SIEMENS

Ingenuity for life

Modern, integrated slimline enclosure design

SIRIUS 3RQ3 coupling relays and SIRIUS 3RS70 signal converters: How controllers and field devices communicate with each other

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SIRIUS 3RQ3

The compact, space-saving coupling relay in a new design

3RQ3 coupling relays come into their own when standard controllers with their inputs and outputs reach their limits. Whether they are used for isolation or the transmission of signals from one circuit to another, coupling relays also contribute to controller overvoltage protection. Anywhere controllers are used – whether in factory or process automation applications – coupling relays add real added-value.

The new SIRIUS 3RQ3 coupling relays should be your first choice when it comes to isolating circuits, converting voltage levels or amplifying control signals.

With a width of just 6.2 mm and a low overall depth and height, they are ideally suited for installation in control cabinets with tight space requirements resulting from narrow tier spacing or in flat switchboxes.

Their appearance is in harmony with that of other Siemens devices in the control cabinet.

SIRIUS 3RQ3 coupling relays can be wired easily and efficiently, even without tools if desired. As well as using screw or spring-type terminals (push-in technology), an additional option is to use comb-type jumpers to bridge potentials across many devices.

Easy looping through of voltages:
Plug-in comb-type jumpers for all terminals:
- Reduce wiring overhead
- Put an end to tangled cables

With semiconductor output:
- Long electrical service life
- Large number of switching cycles
- Maximum contact reliability
- High DC switching capacity
- Short switching times
- Noise-free switching

Typical applications:
- Isolation
- Voltage conversion, e.g. from 24 V DC to 230 V AC
- Signal amplification
- General relay control
- Controller overvoltage and EMC protection

3RQ3 coupling relays

Coupling relay with manual/automatic selector switch

Coupling relay with swappable plug-in relay

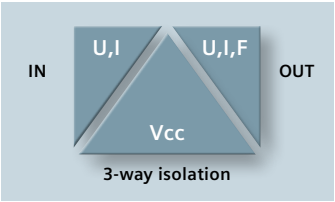
Coupling relay with mechanical relay output or semiconductor output

Minimal space required on the mounting rail:
- Slimline, compact design with a width of 6.2 mm throughout and low overall depth/height
- Ideal for use in flat switchboxes and control cabinets with narrow tier spacing

SIRIUS 3RS70

Interface converter for analog standard signals with a new design

SIRIUS 3RS70 signal converters are used anywhere that analog signals are isolated or converted. Their main function is to convert a multitude of analog (standard) signals to standard signals and transmit them to a PLC or control cabinet door. The most important elements here are isolation between the input and output sides, i.e. between the field and controller, as well as the conversion of one signal waveform to another (e.g. current to voltage) and signal amplification or regeneration. With 3RS70 it is also possible to convert an analog standard signal to a frequency modulated binary signal for processing with a digital input.



In 3-way isolation, each circuit is isolated from the other circuits, i.e. input, output, and supply voltage potentials are not linked.

3RS70 signal converters

Signal converter with manual/automatic selector switch and potentiometer

Single-range/ multi-range signal converter

Passive converter

Exclusively 3-way isolation:
- Simplified logistics and inventory management thanks to few device variants
- Input, output and supply voltage have no potential link as every circuit is isolated from the others

Typical applications:
- Isolation of analog signals
- Conversion of analog signals
- Conversion of analog signals to a frequency
- Conversion of non-standard signals to standard signals
- Overvoltage protection of analog inputs

High-quality, modern titanium gray design
- Easy-to-read laser inscription
- Appearance consistent with other Siemens devices in control cabinet
- Resistant to dirt and yellowing

Easy, fast wiring:
- "Fir tree" profile: all terminals are easily accessible
- Spring-loaded terminals wired at the top: clear view of the terminal – easy insertion of wire
- Toolless wiring when used as push-in terminal

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