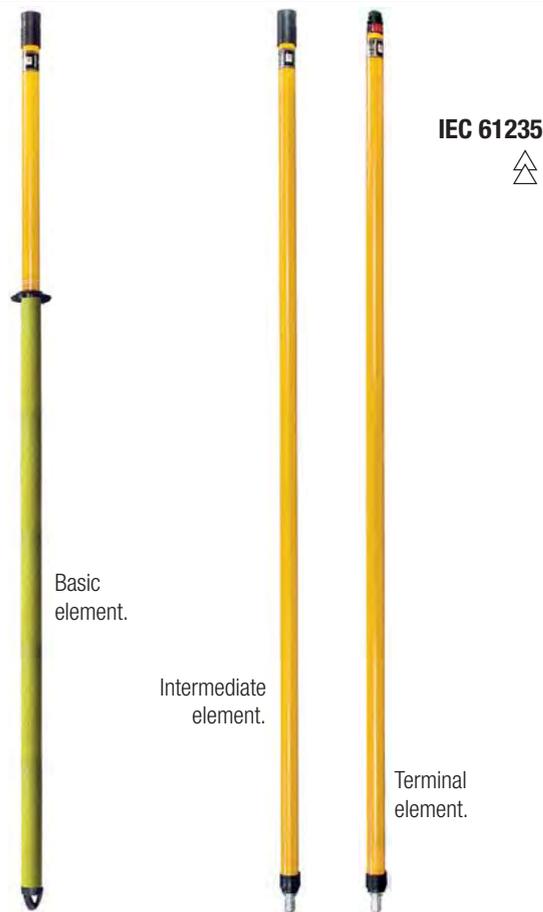
INSULATING STICKS FOR SHORT-CIRCUITING AND EARTHING SYSTEMS

This range allows a stick-length limitation in case of space requirements and carrying capabilities.

For common applications a serie of complete sets including 2 or 3 elements are made to give simple solutions for working distance from 2 to 6 meters.

	Reference	smallest end fitting	biggest end fitting	isolation	kg
Basic	CM-4410	1.13 m	–	0.12 m	1.25
	CM-4415	1.63 m	–	0.38 m	1.70
	CM-4420	2.13 m	–	0.38 m	2.70
	CM-4425	2.63 m	–	0.88 m	3.20
Intermediate	CM-4410-I	1.165 m	–	0.80 m	1.20
	CM-4415-I	1.665 m	–	1.30 m	1.60
	CM-4420-I	2.165 m	–	1.80 m	2.50
	CM-4425-I	2.665 m	–	2.30 m	3.00
Terminal	CM-4410-(*)	1.115 m	1.21 m	0.70 m	0.90
	CM-4415-(*)	1.615 m	1.71 m	1.20 m	1.30
	CM-4420-(*)	2.115 m	2.21 m	1.70 m	2.10
	CM-4425-(*)	2.615 m	2.71 m	2.20 m	2.60

(*) Add end-fitting: B-C-E-H-K-T-D



IEC 61235



Example of assembly



INTERMEDIATE ELEMENTS WITH RAIN SKIRTS

Intermediary element with skirt, which can be located on all the references mentioned above.

Reference	smallest end fitting	kg
CM-4400-J	0.362 m	0.95



INSULATING STICK BAGS

Strong waterproof canvas cases with a heavy duty zipper closure. Shoulder strap. Transparent plastic window for inspection.

CM-1-(*) : For 1 to 3 poles.

CM-3-(*) : For elements series CM-6. For 5 simple elements or 4 double elements.

Reference	Dimensions mm
CM-1-10	1.30 m length
CM-1-15	1.80 m length
CM-1-20	2.40 m length
CM-3-03	0.575 x 1.950 (elmt 1.75 m length)
CM-3-04	0.575 x 2.450 (elmt 2 m length)
CM-3-05	0.575 x 2.850 (elmt 2.50 m length)
CM-3-06	0.575 x 3.400 (elmt 3 m length)





CONNECTION ADAPTORS FOR INSULATING STICKS

	<p>C Hexagonal femal 6 sides</p>		<p>K Universal</p>		<p>E Bayonet</p>		<p>S Clamp stick</p>		<p>A ou B For stick CM-4 / CM-6 / CM-7.</p>			<p>*</p>		<p>H</p>	
Accessories	<p>C</p>				<p>K</p>				<p>E</p>			<p>*</p>		<p>H</p>	
Connection adaptors	CI-7-C	CI-3-C	CI-6-C2	CI-5-C	CI-3-K	CI-4-K	CI-6-K	CI-7-K	CI-5-K	CI-3-E	CI-7-E	CI-4-E	CI-D-K	CI-6-H	CI-3-H
Sticks	E	AB	K	S	AB	C	K	E	S	AB	K	C	K	K	AB

With this range any accessory can be attached to any stick by using connection adaptors. Other models, please consult us.

CLAMP DISPENSER HEADS

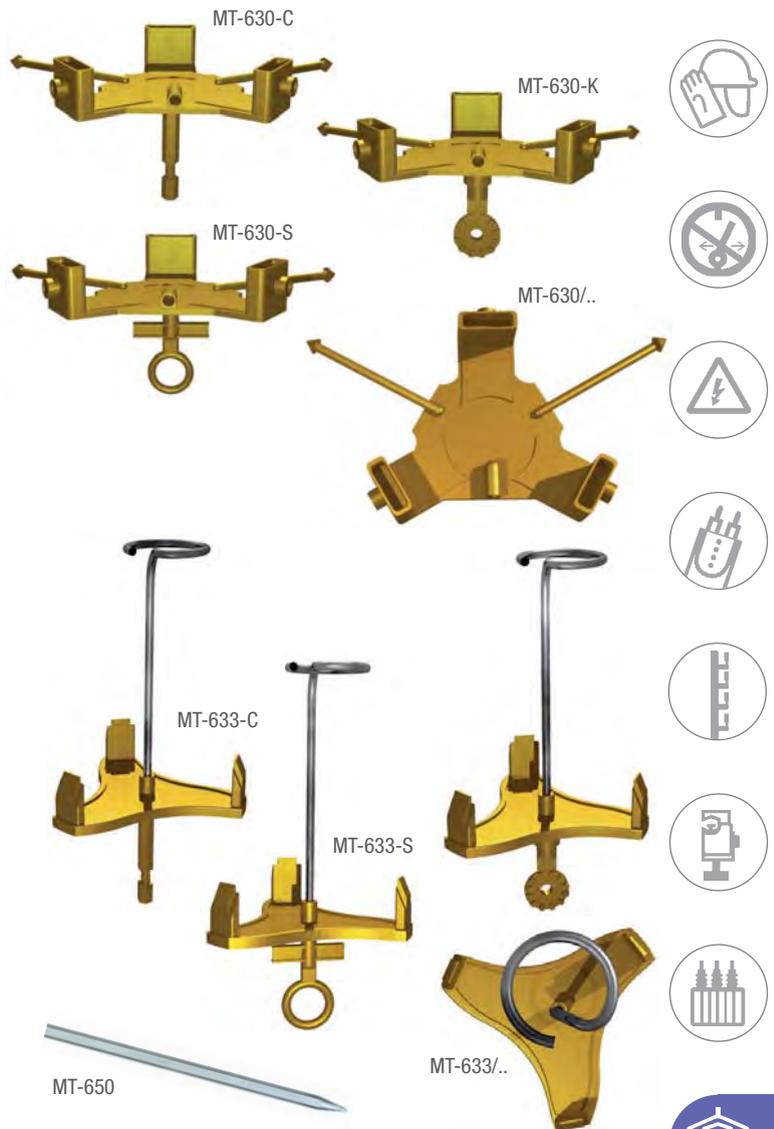
Copper aluminium alloy.

For MT-613/1 and 613/2 clamps

Reference	Head for 3 clamps	Head for 4 clamps	With pigtail hook
MT-630-C	■		
MT-630-K	■		
MT-630-S	■		
MT-635/1-C/K/S	■		■
MT-634-C/K		■	

For MT-613/1 and 613/2 clamps

Reference	Head for 3 clamps	Head for 4 clamps	With pigtail hook
MT-633-C	■		■
MT-633-K	■		■
MT-633-S	■		■
MT-634/1-C/K		■	■



EARTH ROD

Reference	Characteristics	↔
MT-650	Hexagonal section rod	1 m

EARTH CLAMP

Copper aluminium bronze earth clamps.

Reference	Icc (kA/1 s)	Conductors (mm)	g
MT-840/1	20	∅ 6-25 0-25	480
MT-843	40	∅ 6-35 0-35	950



SPOOL WITH EARTHING CONNECTION

Spool with cable and earth clamp.

Reference	Silicone cable (mm ²)	↔
MT-640-S	16	16 m
MT-641-S	16	25 m



IEC 61230





SHORT-CIRCUITING AND EARTHING SYSTEMS

Installed from the ground on conductors up to 10.50 m.
Easier installation features.

Re-inforced insulating stick (36 mm dia.).

Self locking contact clamp: powerful conductor clamping and very good performance at short-circuiting, does not slide.

More rigid metallic stick. Lower tube 30.6 mm dia.

Upper tube 16 mm dia.

Re-inforced insulating stick (36 mm dia.).

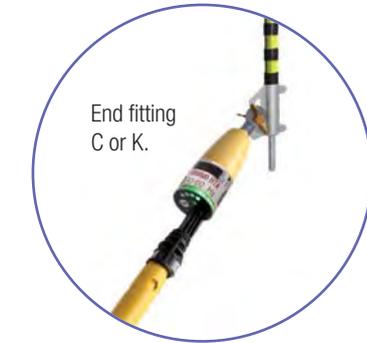
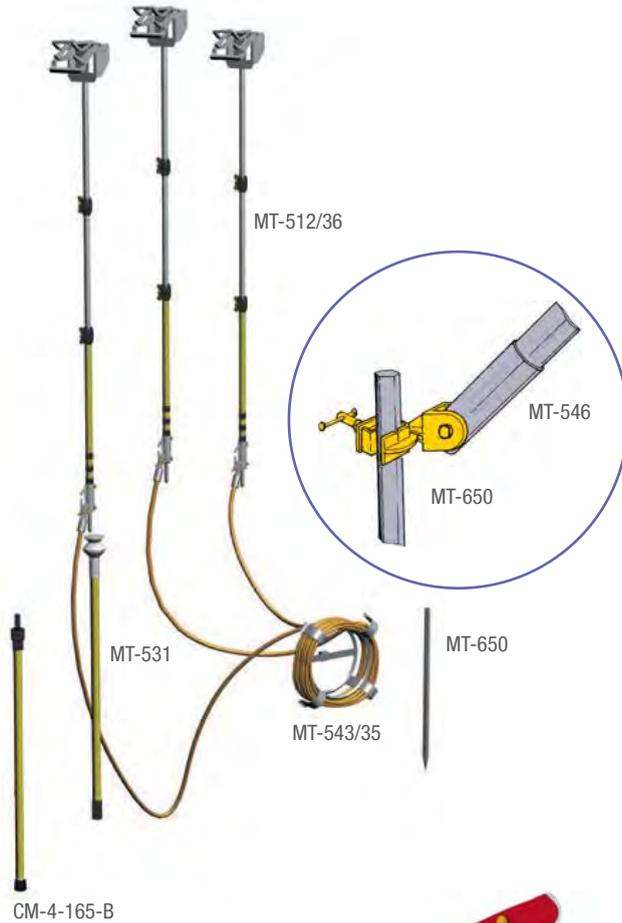
On all models: Reinforced insulating pole: Epoxy/fibreglass resin over Ø 36 mm PV foam with a non-skid area.

This equipment can be used for rigid deployed poles for easy installation.

Reference	Rating (kA/1 s)	Ø mm conductor
MT-508/36	8	3-22
MT-508/46	8	3-22

Reference	Composition
MT-508/36	3 telescopic metallic sticks 3 elements L = 6.00/2.37 m - 2.4 kg - MT-512/36 1 insulating stick 2 elements 1.65 m - MT-531 Reel for 3 cables 10 m x 35 mm ² with earth connect. for attachment to stick - MT-543/35 1 earth rod 1 m - MT-650 1 bag 2.50 x 0.30 x 0.15 - 10.5 kg -M-87-127
MT-508/46	3 telescopic metallic sticks 4 elements L = 5.10/1.62 m - 2.1 kg - MT-512/46 1 insulating stick 2 elements 1.65 m - MT-531 1 insulating intermediate stick element 1.65 m - CM-4-165-B 1 stick lifter - MT-546 Reel for 3 cables 10 m x 35 mm ² with earth connect. for attachment to stick - MT-543/35 1 earth rod 1 m - MT-650 1 bag M-87-208

Equipment available in retail sale.



THE ⊕

- 1 Installation from the ground.
- 2 Self-locking contact clamp.

COPPER CABLES

Extra flexible braided multi-strand copper cables. Delivered to the meter with a minimum of 5 meters. Available in vinyl (A) or silicone sheath (B).

Reference		Rating (kA/1 s)	Cable		Section (mm ²)
A	B*		Weight (kg/m)	Ø (mm)	
M-24-10	-	2	0.105	4.5	10
M-24-16	M-24-16-S	4	0.156	5.6	16
M-24-25	M-24-25-S	6	0.275	7.5	25
M-24-35	M-24-35-S	8	0.386	9	35
M-24-40	M-24-40-S	10	0.440	9.5	40
M-24-50	M-24-50-S	12	0.545	10	50
M-24-70	M-24-70-S	16	0.768	12	70
M-24-95	M-24-95-S	20	1.000	14	95
M-24-120	M-24-120-S	30	1.280	17	120
M-24-150	M-24-150-S	40	1.630	19	150



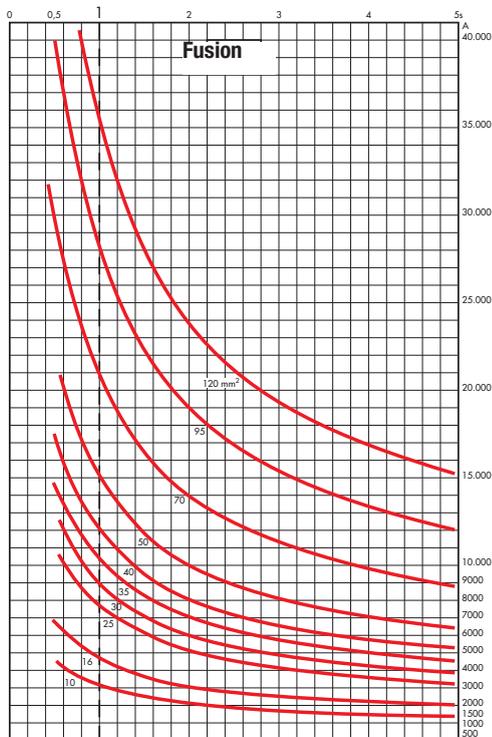
* IEC 61230



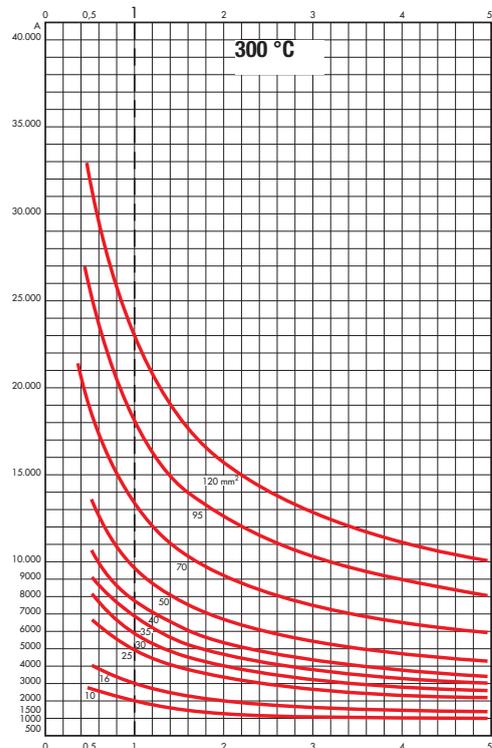
THE +

- 1 Silicon sheath certified IEC 61230 offering more flexibility for better comfort of use.

Copper cables only: Heating curves (Gut & Grundberg method).



Copper cables only: Heating curves - 300 °C.





ALUMINIUM CABLES

Extra flexible braided multi-strand cables.
Transparent PVC sheath, with cable section identification.

Reference	Rating (kA/1 s)	Cable		Section (mm ²)
		Weight (kg/m)	Ø (mm)	
M-28-50	7	0.170	11.5	50
M-28-70	10	0.240	13.4	70
M-28-120	17.5	0.430	19	120
M-28-150	20	0.510	21	150



JUMPER CABLES SPECIALLY MANUFACTURED ITEMS

Assembly consisting of three copper cables or braids for short circuiting, connected to a copper ground wire through a trifurcating box. Transparent PVC sheath.

Reference	Characteristics	Rating (kA/1 s)	kg
MT-40	3 cables 40 mm ² - L = 0.75 m 1 earth cable 40 mm ² - L = 2 m	10	2.3
MT-70/1	3 cables 70 mm ² with equipped lugs - L = 1.20 m 1 earth cable 35 mm ² - L = 2 m	14.5	4.4



ON REQUEST CONTACT OUR TECHNICAL ASSISTANCE

We realize specific earthing and short circuiting systems with crimped cables.



Phone : (33) 01 42 31 46 24 • www.catuelec.com



CABLE TESTING STICK

Enables piercing of cable insulation and shielding, earthing up to 50 kV. Capacity: 70 mm dia.
 Cable-guide with protecting guide. 0.60 m insulating sleeve with 0.80 m extender.
 Double cutting angle blade.
 Multistrand copper earth wire 70 mm² x 2.50 m with earth clamp.
 Ratchet type operating handle.



Reference		 mm	
MP-211	1.60 m	Ø 60 maxi	8.75

Carrying Case available separately (MP-02).

INSULATING BLANKET

Must be placed over the piercing point
 Hole for handle.



Reference	 mm	 mm	
MP-212	900 X 900	Ø 50	0.96

CABLE SPIKE EQUIPMENT

Device to test the voltage on underground cables (1st and 2nd categories) and their earthing, using a system with 9^{**} mm bullet and throwing in the cable a steel treated blade.

Reference	Description	
MP-213 *	Cable spike	20
MP-213/LAM	Spare blade for spade-cable MP-213	0.02
MP-213/EXT	Blade extractor for spade-cable MP-213	0.20

* Delivered complete in suitcase.

** 9 mm bullet not included and not supplied by CATU.





MANOEUVERING HOOK

Reference	Characteristics	kg
CM-02-(*)	Bronze-copper nickel aluminium	0.12
CM-03-K	Bronze-copper nickel aluminium	0.12

(*) Add end-fitting: C, E or K.



CM-02-K



CM-02-C



CM-03-K

CLEANING BRUSHES

Reference	Characteristics	mm	kg
MD-10-C	Concave brush with two rows of perpendicular bristle	100 x 125 x 170	0.5
MD-12-C	Round head brush	175 x 228	0.5
MD-14-C	Adjustable hinged round head brush	175 x 328	0.5



MD-12-C



MD-10-C



MD-14-C

TRIMMER AND PRUNNING SAW

Reference	Characteristics	mm	kg
MD-40-B	Trimmer, maximum capacity Ø 45 mm (for branches up to 28 mm depending on tree species)	375 x 240 x 60	1.2
MD-42-B	Pruning saw on rigid frame, 34 cm blade	125 x 610 x 60	1.1
M-92-28	Replacement blade MD-42-B	—	—



MD-40-B



MD-42-B

FUSE PULLER

All parts in metal protected against corrosion.

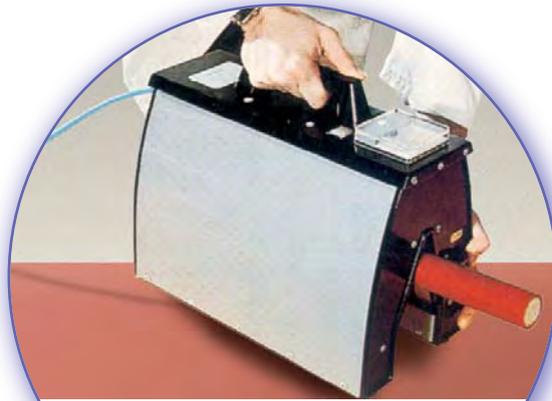
Reference	mm	mm
CM-04-K	230 x 80	up to 70



ROD TESTER

The portable rod tester is designed to measure leakage currents originating from the absorption of humidity or pollution on the surface of insulating rods conform to IEC 60855 standard.

The rod tester does not require any particular gauging and works according to the "Good / No good" principle and there is no need for any particular interpretation of the results. The validation of the satisfactory state of the rod takes place by means of a clear information on the galvanometer screen.



Easily transportable.

Reference	Characteristics	 mm	 kg
MX-215	Rod tester	210 x 480 x 350	10.2

THE

- 1 In accordance with ERDF BT MT 82 specification.
- 2 Quick and simple use.



Railways

Electrical safety equipment



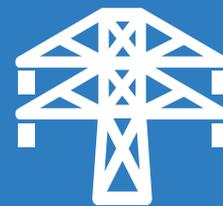
Short-circuiting system

Head and eyes protection

Safety equipment



HV lines and switchgear equipment



<u>Voltage detectors</u>	186
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AC VOLTAGE DETECTOR FOR OUTDOOR USE

IEC electronic voltage detector "Ultra Compact Series" for outdoor use.
 Ultimate "head capacitive technology" of voltage detector.
 Universal application 50/60Hz and wide band of voltage from 44 to 32kV.

Voltage presence is indicated by :

- RED flashing led (very bright, visible up to 20 m in direct lighting).
- powerful rated audible signal 67dB(A)/1.5 m.

Operating check :

- by pressing the Test Button, correct operation is indicated by RED LED flashing on and a sound signal.
- After releasing the Test Button, a timed green LED lights on.
- It indicates the good working order of the detector.

Contact electrodes (hook shaped) fitted to the body by screwing and easily interchangeable.

Characteristics :

- Contact electrodes fitted to the housing by screwing and are easily interchangeable.
- Visible light is also indicated on the circumference of the disk for better visibility.
- Robust housing thermoplastic

Delivered in a carrying bag.

For other voltage, please consult us.

IEC 61243-1 SUPP



THE ⊕

- 1 Visible light on 360°.



End fittings

End fitting "C": hexagonal male 12 mm on flats, for hexagonal end fitting sticks.

End fitting "K": for Universal end fitting sticks.

Reference	 (Operating voltage)	Contact electrode	Case colour	 type 6 LR 61		
CC-765-44/132	44 - 132 kV	Ø 120 mm		9 V	-25/+55 C°	350

AC VOLTAGE DETECTOR FOR OUTDOOR USE

Precise and stable operating threshold. Insensitivity to induced voltages by limiting the operating voltage range. Remarkably resistant to impacts, vibrations, extreme temperatures, humidity.

Double signaling.

Voltage presence indicated at the same time by:

- 4 bright **RED** flashing electro-luminescent diodes (visible at more than 50 meters even in direct lighting),
- a powerful rated acoustic signal (60 dB/2 m).

The **CC-265** detectors is supplied with 3 end fittings for sticks

W : Hexagonal 20 mm,

C : Hexagonal 12 mm,

K : Universal.

Robust housing made from polycarbonate with high mechanical properties and dielectric strength.

Check that the device is working by pressing the TEST button. This test all of the detector's active components once the TEST button is released.

Surrounded by a rubber impact-resistant padding.

Two **GREEN** illuminated lights, indicating that the device is on. These lights turn off, and four lights illuminate when a voltage is detected.

IEC 61243-1



CC-265-60/90



CC-265-60/150

End fittings
Delivered with 3 end fittings as standard.
Removable for replacement if broken.

K

C

THE

- 1 Illuminated display Broadcast over 360°.
- 2 Use in rain.
- 3 Shock Absorber Tip.

Reference	IEC 61243-1 edition 2	(Operating voltage)	Contact electrode	Case colour	type 6 LR 61	-25/+55 C°	0.65
CC-265-44/132-(*)	•	44 - 132 kV	Ø 120 mm		9 V	-25/+55 C°	0.65
CC-265-60/90-(*)	•	60 - 90 kV	Ø 120 mm		9 V	-25/+55 C°	0.65
CC-265-60/150-(*)	•	60 - 150 kV	Ø 120 mm		9 V	-25/+55 C°	0.65
CC-260-60/235-(*)	-	60 - 235 kV	Ø 120 mm		9 V	-25/+55 C°	0.65
CC-265-90/225-(*)	•	90 - 225 kV	Ø 120 mm		9 V	-25/+55 C°	0.65
CC-265-120/245-(*)	•	120 - 245 kV	Ø 200 mm		9 V	-25/+55 C°	0.65
CC-260-132/380-(*)	-	132 - 380 kV	Ø 200 mm		9 V	-25/+55 C°	0.65
CC-260-150/420-(*)	-	150 - 420 kV	Ø 200 mm		9 V	-25/+55 C°	0.65
CC-265-225/420-(*)	•	225 - 420 kV	Ø 200 mm		9 V	-25/+55 C°	0.65
CC-260-225/550-(*)	-	225 - 550 kV	Ø 200 mm		9 V	-25/+55 C°	0.65
CC-265-315/765-(*)	Coming soon	315 - 765 kV	Ø 200 mm		9 V	-25/+55 C°	0.65

Delivered with modern, lightweight and impact-resistant case.
(* Please specify type of mounting when ordering : C or K
For other voltages, please consult us.



INSULATING STICKS FOR MANOEUVERING DETECTORS & SHORT-CIRCUITING AND EARTHING SYSTEMS

This range thus allows a stick-length limitation in case of space requirements and carrying capabilities. For common applications a serie of complete sets including 2 or 3 elements are providing simple solutions for working distance from 2 to 6 meters.

IEC 60855 
EN 50508

THE

1 Quick and simple use.

	Reference	↔ smallest end fitting	↔ longest end fitting	↔ mm Insulating	 kg
Basic	CM-4610	1.13 m	-	0.12 m	1.25
	CM-4615	1.63 m	-	0.38 m	1.70
	CM-4620	2.13 m	-	0.38 m	2.70
	CM-4625	2.63 m	-	0.88 m	3.20
Intermediate	CM-4610-I	1.165 m	-	0.80 m	1.20
	CM-4615-I	1.665 m	-	1.30 m	1.60
	CM-4620-I	2.165 m	-	1.80 m	2.50
	CM-4625-I	2.665 m	-	2.30 m	3.00
Terminal	CM-4610-(*)	1.115 m	1.21 m	0.70 m	0.90
	CM-4615-(*)	1.615 m	1.71 m	1.20 m	1.30
	CM-4620-(*)	2.115 m	2.21 m	1.80 m	2.10
	CM-4625-(*)	2.615 m	2.71 m	2.20 m	2.60
Fixed sticks	CM-4115-(*)	1.575 m	1.675 m	0.82 m	1.35
	CM-4120-(*)	2.075 m	2.175 m	1.07 m	1.8
	CM-4125-(*)	2.575 m	2.675 m	1.32 m	2.8
	CM-4130-(*)	3.075 m	3.175 m	1.82 m	3.3

(*) Reference to be completed by fitting: C-E-H-K-T-D.

Accessories :

Reference	↔ smallest end fitting	 kg
CM-3900-J	0.36 m	0.95



Basic element. Intermediate element. Terminal element.



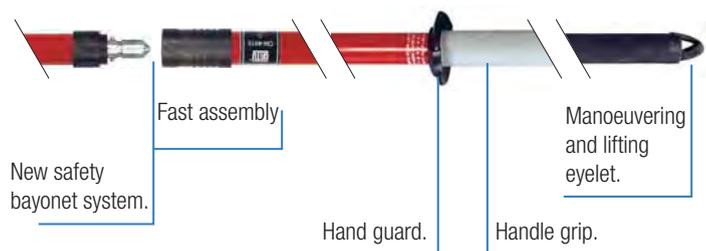
Intermediate element with rain skirts.

SET OF STICKS

Complete sets of sticks for common applications.

Reference	Composition	↔
CM-4220-(*)	2 elements : CM-4610+CM-4610-(*)	2 m
CM-4230-(*)	2 elements : CM-4615+CM-4615-(*)	3 m
CM-4240-(*)	2 elements : CM-4620+CM-4620-(*)	4 m
CM-4345-(*)	3 elements : CM-4615+CM-4615-I+CM-4615-(*)	4.5 m
CM-4360-(*)	3 elements : CM-4620+CM-4620-I+CM-4620-(*)	6 m

(*) Reference to be completed by fitting: C, E, H, K, T et D.



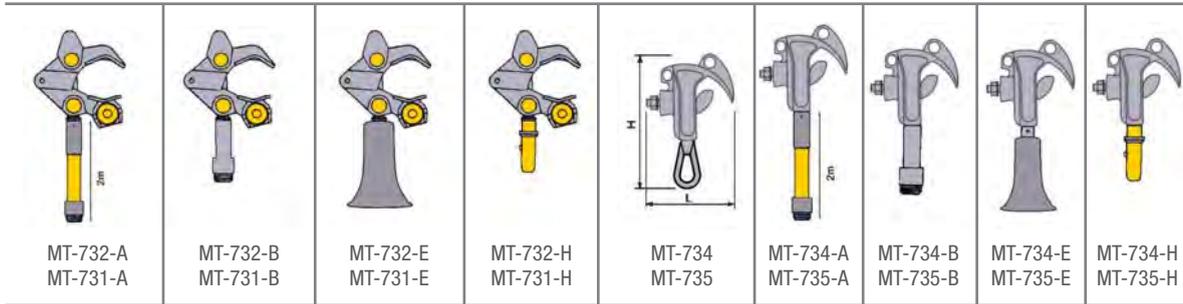
CLAMPS

Body in aluminium alloy with trapezoidal threaded screw. Interposed elastic washers in the clamping system improve efficiency and ensure a higher withstand in case of electrodynamic shock. Manoeuvring by CM-6 insulated stick of appropriate length and characteristics.

IEC 61230



Manoeuvrable clamps



Reference	Rating (kA/1 s)	Dimensions (mm)	Copper connection			Clamp capacity (mm)	Weight (kg)
			Copper cables **	Contact range width	Stud		
MT-731-(*)	40	200 x 200 x 50	150 mm ² max.	45 mm	M 12	∅ 5-60	∅ 5-60
MT-732-(*)	40	200 x 200 x 50	150 mm ² max.	45 mm	M 12	∅ 40-120	∅ 40-120
MT-734-(**)	40	145 x 125 x 52	150 mm ² max.	40 mm	M 12	∅ 5-40	∅ 5-40
MT-735-(*)	40	178 x 175 x 60	150 mm ² max.	40 mm	M 12	∅ 15-60	∅ 15-60
MT-737-H	40	240 x 200 x 55	150 mm ² max.	40 mm	M 12	∅ 20-120	∅ 20-120

(*) Add type of connection A - B - E - H.

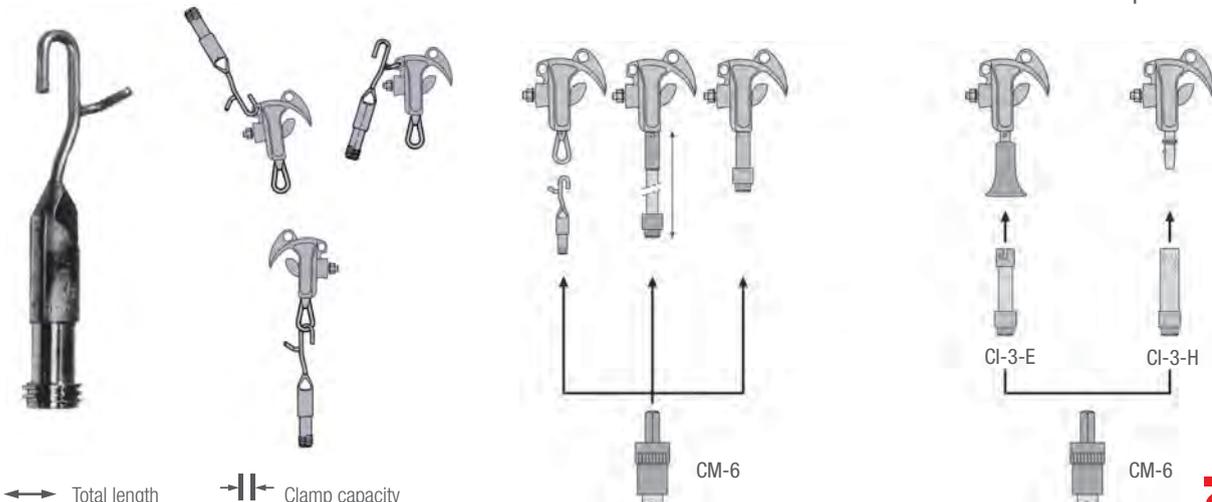
(**) Add type of connection B - E - H.

**Other cable sections: see page 191, 192.

Attachment of MT-735 or MT-734 clamps with MT-717-3-B hook.

Direct connection.

Connection adaptor.



Total length
 Weight
 Diameter
 Clamp capacity
 Dimensions



EARTHING SYSTEM WITH CLAMPS INTERLOCKING

The APE is a grounding system with an interlocking system between earthing and line clamps. It is used for safe and accurate installation (earthing clamp and then line clamp) and removal (line clamp and then earth clamp).

THE

- 1 Locking system using a patented system with more than 30,000 possible combinations.
- 2 Easy installation and removal without additional accessories.
- 3 Automatic trip at the recommended torque on support withstand the short circuit current.
- 4 System security (unable to be unlocked without the associated clamp).

Substation clamp



Line clamp



ONE REFERENCE INCLUDING 3 PHASES, SO 3 CLAMPS EQUIPPED.

Reference	Rating	Use	Fitting	Connection		mm	mm	
				Range	Stud			
MT-834-H	40 kA/1 s	Substation	H hexagonal	width 38 mm	M 12	360 x 200 x 85	• 5 - 40	3.2
MT-834-E	40 kA/1 s	Substation	E bayonet	width 38 mm	M 12	360 x 200 x 85	• 5 - 40	3.2
MT-834-T	40 kA/1 s	Substation	T bayonet	width 38 mm	M 12	360 x 200 x 85	• 5 - 40	3.2
MT-835-H	40 kA/1 s	Substation	H hexagonal	width 38 mm	M 12	390 x 200 x 85	• 15 - 60	3.48
MT-835-E	40 kA/1 s	Substation	E bayonet	width 38 mm	M 12	390 x 200 x 85	• 15 - 60	3.48
MT-835-T	40 kA/1 s	Substation	T bayonet	width 38 mm	M 12	390 x 200 x 85	• 15 - 60	3.48
MT-837-H	40 kA/1 s	Substation	H hexagonal	width 38 mm	M 12	470 x 220 x 85	• 20 - 120	3.88
MT-837-E	40 kA/1 s	Substation	E bayonet	width 38 mm	M 12	470 x 220 x 85	• 20 - 120	3.88
MT-837-T	40 kA/1 s	Substation	T bayonet	width 38 mm	M 12	470 x 220 x 85	• 20 - 120	3.88
MT-934	40 kA/1 s	Line	ring	width 38 mm	M 12	360 x 200 x 85	• 5 - 40	3.2
MT-935	40 kA/1 s	Line	ring	width 38 mm	M 12	390 x 200 x 85	• 15 - 60	3.48

INSULATING STICKS FOR SHORT CIRCUITING AND EARTHING SYSTEMS

CM-6 series is recommended for cables $\geq 95 \text{ mm}^2$. Yellow colour elements, with superior characteristics, they are connected between them without any prior order of assembly.

These elements allow "long length" assemblies which can support short-circuit systems with large cross-section cables. Shockproof guard and pole end cap. Yellow colour elements.

Composite tube fiber glass and epoxy resin, yellow colour.

Reference	↔	∅ mm	kg
CM-6-15	1.5 m	47	2.4
CM-6-20	2 m	47	3.2
CM-6-25	2.5 m	47	4
CM-6-30	3 m	47	4.8



Example of assembly of clamps on the stick.



CM-6-15 CM-6-20 CM-6-25

IEC 61235



EARTH CLAMPS FOR OVERHEAD LIVE NETWORKS AND SUBSTATIONS

Copper aluminium bronze earth clamps.



MT-843



MT-843-P



MT-847



MT-852



MT-853

Reference	Rating	Use	Connection ∅ (mm)	□ mm	— — mm	kg
MT-843	40 kA/1 s	Substation/ Overhead line	Hole : ∅ 12.5	45 x 106 x 165	• ∅ 6 - 25 — 0 - 35	0.95
MT-843-P	40 kA/1 s	Substation	3 Holes : ∅ 12.5	45 x 106 x 165	• ∅ 6 - 35 — 0 - 35	0.95
MT-847	25 kA/0.5 s	Overhead line	Hole : ∅ 13	45 x 106 x 170	— 0 - 30	1.00
MT-852	63 kA/0.5 s	Substation	Hole : ∅ 13	70 x 125 x 155	Fixed points	1.40
MT-853	40 kA/0.5 s	Substation	Hole : ∅ 13	65 x 130 x 135	Fixed points	1.00



COPPER CABLES

Extra-flexible braided multi-strand copper.

Delivered to the meter with a minimum of 5 meters.

Available in vinyl or silicone sheath.



IEC 61230





EQUIPOTENTIAL LINES

USE

Conductive line connecting two pieces of metallic pieces in order to give them the same potential.

- Cable composition and features :

35 mm² copper cable insulated in a green silicone sheathing.
Double crimped lugs at the cable ends.

Reference	Characteristics
M-24-35-V	Cable 35 mm

- Clamp and stick composition and features :

Insulating stick equipped with a clamp MT-735 in aluminium alloy with Ø 15 to 60 mm clamp capacity.

Reference	Characteristics
MT-735-P4	Clamps MT-735 on stick 400 mm

- Earth Clamp composition and features :

All the earth clamps of page 191 are available to complete the equipotential lines.



IEC 61230



Aluminium cables

Extra flexible braided multi-strand cables. Transparent PVC sheath, with cable section identification.

Reference	Rating (kA/1 s)	Cable		Section (mm ²)
		Weight (kg/m)	Ø (mm)	
M-28-70	10.0	0.240	13.4	70
M-28-120	17.5	0.430	19.00	120
M-28-150	20.0	0.510	21.00	150



ADJUSTABLE ACCESS POINTS

For large vertical or oblique heavy duty conductors.



Reference	Characteristics	Icc (kA/1 s)	mm	Conductor		kg
				Type	Ø mm	
MT-790	Copper/Alu alloy Ø 18 mm	30	255 x 105 x 50	Copper	Ø 12 - 60	1.40
MT-792	Light alloy Ø 20 mm	30	270 x 105 x 60	Aluminium	Ø 12 - 60	0.85
MT-797	Light alloy Ø 20 mm	30	240 x 170 x 60	Aluminium	Ø 60 - 120	1.20

SHORT-CIRCUITING AND EARTHING SYSTEM CARRYING BAGS

Can receive earthing system equipment (clamps and cables).

Reference	mm	kg
M-87-53	380 x 250 x 400	2
M-87-153	380 x 250 x 600	2.5
M-87-295	550 x 300 x 300	1.5



M-87-295

M-87-153

ROPE OPERATED CLAMP

Attachment and removal is carried out from the ground or from the cross-arm, using a rope passed previously over the conductor to be earthed. Up to 10 m: by using **MT-709-B** reel launcher placed on a **CM-6 SERIE Stick** (see page 191) that passes the rope over the conductor;

- This projector fires an arrow carrying a braided nylon wire which sets the rope. The clamp is then fixed to the rope and attached onto the conductor.

Attachment: the clamp is pulled up by the rope. Pulling on the rope triggers the spring and closes the jaw.

Removal: pulling on the rope attached to the hinged saddles causes the clamp to pivot and free the jaw.

Spring operated swinging jaw with pre-set.



MT-709-B

MT-708-40

Reference	 mm	lcc (kA/1 s)	 mm	 kg
	Ø 12 - 48	30	195 x 120 x 175	2
MT-701/1	Earthing cable: cable 120 mm ² with crimped lugs on M12 screw (x3)			

MT-701/1



WIRE GUN TESTER

An extremely simple way to test the voltage in an overhead line without leaving the ground. Just shoot a weighted arrow over the line - up to 18 m high - forming contact between the conductors through a very lightweight braided steel cable.

If they are both live, this produces a sparkover and alerts the user.

The **MF-60** gun can also be used to shoot an insulating cord for handling **MT-701/1** contact clamps.

Reference	Characteristics
MF-60	Complete cable-launcher projector delivered in a waterproof bag with 2 spare arrow and 2 spool of 30 m fuse wire 3.5 kg
MF-61	Spare arrow
MF-62	Spool of 30 m of fuse wire
MF-63	Spool of 100 m of fuse wire
MF-66	Spool of 30 m of nylon lead isolated hoisting cord.isolantes



MF-61

MF-60





ISOLATION 1kV = ELECTRICAL SAFETY

A range of safety footwear
designed for electricians.



See page 29

MV-223-(*)



MV-222-(*)



MV-226-(*)



MV-227-(*)



MV-228-(*)



Earthing connections



Earth rods **196**

Earthing connections **197**

**Golden safety rules for short-circuiting
and earthing system** **199**

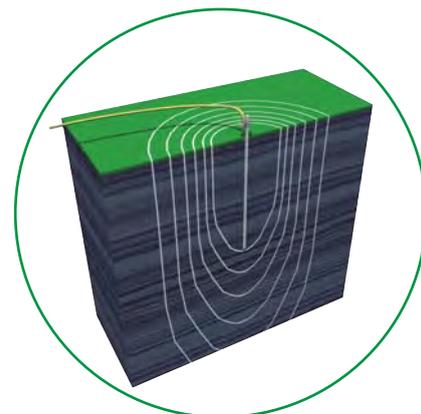


GENERAL

The rod is, in most cases, the most practical, effective and reliable earth connection means.

Highly effective: for a given contact surface area, the linear type electrode provides, both theoretically and practically, the least earth resistance. Furthermore, it enables the most moist and conductive layers to be reached. Easy and quick to install, it requires no earth work. Even inside industrial buildings, it is often possible to install an earth rod exactly where required by breaking through a small area of the floor.

Accessible and testable connection: the use of an inspection box makes it possible to leave the head of the rod and its connection unburied and to periodically test it and measure its resistance.



Self connectable rods: The lower end of each rod is equipped with a point used both for driving into the earth and for connection; the upper pierced end receives (without the sleeve) the point of the previous rod. Use a rivetting head so as not to damage the upper end when driving in.

Connectable rods: Conical slide-in provides perfect assembly stability. For deep earth connections.

COPPER/STEEL EARTH RODS

Steel with copper coating by electrolytic process: Minimum Thickness 250 μ (* = 350 μ).

Reference	Type	\varnothing mm	\longleftrightarrow	kg	Connection
CC-10-Y	standard with connector	14.2 unit 16	1 m	1.2	BCY
CC-15-Y			1.50 m	1.8	
CC-20-Y			2 m	2.4	
C2C-10-Z ⁽¹⁾	Connectable	17.3 unit 19	1 m	2	C2C-95Z
C2C-15-Z ⁽¹⁾			1.50 m	2.8	

Self connectable Copper/Steel earth rods

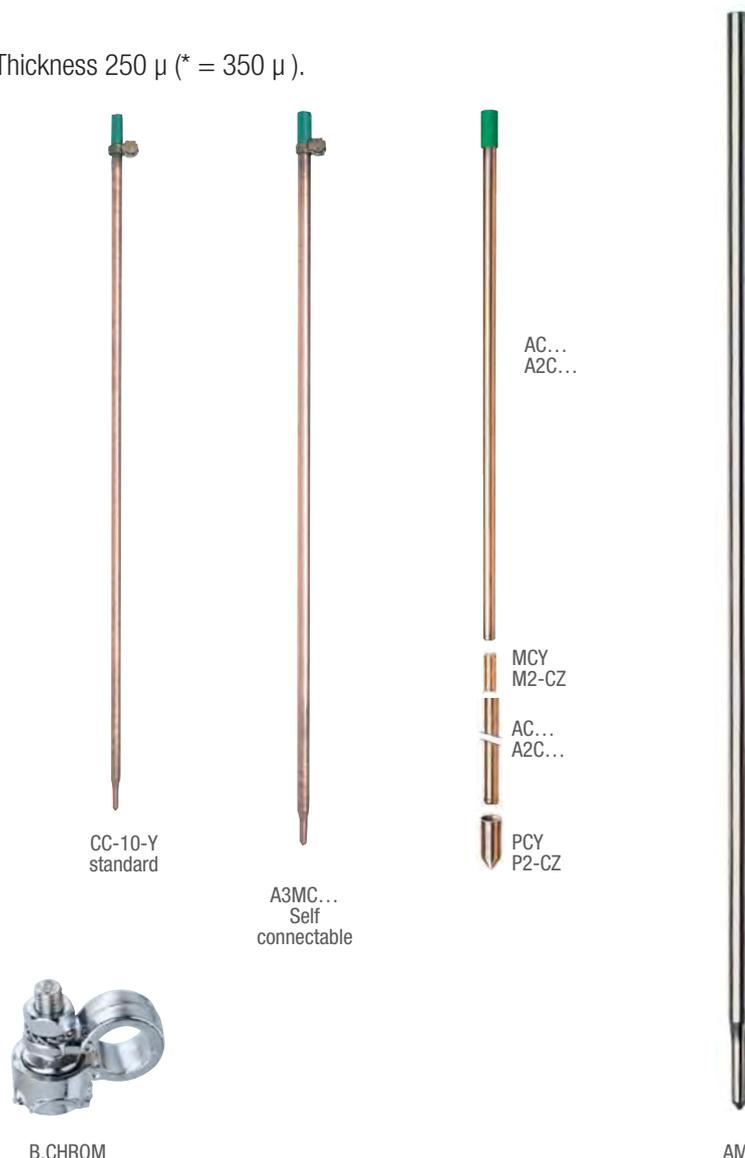
Reference	Type	\varnothing mm	\longleftrightarrow	kg	Connection
A3MC-10-Z*	Self connectable	17.3 unit 19	1 m	1.8	TO-3-16/19 TO-2-19 C2C-95-Z
A3MC-15-Z*			1.50 m	2.75	
AC-10-Y	Connectable ⁽¹⁾	14.2 unit 16	1 m	1.25	TO-3-16/19 TO-2-16 BCY MCY PCY
AC-15-Y			1.50 m	1.9	
A2C-10-Z*	Connectable	17.3 unit 19	1 m	1.95	TO-3-16/19 TO-2-19 C2C-95-Z C2C-95-Z C2C-95-Z
A2C-15-Z*			1.50 m	1.85	

(1) For connectable models, sleeves and tips are ordered separately.

STAINLESS STEEL EARTH RODS

Strength steel ≥ 90 daN/mm².

Reference	Type	\varnothing mm	\longleftrightarrow	kg	Connection
AMI-10	Connectable	16	1 m	1.45	B.CHROM
AMI-15			1.50 m	2.2	



CC-10-Y
standard

A3MC...
Self
connectable

AC...
A2C...

MCY
M2-CZ

AC...
A2C...

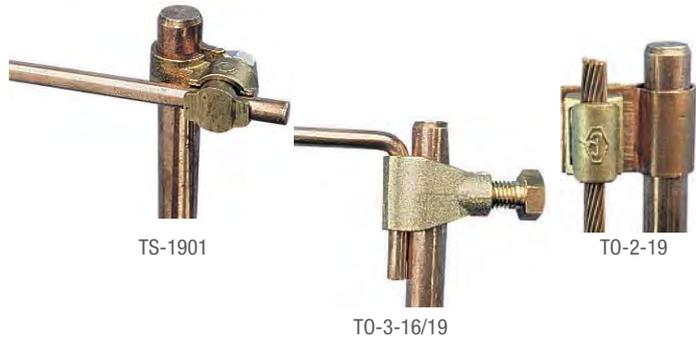
PCY
P2-CZ

B.CHROM

AMI

CONNECTORS

Reference	Ø Rod mm	Conductors section max (mm ²)	Type section max (mm ²)
TO-2-16	16	40	Copper
TO-2-19	19	40	Copper
vTO-3-16/19	19	6 to 95	Copper-aluminium alloy
BCY	14.3	95	Copper-aluminium alloy
C2C95Z	17.3	95	Copper-aluminium alloy



EARTHING CONNECTORS

Interconnects to earth every metallic part of installations.

Reference	Conductors section (mm ²)	mm
COL-8/32	1 x 2.5 to 2 x 6	8 to 32
COL-32/100	1 x 2.5 to 2 x 16	32 to 100



LIVE WORKING TOOLS



Since the second world war, CATU has worked in close co-operation with EDF and RTE to research and develop safety equipment and practices for use on low and high voltage networks, initially in France and now worldwide.

Utilities would be better off efficiency of their networks by avoiding outages, whatever the costs. With the increasing recognition of EDF-Serect worldwide, CATU is fast becoming a major supplier in live working equipment. All the tools meet the specifications of the International Electrotechnical Committee (IEC).

CATU tools have a liveline life of around 20 years.

Catalogue available upon request.





EARTH RESISTANCE TESTER

The **MX-430-M** allows the measurement of earth resistance and earth specific resistivity and also the parasite voltages caused by grounding parasitic voltage presence.

This equipment is suitable for fast and easy measurement of the grounding resistance in home, industrial buildings, substations,...

Technical features

- **Application:** measurement of grounding resistances (with 3 earth rods), earth resistivity (with 4 earth rods) and parasite voltage presence.
- **Range of measurement:** 0 - 20 Ω ; 0-200 Ω ; 0-2000 Ω and 20 KΩ.
- **Voltmeter:** voltmeter function in AC range as a conventional voltmeter 0-200 V AC.
- **Operation frequency:** 1470 Hz.
- **Current in and out put power:** less than 0,5 W and the output current is limited to less than 15 mA (peak to peak).
- **Operation temperature:** -10°C / +50°C.
- **Storage temperature:** -25°C / +65°C.
- **Humidity:** 95% RH (without condemnation).



Reference	↔	kg
MX-430-M	221 x 189 x 99	2

THE ⊕

- 1 High visibility 3 1/2 digit display with direct readings, even under sunlight.
- 2 Connexion wire including a 12 V car battery.
- 3 Rechargeable internal battery managed by a microprocessor which modulates the load current as per the status of the battery, thus increasing battery life and the service life of the device.

ACCESSORIES (MEASUREMENT KIT)

MX-433-T

- 1 storage bag.
- 4 earth rod copper plated steel.
- 1 x 5 meter black cable.
- 1 x 40 meter red cable.
- 2 x 20 meter cable (1 blue and 1 green).
- 1 x 5 meter green cable to connect to the grounding system.
- 1 hammer.
- 1 reel tape measure 50 m.

Reference	Conductors section (mm ²)	kg
MX-433-T	570 x 220 x 160	7.7



SEPARATE THE WORK AREA FROM ALL POSSIBLE SOURCES OF POWER-SUPPLY by opening circuit-breakers, switches...

1



2

LOCK THE LINK IN THE OPEN POSITION with a safety lock system (safety padlock)

CHECK THE ABSENCE OF VOLTAGE at source and on site, on each conductor and apparatus involved.

3



4

APPLY APPROPRIATE SHORT-CIRCUIT AND EARTHING SYSTEMS in sufficient numbers on the conductors of your network where operation is taking place.

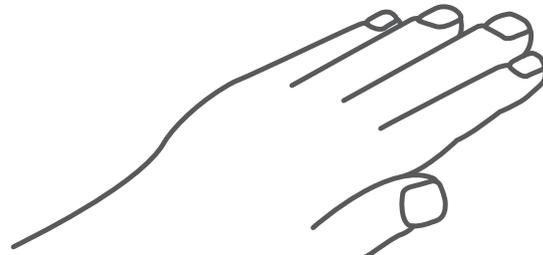
SHOWN, WARN OTHERS AND LIMIT THE WORK AREA even during the most simple temporary maintenance operation

5

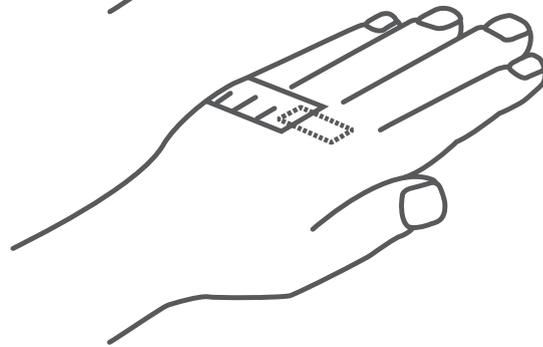




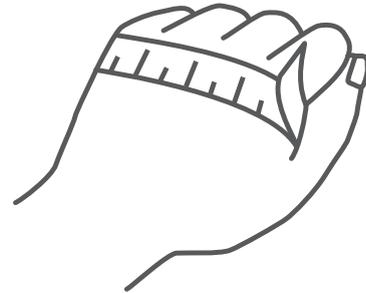
Choose your gloves size!



1 Stretch out your hand.



2 Wind the tape measure around your hand at the level of your knuckles. You can position the tape easier by taping it on the top of your hand.



3 Slightly fold your hand without clenching your fist and take the measurement. If you are between two sizes, take the biggest one.

Women gloves size

Inch	6	6 ^{1/2}	7	7 ^{1/2}	8
cm	15.2	16.5	17.8	19	20.3
Sport size	XS	S	M	L	XL

Man gloves size

Inch	7 ^{1/2}	8	8 ^{1/2}	9	9 ^{1/2}	10
cm	19	20.3	21.6	22.9	24.1	25.4
Sport size	XS	S	M	L	XL	XL

Print this page and cut out the ruler.
Ensure that the tape measures ten inches
or 27.90 cm once printed
(scale of your printer = 100%).

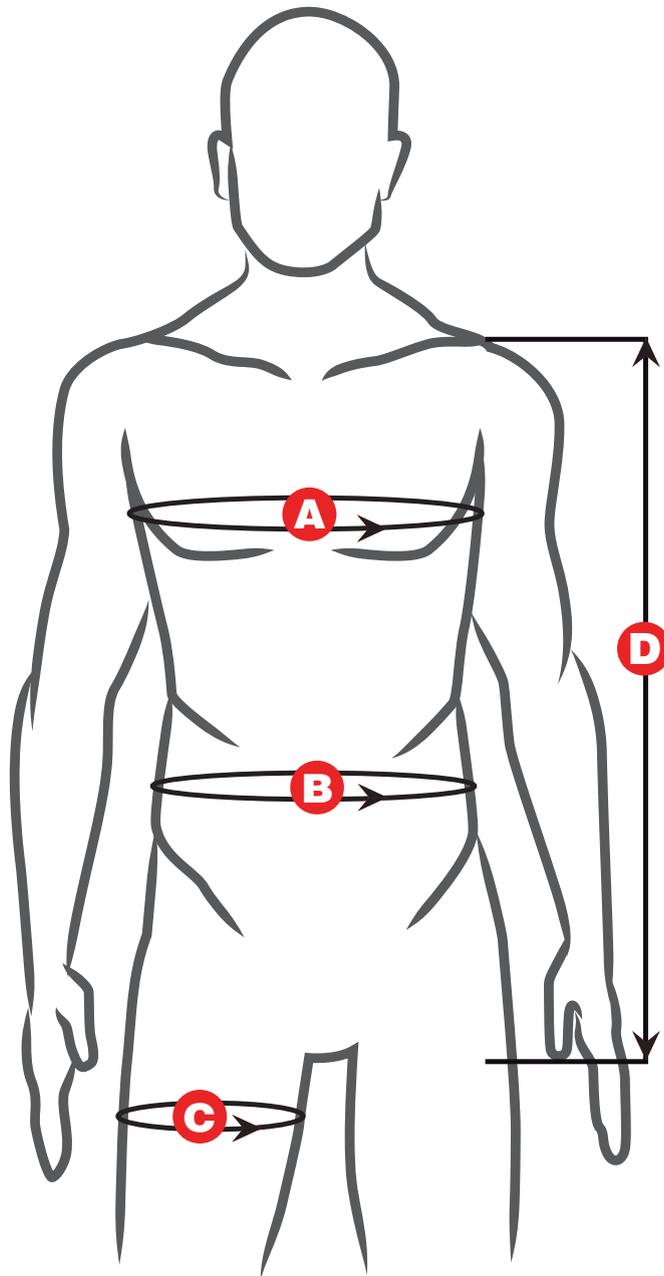
IMPORTANT
In the window of the printer's settings,
check that the "scaling" drop-down
menu is set to: "none".

Choose

your harness size!

Harness size board (in mm)

Reference	Chest (A)	Size (B)	Thigh (C)	Height (D)
S	700 - 1000	750 - 1000	500 - 700	600 - 750
M	800 - 1200	900 - 1200	550 - 750	750 - 850
XL	1000 - 1500	1000 - 1350	550 - 900	700 - 950



Note

A series of horizontal dotted lines for writing notes.

Specification

for short-circuiting and earthing system

A Network, electrical installation characteristics

Network voltage: _____ kV Max. short-circuiting current (1s): _____ kA
 Nature of the conductive materials: Basis Al Basis Cu

Overhead lines Switchboard or substation

- Dia. or section of the conductors: min. _____ max. _____
- Round bars dia. (mm): mini. _____ max. _____
 Length = _____
 Thickness = _____
- Flat bars
 $\left\{ \begin{array}{l} \text{H type} \\ \text{V type} \end{array} \right.$
 H type V type
 Length = _____
 Thickness = _____
- Fitting on edge face Fitting on side face

B Characteristics of the earthing system

- Selected sketch (out of the three standard types shown below)
- Distance between live conductors (m): _____, between live conductors and grounding point (m) _____
- To place the clamps in position, the operator will stand: above the conductors under the conductors
 at the conductors level
- For cable sections, please indicate max. ΔT or min. dia. of the conductor _____

C Earthing connection point

- Earth rods: dia. or thickness on side face (mm): _____ Flat bar, angle-bar, thickness (mm): _____
- Round conductor dia. (mm): _____

D Operating stick

- Insulating stick: total length _____ Fixed Connectable stick Telescopic

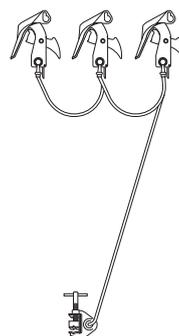
Characteristics

- Selected connection type: Sketch n° _____
- Contact clamps (type MT- _____)
- Short-circuiting cable
 - Length (m) _____
 - Dia. or section (mm, mm²) _____
- Grounding cable
 - Length (m) _____
 - Dia. or section (mm, mm²) _____
- Connection of cables on clamps, earth clamps, trifurcation
 - Direct connection by screw and nut
 - Connection by means of crimped lugs
- Earth clamp, type _____
- Presence of a reel _____
- Insulating stick, type _____

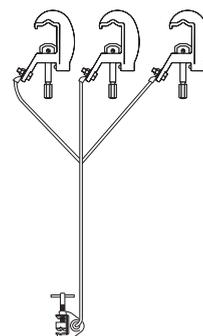
Sketch N°1



Sketch N°2



Sketch N°3



Accessories

- Carrying bag for sticks
- Canvas bag for equipment
- Carrying case for equipment
- Cable reel

The characteristics and technical informations stated in our literature are only for your guidance and therefore cannot be considered as contractual.

Our company is entitled to modify at any time the characteristics of its equipment.

In case of modification of these characteristics, our company would not be obliged to supply materials conform to those previously in force.

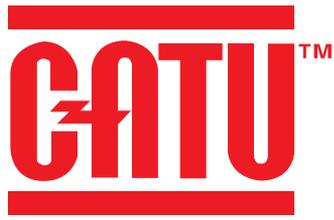
“Alu-Metal, Alu-Script, Catex, Catohm, Catu, Catumètre, Clipblock, Detex, Detex-Lumifix, Identex, Isomil, Isostop, Normafix, Pointest, Piezo-Test, Pelican 2, Triplix” are trade marks of Catu S.A.



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