50Hz solutions

Quality High Voltage Equipment Suppliers

07.2025

Company Profile

50Hz Solutions Pty Ltd supplies a range of quality high voltage equipment to customers around Australia and New Zealand. We undertake the complete range of activities for the supply of high voltage equipment including: initial product selection, liaison with manufacturer factories, local technical support, contract management, provision of contract/technical documentation, transport/delivery logistics and after sales support.

50Hz Solutions commenced operations in 2010 as a subsidiary of Powereng Pty Limited – a well known company that supplied high voltage equipment to the Australian power generation, transmission and distribution sectors from 1989 to 2016.

Portfolio Snapshot

50Hz Solutions supplies a wide range of high voltage equipment including:

- SF6 gas handling and measuring equipment
- Transformer, wall and specialty bushings
- Power quality measuring devices and transducers
- Cast resin outdoor instrument transformers
- Indoor block type Instrument transformers
- High voltage oil/paper instrument transformers
- Air core reactors
- Surge arresters
- Insulated busbar

Supplier Snapshot

50Hz Solutions supplies equipment from numerous high quality suppliers:

PFIFFNER

RITZ

DILO

UNIPOWER

MOSER GLASER

BVM Systems Limited

TRIDELTA MEIDENSHA

COILINNOVATION POWER INDUCTORS

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About Us

Quality Management

50Hz Solutions is certified to AS/NZ ISO 9001 2015. Our QA policy can be found here.

Environmental Management

We are currently working on formalising our environmental management system to be compliant with ISO 14001. Our Environment Policy can be found here.

Occupational Health and Safety Management

We are currently working on formalising our Occupational Health and Safety Management system to be compliant with ISO 45001. Our OH&S Policy can be found here.

Privacy

50Hz Solutions operates in accordance with the Privacy Act 1988.

Our Privacy Policy can be found here.

Information Security

We are currently working on formalising our Information Security Management System to be compliant with AS/NZS ISO 27001.

DILO

DILO continually combines the leading technology in service carts, developed over many years of experience, with the latest customer and market requirements. Whether maintenance is performed on medium voltage switchgear, high voltage switchgear or on large gas-insulated switchgear, DILO service equipment allows for simple, safe and economic maintenance.

DILO's product range of maintenance units is divided into different series with various performance parameters which are designed to meet the varying requirements in SF6 gas handling. Unlike competitor products, DILO service carts have had performance data certified by TÜV SÜD. It is not sufficient to rely and nominal performance figures of pumps and compressors, as overall system design, pipework and other components all impact the overall performance of the service cart. A time calculation tool can be found on DILO's website at DILO SF6 Apps.

No matter whether you are interested in small devices or large equipment: DILO products will always give you the best technology, emission-free SF6 gas handling and utmost economic efficiency.

DILO's extensive range of SF6 handling equipment includes:

- SF6 gas refilling and evacuating devices
- SF6 service carts – mega, economy, compact, piccolo, small, mini and micro series; suction pumps, vacuum pumps
- Accessories for service carts – tanks, pre-filters, cylinders, retrofit kits
- Accessories – adapter kits, gas tight cutting devices, working protection kits
- SF6 monitoring devices – bottle scales, mass flow measurement devices
- SF6 measuring devices – multi-analyser, mirror-analyser, leak detectors, SF6 room monitors, densimeter test devices
- Valves and couplings – SF6 connections DN6 to DN40, soldering unions, screw-in-stubs, gauge connections, ball vales, rubber and wire braided hoses, transition pieces and adapters, bottle connections, distribution panels

50Hz Solutions offers preventative maintenance and service for SF6 service carts. We also offer calibration services for DILO SF6 analysers.

50Hz Solutions is also able to provide a range of SF6 training options including SF6 gas handling; and operation of SF6 service carts and measuring devices.

For more information on DILO's SF6 product range, please visit de.dilo.com

MOSER GLASER

MGC Moser Glaser

MOSER GLASER

MGC Moser Glaser was established in 1914 and is based in Switzerland. It produces insulated busbar (Duresca), wall and transformer bushings. In recent years, they have built a new state of the art facility dedicated to the production of bushings.

MGC Moser Glaser invented resin impregnated paper (RIP) technology in 1958 – a process that is designed to insulate electrical conductors for bushings and busbars for high and medium voltage applications. The insulation lies directly on the aluminium or copper conductor and consists of wrapped paper dried under vacuum and then impregnated with epoxy resin. For higher voltages, bushings may be constructed using fibreglass tube with foam filler rather than directly bonded technology.

Conductive grading layers are embedded in the insulation during the wrapping process to provide field control. The RIP technology provides an oil free/dry type bushing that can be created in short lengths for transformer and wall bushing applications, or up to 10m lengths for busbar systems.

Recently, MGC Moser Glaser have introduced the new Resin Impregnated Synthetic (RIS) technology, providing for minimal moisture absorption with better long term storage and in-service performance.

MOSER GLASER

MGC Moser Glaser is able to provide a wide range of bushings and busbar products including:

- Transformer bushings from 24kV to 420kV
- Wall bushings from 24kV to 362kV (with included current transformers if required)
- Speciality bushings for retrofits such as bulk oil GCN circuit breakers
- Resin Impregnated Paper (RIP) and Resin Impregnated Synthetic (RIS) technology
- Directly moulded silicon rubber insulators or fibreglass tube with foam filler

MGC Moser Glaser's technology and manufacturing method is perfect for designing and manufacturing application specific retrofit bushings matching existing dimensions and technical parameters of old oil type bushings.

In addition to MGC Moser Glaser's bushing products, they manufacture the well known insulated busbar system – Duresca. A fully engineered touch safe busbar system which is perfect for high current and space limited applications where multiple cables per phase is impractical.

For more information on MGS Moser Glaser's product range, please visit www.mgc.ch

UNIPOWER

Unipower

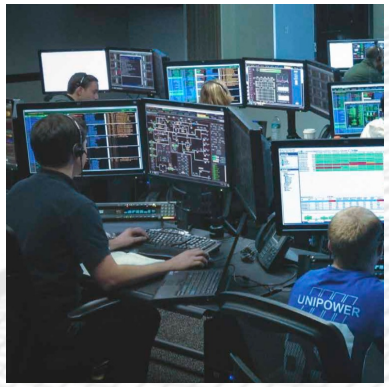
Originating from a Swedish ABB company in the mid 80's, Unipower has developed a competitive edge within the field of Power Quality and Smart-Grid solutions. They focus on norm compliance power quality measurement equipment, with a special focus on the requirements for power generation, transmission and distribution.

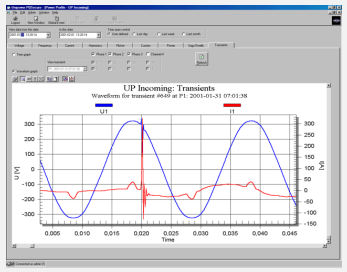
Unipower's product lines reach from traditional portable PQ analysers to fully integrated and automated Power Quality Management systems for continuous supervision of the energy supply.

The UP-2210 permanent PQ meter, available in a panel or rack mounted chassis, as well as the Unilyser U900 Portable Analyser, works as an advanced power quality meter and at the same time as a fault recorder. All of the power quality parameters can be analysed in accordance with power quality standards such as the IEC61000-2-2, 2-12, 4-7, 4-15 and 4-30 Class A. The UP-2210 unit captures both steady state disturbances (harmonics, flicker etc.) as well as rapid voltage changes (sag/swell events and fast transients).

Both hardware form factors also allow:

- Measurement up to the 100th harmonic
- Multiple time synchronisation options
- Harmonic compensation module for electromagnetic voltage transformers
- Slowscan recording capturing events over several minutes
- Earth fault recording
- Modbus and IEC61850 communication
- PSPM recording
- Synchronised phase measurement amongst other high performance features





The **PQSecure** system is a perfect solution for supervision of power quality and disturbances in the power grid. The power quality management system is:

- User-friendly
- Provides continuous monitoring of all the power quality parameters
- Allows quick and easy tracing of different disturbance events and at the same time
- Fault direction analysis

PQSecure's main functions include: power quality monitoring, transient monitoring, load monitoring, station control, automatic analysis, and automatic report generation.

The **PQSecure** system will automatically transfer data from the **UP-2210/U900** units to the central SQL database and analyse the measurement result graphically or via an event list.

The evaluation software is integrated into the platform and covers: analysis functions, event viewers (global/local), RMS trend diagrams, wave form diagrams, duration analysis (ITIC/CBEMA), automatic report function, export features and real-time window.

For more information on **Unipower's** PQ meters and analysis software infrastructure, please visit www.unipower.se

BVM Systems Limited

BVM Systems

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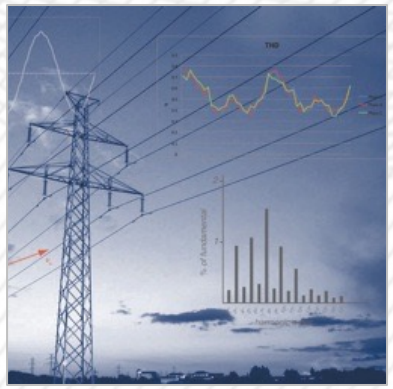
Accurate measurement of voltage harmonic levels on transmission networks is an essential aspect of assuring compliance with grid codes and operating licenses.

Several years ago BVM Systems, located in the UK, developed a unique and cost effective method to accurately measure high frequency transients and harmonic content using capacitor voltage transformers (CVTs). Inherent CVT inaccuracies make their use impractical for measurement of harmonics, ferro resonance and sub-synchronous resonance. High speed voltage transients cannot be accurately recorded using CVTs, whilst electromagnetic voltage transformers also introduce large harmonic measurement errors.

PQSensor alleviates the problems with using CVTs for harmonic measurement and provides a cost effective method to utilise existing CVT for transient and harmonic measurement without the need for costly change-out or installation of specific harmonic measuring devices such as resistive capacitive dividers (RCDs).



BVM Systems Limited

BVM Systems' PQSensor device is an analog transducer that accurately reflects the harmonic, resonant effects and transient spectrum of the primary voltage from a high voltage capacitor voltage transformer (CVT). The PQSensor is made up of two components: a Measurement Unit (MU) consisting of special CTs connected to the CVT; and a Signal Conditioning Module (SCM).

The output of the PQSensor is compatible will all commonly used power quality monitors and:

- Accurately measures frequencies up to the 100th harmonic
- Faithfully reproduces power system transients up to 1MHz
- Can be retrofitted to in-service CVTs or supplied (factory fitted) with new installations at any voltage level
- Are available for all major CVT suppliers
- Has no impact on the normal operation and measurement capabilities of the CVT

For more information on PQSensor, please visit www.bvmsystems.co.uk

COILINNOVATION
POWER INDUCTORS

Coil Innovation

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POWER INDUCTORS

Coil Innovation is based in Eferding, Austria and specialises in the design and manufacture of air-core reactors / power inductors for electrical power systems.

Innovation and quality are the key elements of the Coil Innovation strategy as evidenced by its advanced reactor design process and revolutionary, patented winding production technology. To achieve precise reactor design dimensions, an ”online” feedback loop has been integrated into the winding process which monitors the actual wound length of each winding layer while adjusting the conductor dimensions in real-time. The results are extremely low inductance tolerances and an optimum current and temperature distribution in each of the individual parallel winding layers.

The ever growing demand for electrical equipment with extremely low sound emissions has prompted Coil Innovation to make significant investments into the development of low-noise reactors and modern acoustic measurement tools. This investment yielded two major accomplishments – a revolutionary sound mitigation technology and a new sound measurement test laboratory. In Coil Innovation’s specially designed acoustic laboratory, power harmonic current sources are generated to simulate operational loads, thus enabling accurate, reliable acoustic measurements

COILINNOVATION
POWER INDUCTORS

Coil Innovation manufactures air cored reactors for an extensive range of applications including:

- Fault current limiting reactors
- Inrush current limiting for capacitor banks reactors
- Harmonic filters reactors
- Static VAR compensation (SVC) and series compensation (SC) reactors
- Electric arc furnace reactors
- Load flow control / line balancing reactors
- Neutral earthing reactors
- Shunt reactors
- HVDC smoothing reactors and AC/DC filters
- Line traps for PLC

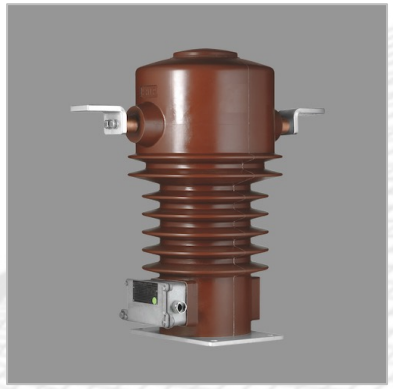
For more information on Coil Innovation's product range, please visit www.coilinnovation.com

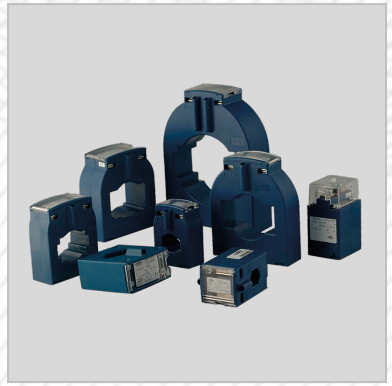
RITZ Instrument Transformers

RITZ is one of the world's leading manufacturers for Instrument Transformers, Cast Resin Applications, and Cast Resin Insulated Busbar Systems.

The company dates back to 1904, and whilst headquartered in Hamburg, RITZ today combines the expertise of RITZ Messwandler Hamburg (RITZ), Messwandlerbau Bamberg (MWB), RITZ Messwandler Dresden (TuR and Duromer) and Wandler-und Transformatoren-Werk Wirges (WTW) for a wealth of experience in design and manufacturing of case resin instrument transformers.

RITZ have seven production facilities across Europe, China and the USA, providing solutions to many sectors including generation, transmission, distribution, rail, mining, oil and gas.





RITZ manufactures a wide range of cast resin instrument transformers including:

- Indoor current transformers (block types) up to 36kV
- Single and double pole indoor voltage transformers (block types) up to 36kV
- Outdoor current and voltage transformers up to 72.5kV (double pole up to 36kV)
- Protection, metering, power supply and harmonic measurement applications
- Indoor metal clad current, voltage and combined current/voltage transformers up to 36kV
- Special indoor type medium voltage designs including bushing type and high current transformers
- Low voltage window type current transformers including split core and summation transformers

For more information on RITZ's full product range, please visit www.ritz-international.com

PFIFFNER

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PFIFFNER is an independent manufacturer based in Switzerland and Germany, with over 80 years experience in the manufacture of high voltage instrument transformers. Their product portfolio includes both oil/paper and SF6 insulated current transformers, voltage transformers (both EMVT and CVT) and combined current/voltage transformers.

The voltage and current transformers are hermetically sealed. All products have a high level of safety against explosion hazards and meet the latest international standards. All utilise an aluminium casting and are available with silicone composite or for oil-paper insulated transformers with porcelain (C130) insulators upon request. All instrument transformers are available with various creepage and arcing distances.

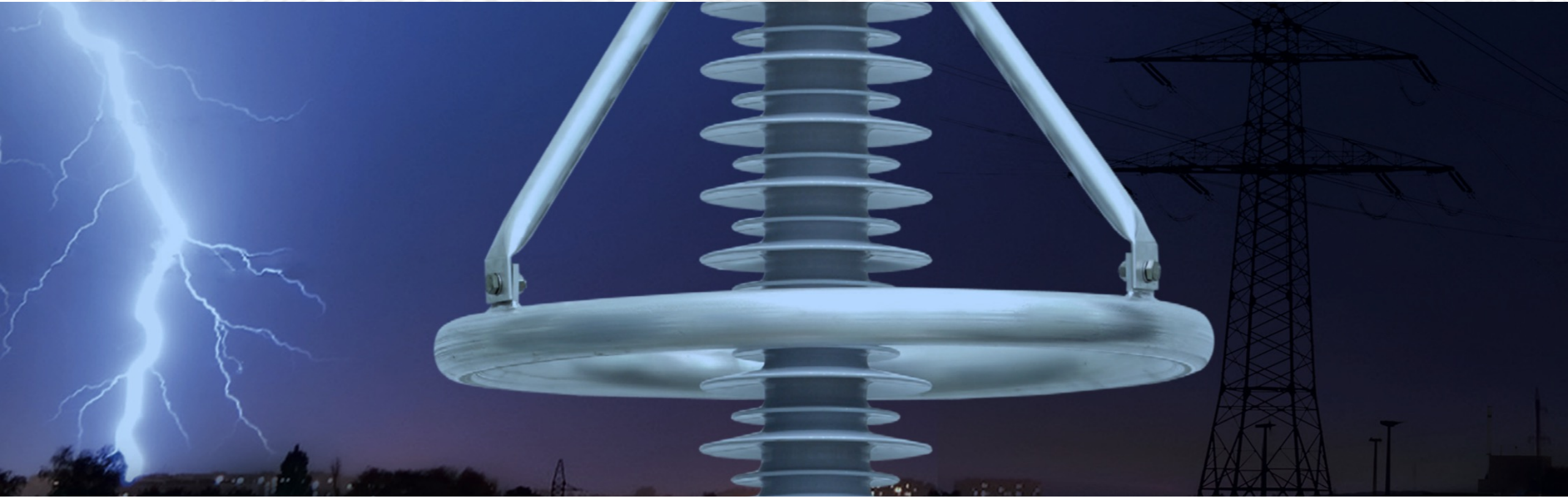
PFIFFNER PFIFFNER

PFIFFNER'S range of high voltage instrument transformers include:

- Oil/paper current transformers from 24kV to 550kV
- Oil/paper inductive voltage transformers from 24kV to 245kV
- Oil/paper combined current/voltage transformers from 24kV to 170kkV
- Oil/paper capacitive voltage transformers from 72.5kV to 550kV
- SF6 current transformers from 245kV to 550kV
- SF6 inductive voltage transformers from 245kV to 550kV
- SF6 combined current/voltage transformers from 245kV to 550kV
- Instrument transformer for gas insulated switchgear (GIS)
- Resistive capacitive dividers (RCD) from 72.5kV to 550kV
- High current "ring type" current transformers for power generation applications

For more information on PFIFFNER'S product range, please visit www.pfiffner-group.com

TRIDELTA MEIDENSHA



Tridelta Meidensha

TRIDELTA MEIDENSHA

Tridelta Meidensha manufacturers a wide range of transmission class surge arresters up to 800kV in both polymer and porcelain technologies in their facilities in Germany. For more than 50 years Tridelta Meidensha has manufactured surge arresters for worldwide markets with the highest quality and reliability and proven service history. In 2015, Tridelta Meidensha became part of Meiden Corporation of Japan.

Tridelta Meidensha offers a broad portfolio of surge arresters for the application on high voltage up to 800kV. The reliable SB series is constructed with a porcelain housing, whilst the SBK, SBKC and SBKT series' utilises a moulded silicone insulator.

The broad range of Tridelta Meidensha surge arresters offer optimal overvoltage protection for different demand and application areas. They are perfect for applications with the very highest mechanical requirements such as for regions with high seismic activity, or when using the arrester as support.

Tridelta Meidensha arresters with silicone insulators use high quality LSR Silicone, which keeps its hydrophobic and UV-resistant/non ageing properties over the complete service life and ensures excellent artificial pollution performance. Tridelta Meidensha's outstanding sealing system prevents any moisture ingress and assures a long service life time.

TRIDELTA MEIDENSHA

Tridelta Meidensha's range of transmission class surge arresters includes:

- Silicon insulator designs utilising one of three design/construction principles – **Modular**, **Cage** or **Tube**
- **Modular** solid-core design models have a lightweight woven/wrapped construction and provide a very cost effective option available for up to LDC 3 applications to 170kV
- **Cage** design models provide a higher strength solution up to LDC 4 to 420kV voltage levels and are constructed with fibreglass reinforced plastic rods (FRP rods) to reinforce the active part
- The **Tube** design models, available up to 550kV, with their very high strength provide the highest performance arresters up to LDC 5 and are constructed using a fibre reinforced tube between the active part and silicon sheds
- Transmission line arresters which can provide an effective and economical option to protect transmission lines against lightning over voltages in order to increase grid reliability and line availability.

Tridelta Meidensha has a number of arrester accessories available to evaluate arrester performance and conditions including surge counters with and without leakage current measurement, and spark control device.

Tridelta Meidensha has developed surge arresters for the use in direct voltage (DC) networks with a rated voltage of up to 4.8kV. They are suitable, due to special varistor disks, to protect equipment in rail cars, trams or overhead lines.

For more information on **Tridelta Meidensha's** surge arrester product range, please visit www.tridelta-meidensha.de

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