

Distributor line card - Global product offering








Surge arresters for AC and DC traction

Hitachi Energy offers a complete range of metal-oxide surge arresters (MO-surge arresters) for indoor and outdoor installations for traction markets. The range comprises AC and DC solutions for fixed installations and rolling stock. Hitachi Energy's arresters are designed using the latest technology of MO resistors and are fixed with glass fiber composite material to ensure prolonged stability and compactness. The active part of the surge arrester is directly molded


into silicone for robustness in harsh conditions, ensuring superior electrical performance. Special tests are performed to ensure fire safety, shock and vibration withstand and mechanical strength. Personal safety and equipment protection are our top priority.

These surge arresters can be installed in systems with voltage frequency of 15 to 62 Hz.








Range of MO-surge arresters for AC traction

	Type	Benefits and features	Recommended applications
	POLIM-K	For systems up to 52 kV U_g . With energy absorption of 4.5 kJ/kV (U_r) it is an IEC class station low.	Feeder transformer
	POLIM-C..N	For systems up to 7.5 kV. With energy capability of 4.4 kJ/kV (U_r) it is an IEC class station low.	<ul style="list-style-type: none"> • Power electronics • Secondary equipment
	POLIM-I..N	For systems up to 72 kV with U_r up to 55 kV. This mechanically strong ar-rester with 5.0 kJ/kV (U_r) thermal rating is an IEC class station low.	<ul style="list-style-type: none"> • Fixed installation • Rolling stock
	POLIM-S..N	For systems up to 72 kV with U_r up to 55 kV. This mechanically strong ar-rester with 8.0 kJ/kV (U_r) thermal rating is an IEC class station medium.	<ul style="list-style-type: none"> • Fixed installation • Rolling stock • High speed trains
	POLIM-H..N	For systems up to 72 kV with U_r up to 55 kV. This mechanically strong ar-rester with 9.0 kJ/kV (U_r) thermal rating is an IEC class station high.	<ul style="list-style-type: none"> • Fixed installation • Rolling stock • High speed trains
	POLIM-R..N	Available from 0.11 up to 0.78 kV U_r . Having a thermal energy rating of 12 or 24 kJ / kV (U_r) this arrester protects neighboring equipment by absorbing high energy pulses.	<ul style="list-style-type: none"> • Power electronics • Energy absorber of semiconductor switching devices • Low-voltage motors
	SAM 3.0	System for arrester monitoring measures total leakage current, registers and classifies the surge events saving them with a time stamp.	<ul style="list-style-type: none"> • Substation / feeder transformer

Voltage limiting device for AC, DC or mixed AC and DC

	Type	Benefits and features	Recommended applications
	HVL	Voltage limiting device is available for triggering voltage of 60 and 120 V. Metal-oxide blocks and thyristors enable the HVL to react fast to the occurring event, providing the best protection from impermissible touch voltages.	<ul style="list-style-type: none"> • In substations between re-turn cables and earth • Between the conductive parts and earth along the line, especially at bridge railings • Between metallic construction of waiting shelter and running rail • In workshops and depots

Range of MO-surge arresters for DC traction

	Type	Benefits and features	Recommended applications
	POLIM-C..HD	Rated from 1.0 kV to 4.7 kV DC. The charge transfer class is DC-A with 4.5 kJ/kV. Mechanically strong arrester for high vibration loads.	<ul style="list-style-type: none"> • Fixed installations: pole • Rolling stock: trains • Secondary equipment • Trams and trolleys
	POLIM-C..ND	Rated from 0.56 kV to 4.7 kV DC. The charge transfer class is DC-A with 4.5 kJ/kV. Compact design for installation in limited spaces.	<ul style="list-style-type: none"> • Fixed installation: pole • Secondary equipment • Power electronics
	POLIM-H..ND	Rated from 1.0 kV to 4.7 kV DC. The charge transfer class is DC-B with 9.5 kJ/kV.	<ul style="list-style-type: none"> • Fixed installations • Rolling stock: railway • High speed trains
	POLIM-H..SD	Rated from 0.14 kV to 4.2 kV DC. The charge transfer class is DC-B with 9.5 kJ/kV. Compact solution for installation in limited spaces.	<ul style="list-style-type: none"> • Fixed installations • Rolling stock: urban railways
	POLIM 4,5 ID	Rated at 4.5 kV DC. The charge transfer class is DC-C with 45 kJ/kV when the highest energy absorption is needed.	<ul style="list-style-type: none"> • Rolling stock • Indoor
	POLIM-X..ND	Rated from 1.0 kV to 4.7 kV DC. The charge transfer class is DC-C with 28.5 kJ/kV.	<ul style="list-style-type: none"> • Fixed installations • Rolling stock: trains • High speed trains
	POLIM-R..ND	Rated from 0.14 kV to 1.0 kV DC. The charge transfer class is DC-B available for 9.5 and 19 kJ/kV.	<ul style="list-style-type: none"> • Fixed installations • Rolling stock: switchboard • Secondary equipment

NOTE: This is Hitachi Energy's global offering and some products may not be available in your country.

Hitachi Energy Switzerland Ltd.
P.O. Box, Jurastrasse 45
CH-5430 Wettingen/Switzerland
Phone +41 58 585 29 11

[hitachienergy.com/offering/product-and-system/surge-arresters](https://www.hitachienergy.com/offering/product-and-system/surge-arresters)

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. Hitachi Energy Ltd. does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of Hitachi Energy Ltd.