

Global Instrumentation and Control Nuclear Instrumentation System Power Line Filter Kits

Background

The Westinghouse original ex-core Nuclear Instrumentation System (NIS) has been protecting nuclear plants for over 50 years. Industry experience has proven the design to be robust, reliable and effective.

Westinghouse continues to support the NIS with upgrades such as the power line filter kits. These kits were originally developed as part of the Digital Meter 2.0 upgrade. The power line filter kits can be installed independently of the digital meters for the benefit of enhanced noise resistance for all NIS safety-related drawers.

Description

The power line filter kits remove high frequency noise from the instrument power to the safety-related NIS drawers: source range, intermediate range, power range A and power range B.

A separate kit is available for each of the four NIS console bays with customized wire labels. Kits include the filter, stainless steel mounting plate and fasteners, terminal insulating caps, wires, wire labels and crimp connectors.

Westinghouse can provide licensing support, field change notices, field kit instructions, drawing updates, technical manual updates and installation services.

The kits are seismically and environmentally qualified as class 1E components in accordance with the Institute of Electrical and Electronics Engineering 323-1983 and 344-1987 requirements.



NIS Power Line Filter with Mounting Plate and Terminal Insulating Caps.



Power Line Filter Installed in Rear of NIS Console Bay

Benefits

- Enhances noise resistance for source range, intermediate range and power range drawers
- Attenuates common mode noise between ground and power lines
- Attenuates differential mode noise between hot and neutral lines
- Prepares NIS console for Digital Meter 2.0 upgrades (for U.S. Nuclear Regulatory Commission Regulatory Guide 1.180 EMI/RFI susceptibility compliance)