

# HV JUICE

**STAY SAFE**

**AT WORK**



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**RPIT Plug-In Termination System**  
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**SAFER**  
**2 METRE LEAD**  
**SAFER**

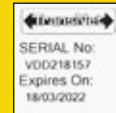
This CAT IV 600V voltage and continuity tester is easy to use by utilities and electricians alike. With a 2 metre lead between the probes there is little chance of damage caused by stretching. Featuring rubberised grips, bright LCD display, and supplied tested and tagged for immediate use, it's got everything you need.

### FEATURES & BENEFITS

- **Supplied tested and tagged for immediate use**
- 2000-count digital display (LCD type)
- Test leads positioned at 19mm apart
- Interchangeable probe tip for 2mm and 4mm
- 2m lead between probes
- Polarity test
- Audible continuity test
- Auto sensing function for: voltage (AC/DC),  $\Omega$ , diode
- Measurement function:
  - ACV/DCV: 1000V
  - Resistance: 2000 $\Omega$
  - Frequency: 30Hz~1kHz
- Phase rotation test
- Waterproof design, protection class IP65
- Phase / Neutral identification
- Rubberised double-moulded housing
- Flashlight function
- Safety Standard:
  - EN 61010-1 CAT III 1000 V
  - EN 61010-1 CAT IV 600 V
  - EN 61243-3
  - EN 61326-1

# TNVOT-53

## VOLTAGE & CONTINUITY TESTER



**All units are tagged & supplied with current test certificate**

### Specifications

ACV		
Range	Resolution	Accuracy
1000 V	1 V	$\pm(1.3\%rdg+5dgt)$
DCV		
Range	Resolution	Accuracy
1000 V	1 V	$\pm(1.0\%rdg+2dgt)$
Resistance		
Range	Resolution	Accuracy
2000 $\Omega$	1 $\Omega$	$\pm(2.0\%rdg+8dgt)$
Frequency		
Range	Resolution	Accuracy
30~1 kHz	1 Hz	$\pm(0.5\%rdg+3dgt)$
Continuity		
Buzzer Sounds	<200 $\Omega$	
Voltage Protection	1100 V AC / DC	
Phase Rotation Test Range	100 V~1000 V measure between 2 phases, instrument in hand	
Diode Test	0.1 ~ 1.5 V (Resolution:0.1 V)	
Operating Temperature & Humidity	0°C ~ 40°C 80% R.H. Max.	
Storage Temperature & Humidity	-10°C ~ 50°C 80% R.H. Max.	
Probe Distance	19mm apart	
Power Source	1.5V (AAA) x 2 Alkaline batteries	
Dimensions	248(L) x 68(W) x 34(D)mm	
Weight (battery included)	Approx. 232g	
Safety Standard	EN 61010-1 CAT III 1000V EN 61010-1 CAT IV 600V EN 61243-3 EN 61326-1	
Accessories	Instruction manual Alkaline batteries	



WHY TRUST AMPACT?



# FOR ALL NON-TENSION CONNECTIONS

# WHEN QUALITY CAN'T BE COMPROMISED

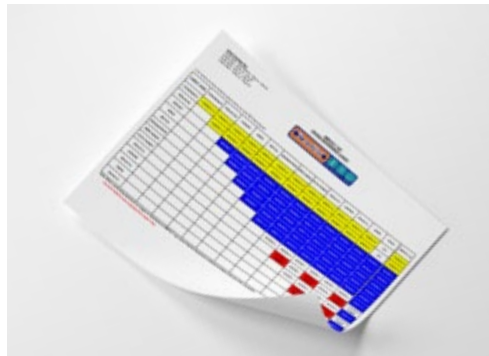


## KEY FEATURES

- Low resistance connection
- Range taking, 4.8mm–23.20mm OD in copper, aluminium & bimetal connections
- Removable & reusable with no damage to conductors
- Gel covers available to ensure integrity of the connection in harsh NZ environments (especially in bi-metal situations)
- Cost effective, long life connection
- Lightweight - easy to use
- Very price competitive - saves \$\$\$
- Exceeds requirements of international standard ANSI C119.4 Class AA
- Used throughout NZ & the world
- No variables when using the proven "AMPACT System" – same high quality connection every time
- Fast installation time



The AMPACT connector's unique spring ability reduces resistance, helping the connector and connection remain cooler.



We can design and build a custom selection chart for individual networks to reduce inventory requirements.

## OVER 2.8 MILLION INSTALLATIONS WORLDWIDE PER YEAR



TransNet offers product & tool maintenance training for the AMPACT system.

### THE WEDGE CONNECTORS DILEMMA: FIRED WEDGE CONNECTORS VS BOLT-DRIVEN WEDGE CONNECTORS VS CONNECTORS WITH THE WEDGE-SHAPED DRIVE SCREW MECHANISM

by Goran Stojadinovic

Read the complete paper here or go to <https://tinyurl.com/wedge-connectors-dilemma>



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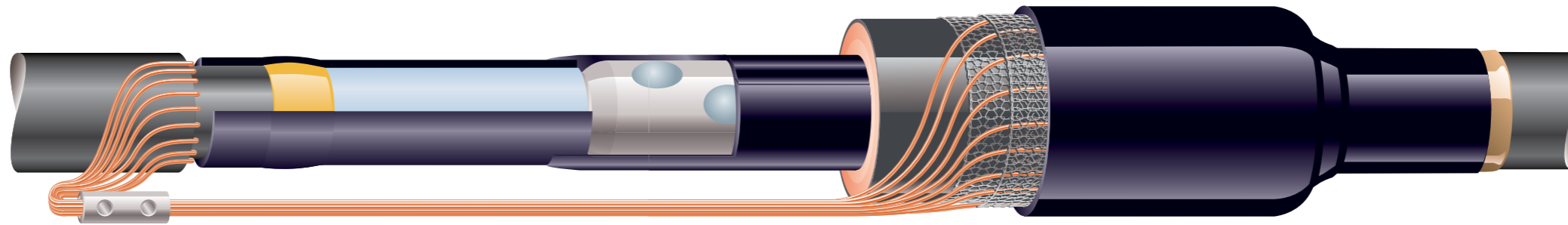
# WHY CHOOSE RAYCHEM?



## MXSU FEATURES

- Can be designed to network specific requirements
- Screen termination products can be included according to network specifications and cable fault current ratings if required
- Mechanical connectors for conductor and wire shield are supplied with the kit
- Kits are widely range taking and cover most conductor constructions including tolerances
- No crimping tools or tool maintenance required
- Short and space saving design for installation
- Improves installation reliability
- Unlimited shelf life, reduces cost
- Avoids bulky waste and costly waste disposal
- Exceeds international performance standards including CENELEC HD 629 or IEC 60502-4 for joints

## MXSU JOINTING SYSTEM FOR POLYMERIC INSULATED CABLES



### BSM TYPE SHEAR BOLT CONNECTORS FOR ALU & CU CONDUCTORS

All joint kits incorporate a Raychem screw connector with shear head bolts to ensure a reliable pre-engineered electrical connection. The pre-set shear torque of the bolts ensures that the correct contact pressure is always achieved. The specially designed contact surface on the inside of the connector breaks up any conductor oxide layer and ensures reliable service over the entire life time of the joint.

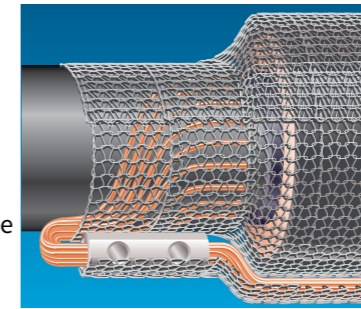
- Pre-set shear torque provides safe & reliable installation
- Removable half shell insert provides core centering
- Tin-plated and greased contact surface for corrosion protection
- Shorter length compared to compression connectors
- Excellent tensile performance due to special bolt tip design

Tested in accordance with IEC 61238-1 class A.



### SHIELD CONTINUITY

Typical shield wire cross sections up to 35mm<sup>2</sup> can easily be connected with the mechanical connector supplied in the kit. Positioned at the oversheath cut back, the connection provides a smooth profile and resists mechanical damage. Two shear bolts provide the required contact force in order to ensure safe installation and reliable performance during load cycling in service as well as during short circuit conditions. An additional layer of copper mesh is applied around the joint to provide satisfactory shielding and protection.



### ELECTRICAL STRESS CONTROL

The stress control tubing at each cable end in combination with the yellow stress grading mastic at the screen cut provide a precisely defined impedance characteristic which smoothes the electrical field. For ease of installation, a stress control patch is applied around the mechanical connector to provide a similar function.

#### Range Includes

INLINE JOINTS FOR XLPE CABLES	11KV, 22KV, 33KV
TRANSITION JOINTS FOR 1C & 3C XLPE UNARMoured CABLES	11KV, 22KV, 33KV
REPAIR JOINTS FOR XLPE CABLES	11KV, 22KV
CROSS BOND JOINTS	11KV, 33KV

## ROBUST OUTER SEALING AND PROTECTION

Oversheath replacement is capable of withstanding high mechanical stresses during conventional cable laying as well as mechanical impact occurring during the entire cable life time. The hot melt adhesive lined thick-wall heat-shrinkable tubing ensures an effective moisture seal and corrosion protection for the joint. When installed, the joints provide a similar level of protection and thickness as modern cables with PE oversheath. All voltage sheath testing commonly used today after cable laying or as control test methods have easily been passed.

The increasing popularity of gas insulated switchgear called for more appropriate connection systems for standardised bushings in accordance with EN 50181. The Raychem Plug-In Terminations (RPIT) separable connectors range has been developed to fill this need.

The inner cone termination incorporates a high-quality contact system which ensures reliable current transmission from the cable conductor to the busbar. The electrical interfaces between the silicone stress relief cone to the cable and the bushing are kept permanently sealed using a pressure component. This element is housed in the protection cover, which is sealed with heat-shrinkable tubing.

The installation and plug-in of inner cone terminations is simple by using a silicone component and offering an easy-to-handle installation tool, which is compatible with industry-wide standards. In addition to TE's Raychem RPIT inner cone terminations, TE offers a full line of other RPIT accessories such as bushings, insulating caps and current testing tools to meet any needs and support our customers.

Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.



## FEATURES

- Separable inline connection for high current, gas insulated switchgear and transformers up to 52kV
- Termination mates interfaces in accordance with EN 50180 (and EN 50181 for inner cone connections)
- Contact parts are designed for stranded circular Aluminium or Copper conductors in accordance with IEC60228
- Metal-enclosed, hermetically insulated and suitable for outdoor use
- Special designs for wind power stations and offshore applications with bronze protection cover
- Optional voltage detection point

Cat No.	Size	Nominal Current (A)	System Voltage (kV)	Cross Section (mm <sup>2</sup> )	Dia. over Conductor (mm)	Dia. over Insulation (mm)
RPIT-321X			12	120-400	12.0-24.6	21.0-33.0
RPIT-521X	2	800	24	50-400	7.6-24.6	21.0-39.0
RPIT-621X			36/42	50-400	7.6-24.6	23.5-42.0
RPIT-331X			12	240-630	17.0-32.5	26.0-40.0
RPIT-33XX			12	240-1000	17.0-40.0	26.0-58.8
RPIT-531X			24	150-630	13.0-32.5	26.0-42.5
RPIT-53XX	3	1250	24	150-1000	13.0-40.0	26.0-58.8
RPIT-631X			36/42	70-630	7.6-32.5	26.0-50.0
RPIT-63XX			36/42	70-1000	7.6-40.0	26.0-58.8
RPIT-831X			52	50-500	7.6-27.6	26.0-55.0

## RPIT PLUG-IN TERMINATION SYSTEM FOR GAS INSULATED SWITCHGEAR UP TO 52KV



Special designs for wind power stations and offshore applications with bronze protection cover available upon request.





# INTEGRATED FACE SHIELD

**14CAL/CM<sup>2</sup>  
& 28CAL/CM<sup>2</sup>  
RATED**

RETRACTABLE FACE SHIELD READY TO BE USED AT A MOMENT'S NOTICE

The ErgoS Intec power is a helmet with integrated retractable face shield to protect its wearer from getting burned in case of an arc flash incident. It is tested for European "Box-test" and American "Open-Arc-test". It is a very ergonomic solution for all day work.

**FEATURES**

- Clear/light smoke tint for easy colour determination
- Premium permanent anti-fog coating
- Helmet usable until -40°C
- Superior scratch resistance
- Improved peripheral vision

**ARC PROTECTION CLASSIFICATION**

- ASTM F2178: ATPV= 14 cal/cm<sup>2</sup> / 28 cal/cm<sup>2</sup>

**DURABILITY**

- 4 years

**COLOUR REPRODUCTION INDEX / OPTICAL CLASS**

- > 93% / Class 1

**CAT No. 7406401** 14 Cal/cm<sup>2</sup>

**CAT No. 7406501** 28 Cal/cm<sup>2</sup>



**NZ'S LEADING LIGHTWEIGHT  
ARC RATED WORK GEAR**



- Rating clearly visible
- 215gsm Woven Lenzing Blend Arc Armour fabric
- Adjustable cuffs & zip gusset
- Inherently Flame Retardant, Antistatic and Arc Flash Protection
- High tensile strength fabric
- Non-conductive zips

LIGHTEST FABRIC IN THE INDUSTRY




YOUR LOGO HERE

Made with LENZING™ FR – a sustainably produced, inherently flame-resistant cellulosic fibre – our Arc Armour PPE clothing range is not only comfortable, functional, and US NFPA 70E compliant, but also a durable and truly eco-friendly option for a variety of industrial applications.

**NEED COMPANY BRANDING?**

Talk to us about getting your Arc Armour safety gear customised with your logo.

**RANGE INCLUDES**

-  OVERALL
-  JACKET
-  CARGO PANTS

- ▶ **Very lightweight - cool to wear**
- ▶ Rugged & durable
- ▶ Premium Grade HRC2/PPE2
- ▶ Proprietary 215gsm Arc Armour fabric



**VIEW THE RANGE**



## OUTSTANDING FLEXIBLE CONTROL OF LV NETWORKS



This true 3way link pillar is prominently applied in a 3 phase, 400 A, 50 Hz MEN (Multiple Earthed Neutral) distribution system. It can be used in residential or industrial applications to energise or isolate the customer's LV network, as well as supply multiple LV feeders in parallel.

This new 3way link pillar can be installed easier and faster than its predecessor, with less cable core bending needed for terminating into the double bolted terminals. Each main core is independently separated and insulated. No cross phasing is possible.

This fully insulated and touch-safe unit is independently tested to meet the requirements of utilities.

### FEATURES AND BENEFITS

- 3x linked mains connections from 185mm<sup>2</sup> up to 300mm<sup>2</sup>, accommodates Al or Cu round or sector cables
- 6 service ports per phase, 1x70mm<sup>2</sup> and 2x50mm<sup>2</sup> per each side of the unit
- Staggered main connections run vertically to minimize cable crossings
- Phases independently separated and insulated
- Easier, faster and safer to install and operate
- Fully insulated and touch safe system; no exposed live contacts
- Suitable for both Aluminum and Copper cables
- Ability to include additional service connections if required
- True 3way switching to energise or isolate LV mains, or to supply multiple LV feeders in parallel
- Tinned brass connections eliminate possibility of corrosion
- Complete with installation instruction, network and switching labels
- Proven and reliable dovetail connection; no specialized tooling is required
- Make / Break tested - 100 x 100 amps; then 10 x 400 amps
- Tested to 600 amps

**Fits into ECOpillar EP6TALL for a compact yet accessible installation.**

TE Connectivity's TAPPATLINK 3way open/switching point link pillar is designed to maximize flexibility when it comes to standard link and isolation procedures and load balancing. Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.

- Safe and economical to install & operate
- Fully insulated and touch safe system
- Independently tested to meet the requirements of utilities

Learn more about the Tappat range of products at [te.com](https://www.te.com)





# WHAT'S INSIDE?

## TOTAL UNDERGROUND DISTRIBUTION SYSTEM

TUDS is designed to house fusing for customer services completely out of sight, safely and securely underground. TUDS have been tested to accommodate the weight of vehicles passing over them and are perfect for areas where space is an issue, store frontages, infill housing situations, retirement villages, or locations where aesthetics call for the landscape to be clean and uncluttered.

These pits were designed and built here as a solution to a specific problem faced by a New Zealand utility, and have now been in use throughout NZ & the Pacific for twenty years. The enclosure itself has been tested (AS/NZS3661.1:1993 pedestrian slip, AS3996-1992 downward force) for its ability to stand up to the elements.

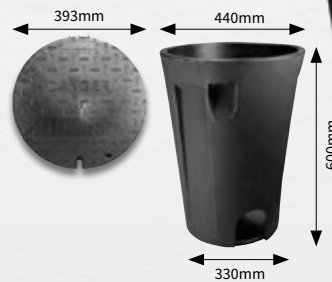
- **Unobtrusive, safe, & secure** for public - no exposed live wires
- Lid latches into place & requires a **tool for access**
- All fittings are **touch safe** and **fully submersible**
- Pit & lid manufactured from durable black **UV resistant** plastic compounds
- **Fully recyclable**
- Up to **100A** fusing possible
- Stainless steel **spring lock** available
- Kits available with **Class B & C rated** enclosures



PIT & LID DESIGNED & MADE IN NEW ZEALAND, & LOADED WITH COMPONENTS CHOSEN & IMPORTED FOR NZ SPECIFIC APPLICATIONS



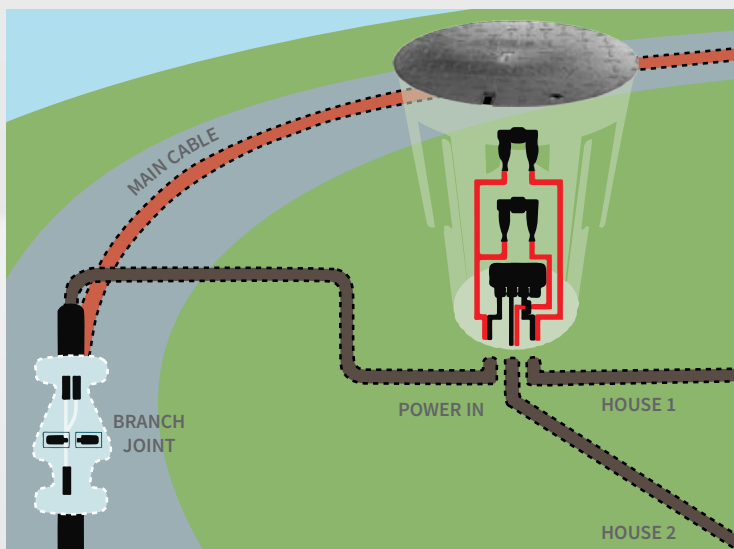
**Pit Fuse K199:** Fully submersible design rated to IP68. Accepts barrel fuse links up to 100amps & copper or aluminium cable, 6mm<sup>2</sup>– 50mm<sup>2</sup>.



**Gelport Connector:** insulated multiport busbar. Accepts both copper and aluminium cable. 6mm<sup>2</sup>–150mm<sup>2</sup> (larger 16–240mm<sup>2</sup> also available) ANSI C119.1,2002.



**Guro MM5 Branch Joint Kit:** Used to tap a supply from the main transformer cable to the pit. Can connect single & multicore main to single & multicore supply cable. Environmentally friendly insulating compound.





## PLASTIC FLANGE FOR RETROFIT INSTALLATIONS



## HSI-150-DFK

Used when there is water coming in between the conduit and the concrete wall that it's installed in, the flange seals onto the wall outside of the conduit so any water tracking between the wall and conduit is caught in the flange.

### FEATURES

- Accepts HRD and HRK seals
- Integrated spirit level
- System seal can be connected (e.g. cable duct connection or cable seal)
- Can be installed on container walls
- Form-fitting surface seal
- Glass fibre reinforced polyamide flange
- EPDM surface seal (6mm)
- Gastight and watertight to 2.5 bar
- Dimensions: 235mm x 235mm x 63mm out from wall

## INDIVIDUAL WALL SEAL WITH SEGMENTED RING TECHNOLOGY



**SUPER SEGMENTED RING TECHNOLOGY - SIMPLE ONSITE ADJUSTMENT**

FULLY CUSTOMISED OPTIONS AVAILABLE FOR PERFECT ALIGNMENT OF RETROFIT INSTALL

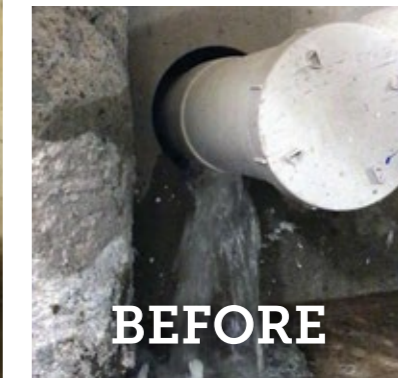
## HRD & HRK

These innovative press seals from Hauff-Technik are quick and cost-effective, giving you reliable sealing of core drills or wall sleeves for one or multiple cables.

Ranging from closed seal inserts for first-time installation to split seal inserts for retrofit sealing of cables that have already been laid, we can provide the ideal press seal for every requirement and task, be it tailor-made to the millimetre or suitable for universal use on site, round, oval or even square.

### FEATURES

- Fits standard Duct sizes
- Made for new installations and Retrofit installations
- Split seal for retrofit installation without removing cables
- Standard seal range and custom seals available to cater for each individual installation requirement
- Gastight and watertight options
- Segments with exact diameter marking
- Form-fitting connections of the press plates
- EPDM rubber
- Screws and nuts made of stainless steel V4A (AISI 316L)
- Plastic pressure plates made of glass fibre reinforced polyamide
- Highly robust plastic press plate with reinforcement ribs



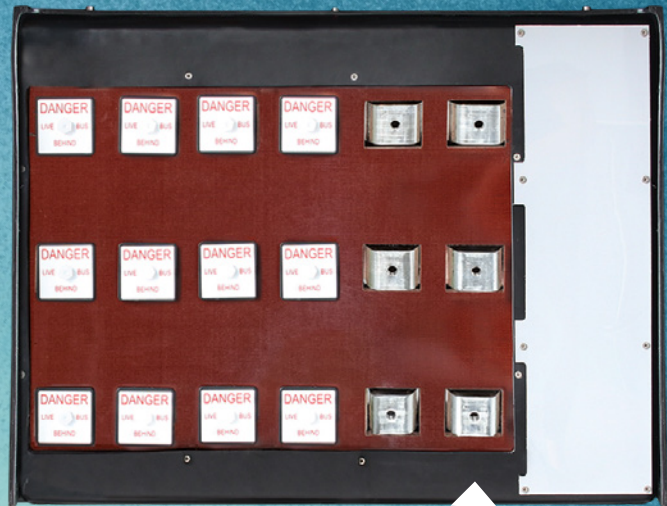


# Improve Your Frame of Mind

## Fully Insulated LV Frame



Designed and manufactured right here in New Zealand, this fully encapsulated LV frame was designed with safety in mind. Carefully thought out, this unit offers all the benefits without any of the compromise you might expect. Will fit Horizontal & vertical disconnecter switches.



REMOVE COVERS TO ACCESS BUSBAR

### FULLY INSULATED LV FRAME

- Easy, simple, safe access to connection points
- Fully enclosed bus system
- 6 way
- 800 amp rated
- Comes with accessory board
- Access covers for spare terminals
- Top or bottom supply
- Can be fitted with generator ports
- Increased clearance from live terminals

### SAFETY BENEFITS

- Safe & easy to install
- Safe to operate
- Increased safety when adding circuits or working close to live feeders

### SUITABLE FOR

- LV side of transformers
- Wall mounting
- LV distribution boards/kiosks
- LV cabinets



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Touch safe covers



Tinned copper busbar



Fully enclosed bus system

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