

Press Release

THE NRG DIGITAL SOLID STATE RELAYS WITH A PROFINET INTERFACE

Compact, multifunctional solid state relays with real-time monitoring enable prediction of load failures, reducing unplanned downtime.

Lainate, July 2020 - Carlo Gavazzi Automation, the international electronics group with activities in the design, manufacture and marketing of electronic equipment, today presents a new variant of the NRG digital solid state relays with an Ethernet-based communication interface.

The industrial automation industry is undergoing a digital transformation. At the root of digitalization is data, obtained in real-time to ensure optimal machine processes and plant management. The NRG digital solid state relays provide a perfect platform for this new era. Switching, real-time monitoring and data exchange with the machine controller is now possible through a communication interface added to the solid state relay. 'You can't manage what you can't measure'. This interface enables real-time monitoring that is crucial to predict failures, reduce unplanned machine stoppages and optimize machine performance.

The rise in data flow instigated a demand for faster communication speed, which is why machine builders are now relying on industrial Ethernet for data transfer and exchange. The NRG interface to the machine controller is now available via PROFINET therefore facilitating integration in PROFINET networked machines.

The NRG digital solid state relays provide an all-in-one solution for switching, monitoring and communication in a very compact platform. The NRG solution permits machine builders to reduce the number of components in a panel thus reducing wiring efforts and occupying less space compared to other traditional monitoring set-ups.

"In tomorrow's smart factory everything that can be connected will be connected. Data is a valuable resource to achieve cost savings and maximized plant efficiency", Dorianne Grech International Product Manager says. "With the NRG, Carlo Gavazzi is proposing a different and unique cost-effective solution for real-time monitoring with features that enable predictive and better preventive maintenance programs that will reduce downtime and optimize machine availability".

Developed in our competence centre in Malta, the NRG has been designed to suit any heating application where precise temperature control is crucial to guarantee the quality of the end product and where unplanned machine stoppages can result in a considerable loss of revenue. Typical applications are plastic injection machines, semiconductor manufacturing and glass tempering machines.

Main technical features

- NRG controller with PROFINET or Modbus RTU interface
- An NRG bus chain occupies 1 node in PROFINET or 1 Modbus address
- Max. 32 NRG solid state relays (RG..CM..N) in 1 NRG bus chain
- 24 VDC for the NRG controller
- NRG solid state relays go up to 660 VAC 65 A, 90 A (versions without heatsink)
- ON/OFF or % power control modes
- Selectable switching modes
- Predictive failure detection with Load deviation indication
- Read-outs: Current, Voltage, Power, Energy consumption kWh, Load and SSR Running hours
- Malfunction detection: Mains loss, Load loss, SSR short circuit, SSR over-temperature, Voltage/Current/Frequency out-of-range

ABOUT CARLO GAVAZZI AUTOMATION

Carlo Gavazzi Automation is an international electronics group with activities in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.

Carlo Gavazzi Automation provides customers with technologically innovative, high quality and competitive solutions, in compliance with their requirements and expectations through its 22 National Sales Companies in Europe, the Americas and Asia & Pacific, operating with its production sites in Denmark, Italy, Malta, Lithuania and China.

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