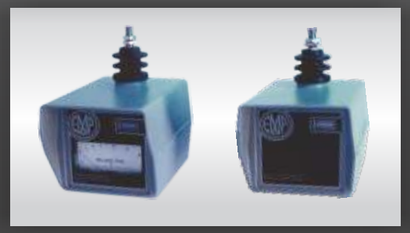
Raychem RPG

Bowthorpe EMP Remote Surge Monitoring Systems with Current Leakage Measurement

The Bowthorpe EMP surge counters use patented Planar Magnetic Current Sensing technology to accurately and reliably detect and measure current impulses.



SC 12 &13
Surge monitor

The Bowthorpe EMP SC12 is a surge counter only, whilst the Bowthorpe.

EMP SC13 provides the additional measurement of total leakage current.

SC 14 & SC 15
Surge monitor

Humidity and Temperature Sensor

(PAC -G)
Programmable Access Controller - Gateway

The Bowthorpe EMP SC14 and SC15 are the next generation surge monitors, being intelligent, they transmit data from the surge monitor to a receiving device (PAC-G 'Programmable Access Controller - Gateway'). They utilise eading edge technologies in terms of reliability, accuracy and ease of use.

Note : These surge monitors can replace any surge monitor in field, irrespective of make & type of surge arrester

* Accessories available: Insulating Base, Dis connector up to Class 3

Please contact regional offices for more details

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Raychem

Polymeric Surge Arresters

Reliable protection
for power equipment upto 800kV

TE connectivity (A TE Connectivity - RPG Enterprises JV) RPG

TE connectivity RPG

Raychem
Polymeric Surge Arrester

Safety and reliability are vital in energy industry and Raychem RPG's Energy Products Division is committed to pioneering improvements in performance at all levels.

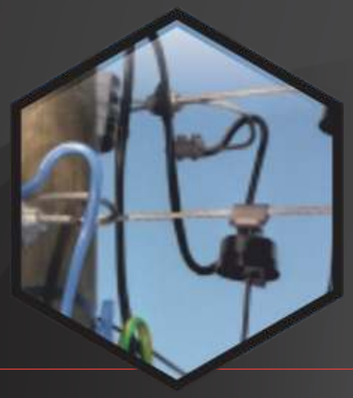
RRL's development teams work to generate a superior range of high performance products. All products are developed using Raychem's extensive service experience, as per the international standards including IEC, IEEE, ANSI and many national standards.

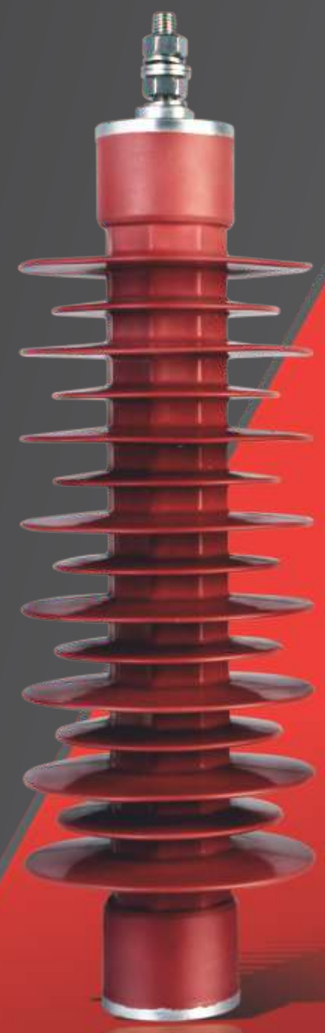
Raychem's polymeric surge arresters for voltage power distribution systems upto 800kV are designed to reliably protect your valuable assets from over voltage. They withstand severe outdoor exposure over long operating lifetime and help maintain service reliability in both overhead and underground installations.

Raychem's polymeric surge arresters have passed the most rigorous tests (IEC 60099-4, ANSI C62.11, IEC 61643)

Low Voltage Surge Arresters

Provide protection for LV overhead lines, consumer in-house supplies, distribution tranformers and other applicances





Medium Voltage Surge Arresters

For indoor and outdoor applications, for protection of overhead lines, DC locomotives, switchgear applications and motor protection

High Voltage Surge Arresters

For protection of transmission systems up to 800 kV

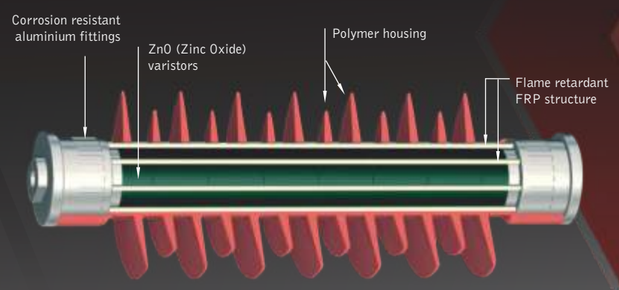
Advantages

All our arrester are manufactured using ZnO varistors, which display excellent thermal and current handling characteristics due to the guaranteed homogeneity of the varistor volume. This thermal behavior yields products with:

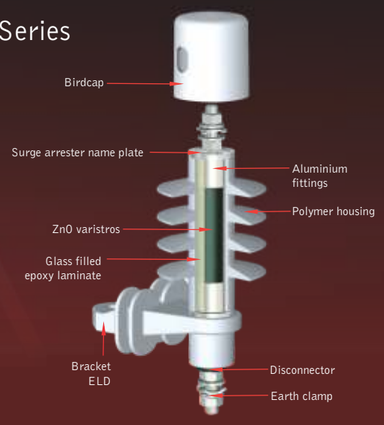
- Excellent temporary overvoltage (TOV) performance
- Safe, non-shattering failure in the short circuit test by pre-failing to higher fault currents
- High energy handling capability

Structure of Polymeric Surge Arrester

Raychem's ZnO varistor disk has excellent electrical characterstics and thermal stability. The resulting new varistor has resulted in excellent energy handling and TOV performance



DA Series



LV

WHY Raychem Polymeric Surge Arrester is better than other Surge Arrester available in the market?

Raychem Surge Arrester has been developed using the knowledge accumulated over 35 years of internal materials science expertise and experience, resulting in a material with excellent tracking and erosion resistance, and known for operating in the world's toughest environments.

Raychem's Surge Arrester is made possible by:

Proven moisture sealing technology

- All arrester cores are encapsulated in silicon insulating housing
- Invisible interface prevents moisture from entering during severe thermal fluctuations due to normal climatic and energy absorption events

Polymer Housing

- Non-tracking and hydrophobic silicon insulating material is used
- Housing material has proven performance in long term TERT and UV aging tests and proven resistance to flammability

Fully integrated, single piece and void-less design

- Manufacturing integrates all components in a single piece
- Design is void and gap free ensuring peak performance under the harshest conditions

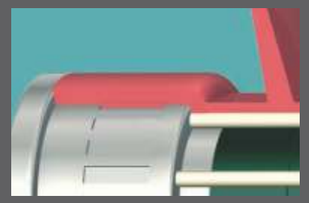
Disconnector (optional)

- Robust ground lead disconnector
- Reliable and consistent
- Offers operational reliability and consistency
- Can be shipped and stored restriction free

Safe mode of failure

Quality

- Manufacturing in ISO accredited production facility
- Perform 100% routine testing on arresters



Direct bonding of housing to fittings ensures optimum moisture barrier

Superior TERT performance

Safe short circuit failure

Excellent hydrophobicity

Low Voltage Surge Arresters

Raychem's low voltage surge arresters provide protection for low-voltage overhead lines, consumer in-house supplies, distribution transformers and other systems. The gapless metal-oxide varistor incorporated in the surge arrester reliably imposes low-value limits on surges caused by atmospheric over voltages and switching transients, thus protecting the insulation of the consumer-side networks and equipment.

The LV surge arresters are in compliance with Class II requirements as defined by IEC 61643-1. They are designed for applications in which protection against direct contact is not necessary.

Product Features

- Suitable for indoor and outdoor use
- Integrated disconnector
- Housing and lead is flame retardant and UV resistant
- Easy to identify failure indicator
- Easy to install (no tools required)
- Large selection of standard accessories
- CE certified

Applications

Overhead line

Transition : Insulated overhead lines to cables

Service entry through overhead system

Distribution transformers

MV

Medium Voltage Surge Arresters

Raychem's Bowthorpe EMP surge arresters provide active over voltage protection that contributes directly to improved reliability of your system, reducing lost minutes and protecting expensive assets.

Bowthorpe EMP DA silicone surge arresters have been designed and tested to meet our customers demands with reliability and offering improved operational performance.

Product Features

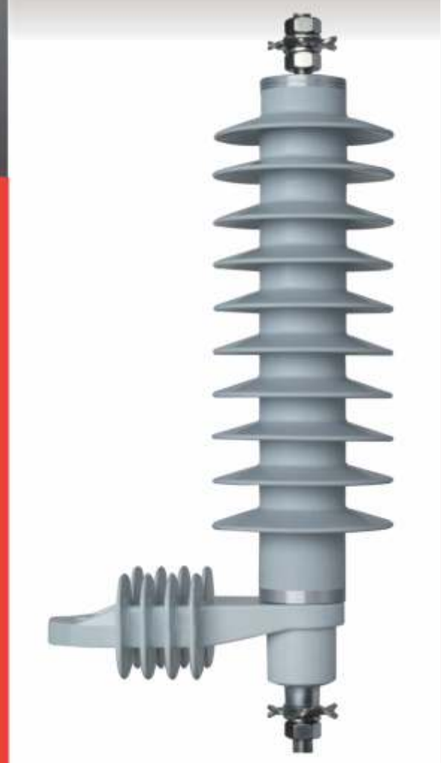
Raychem's Bowthorpe EMP:

- Tested in accordance with IEEE 62.11, 2005
- Direct molded housing to prevent moisture ingress
- Low residual voltages
- High-energy handling
- Safe non-shattering short circuit behavior to higher current levels
- Maintenance free
- Hydrophobic silicone/ EVA housing: (Tracking and erosion resistant)
- Excellent cantilever and tensile performance
- Quality design and manufacturing meeting international standards

Raychem's Bowthorpe OCP:

Raychem Bowthorpe 'OCP' silicone surge arresters have been designed and tested to meet our customers toughest environmental conditions and to meet the requirements of IEC60099-4. Our gapless zinc oxide polymeric arresters now have the OCP ranges builds on this experience and know how.

- Superior protection margins
- Direct moulded housing to prevent moisture ingress
- Superior TOV performance



Applications

Protects transformers and other equipments in station and distribution systems against the damage caused by environmental (especially lightning effects) and operational conditions.

Protects distribution assets including transformers and cable-end terminations from lightning and switching surge related over voltages.

Motor Protection

Indoor Switchgear

HV

High Voltage Surge Arresters

Each surge arrester module is completely impervious to the ingress of moisture and utilises the high mechanical strength properties of the ZnO varistors bonded by cured resin impregnated glass fibre.

Product Features

- No air gap therefore no internal ionization
- Light weight compared to porcelain
- Ease of installation
- Non shattering housing
- Optimised voltage stress grading eliminates need to oversize stress grading ring, therefore the compact series parallel can be installed in tight spaces without infringing electrical or surge safety clearances
- The diameter of the series parallel design has been calculated to reduce the radial field stress to a minimum, even under adverse environmental conditions
- Can directly be mounted on equipments

Applications

- Arc Furnace
- Transformers
- Transmission Line Arresters
- Cable Terminations
- Substations