

HV JUICE



THE EQUIPOTENTIAL ZONE

What is it and how do you build one of your own?



**MV Earth Set
with Attached
Earth Stick**
PAGE 2

www.transnet.co.nz

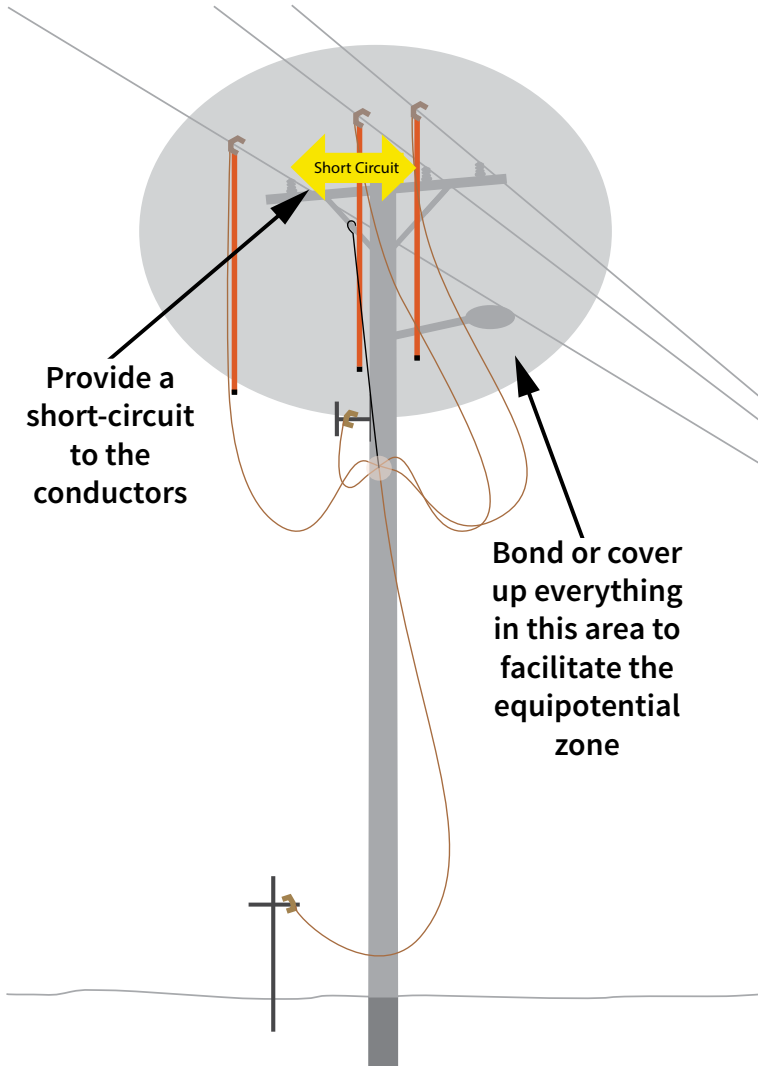


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THE EQUIPOTENTIAL ZONE



MV EARTH SET WITH ATTACHED EARTH STICK

The Ritz Temporary Earth Set short-circuits and earths conductors, ensuring the risk of harm arising from any advertent introduction of a hazardous voltage will be minimised by protection operating as quickly as possible. These temporary earth sets have 35mm² or 50mm² flexible Copper conductor and fully insulated hotsticks for safe and easy application. The sticks are permanently attached to the clamps, giving an even greater visual reference of the earthed zone. Easy to install, simply position the clamp and tighten onto the conductor using the attached hotstick.

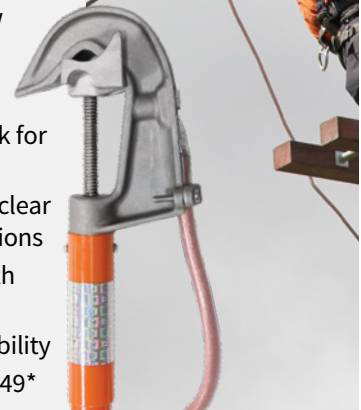
These earths are a well known and extensively used design here in New Zealand.

Features

- Reflector at the top of each stick for night time visual check
- Flexible Copper conductor with clear sheath for ease of visual inspections
- Factory test report supplied with every set
- Unique serial number for traceability
- Inspected & tested to ASTM F2249*

Set includes:

- 3x 3m leads attached to fully insulated line clamp hotsticks
- 1x 9m lead from cluster to ground with ground clamp
- 1x 1m lead from cluster to pole with ground clamp to bond pole metal work
- 1x heavy duty storage bag
- 1x 1m earth stake
- 1x Acrylic cluster cover for easy fast inspection of connections



Earthing applied to ensure operation of circuit protection and facilitate creation of equipotential zone at working position.

Talk to us now for all your equipotential bonding requirements.



*Standard Specification for In-Service Test Methods for Temporary Grounding Jumper Assemblies

Cat No.	Description
CAR/ST-NZ-HG14880	RITZ PORTABLE EARTH SET, 35MM ²
CAR/ST-NZ-HG14880-5	RITZ PORTABLE EARTH SET, 50MM ²
TN11-33KV/SET	RITZ PORTABLE EARTH SET, 35MM ² , 2 PIECE STICKS



BONDING REQUIREMENTS

With the recent changes to Equipotential Bonding requirements you might find your temporary earths are no longer enough to adhere.

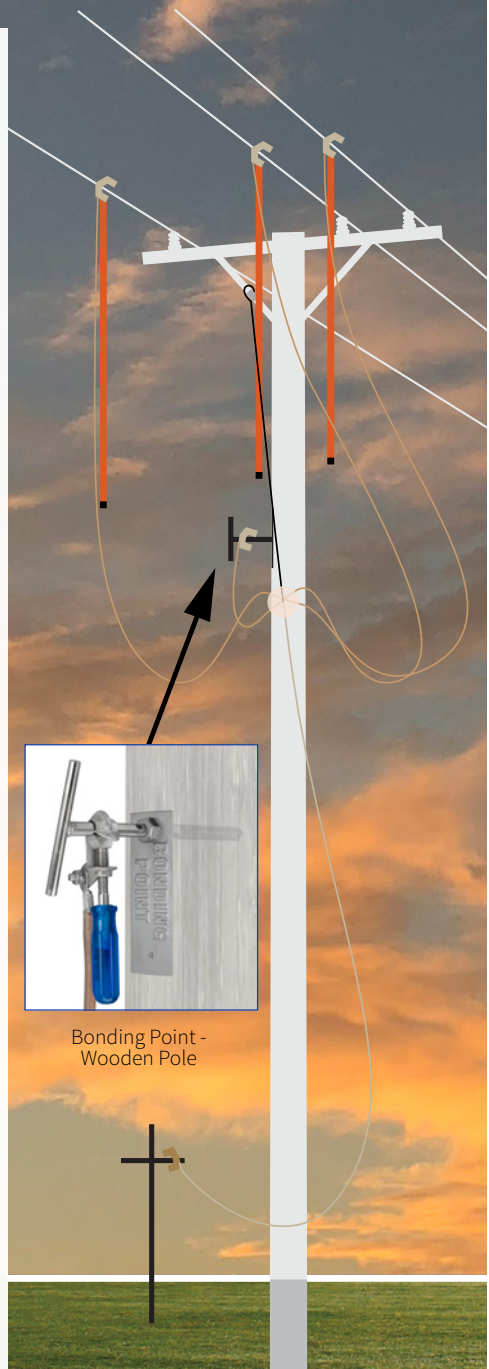
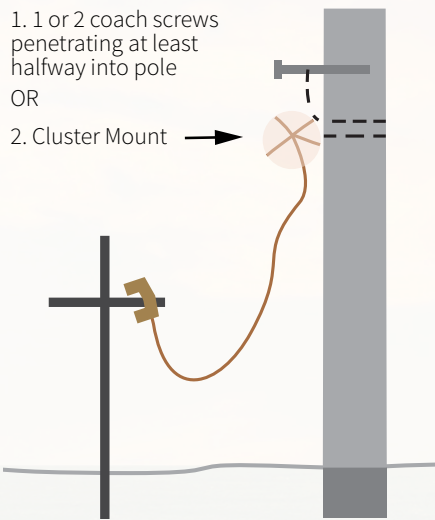
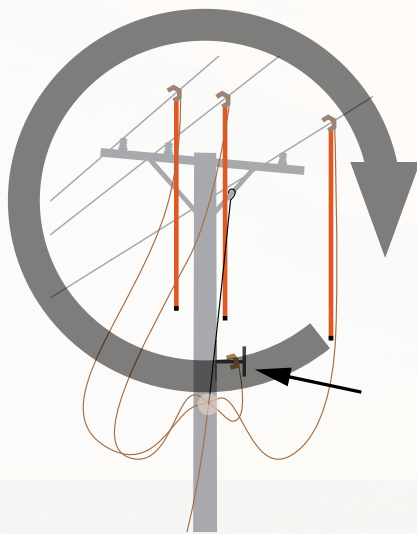
Working with local pole suppliers and asset owners we developed a 316 Stainless Steel T Handle to screw directly into the internal thread of the bonding point on new generation concrete poles. The standard T bar has enough room for two clamps, and the longer version has enough space for 3. There is also an option to permanently fix a lead from the T bar handle directly to the central cluster of your portable earth set.

If you're working on wooden poles there won't be an existing bonding point, so for wooden poles we have a 316 stainless steel coach screw with an internal thread the same as that found in the new generation concrete poles. The coach screw is designed to accept the same T bar handle. Once installed, this coach screw becomes a permanent fixture. In order to identify this coach screw is in fact a bonding point, we have a 316 Stainless Steel Bonding Point sign which is fitted when the coach screw is installed.

We also have the ability to cater for your company's custom requirements.

WORKING POSITION EQUIPOTENTIAL ZONE

Equipotential zone for wood poles without pole steps supporting 11kV (but not higher). For clarity, miscellaneous bonding of stays etc. is not shown.



Bonding Point - Wooden Pole

EQUIPOTENTIAL COMPONENTS



316 Stainless Steel Bonding Point Sign

316 Stainless Steel Coach Screw



316 Stainless Steel T Handle

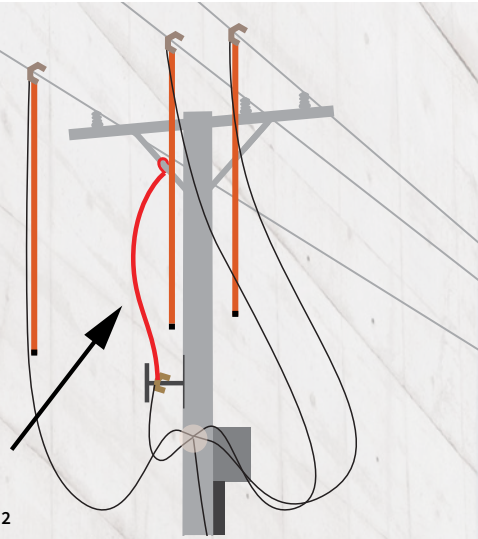


T Handle & Lead



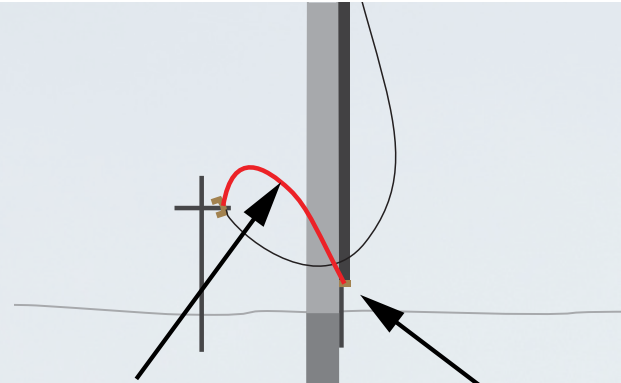


Miscellaneous bonding to achieve equipotential zone - minimum recommended size 25mm²



All leads liable to carry full fault current must be same size as cross section of portable earths

Permanent equipment earth



LV EARTH SETS, JUMPERS, & TRUCK EARTHS

We've selected products that are lightweight, flexible, and easy to use as an essential part of your toolkit. The beauty of these ranges is that they are completely customisable, so whatever your application, the perfect lead can be assembled right here at TransNet.

FEATURES

- Customisable clamp, cable size, cable length, & design - simply advise us of your requirements
- Fast, easy installation and removal
- Two common cable sizes (35mm², 50mm²) and four clamp types available (other cable sizes available on request)
- Sturdy carry bag also available

These temporary earthing products are **fully tested** by our In-House Test Lab



A. LV JUMPER CLAMPS



1. ATR13047-1 | 2. ATR13047-2

NEW Grounding Clamps (Red / Black)

- Fast installation
- **Fault rated/tested 10kA 0.5 sec**
- Suitable for conductors or flat bars
- Connects to almost anything

3. BLP12-TIN

S/Driver Clamp (Blue)

- Jaw opening 5-19mm OD
- Split bolt capacity, tap conductor 5-8mm OD

4. SC-P101559-02

S/Driver Clamp (Yellow)

- Jaw opening 0-27mm OD
- Strain relief accommodates 25-35mm² lead

B. COPPER CONDUCTOR



CTC-35
35mm² cable

CTC-50
50mm² cable

- Clear sheath for visual inspections
- Extra flexible electrolytic cable
- 750V insulated protection made of crystal clear PVC for visual inspection of the copper filaments
- Custom lengths available in 0.5m increments

C. CENTRE CLUSTER

Clear centre cluster for visual inspection of connection integrity



G4754-1/ACRYLIC





TN277NZHP HIGH VOLTAGE DETECTOR

The TN277NZHP is an ideal tool for checking the presence of AC high voltages and AC low voltages in cables, wall outlets, fuses etc. It provides a non-contact detection for AC voltages from 50V ~132kV. It is also suitable for industrial, utility and mine safety applications.

Features

- Non-contact detection of live voltage
- Detect residual & induced voltages
- Sturdy tough case
- Meets requirements of EEA Technical Guide: Portable Equipment for Work On or Near Conductors
- Meets requirements of ASTM F1796-09, IEC 61243-1 & IEC 61243-2
- 2 ranges for selection:
LOW : 50V~1.5kV
HIGH : 1.5kV~132kV
- Circuit test function
- Low power consumption

APPLICATIONS

- Non-contact detection of live voltages
- Find faults in cables
- Check and detect live high voltage cables
- Trace live wires
- Check high frequency radiation
- Detect residual or induced voltages



CAT NO. TN277NZHP

Operating Temp	0°C ~50°C
Dimensions	318 (L) x 75 (W) x 71 (D)mm
Weight (incl. battery)	Approx. 277g
Power Source	9V (6LF22) x 1 Alkaline battery
Safety Standards	EN 61326- 1 EN 61000-4-2 EN 61000-4-3
Accessories	Instruction Manual, Carry Case, Battery

AS/NZS 4836:2011

ARE YOU COMPLIANT?

AS/NZS 4836:2011 SECTION 9

PERSONAL PROTECTIVE EQUIPMENT

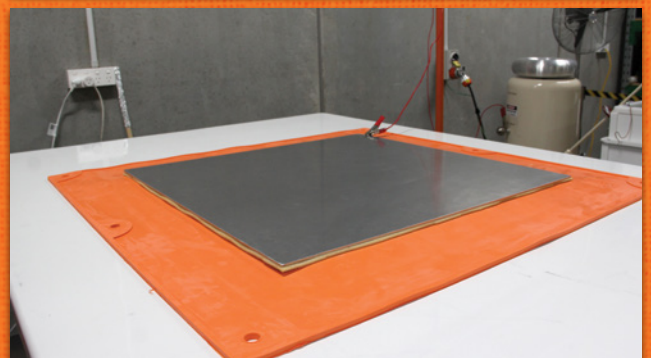
This Standard states the minimum requirements for Personal Protective Equipment (PPE) for working on or near Low Voltage Installations and Equipment. Not sure if this relates to you? Give us a call and we can advise you what PPE equipment you're required to have and whether yours is up to scratch.

SOME PPE REQUIRES IN-SERVICE TESTING

GLOVES • MATS • BLANKETS • BOOTS

Are you interested in reduced lead times for testing? All your new TransNet gear will be tested ready to go into service as soon as it's in your hands.

Have a specific testing requirement? Talk to your local rep or contact customer services today.



WE OFFER **FREE** TESTING OF
NEW TRANSNET PRODUCTS



TIC-300PRO | VOLTAGE DETECTOR

Rugged and reliable for utility, industrial, heavy manufacturing and mine safety applications, the Amprobe TIC 300 PRO with VolTect™ detects voltages in low, medium and high voltage applications with bright visual and loud audible alerts.

KEY FEATURES

- Utility tool for checking transmission lines, power distribution equipment, down power lines, fuses, and load break connectors
- Lower voltage setting for checking voltage presence in breaker panels, breakers, power outlets and wiring
- Verifies presence of Voltage from 30 VAC to 122,000 VAC (122kV)
- Non-contact AC voltage detection
- Visual and audible voltage indication
- Self-test verifies that tester works properly
- Ergonomic design with a convenient handle
- Drop-proof to 6 feet
- Instruction manual & handy carry case included

2xxHVD | CAPACITIVE HIGH VOLTAGE DETECTOR

These HVDs have been designed to meet the latest IEC standards. They are self starting and automatically activated when the high voltage is applied to the contact electrode. They can also be manually armed before use by depressing the "TEST/ARMING" button. These detectors are intended for use on sinusoidal (50 or 60Hz) high voltage systems. Models are available to cover systems voltage from 11kV to 132kV.

KEY FEATURES

- Meets IEC 61243-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-32, IEC 60529
- Automatic and manual activation
- Indoor/outdoor use, in all weather
- Rugged, reinforced nylon molded casing
- Shock, drop and vibration resistant
- Low battery detection
- Supplied with a cleaning kit
- Visual indication shows armed unit
- Visual and audible indication when voltage is detected
- Approximate weight: 550g (w/ battery)
- Compatible with all hot sticks
- Auto off (if no voltage detected)
- Comes in handy storage/carry case
- Built-in proving and self-test circuit
- High bright color-coded LEDs
- Uses standard 9V battery (included)
- Interchangeable contact electrode
- Customised threshold on demand
- IP65, waterproof design

TIC-300PRO



225HVD

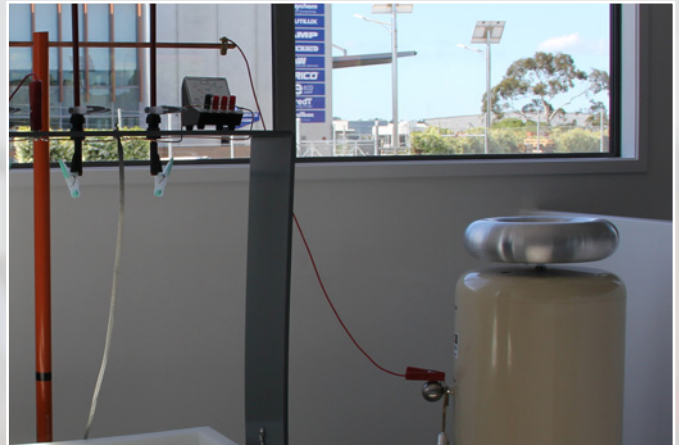
Cat No.	System Voltage (kV)	Threshold Set Within Range (kV)	Threshold (kV)
213HVD	11	1.65–4.4	3.02
214HVD	33	4.95–13.2	9.07
215HVD	66	11–13	12
216HVD	132	13.2–59.4	13.2
217HVD	11/33	3.3–4.95	4.12
218HVD	44/132	13.2–19.8	13.2
219HVD	66/132	13.2–29.7	13.2
222HVD	11/44	4.4–4.95	4.75
223HVD	33/132	13.2–14.85	13.2
224HVD	44	6.6–17.6	12
225HVD*	USER DEFINED		USER'S SPEC.
226HVD	12/36	3.6–5.4	5.4

*User defined parameters may not comply with IEC/EN 61243-1



OUR NEWEST FACILITY IS UP AND RUNNING

WITH SOME PRETTY NEAT ADDITIONS



Purpose built facility

HV EQUIPMENT TESTING

- Items requiring testing prior to going into service leave TransNet fully tested/certified, including
 - Insulating gloves & sleeves
 - Insulating mats & blankets
 - Live line sticks & operating sticks
 - Hard & soft covers
 - All live line equipment
 - Proximity testers (contact & non-contact)
 - Portable earths – all voltages
- Electrical testing up to 120kV
- All testing complies to requirements of industry
- Helping our customers comply to legislative requirements & avoid costly downtime
- Test certificates issued & recorded within comprehensive database

PRODUCT EVALUATION

- Products tested electrically & mechanically to ensure standards are met
- Customer specific requirements evaluated & prototyped
- Product performance demonstrations to customers

SWITCHGEAR ASSEMBLY

- Allied ABS assembly area
 - Fully customisable to meet customer specification
 - Stringent QA procedures to ensure consistency
 - 100% traceable manufacturing of components back to source/suppliers

G&W

- Switches/Reclosers
 - Fully electrically tested/commissioned, simply mount & operate





DIELECTRIC GUMBOOTS

These high spec dielectric safety gumboots have been designed for use on and around electrical installations. They have been manufactured with specially formulated insulating layers offering electrical protection over the whole boot.

Hand-built on the popular Quatro last, these gumboots give a generous fit while also locking the ankle and preventing heel slip in use.

FEATURES

- Fully waterproof
- Heel kick lug
- Toe scuff guard
- Quatro comfort footbed
- Foxing wear layer

STANDARDS

- ASTM F1116 &
- ASTM F1117 – 20kV



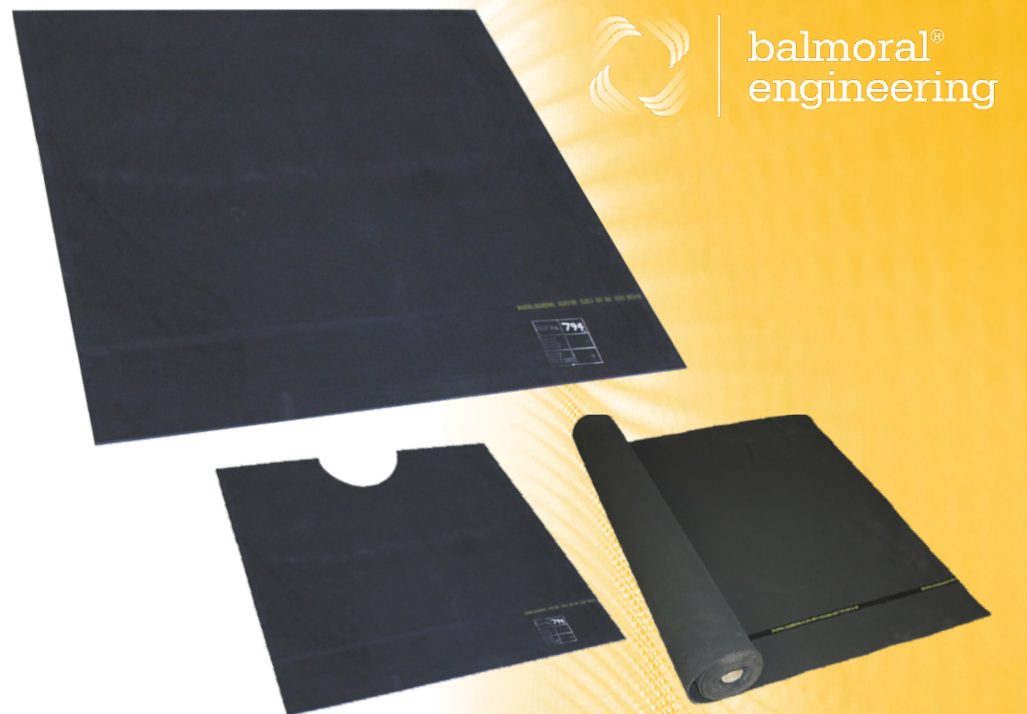
Cat No.	
COLOUR	YELLOW/BLACK
CONSTRUCTION	VULCANISED RUBBER
FIT	WIDE
UPPER MATERIAL	RUBBER
LINING MATERIAL	QUICK DRYING POLYESTER
OUTSOLE MATERIAL	INSULATING, OIL RESISTANT, NITRILE RUBBER
OUTSOLE DESIGN	SUREGRIP 360°
SAFETY TOE CAP	WIDE, COMFORTFORM STEEL TOE CAP
SLIP RESISTANCE	SRC
SAFETY FEATURES	SB E HRO FO

INSULATED GROUND MATS

These insulated ground mats are manufactured specifically for foot traffic. Made from high quality EPDM this matting is designed to be placed in front of switchgear, motor control centres, and other energised apparatus providing personal protection for workers.

The insulated mats are available with protective ratings ranging from 650V through to 36kV. The correctly rated insulated mat must be selected for the nominal voltage of equipment being worked on.

All items are tested prior to delivery meaning they can go straight into service upon arrival.



balmoral[®]
engineering

Custom cut-outs and cut-to-length mats available on request, contact us for more information.

Cat No.	Dimensions	Description	Features	Colour
1810	1000MM × 1000MM	EPDM GROUND MAT	CLASS 0 1000V	BLACK
1814	× 6MM		CLASS 4 36KV	



INSULATED BLANKETS & DRAPES

Covering energised equipment is easier than ever with this extensive range of insulated blankets and line covers offered by TransNet.

Our blankets and drapes are available with protective ratings of up to 36kV. The correctly rated blanket or drape must be selected for the nominal voltage of equipment being worked on.

Manufactured from PVC & EPDM, these items can be easily affixed to the equipment by peg, magnet or cable tie. Eyelet blankets are flexible and feature a reinforced beaded edge for added strength.

PVC and EPDM offer superb flexibility, allowing for ease of application in tight working environments.

All items are tested prior to delivery meaning they can go straight into service upon arrival.



Cat No.	Dimensions	Description	Features	Colour
9018	300MM × 300MM		PLAIN STYLE	
10008	450MM × 300MM	650V EPDM SWITCHBOARD DRAPE	EYELET FASTENING	YELLOW/ BLUE
10009	600MM × 450MM		EYELET FASTENING	
10010	900MM × 600MM		EYELET FASTENING	
10011	1800MM × 900MM		EYELET FASTENING	
9007	600MM × 450MM	650V PVC SWITCHBOARD DRAPE	PLAIN STYLE	YELLOW/ GREY
9008	400MM × 300MM		PLAIN STYLE	
10005	600MM × 450MM		EYELET/MAGNET FASTENING	
900E	914MM × 914MM (36" × 36")	TYPE II SALCOR RUBBER, CLASS 4 BLANKET	SOLID	ORANGE
1300			SPLIT	



FEATURES AND BENEFITS

- Specifically designed product for use in utility applications
- Touch safe - no bare live parts
- Easy to install
- Can be installed in a range of pillars & cabinets
- 185mm² to 300mm² mains & up to 70mm² service connections
- Tested to 600 AMPS
- Capacity to house additional service fuses for street lights or customers
- Galvanised Steel pillar base and UV stable Rotathene 6329 plastic pillar body
- All products come with an installation instruction and components list
- Functional link and isolation capacity allowing minimal customer outage minutes during fault conditions
- To aid quick and easy fault finding in LV networks
- Maximum flexibility control of your LV network



THE SAFER WAY TO SWITCH & ISOLATE LV MAINS CABLES

This 3-Way Open/Switching Point Link Pillar is predominantly used for standard link and isolation procedures and load balancing. The TE Link Pillar is designed to be used in a 3 phase, 400 Volt, 50 Hz MEN distribution system, to connect/disconnect or parallel LV feeders.

- No bare live parts - completely encased Copper bus for worker safety
- Ability to include service connections if required
- Tinned Brass connections eliminate possibility of corrosion
- Accommodates main cables 185mm² up to 300mm²
- Tested to 600 Amps

Learn more about the Tappat range of products at te.com



Note: picture shows only one example of how the Tappat Link Pillar can be used. Contact us for assistance on a solution for your application.



YOUR COMPLETE LV SWITCHING & ISOLATING SYSTEM



FEATURES AND BENEFITS

- Range taking up to 300mm² mains cable
- Fully insulated CAMLOK link tested to 600 Amps
- Eliminates above ground consent issues
- Pit and lid meet B125 & EN124 standards
- Pit depth can be tailored to the requirements of each installation by adding or removing enclosure modules
- Complete solution, can be supplied tailed or untailed
- Jacking screws allow lid adjustment for uneven ground levels
- Functional switching ability allows for easy sectionalising during fault conditions reducing outage times
- Touch safe fittings, no exposed live metal work
- Can accommodate PILC and XLPE cables
- Complies with all applicable international standards: EN50393:2006, EC60439.5:2006, Ed2.0, C.81/3:1996, Pit & Lid meet B125 & EN124 standards
- Range-taking - mains cable up to 300mm²
- Pit is made of durable HDPE plastic
- Two piece concrete lid can hold 45N/mm² & comes with an identification plate cast into it
- Stabilising base pad included with every kit
- Complete with circuit I.D. labels

Designed collaboratively with our utility customers, the Tappat underground link box is perfect for new installations or as a like for like replacement for existing bitumen filled link boxes at the end of their asset life.

Available untailed or pre-tailed with flexible copper tails ready to joint to existing cables on site. It is available in 2way or 4way configuration with 600amp CAMLOK links included.

- Safe and economical to install & operate
- Fully submersible
- Aesthetically pleasing in ground installation

Learn more about the Tappat range of products at te.com



Cat No.	Description	Dimensions (mm)
TAP10710-NZ	TAPPAT 4 WAY LINK BOX COMPLETE - UNTAILED	762 × 609 × 564H
TAP10710-NZ-TAILED	TAPPAT 4 WAY LINK BOX COMPLETE - TAILED	762 × 609 × 564H

New Generation Din Switches

smartARS Pro Disconnectors



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NEW ZEALAND
Ph 0800 442 182
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TransNet Tonga

Nuku'alofa

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Features

- Equipped with delta contacts
- 1 pole & 3 pole configurations
- Available in 00, 1, 2, & 3
- Designed for using with current transformers & ammeters
- Silver plated contacts provide low power loss
- Double clearance between open contacts
- Arc chambers with deionization plates over every contact
- Fast installation using PPN technology
- Remote monitoring
- Built-in current transformers
- Highest flammability class V0 achieved
- Reversibility - top/bottom cable terminal connection
- All plastic parts are made from Halogen fibreglass strengthened, self-extinguishing material
- Wide range of accessories
- Designed to go on 185mm Busbar

Functionality

- Making and breaking operations are completed with determined movement
- Parallel moving, double contact system
- suitable for top cable terminal connections
- Voltage test is performed through test holes for testing while live
- Possible installation of earthing device
- Fast installation using PPN technology
- Adapted to existing assembly systems

Applications

- LV distribution boards
- TX substations
- Industrial LV assemblies
- Cable cabinets



APATOR

For technical specifications or ordering information please contact us

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