Interface Protection Module (IOPM)

Fully Qualified Safety-Related Digital Platform





About

Curtiss-Wright Nuclear has partnered with Radics, LLC to supply integrated FPGA-based instrumentation and control (I&C) systems for nuclear power plants and research reactors. RadICS is a digital I&C platform that is robust, flexible, and scalable. It provides state-of-the-art functions, services, and safeguards for safety applications in the nuclear industry. The RadICS product line consists of a Logic Module, basic input/output modules, and specialty modules all housed in a seismically qualified chassis.

The Interface Protection Modules provide electromagnetic compatibility and other electrical hazards protection for the input and output modules of RadICS Platform. Each device supports connection to up to 32 field signals. Where appropriate, custom field signal termination cables can be provided to minimize installation complexity and time. Up to 12 modules are housed in a single chassis.



Interface Protection Modules (IOPM)

- Provides electromagnetic compatibility, overvoltage, overcurrent, electrostatic discharge, and other electrical hazards protection for the RadICS input, output and communication modules.
- · Passive component usage for maximum reliability.
- Custom signal conditioning.
- Custom field termination cables.
- Staggered connection locations (top/bottom) for maximum cable connectivity.
- IEC 61508 SIL 3 certification.



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Interface Protection Module Technical Specifications

Function	Specifications
Electrostatic Discharge Protection	15 kV air discharge 8 kV contact discharge
Input/Output Channel Isolation	All input and output channels are galvanic-isolated up to 250 $\rm V_{\rm RMS}$ AC or 250 VDC field-to-chassis and channel-to-channel
Overvoltage Protection	Depends on module type
Operating Temperature	4.4 to 60 °C (40 to 140 °F)
Operating Humidity	10 to 90% relative humidity, non-condensings

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