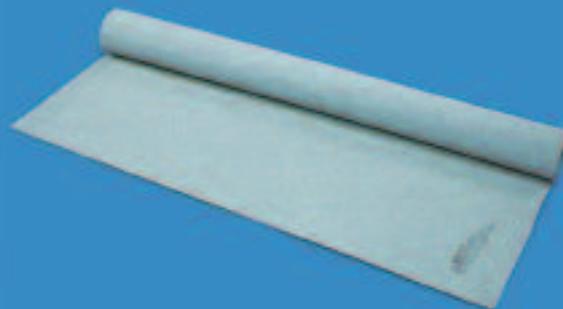




Work Italia S.R.L.



COMPANY WITH QUALITY SYSTEM
CERTIFIED BY DNV
= UNI EN ISO 9001:2000 =

Work Italia S.R.L.

Our company is active since 1986 in the design, research, production and sale of quality products for the field of protection and safety against electrical risks.

This continuous research of specialisation, care and investments has enabled our company to be occupy today a primary position in Italy and on foreign markets.

The “**Quality System**” of Work Italia is certified by the certification’s organism **DET NORISKE VERITAS** in conformity with the Standard **UNI EN ISO 9001:2000**.

Work Italia is actually among the main suppliers in Italy of ENEL (Italian National Electricity Board), TERNA (Italian National Board for High Voltage Electricity’s Transport), RFI-TRENITALIA (Italian National Railways), EDISON, ACEA (Energy Municipal Enterprise – Rome), AEM MILANO (Energy Municipal Enterprise – Milan) and of the other most important producers, distributors and users of electric power.

A regular export activity enables our company to be present all the world with high quality products approved by the relevant Public Power Companies, Railway Authorities and other major customers.

Our products are tested and certified by I.N.RI.M. National Institute of Metrological Research (previous called Italian Institute Galileo Ferraris of Turin), by ABB SACE, by ENEL, by NEMKO Laboratory, by CESI, by IMQ, by PPC Greece (Public Power Company), by SNCB Belgium (Belgium National Railways) and by other Official Laboratories in conformity with the International Standards (IEC), the European Standards (EN / CE Mark), the ENEL, TERNA, RFI, TRENITALIA Specifications and the Standards and Technical Specifications of other European countries.

Our Technical and Sale Departments are at your complete disposal to meet your requirements and/or demands.

SHORT CIRCUITING AND GROUNDING, EQUIPOTENTIAL AND CONTINUITY EQUIPMENT

1 WBT 127

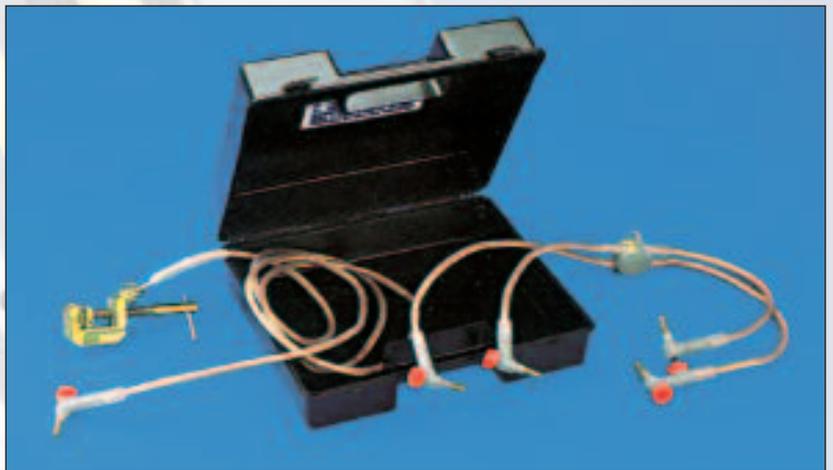
- Short circuiting and grounding equipment for LV insulated conductors in correspondence of fixed points suitable for insulation piercing (Type MPC93).

In conformity with the ENEL specification EA 0127.

Short circuit test 8 kA / 0.2 s.

Short circuit test certificate by Electrotechnic Italian Institute Galileo Ferraris of Turin.

- Expansion copper alloy connecting plugs, expansion screw steel with high insulation plastic. Covered by high insulation transparent uncoloured material.
- Short circuit cables section 16 mm², length 600 and 750 mm, made by electrolytic copper covered by transparent plastic sheath.
- Ground cable, characteristic as above, length 2000 mm.
- Copper alloy short circuit central connector with central socket for introduction of the grounding expansion connecting plug. Covered by high insulating transparent uncoloured material.
- Ground clamp made by press forged brass, clamping capacity up to 20 mm.
- Rigid plastic case.



2 MPC 93/1/2/3/4

- Short circuit insulating piercing connectors for LV insulated conductors.

In conformity with the ENEL specification EA 0138.

Short circuit test 8 kA / 0,2 s.

Short circuit test certificate by Electrotechnic Italian Institute Galileo Ferraris of Turin.

MPC 93/1 for cables 10÷25 mm².

MPC 93/2 for cables 35÷70 mm².

MPC 93/3 for cables 95÷150 mm².

MPC 93/4 for cables 150÷240 mm².

- Connector made of two reinforced nylon elements having high mechanical and electrical characteristics, matchable one each other. Upper shell including the drilling block with central socket. This permits the complete insertion of the expansion connecting plug of the short circuiting and grounding equipment type WBT 127.
- The closing of the connector on the cable, the perforation of the insulation and the electric contact are obtained by tighten the screws and bringing to perfect contact the two shells.



3 DBT 318

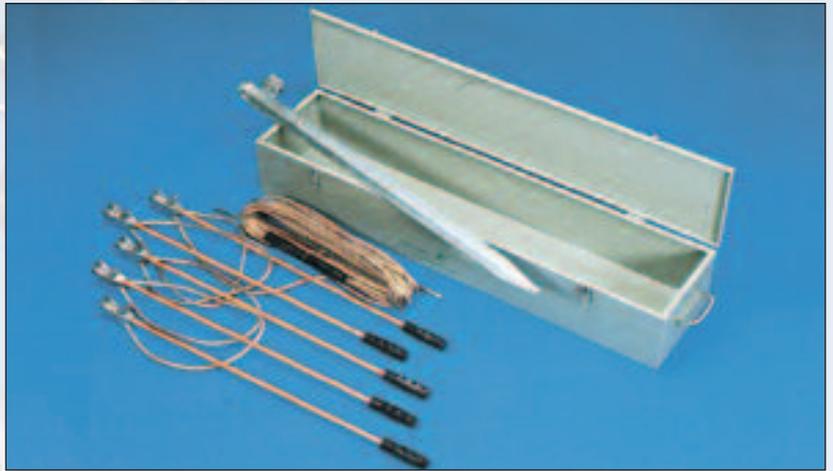
- Short circuiting and grounding equipment for LV overhead bare conductors.

In conformity with ENEL specifications.

Short circuit test 8 kA / 0,23 s.

Short circuit test certificate by Electrotechnic Italian Institute Galileo Ferraris of Turin.

- Light alloy contact clamps with automatic spring clamping on conductor 2÷18 mm diameter. The contact clamps are fitted onto insulating fiberglass rod length 0.8 m (different lengths on demand), with insulating plastic handle.
- Short circuit extraflexible electrolytic copper cables covered by transparent plastic sheath, section 16 mm², length of each connection 0.70 m (different lengths on demand).
- Ground cable, characteristics as above, connecting the first clamp to the earthing rod.
- Section 16 mm², length 16 m (different lengths on demand), rolled up on cable coiler.
- Earthing rod – Metallic carrying case.



- DBT 318/4 with 4 contact clamps and 3 short circuit cables.
- DBT 318/5 with 5 contact clamps and 4 short circuit cables.

4 Equipment for insulated LV voltage bundled conductors

- Equipment for connection of branch connectors on LV insulated conductors.

- WI 6 –SC Short circuiting equipment

Short circuit test 4 kA / 1s.

- Series of six insulated female connecting plugs type SOCKET/F, with elastic contacts and bayonet plug-in system made by tinned brass. Covered by insulating synthetic sleeve suitable for outdoor use. Extraflexible electrolytic copper cables connection covered by transparent plastic sheath, section 16 mm². Rigid plastic case.

- WI 2-SP Single pole shunt

- Two insulated female plugs type SOCKET/F with extraflexible electrolytic copper cable covered by transparent plastic sheath. Section 16/25/35 mm², length 1,5 m (different lengths on demand). Rigid plastic case.

- WI-MT Earthing equipment

- One brass bayonet male plug type SOCKET/M having a bayonet blocking system suitable for the connection on to insulated female SOCKET/F



- of the short circuiting equipment. Covered by insulating synthetic sleeve suitable for outdoor use. Extraflexible electrolytic copper cable covered by transparent plastic sheath. Section 16 mm², length 10 m (different lengths on demand). Ground clamp made by press forged brass, clamping capacity up to 33 mm. Rigid plastic case.

5 WI 420/E ⚠

- Short circuiting and grounding equipment for MV overhead bare conductors.

Certified in conformity with the International Standard CEI EN 61230 (IEC 1230).

- WI 420/E-25 – short circuit cables section 25 mm² - Short circuit test 13,77 kA / 0,25 s.

- WI 420/E-35 – short circuit cables section 35 mm² - Short circuit test 8,05 kA / 1 s.

- 3 Light alloy contact clamps with automatic tightening. Clamping capacity: conductors 3÷20 mm diameter. Tang suitable for fitting on clamp holder head.
- Light alloy clamp holder head, complete of steel recover hook and threaded tang for screwing on the head of the insulating rod.
- 2 Short circuit extraflexible electrolytic copper cables, covered by transparent plastic sheath, each length 2,5 m (different lengths on demand).
- Ground cable, characteristics as above, section 16 mm², length 16 m (different lengths on demand), rolled up on cable coiler.
- Earthing rod.



- Insulating fiberglass rod type PE2/300FA made by epoxy resin reinforced by fiberglass. Total length 3 m in two elements each length 1,5 m, with fast joint and threaded M10 attack suitable for fitting on clamp holder head.
- Metallic case for the equipment, heavy fabric bag for the rod.

6 WI 322/E

- Short circuiting and grounding equipment for MV overhead bare conductors.

Short circuit test 6 kA / 1 s.

Short circuit test certificate by Electrotechnic Italian Institute Galileo Ferraris of Turin.

- 3 Light alloy contact clamps with automatic tightening. Clamping capacity: conductors $3\div 20$ mm diameter. Tang suitable for fitting on clamp holder head.
- Light alloy clamp holder head, complete of steel recover hook and threaded tang for screwing on the head of the insulating rod.
- 2 Short circuit extraflexible electrolytic copper cables, covered by transparent plastic sheath, section 25 mm^2 , each length 2,5 m (different lengths on demand).
- Ground cable, characteristics as above, section 16 mm^2 , length 16 m (different length on demand), rolled up on cable coiler.
- Earthing rod.
- Insulating fiberglass rod type **P2/300FA** made by polyester resin reinforced by fiberglass.



Total length 3 m in two elements each length 1,5 m, with fast joint and threaded M10 attack suitable for fitting on clamp holder head.

- Metallic case for the equipment, heavy fabric bag for the rod.

7 MT/BM

- Short circuiting and grounding equipment with universal contact clamps for electric cabins and MV installations.

- 3 Screw type universal contact clamps made by press forged brass. Clamping capacity: round conductors $5\div 40$ mm diameter - flat conductors 40×60 mm - bars on horizontal level 12×60 mm - 45° slanting bars up to 28 mm thickness.
- 3 Short circuit extraflexible electrolytic copper cables, covered by transparent plastic sheath, each length 0,75 m (different lengths on demand).
- Central trifurcating connector.
- Ground cable, characteristics as above, length 2 m (different lengths on demand)
- Ground clamp made by press forged brass, clamping capacity up to 22 mm.
- Insulating fiberglass rod type **P2/135EF** made by polyester resin reinforced by fiberglass (type **PE2/135EF** made by epoxy resin reinforced by fiberglass for certified types), length 1,35 m in two elements with quick coupler.
- Metallic case.
- **Standard type:**
MT/BM – with cables section 25 mm^2 - Short circuit test 13,77 kA / 0,25 s.



- Certified types in conformity with the International Standard CEI EN 61230 (IEC 1230).

△ MT/BM-50 – with cables section 50 mm^2 - Short circuit test 12,4 kA / 1 s.

△ MT/BM-95 – with cables section 95 mm^2 - Short circuit test 24 kA / 0,5 s.

8 MT/PF

- Short circuiting and grounding equipment for electric cabins and MV installations with contact clamps for ball fixed points.

- 3 Screw type contact clamps made by press forged brass. Clamping capacity for round earth points 20/25 mm diameter (to be indicated) – round conductors and flat bars up to 22 mm.
- 3 Short circuit extraflexible electrolytic copper cables, covered by transparent plastic sheath, each length 0,75 m (different lengths on demand).
- Central trifurcating connector.
- Ground cable, characteristics as above, length 2 m (different lengths on demand).
- Ground clamp made by press forged brass, clamping capacity up to 22 mm.
- Insulating fiberglass rod type **P2/135EF** made by polyester resin reinforced by fiberglass (type **PE2/135EF** made by epoxy resin reinforced by fiberglass for certified types), length 1,35 m in two elements with quick coupler.
- Metallic case.
- **Standard type:**
MT/PF – with cables section 25 mm^2 - Short circuit test 13,77 kA / 0,25 s.



- Certified types in conformity with the International Standard CEI EN 61230 (IEC 1230).

△ MT/PF-50 – with cables section 50 mm^2 - Short circuit test 12,4 kA / 1 s.

△ MT/PF-95 – with cables section 95 mm^2 - Short circuit test 24 kA / 0,5 s.

9 DENT

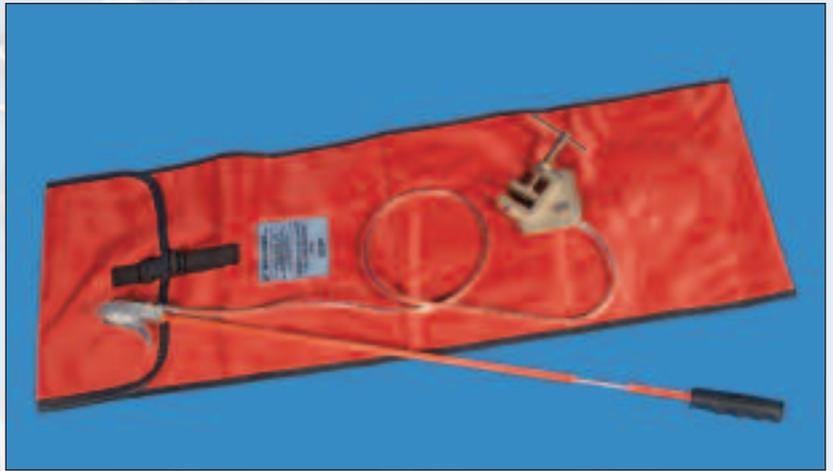
- Equipotential equipment for MV overhead bare conductors.

In conformity with ENEL technical specifications.

Short circuit test 10,5 kA / 0,3 s.

Short circuit test certificate by Electrotecnic Institute Galileo Ferraris of Turin.

- Light alloy contact clamp with automatic spring, clamping on conductor from 2÷18 mm diameter. Contact clamp is fixed on the insulating fiberglass rod length 0.8 m (different lengths on demand), with handle.
- Extraflexible electrolytic copper cable covered by transparent plastic sheath, section 16 mm², length 1,2 m (different lengths on demand).
- Ground clamp made by press forged brass. Clamping capacity up to 40 mm on round conductors or bars.
- Heavy fabric bag.



10 WI 198 CE

- Continuity and equipotential equipment for use during jointing and terminations of spiral cables.

In conformity with the ENEL specification EA 0320/19.

Short circuit test 5 kA / 0,25 s.

Short circuit test certificate by Electrotecnic Italian Institute Galileo Ferraris of Turin.

- 2 Light alloy press forged piercing clamps for clamping on cables 35÷240 mm².
- Ground clamp made by press forged brass clamping on round conductors up to 20 mm diameter, bars and point fix with head ball of 20 mm diameter.
- 3 Extraflexible electrolytic copper cables covered by transparent plastic sheath, section 25 mm², lengths: n°2 of 2 m, n°1 of 4 m.
- Rigid plastic case.



11 Rolling earthing

- Mobile device for grounding operations on overhead LV, MV, HV lines during stringing works.

In conformity with ENEL specifications.

Short circuit test 3,5 kA / 0,5 s.

Short circuit test certificate by Electrotecnic Institute Galileo Ferraris of Turin.

- Composed by light alloy frame supporting two contact rollers and light alloy guide sliding for supporting and regulating the mobile roller. Eyebolts on the external sides for anchorage of the ropes. Extraflexible electrolytic copper cable covered by transparent plastic sheath, complete with ground clamp made by press forged brass.
- **WTM 20** for LV and MV overhead lines.
Clamping capacity: conductors 3-20 mm diameter.
Ground cable: section 16 mm², length 5 m.
- **WTA 40** for HV overhead lines.
Clamping capacity: conductors 5-40 mm diameter.
Ground cable: section 50 mm², length 5 m.



12 WI 560/A

- ❑ Short circuiting and grounding equipment for HV overhead lines up to 400 kV.

Certified in conformity with the International Standard CEI EN 61230 (IEC 1230).

- ❑ WI 560/A-50 with cable section 50 mm²
Short circuit test 11,25 kA / 1 s.
- ❑ WI 560/A-70 with cable section 70 mm²
Short circuit test 15,1 kA / 1 s.
- ❑ WI 560/A-95 with cable section 95 mm²
Short circuit test 23,9 kA / 1 s.
- ❑ WI 560/A-120 with cable section 120 mm²
Short circuit test 30,7 kA / 1 s.
- 3 Screw type contact clamps made by light alloy. Clamping capacity: conductors 5÷60 mm diameter. Suitable for use on oxidized conductors. Lower ring for fastening and unfastening.
- 3 Extraflexible electrolytic copper cables covered by transparent plastic sheath (length to be specified on demand).
- 3 Ground clamps made by press forged brass. Clamping capacity: round conductors and bars up to 33 mm.
- Metallic case.



- Insulating fiberglass rod made by synthetic resin reinforced by fiberglass, in two or three elements. Length 1,5 or 2 m each, with quick coupler and top hook for manoeuvring the clamps. Total length to be specified on demand.
- Heavy fabric bag for the insulating rod
- ❑ WI 1580/A – clamps suitable for conductors 15÷80 mm diameter.

13 WI 560/C

- ❑ Short circuiting and grounding equipment for HV installations up to 400 kV.

Certified in conformity with the International Standard CEI EN 61230 (IEC 1230).

- ❑ WI 560/C-50 with cable section 50 mm²
Short circuit test 11,25 kA / 1 s.
- ❑ WI 560/C-70 with cable section 70 mm²
Short circuit test 15,1 kA / 1 s.
- ❑ WI 560/C-95 with cable section 95 mm²
Short circuit test 23,9 kA / 1 s.
- ❑ WI 560/C-120 with cable section 120 mm²
Short circuit test 30,7 kA / 1 s.
- 3 Screw type contact clamps made by light alloy. Clamping capacity: conductors 5÷60 mm diameter. Suitable for use on oxidized conductors. Bayonet tang with flexible rubber guide-bell.
- 3 Extraflexible electrolytic copper cables covered by transparent plastic sheath, length to be specified on demand.
- 3 Ground clamps made by press forged brass. Clamping capacity: round conductors and bars up to 33 mm.
- Metallic case.
- Insulating fiberglass rod made by synthetic resin reinforced by fiberglass, in two or three elements. Length 1,5 or 2 m each, with quick coupler and top hook for manoeuvring the clamps. Total length to be specified on demand.
- Heavy fabric bag for the insulating rod.
- ❑ WI 120/C – clamps suitable for conductors 20÷120 mm diameter.



- ❑ WI 796/C – clamps suitable for: conductors 14÷70 mm diameter – flat 100x70 mm – bars on horizontal level 30x100 mm - inclined bars to 45° up to 120x50 mm.
 - ❑ WI 100/C – clamps suitable for plate and shaped bars 100 x 80 mm.
 - ❑ WI 1080/C – clamps suitable for conductors 10÷80 mm diameter.
 - ❑ WI 140/C – clamps suitable for: conductors 20÷120 mm diameter – flat up to 50 mm thickness – bars up to 50 x 140 mm.
 - ❑ WI 150/C – clamps suitable for plate and shaped bars 150 x 80 mm.
- All the equipment can be supplied with attack type DIN, HEXAGONAL, or other on demand.

14 WI PCMT 95

- ❑ Cable-piercing equipment for single pole and three poles insulated cables up to 100 mm outside diameter and max 45 kV.

In conformity with ENEL specifications.

- Light alloy body with piercing helicoidal element.
- Protection tiles.
- Pole and handle made by fiberglass reinforced resin.
- Extraflexible electrolytic copper cable covered by transparent plastic sheath, section 25 mm², length 5 m.
- Ground clamp made by press forged brass, clamping capacity up to 33 mm.
- Supplied into metallic case.



INSULATING RODS

15 Insulating rods for short circuiting and grounding equipment △△

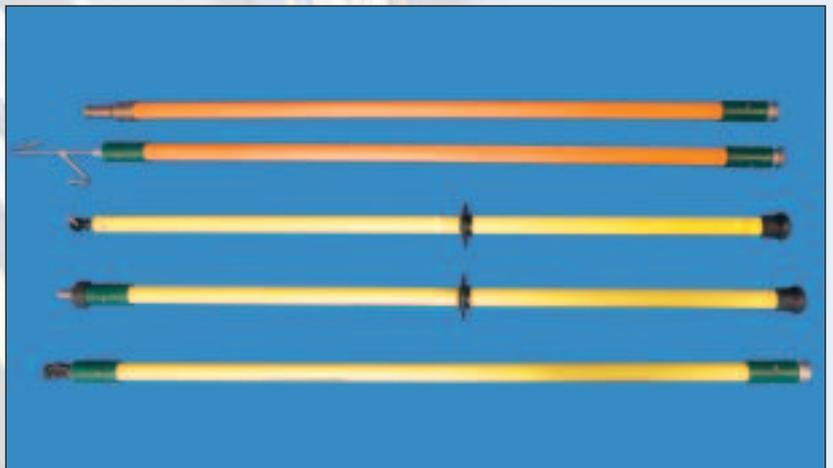
□ High insulating tube-rods made by synthetic resins reinforced by fiberglass.

- Lengths on demand, external diameters 32 and 40 mm.
- Complete of:
 - insulating closing cap;
 - hand guard;
 - top fitting to handle the contact clamp;
 - quick couplers are provided for rods having two or more elements.

Types of tube:

△ PV: tube made by synthetic resin reinforced by fiberglass certified in conformity with the International Standard CEI EN 61235 (IEC 1235). Orange colour, external diameters 32 and 40 mm.

△ PE: tube made by epoxy resin reinforced by fiberglass certified in conformity with the International Standard CEI EN 61235 (IEC 1235). Yellow colour, external diameter 40 mm.



△ PVR: tube made by synthetic resin reinforced by fiberglass filled by closed cells foam polyurethane certified in conformity with the International Standard CEI EN 60855 (IEC 855). Orange colour, external diameters 32 and 40 mm.

P: tube made by polyester resin reinforced by fiberglass, "Poltrusion" processing (unidirectional fibers). External diameters 32 and 40 mm.

16 Insulating rods for switches disconnection △

□ High insulating tube rods made by polyester resin reinforced by fiberglass.

- Lengths on demand, external diameters 32 and 40 mm.
- Complete of:
 - manoeuvring metallic hook;
 - insulating closing cap;
 - hand guard;
 - quick couplers are provided for the types having two or more elements.

Standard types:

P1/150 GS	1,5 m length	1 element
P1/200 GS	2 m length	1 element
P1/250 GS	2,5 m length	1 element
P2/250 GS	2,5 m length	2 elements
P1/300 GS	3 m length	1 element
P2/300 GS	3 m length	2 elements



On demand supplied with tube type PE - PV - PVR.

17 Insulating rods for special applications

- High insulating tube rods made by polyester resin reinforced by fiberglass.
- FS – Rescue rods with steel hook covered by plastic sheath.
 - FS 45 total length 1,65 m.
 - FS 63 total length 2 m.
 - FS 110 total length 3 m.
 - FS 225 total length 4 m.
- ASV 750 – Lamp changer rod.
 - Length 6 m in three elements;
 - Device suitable to change road bulb lamps diameter 6÷12 cm;
 - Heavy fabric bag.
- W/TR6 – Tree pruner rod.
 - Length 6 m in three elements with upper attachment for connection of different working tools.
 - Pruning saw for large-dimension branches.
 - Prunerhead for small-dimension branches.



- Heavy waterproof fabric bag suitable to contain the equipment.

18 EF 30

- Insulating rod for fuse extraction and insertion on max 30 kV system.
 - In conformity with the ENEL specification EA 0375**
 - High insulating clamp made by resin reinforced by fiberglass, suitable for an easy and safe clamping of high voltage fuses having 30÷90 mm diameter. Internal surfaces covered by shagreened rubber for better grip of the fuse and 75° slanting in respect to the axis of the rod to facilitate the operations of extraction/insertion of the fuses.
 - High insulating tube-rods made by epoxy resin reinforced by fiberglass type PE certified in conformity with the International Standard CEI EN 61235 (IEC 1235).
 - Dynamometric device to limit the torque onto the fuse and to guarantee the grip without damage of the fuse.
 - Total length 1,5 m, supplied into a waterproof heavy fabric bag.



VOLTAGE DETECTORS

19 RBT 750-E

- Electronic voltage capacitive and/or resistive detector of LV presence/absence with visual and acoustic signalling.

In conformity with the ENEL specification EA 0118.

Range:

2 poles 25÷500 V a.c.

2 poles 50÷750 V d.c.

single pole 50÷500 V a.c.

- Built-in self control check for testing the accurate working of all circuits, signals and connection cable.
- Detector box made by ABS reinforced by fiberglass.
- Dimensions: 200x40x40 mm.
- Contact-electrode made by tinned brass covered by rubber.
- Nylon probe with electrode contact made by tinned brass covered by rubber.
- Supply: alkaline battery 9 V.
- Rigid plastic case.



- RBT 750-E/A for use on overhead bare lines.

Complete of insulated extension probe length 1 m, to be fitted onto the detector electrode contact, supplied into a suitable rigid plastic case.

20 RMT 1030

- Electronic capacitive detector of voltage presence/absence on MV lines and installations by visual and acoustic signalling.

Certified in conformity with the International Standard CEI EN 61243-1 - CEI IEC 61243-1.

Nominal voltage ranges to be set upon the working voltage.

Suitable for use in wet condition, either indoors or outdoors.

- Double indication of operative voltage presence: intermittent acoustic and flashing of 2 red led-lights.
- The absence of operative voltage is indicated by green led-light permanent on.
- The lighting of the orange led-light is the indication of flat battery.
- Built-in self control check for testing the accurate working of the voltage detector before use.
- Cylindrical box made by plastic material, diameter 58 mm.
- Metallic contact probe V shape.
- End fitting: threaded M10 type F or universal splined type U or hexagonal type CH12 for connection onto the head of to the insulating rod.



- Supply: alkaline battery 9 V.
- Supplied into a metallic case.

On demand can be supplied the insulating rod with or without waterproof fabric bag.

21 RMT 3090

- **Electronic capacitive detector of voltage presence/absence on HV lines and installations by visual and acoustic signalling.**

Certified in conformity with the International Standard CEI EN 61243-1 - CEI IEC 61243-1.

Nominal voltage ranges to be set upon the working voltage.

Suitable for use in wet condition, either indoors or outdoors.

- Double indication of operative voltage presence: intermittent acoustic and flashing of 2 red led-lights.
- The absence of operative voltage is indicated by green led-light permanent on.
- The lighting of the orange led-light is the indication of flat battery.
- **Built-in self control check** for testing the accurate working of the voltage detector before use.
- Box made by plastic material.
- Metallic contact probe hook shape, 360° swivel type.
- End fitting: universal splined type U or hexagonal type CH12 for connection onto the head of to the insulating rod.



- Supply: alkaline battery 9 V.

- Supplied into a metallic case.

On demand can be supplied the insulating rod with or without waterproof fabric bag.

22 RMT 1133

- **Electronic capacitive detector of voltage presence/absence on MV installations by visual signalling.**

Suitable for indoor and outdoor use, on voltages from 3 to 36 kV.

- 4 flashing red led-lights indicating the operative voltage presence.
- **Built-in self control check** for testing the accurate working of the voltage detector before use.
- Cylindrical box made by plastic material, diameter 58 mm.
- Metallic contact probe V shape.
- End fitting: threaded M10 type F or universal splined type U or hexagonal type CH12 for connection onto the head of to the insulating rod.
- Metallic case.

The detector can be supplied together with a detachable insulating rod. Standard length 1,2 m (different lengths on demand). The rod can be supplied with or without waterproof heavy fabric bag.



23 RBM 36

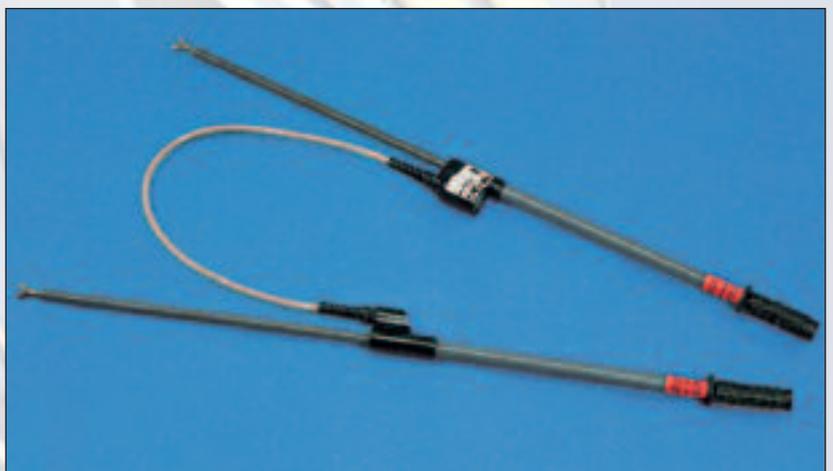
- **Phasing and voltage detector of MV presence/absence by visual signalling, indoor use.**

It can be used as:

- double poles voltage detector.
- phase relationship detector.
- HV fuse tester.

Operating range: 5÷36 kV

- Composed by two high insulating rods complete with rubber handle with hand guard. The poles are connected one to the other by a high flex insulated cable, protected by cover sheath, length 1,2 m.
- One of the two rods is provided with led-lights voltage indicators, the other rod is used merely to close the circuit.
- Two high impedance antennas, made by high insulating material, completed with electrodes, connectable onto the head of the two rods.
- Total length of each rod complete of antenna: 1,17 m.
- Metallic case.



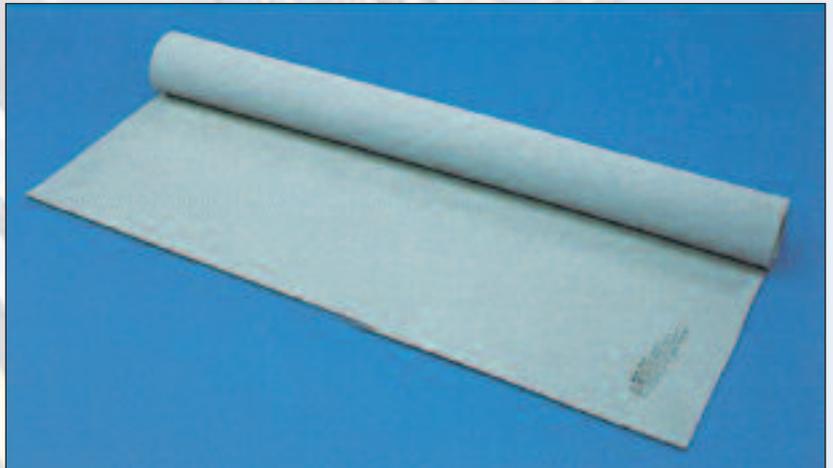
Accessory:

contact antennas extension: 0,62 m length.

INSULATING PRODUCTS AND MATERIALS

24 Insulating rubber carpets

- ❑ Insulating rubber carpets, grey colour, antisliding clothing surfaces
- ❑ WI 3/100 - certified in conformity with the International Standard IEC 1111 - CEI ENV 61111 - CLC/TS 61111 (CLASS 3).
Nominal thickness: 3 mm.
Width: 100 cm.
Supplied in rolls 10 – 20 – 30 m lengths.
Test voltage 30.000 V.
Max operating voltage 26.500 V.
In conformity with the ENEL Specification EA 0362.
- ❑ WI 4,5/100 – in conformity with the International Standard IEC 1111 – CEI ENV 61111 – CLC/TS 61111 (CLASS 4).
Nominal thickness: 4,5 mm.
Width: 100 cm.
Supplied in rolls 10-20 m lengths.
Test voltage 40.000 V.
Max operating voltage 36.000 V.
- ❑ WI 6/100 - certified in conformity with the International Standard IEC 1111 - CEI ENV 61111 – CLC/TS 61111 (CLASS 4).



Nominal thickness: 6 mm.
Width: 100 cm.
Supplied in rolls 10-20 m lengths.
Test voltage 40.000 V.
Max operating voltage 36.000 V.

25 ISOLPLAST 353

- ❑ Insulating cover for temporary protection against accidental contact at energized LV installations up to 1000 V.
ISOPLAST 353/03
Flexible, transparent, thickness 0.3 mm, acid and oil resistant, self extinguishing.
Voltage test: 5 kV.
Maximum absorbed current at the voltage test: 0,4 mA.
Perforation voltage: 16 kV.
Tensile test: 18,4 N/mm².
- Types:**
- ❑ **ISOL/R** – Drum 1.4 m height, length 55 m.
 - ❑ **ISOL/T** – Cover with plastic button-holes. Size 800x1000 mm. (different sizes on demand)

Accessories:

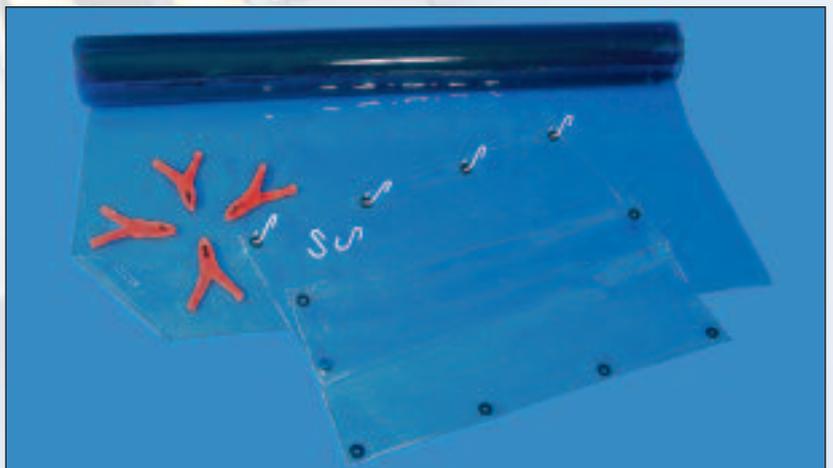
- PI/96** – Insulating spring clamp, beaks opening 45 mm.
- GA/5** – "5" insulating hook for hanging cover at button-holes.

ISOPLAST 353/05

In conformity with the International Standard CEI ENV 61112 - Class 0 - Category M.

In conformity with the ENEL Specification EA 0337.

Flexible, transparent, thickness 0.5 mm, acid and oil resistant, self extinguishing.
Voltage test: 5 kV.



Withstand test voltage 10 kV.
Maximum absorbed current at the voltage test: 0,4 mA.
Tensile test: 19,1 MPa.

Types:

- ❑ **ISOL/R-05** – Drum 1,4 m height, length 30 m.
- ❑ **ISOL/T-05** – Cover without plastic button-holes, size 800x1000 mm (different sizes on demand).

Accessories:

- PI/96** – Insulating spring clamp, beaks opening 45 mm.

26 Dielectric gloves

- ❑ CE mark in conformity with the European Standard EN 60903 (International Standard IEC 903).
- Insulating gloves in natural latex, individually tested at the voltage value corresponding to the class indicated.

Type	Class	Voltage test	Voltage use
GI 2.5	00	2.500 V	500 V.
GI 5	0	5.000 V	1.000 V.
GI 10	1	10.000 V	7.500 V.
GI 20	2	20.000 V	17.000 V.
GI 30	3	30.000 V	26.500 V.
GI 40	4	40.000 V	36.000 V.

Accessory: CUST/GI - insulating plastic case for transport or for fixing to the wall.



27 VPG 90

- ❑ Pneumatic inflation tester for detection of eventual perforations on dielectric gloves
- Made by thermoplastic material.
- Upper part tapered to allow easy insert and fixing of glove by the two elastic rings and provided with no return valve.
- Lower side is composed by inflating body pump with compression spring and rubber type o-ring for seal and sliding.
- Suitable for periodic inspection test as specified by the European Standard EN 60903 (International Standard IEC 903).



28 Insulating platforms

- ❑ Insulating platform with anti-slip surface made by resin reinforced by fiberglass, dimensions 500x500x40 mm.
- Insulating plastic legs, screw connection to the body of the platform. Legs are slanted so to prevent the platform from tilting. Indoor use.
- ❑ WI 30 – nominal voltage 30 kV.
Height: 260 mm.
In conformity with ENEL specification.
In conformity with the NBN 761.01 Standard (BELGIUM).
- ❑ WI 45 – nominal voltage 45 kV.
Height: 310 mm.
Outdoor use.
Legs extended by insulating fiberglass tubes increasing the height from the ground. Each leg is equipped by rubber bells.
- ❑ WI 30 E – nominal voltage 30 kV – height 350 mm – 2 rubber bells.
- ❑ WI 45 E – nominal voltage 45 kV – height 430 mm – 3 rubber bells.



- ❑ WI 60 E – nominal voltage 60 kV – height 510 mm – 4 rubber bells.

PRODUCTS FOR RAILWAYS LINES AND INSTALLATIONS

29 WI DLC/RFI

- Short circuiting and grounding equipment for railway contact line 3 kV d.c.

In conformity with technical specification RFI (Italian Rail Network) – Technical Direction of Energy and Electric Traction - RFI/DMA.IM STF TE 48 Ed. 2004.

- WI DLC/RFI-494 Cat. RFI 817/494

Type with two elements for contact line.

Cable length 4,95 m.

- WI DLC/RFI-497 Cat. RFI 817/497

Type with two elements for feeders.

Cable length 9,2 m.

- Insulating part made by epoxy resin reinforced by fiberglass tube certified EN 61235, length 2,5 m.
- Metallic extension made by aluminium tube with conductive element made by aluminium light alloy plate connecting the ground cable's lug and the contact clamp.
- Contact clamp made by aluminium light alloy fixed onto the upper end of metallic extension rod, clamping the conductors of the contact line.



- Total length. 4,6 m.
- Extraflexible electrolytic copper cable, covered by transparent silicone sheath, section 95 mm².
- Ground clamp clamping onto the rail by means of steel milling jaws.
- Heavy waterproof fabric bag on demand.

30 WI 560/RFI

- Short circuiting and grounding equipment for high voltage overhead lines and installations up to 150 kV.

Certificate in conformity with the International Standard CEI EN 61230 (IEC 1230).

In conformity with the technical specification RFI (Italian Rail Network) DI/TC.TE STF LP 002 Ed 01/2000.

- WI 560/RFI-486 – Cat 817/486 with cables section 50 mm², length 8 m each – insulating rod type PV3/600G total length 6 m in three elements.

- WI 560/RFI-488 – Cat 817/488 with cables section 95 mm², length 6 m each – insulating rod type PV2/400G total length 4 m in two elements.

- 3 Screw type contact clamps made by light alloy. Clamping capacity: conductors 5-60 mm diameter. Suitable for use on oxidized conductors. Lower ring for fastening and unfastening.
- 3 Extraflexible electrolytic copper cables covered by transparent silicone sheath.
- 3 Ground clamps made by press forged brass. Clamping capacity: round conductors and bars up to 40 mm.
- Metallic case.



- Insulating rod made by synthetic resin reinforced by fiberglass, in two or three elements length 2 m each, with quick couplers and hook for manoeuvring the clamps.
- Heavy fabric bag for the rod.

31 WI 33-120

- ❑ Short circuiting and continuity equipment for rails.
- 2 Clamps made by press forged brass. Clamping capacity: on the lower part of the rail.
- Extraflexible electrolytic copper cable covered by transparent silicone sheath. Section 120 mm², length 1,5 m.
- Rigid plastic case.



32 RTC 3600/FER

- ❑ DC voltage electronic detector with visual and acoustic signalling for use on railways lines and installations.

Suitable for indoor and outdoor use, on voltages 500÷3.600 V d.c.

- Double indication of voltage presence: intermittent acoustic and visual by flashing of 2 red led-lights.
- The absence of operative voltage is indicated by the green led-light permanent on.
- The lighting of the orange led-light is the indication of flat battery.
- **Built-in self control check** for testing the accurate working of the voltage detector before use.
- Box made by plastic material.
- Metallic contact probe hook shape, 360° swivel type.
- End fitting: universal splined type U for connection onto the head of the insulating rod.
- Supply: alkaline battery 9 V.
- Electrolytic copper cable covered by plastic sheath for connection to the ground clamp. Section 1 mm², length 8 m (different lengths on demand).
- Ground clamp.
- Case containing the detector.



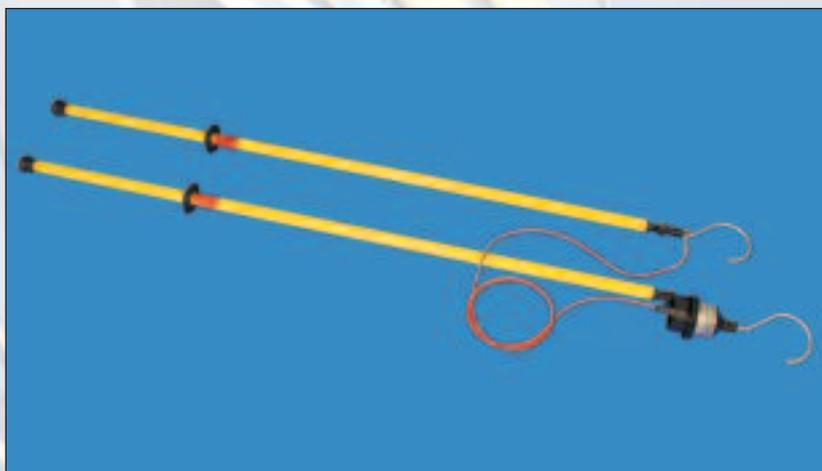
- Insulating rod made by resin reinforced by fiberglass, total length 4 m in two elements (different lengths on demand) connecting between them by quick coupler.
- Heavy waterproof fabric bag containing the insulating rod.

33 RTC 1800/FIL

- ❑ DC voltage electronic detector with visual and acoustic signalling for use on trolley-bus lines.

Suitable for indoor and outdoor use, on voltages 385÷1.800 V d.c.

- Double indication of voltage presence: intermittent acoustic and visual by flashing of 2 red led-lights.
- The absence of operative voltage is indicated by the green led-light permanent on.
- The lighting of the orange led-light is the indication of flat battery.
- **Built-in self control check** for testing the accurate working of the voltage detector before use.
- Box made by plastic material.
- Metallic contact probe hook shape, 360° swivel type.
- End fitting: universal splined type U for connection onto the head of the insulating rod.
- Supply: alkaline battery 9 V.
- Electrolytic copper cable covered by plastic sheath for connection to the negative conductor. Section 1 mm², length 2 m (different lengths on demand).
- Case containing the detector.



- 2 Insulating rods made by resin reinforced by fiberglass, each total length 4 m in two elements (different lengths on demand) connecting between them by quick coupler. The first is complete with a metallic hook contact probe, the second with attack for the voltage detector.
- Heavy waterproof fabric bag containing the insulating rod.

34 RTC 1800/TRM

□ DC voltage electronic detector with visual and acoustic signalling for use on tramways and underground lines.

Suitable for indoor and outdoor use, on voltages 385÷1.800 V d.c.

- Double indication of voltage presence: intermittent acoustic and visual by flashing of 2 red led-lights.
- The absence of operative voltage is indicated by the green led-light permanent on.
- The lighting of the orange led-light is the indication of flat battery.
- Built-in self control check for testing the accurate working of the voltage detector before use.
- Box made by plastic material.
- Metallic contact probe hook shaped, 360° swivel type.
- End fitting: universal splined type U for connection onto the head of the insulating rod.
- Supply: alkaline battery 9 V.
- Electrolytic copper cable covered by plastic sheath for connection to the ground clamp. Section 1 mm², length 8 m (different lengths on demand).
- Ground clamp, magnetic base type, for connection on the rail.



- Case containing the detector.
- Insulating rod made by resin reinforced by fiberglass, total length 4 m in two elements (different lengths on demand) connecting between them by quick coupler.
- Heavy waterproof fabric bag containing the insulating rod.



PROTEZIONE CONTRO I RISCHI ELETTRICI

20019 SETTIMO MILANESE (MI) - Via Podere la Vigna, 7/9
Tel. 02 33510332 r.a. - Fax 02 33510325
www.workitalia.it - e-mail: webmaster@workitalia.it