





TRIDELTA MEIDENSHA SURGE ARRESTERS

Best solution and superior quality for every requirement

- Comprehensive product portfolio
- Stable operation and lowest failure rates ensuring a long service life
- Best protection levels and bending strength
- Efficiency and the highest quality in manufacturing

Tridelta Meidensha offers surge arresters tailored to meet diverse requirements, specifically developed to excel in a variety of global environmental conditions. Successfully deployed in coastal and desert regions, areas with high industrial air pollution, heavy windloads, seismic zones, and other locations demanding special protection, our products showcase robust performance.

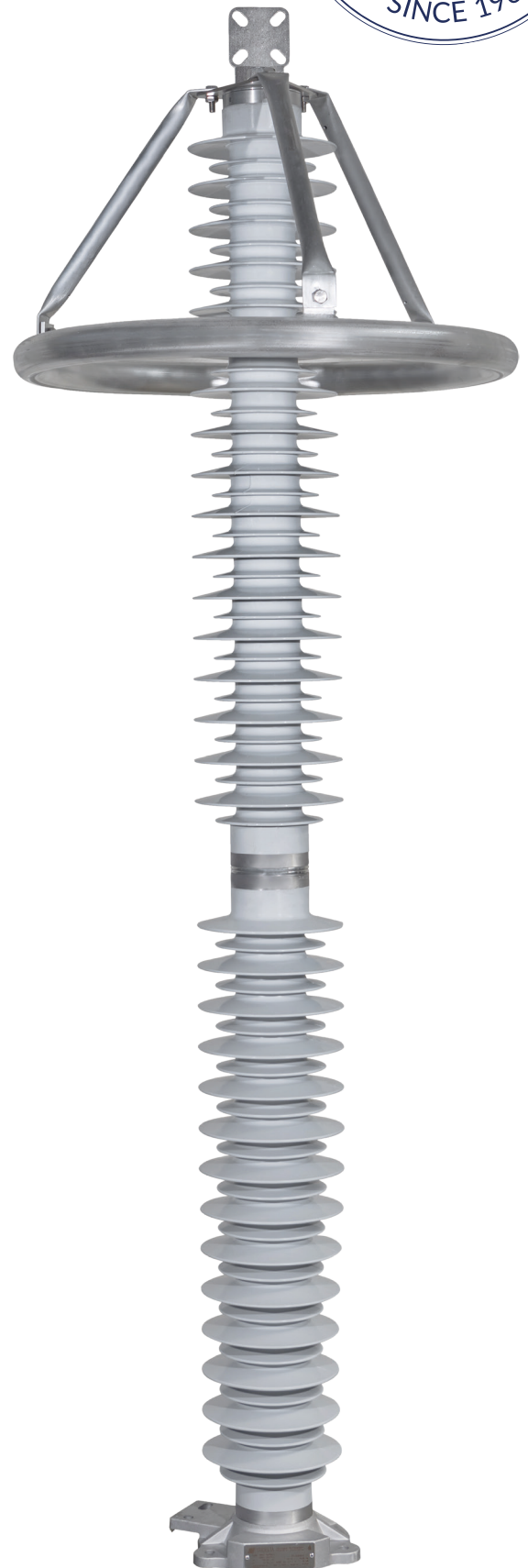
TRIDELTA arresters serve as protective devices for outdoor equipment, including transformers, electrical drives, generators, traction vehicles, and insulators in transmission lines, shielding them from atmospheric and switching overvoltages.

In addition to our standard offerings, Tridelta Meidensha provides specialized surge arresters for unique applications:

- arrester for capacitor banks in static compensators
- AC and DC railway arresters
- arresters for indoor applications in MV switchgears

Additionally, Tridelta Meidensha presents a comprehensive selection of transmission line arresters, offering a cost-effective solution for safeguarding overhead transmission lines, minimizing potential outages, and bolstering overall system reliability.

Our diverse range includes porcelain and polymer housings in various designs and versions, ensuring the provision of the optimal surge arrester for every application.



Fast, flexible and customer oriented

As part of the Meidensha Group since 2015, Tridelta Meidensha brings over 60 years of specialized experience in producing high-quality surge arresters. A trusted partner for utilities, contractors, and EPCs seeking products from an independent source, Tridelta Meidensha is synonymous with fast, flexible, and customer-oriented solutions.

Our commitment to stability, extended operational life, low failure rates, and an excellent price-performance ratio has positioned Tridelta Meidensha as a leading global manufacturer of surge arresters. Our comprehensive portfolio caters to diverse applications, withstanding various environmental conditions to protect a wide range of electrical equipment. Guided by technical expertise, we continually introduce innovative products to enhance our portfolio.

MOV blocks - The heart of reliability

At the heart of our surge arresters lie Metal Oxide Varistors (MOV) blocks, crucial components that define the electrical properties and protective functions of our devices. Drawing on over 50 years of industry experience, our parent company, Meidensha Group in Japan, pioneered the introduction of MOV blocks to the market.

Since then, Tridelta Meidensha has consistently upheld the highest standards by sourcing MOV blocks from esteemed manufacturers, including Meidensha and other well-known industry leaders. This commitment ensures that our surge protection solutions embody cutting-edge technology and reliability, meeting the stringent demands of our valued customers





Our specialty - Surge arresters with silicone housing

- Different designs for applications with standard, advanced or highest technical requirements
- Outstanding pollution performance
- Resistance to tracking, erosion and UV radiation
- Fire retardant and self extinguishing
- Excellent hydrophobicity

All our designs employ high-quality silicone as an insulation material, renowned for its exceptional pollution resistance. Harnessing key silicone properties—such as resistance to tracking, erosion, UV radiation, fire retardancy, self-extinguishing capabilities, and water-repellence—ensures superior performance. Genuine silicone rubber housings, maintaining hydrophobicity throughout the arrester's lifespan, contribute to the prolonged service life of TRI-DELTA surge arresters.

Each design incorporates premium MOV blocks for outstanding electrical performance, coupled with the advantage of easy transportation and installation due to their reduced weight compared to porcelain arresters. With our diverse range of designs, we strive to provide the ideal surge arrester solution tailored to meet the unique needs of our customers.

Cage design:

Utilizing a cage of FRP rods surrounding the stack of MOV blocks, secured into the terminals through a patented wedge clamping system, guarantees enhanced mechanical strength to meet advanced requirements.

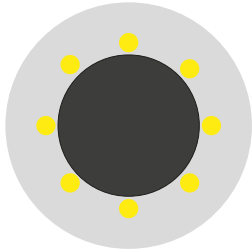
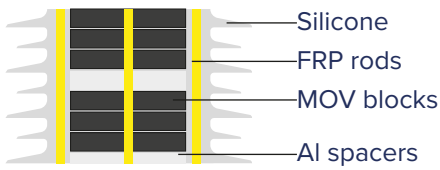
Tube design:

Featuring an FRP tube with an enclosed gas volume, complete with a pressure relief device, ensures maximum mechanical strength—ideal for regions facing high seismic activity or heavy wind loads

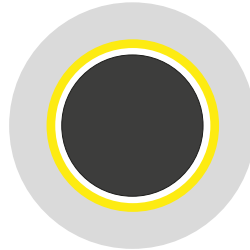
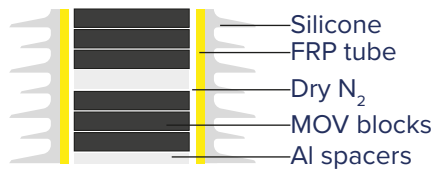
Filament cage design:

A hybrid design blending the advantages of both cage and tube technologies. The filament cage arresters offer flexible adaptability for diverse applications, ensuring a perfect fit for custom requirements.

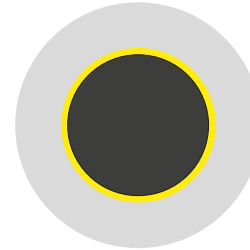
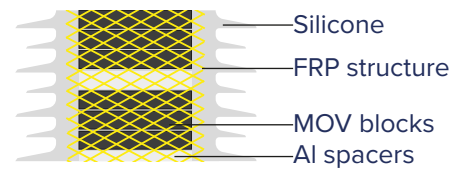
Cage design:



Tube design:



Filament cage design:



Description

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> • Cage of FRP rods around MOV blocks • FRP rods fixed into the end terminals • silicone sheds directly moulded onto MOV blocks/cage • no enclosed gas volume • no sealing/pressure relief device needed | <ul style="list-style-type: none"> • FRP tube with enclosed gas volume (hollow insulator) • silicone sheds directly moulded onto FRP tube | <ul style="list-style-type: none"> • PD free insulation structure thanks to a high-precision CNC-controlled process • MOV stack tightly fitted in a patented multi layer cross-pattern shaped FRP body • silicone directly moulded onto filament cage • no enclosed gas volume • Ultimate pressure relief performance with complete moisture resistance through the patented 2-layer filament matrix |
|---|---|---|

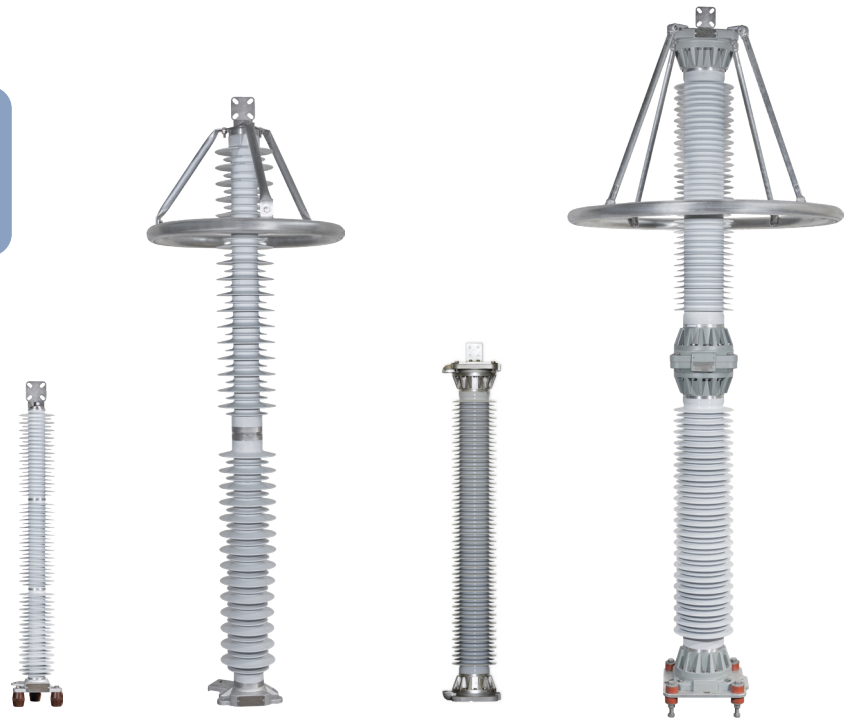
Key parameters

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|--|--|--|
| <ul style="list-style-type: none"> • high safety margin regarding electrical and mechanical overloads • no violent destruction after overload or short circuit events • easy transportation | <ul style="list-style-type: none"> • high safety margin regarding electrical and mechanical overloads • no ejection of internal parts in case of short circuit | <ul style="list-style-type: none"> • ultralight weight and utmost compactness • Versatile adaptation to custom requirements. • supreme short circuit performance • easy transportation |
|--|--|--|

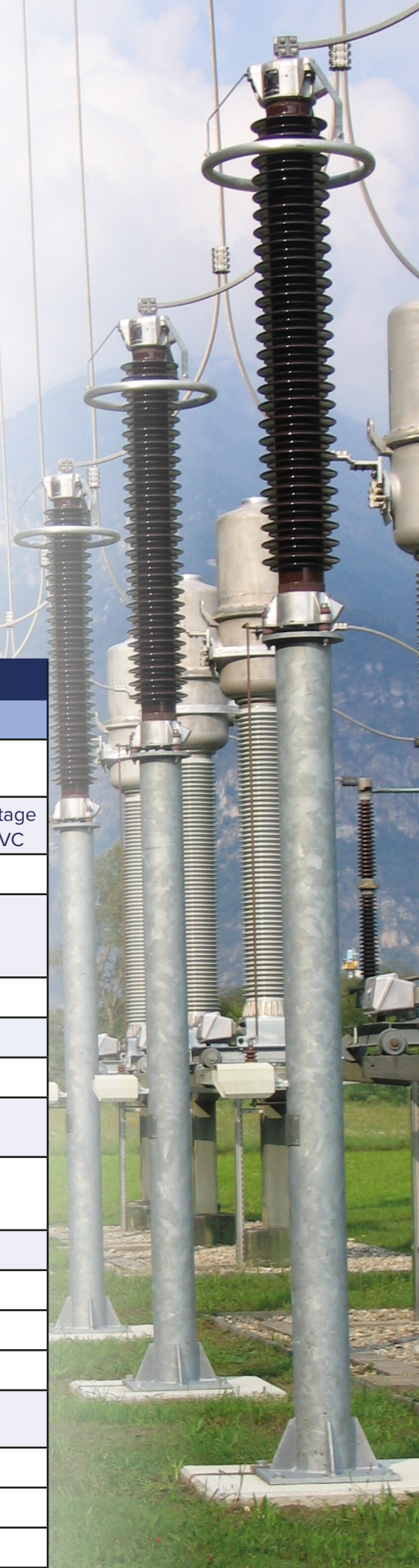
Applications

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> • for standard and advanced mechanical requirements • excellent for line arrester applications (EGLA type) • for use in capacitor banks | <ul style="list-style-type: none"> • for highest mechanical and safety requirements • for arrester applications as support/post insulator • for applications with seismic requirements | <ul style="list-style-type: none"> • Medium voltage applications (Indoor and Outdoor) • excellent for line arrester applications (EGLA type) • available as DC surge arresters in railway applications • HVDC breaker protection against Transient Interruption Voltage |
|---|---|---|

High voltage surge arresters up to 800 kV



Silicone Housing					
Product		SBKC size 0	SBKC size II	SBKT size I	SBKT size II
Design		Cage design type B2 as per IEC 60099-4		Tube design type A as per IEC 60099-4	
Application		Protection of outdoor high voltage equipment and transmission lines		Protection of outdoor high voltage equipment, HVDC, SC and SVC	
Specification		IEC 60099-4			
Classification		Station Low	Station Medium Station High	Station Medium Station High	Station Medium Station High
max. nominal system voltage U_n	kV	150	400	500	765
max. highest voltage for Equipment U_m	kV	170	420	550	800
max. rated voltage U_r	kV	144	396	456	624
max. nominal discharge current I_n (at 8/20 μ s waveshape)	kA	10	20	20	20
max. rated thermal energy W_{th}	kJ/ kV_{Ur}	4,5	10	14	18
max. repetitive charge transfer rating Q_{rs}	C	1,2	2,4	3,6	4,4
max. Discharge current withstand strength					
- High current 4/10 μ s	kA	100	100	100	100
- Low duration impulse current 2 ms	A	500	1.200	1.700	2.600
max. short circuit /Pressure Relief Capacity in kA	kA	40	65	65	80
Mechanical strength					
- SLL in Nm	Nm	1.000	2.800	6.000	12.000
- SSL in Nm	Nm	1.200	4.000	12.000	23.000



Porcelain Housing

SB size 0

SB size I

SB size II

Hollow insulator

type A as per IEC 60099-4

Protection of outdoor high voltage equipment

Protection of outdoor high voltage equipment, HVDC, SC and SVC

IEC 60099-4

Station Low
Station Medium
Station High

Station Medium
Station High

Station Medium
Station High

400

765

765

420

800

800

396

624

612

20

20

20

4,5

10

10

3,6

4,4

-

100

100

100

500

1.200

1.700

65

65

65

4.000

10.000

14.000

10.000

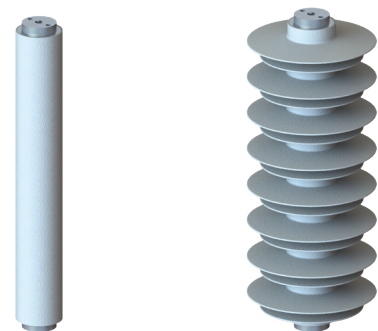
25.000

35.000

Medium voltage surge arresters

Our SBKW surge arrester families feature an advanced patented multi-layer filament cage, crafted with precision using CNC-controlled production technology and high-performance materials.

The versatile configuration options provide nearly limitless adaptability to meet your specific needs.



		Indoor	Outdoor
Product		SBKW DH-I-0	SBKW DH-I
Design		Filament cage	
Application		Protection of Transformers, Switch-Gears & Transmission Lines	
Specification		IEC 60099-4	
Classification		Distribution High	
max. rated voltage U_r	kV	60	
nominal discharge current I_n (at 8/20 μ s waveshape)	kA	10	10
thermal energy rating W_{th}	kJ per kV of U_r	3	
repetitive charge transfer rating Q_{rs}	C	0,4	
thermal charge transfer rating Q_{th}	C	1,1	
Discharge current withstand capability			
- High current 4/10 μ s	kA	100	
rated short circuit current	kA	63	
Mechanical strength			
- SLL	Nm	350	350
- SSL	Nm	500	500

DC Railway surge arresters



Product	Silicone Housing		Porcelain Housing	
	SBKW-B DC-B	SBKW-B DC-C	SB-B DC-B	
Design	Filament cage		Hollow insulator type A as per IEC 60099-4	
Application	Protection of DC railway equipment			
Specification	IEC 62848-1, IEC 61373, EN 45545-2			
max. rated voltage U_r	kV	4,5		
max. nominal discharge current I_n (at 8/20 μ s waveshape)	kA	10	20	10
max. thermal energy capability	kJ per kV of U_r	12	28	12
Charge transfert capability:	As	2,5	7,5	2,5
Discharge current withstand strength				
- High current 4/10 μ s	kA	100		
max. short circuit /Pressure Relief Capacity	kA	40		
Mechanical strength				
- SLL	Nm	450	1.500	800
- SSL	Nm	1.100	3.000	2.000

Monitoring Equipment

Complementing our extensive array of surge arresters, we provide devices dedicated to the assessment of surge arrester conditions.

smartCOUNT arrester monitoring system precisely measures and visualizes leakage current while indicating discharge currents and allows comprehensive trend-based health assessment for all ZnO Surge Arresters.



The **monitoring spark gap** is a device to provide information about the number of discharges and their contained charge.



Our **Surge Counter DCC2** provides information about the number of discharges. **DCC-M2** additionally comprises total leakage current measurement for condition indication.



R&D and HV Test Laboratory - Our investment in the future!

The synergy of ongoing product development and investment in state-of-the-art high-voltage test facilities, specifically designed for surge arresters, stands as a pivotal driver for Tridelta Meidensha's success. Our commitment to continuous improvement is evident through the seamless interaction between development and production, enhancing the quality of our manufacturing lines.

Certified under ISO 9001, our development processes ensure the highest standards. Every MOV-block and surge arrester undergoes individual testing throughout the manufacturing process, guaranteeing excellence at every stage.

Our modern and powerful laboratory is equipped with:

- Impulse Generator up to 1.200 kV
- Power Frequency Transformer 600 kV
- High Current impulse Generator 150 kA
- Long duration current impulse generator
- Test facilities for weather ageing test
- Climate testing laboratory with capability of -40°C up to 100°C
- Mechanical testing machine

We proficiently conduct a wide range of standard type tests, including customer-specific acceptance tests and those related to R&D activities

TRIDELTA Quality Products - MADE IN EUROPE

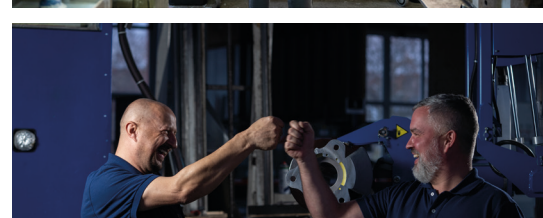
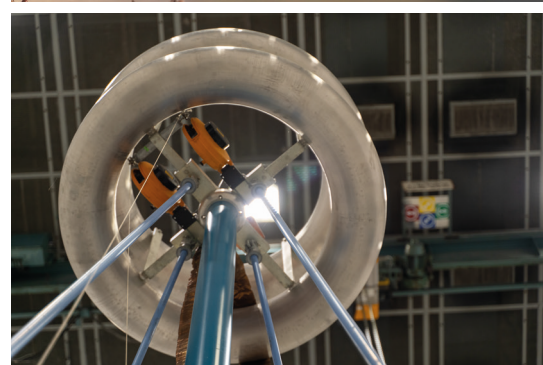
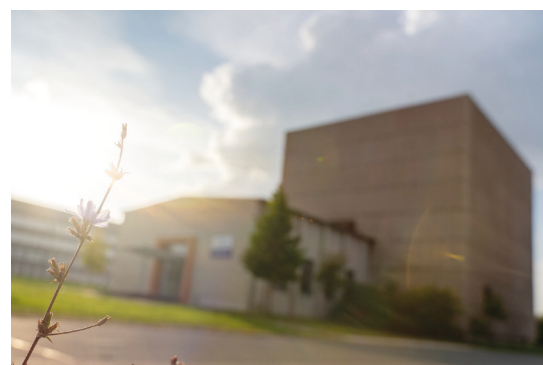
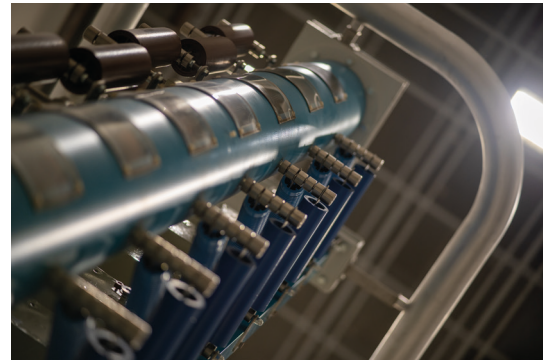
Crafted in Hermsdorf, Germany, TRIDELTA surge arresters represent the pinnacle of precision engineering, utilizing premium materials and cutting-edge testing technologies. With over 60 years of tradition and knowledge, our expert team ensures uncompromising quality, delivering outstanding products and optimal surge protection solutions

To ensure top-notch quality, every arrester is manufactured and routinely tested to meet the latest industry standards, providing our customers with reliable products they can count on.

We've instituted a process-oriented quality management system aligned with ISO 9001, and hold certifications for ISO 14001 and ISO 45001 to meet diverse customer demands.

Since 2020, we've embraced the LEAN optimization strategy, consistently evaluating and enhancing internal processes in both office and production realms. This ensures swift and efficient handling of customer requests, from recording to production and dispatch.

Feel free to explore our highly motivated team by visiting us in Hermsdorf – see firsthand the commitment to excellence that defines us!



Over 5 million TRIDELTA surge arresters are currently delivering reliable performance in more than 120 countries globally.

Our agents and distributors offer local technical and commercial support for our products in most countries, bolstered by the expertise of our sales engineers based at our German headquarters. They are dedicated to crafting tailored technical and commercial proposals based on your specific requirements.

As THE ARRESTER COMPANY, we stand as your trusted supplier for high-quality surge arresters, addressing a spectrum of specific needs.

For further information, please don't hesitate to contact us:



Tridelta Meidensha - WORLDWIDE



... and many more

Provided by your local partner:

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