



XRI

Relais-Interface



A U D I O E X C E L L E N C E

The GPIO board: Relay outputs and optocoupler inputs for the NEXUS system

The XRI boards for NEXUS base devices offer an abundance of GPIO contacts: The board has 24 inputs each evaluated via optocouplers and 24 relay outputs. All contacts can be combined in pairs to form galvanically isolated connections; an internal control voltage is of course available on inputs and outputs. Integration with NEXUS Logic Control macro control allows extremely complex interactions with external systems.

An XRI board is the easiest way to connect a NEXUS system to external systems at the control level. 24 inputs and 24 outputs are available, each of which can be grouped in pairs and thus galvanically isolated from the internal circuit. The internal or external control voltage can be used to evaluate the contacts. The outputs are switched via relays, while the inputs are evaluated via optocouplers to ensure maximum operational reliability. The „Logic Control“ media control integrated in the NEXUS system allows simple to very complex interactions and automations to be set up. For this purpose, the autonomous logic units available in each base unit are used, which communicate with the entire NEXUS system. The functions range from setting or evaluating crosspoints to monitoring the levels of specific signals. All states allow the consideration of almost unlimited interdependencies and dependencies. In conjunction with the XRI card, relay inputs can be interrogated and set, e.g. to trigger the switching and control of external loads depending on logical relationships. This can also be used, for example, to integrate the NEXUS system into comprehensive external disaster systems or to trigger alarms.

Inquiry of external switching contacts and control voltages

The inputs can be used to interrogate external switching contacts with internal or external voltage. External control voltages can also be queried.

Provides two internal power sources

The board has two power sources that are galvanically isolated from the NEXUS system. One voltage can be used for external contacts, the other for the outputs. For smaller loads the output power of 5V/20mA is sufficient.

Combination of two contacts to one potential-free contact

When two contacts are combined, a potential-free contact can be created. The second contact loses its function because its line is used for the ground.

Interface to Nexus logic

The XRI is predestined to be integrated into the extensive NEXUS logic to query switching contacts or output control voltages.

Configuring inputs and outputs

In addition to configuring the floating contacts, the inputs and outputs of the XRI can also be assigned a voltage whose polarity can be changed.

Control by both positive and negative voltages

Control with DC and AC voltages possible

Both DC and AC voltage can be used for control. A maximum permissible current of 1A or 4A peak current is possible at a voltage of up to 60V.

All inputs and outputs equipped with filters

To avoid the effects of interference such as noisy signals or crosstalk, both inputs and outputs are equipped with filters whose time constant is adapted to the requirements of the software.

| Connections | | | |
|------------------------|----|---------|-------|
| Variant: 4 Ports | | 1 x 8TE | |
| D-Sub 15 Buchse female | 4x | | Input |
| Variant: 2 Ports | | 1 x 4TE | |
| D-Sub 25 Socked female | 2x | | Input |

| Technical specifications | |
|---------------------------------------|---|
| Configuration | |
| | 12-24 optocoupler inputs* (max.) on 25-pin D-Sub port, female (upper port) |
| | 12-24 semiconductor-relay outputs* (max.) on 25-pin D-Sub port, female (lower port) |
| | Common-potential contacts and floating contacts supported |
| | Input and output filters for noise suppression |
| | Serial EEPROM storing the serial number |
| | *The number depends on the I/O configuration (floating/with common potential). |
| Inputs | |
| Input voltage | 40 V (DC)/28 V (AC) (max.) |
| Input current | 3 mA (max., internally limited) |
| Input current ON | ~1 mA |
| Input current Off | < 0,3 mA |
| LED forward voltage | 4 V bei $I_F = 2,9$ mA |
| Output voltage, internal power source | 5 V, galvanically isolated |
| Output current, internal power source | sufficient for using all inputs at the same time |
| input filter | 10 ms |
| Outputs | |
| Output impedance ON | 0.4-0.6 ohm (typ.) |
| Output impedance OFF | 100 Mohm (typ.) |
| Output voltage, external power source | 60 V (DC)/42 V (AC) (max.) |
| Output current, external power source | 1 A per output (max., resists 4 A transient current); 2 A (max.) total current per group/port |
| Output voltage, internal power source | 5 V, galvanically isolated |
| Output current, internal power source | 20 mA (max.) per output |
| Output power, internal power source | 2.4 W (max.) for all outputs |
| Output filter | 10 ms |
| Operation conditions | |
| Temperature range | 0 °C bis +50 °C |
| max humidity | max. 90 %, non-condensing |
| Lagerbedingungen | |
| Temperature range | -35 °C bis +70 °C |
| max humidity | max. 90 %, non-condensing |
| Power supply | |
| Voltage | +4,75...5,25 V |
| Current | max. 50 mA (outputs open and inputs inactive) |
| Mechanical data | |
| Weight | 0,19 kg |

Stage Tec NEXUS: A global reference!*



*The map shows selected reference locations. To date more than 1,000 Stage Tec NEXUS systems have been delivered and installed worldwide.

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