



Quench Protection Unit

METROSIL.COM

METROSIL QUENCH PROTECTION UNIT

Superfast high energy discharge guarantees the superior protection of superconducting magnets.

Maintaining valuable assets is a top priority for any business. That's why the Metrosil brand name is trusted by industry leaders worldwide. When a quench occurs, our Quench Protection Units* ensure that superconducting windings are protected.

Metrosil Quench Protection Units are silicon carbide (SiC) varistors designed to clamp voltage to a required magnitude and quickly extract energy stored in superconducting magnets during a quench. The design of each unit has been optimised for ease of installation and our High Energy Test Laboratory (HETL) guarantees and certifies protection from a quench at maximum operating current – preventing damage to the magnet and costly maintenance.

*Patent Pending.



QUENCH PROTECTION UNIT FEATURES:

- SiC resilient material proven at ambient and low temperatures
- All units high energy tested to 100% of full specification
- High energy test certification provided as standard
- Range of ratings - kJs to MJs

QUENCH PROTECTION UNIT BENEFITS:

- Ergonomic design for ease of installation
- Protective bar avoids impact damage
- Anti-tamper device ensures unit integrity
- Rating plate clearly defines each unit's capabilities
- Easy access connection points
- Optional Energy Performance Monitor (EPM)
- 80 years of manufacturing excellence

OPTIONAL MONITORING GUARANTEED PROTECTION

The Energy Performance Monitor (EPM) enables users of the Quench Protection Unit to monitor its condition under ambient conditions.

Each unit is tested to its full specification by our High Energy Test Laboratory (HETL), which establishes performance ratings prior to despatch.

During testing, the energy profile of the unit is programmed into the EPM's non-volatile memory, allowing users to compare the energy absorption of the unit with its original profile at any given point in time. This enables users to ascertain whether or not performance has changed and if action is required.

EPM FEATURES:

- Optional hardware
- Fibre optic interface between units
- MODBUS TCP Ethernet connection
- Networks up to 32 Metrosil units
- 24 Volt DC operation (user supplied)

EPM BENEFITS:

- Reassures that units are performing as expected
- Compares data between discharges
- References HETL results
- Enables users to log data over time



Optional Energy Performance Monitor

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For more information, please contact the Metrosil team:

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