QUBI-RIO 100

Ethernet Relay Module

The Ethernet Relay Module is a compact module for test and performance automation. With the 24 relays á 12A it owns a high flexibility and the open Application Programming Interface. It is easy to start up and use.

24 Relays

12A

Open API

Web Interface

TCP/IP, UDP

Plug & Play

XS
Extra small

DIN Rail

Description

The QUBI-RIO 100 includes 24 power relays. The relays are configured as normally open (switch).The current amperage amounts to 12A and the input voltage can be chosen between 10 and 60 VDC. The robust module is designed for laboratory and industrial applications. The module communicates via USB2.0 (HID) and via Ethernet (TCP / IP, UDP, HTTP). The device has a built-in diagnostics, this allows the detection of relay switching cycles and the monitoring of operating voltages. For quick diagnostics and initial startup, the device has a web interface. The device has an open Application Programming Interface (API) and is programmable with C, C + +, C #, Java, Visual Basic, Python.

Applications

With the QUBI-RIO 100 you can switch up to 12A and perform Tests completely automated.
It is possible to multiplex power and signal lines for the simulation of cable breaks or short circuits. It is suited for validation of safety-related functions.

Features

The QUBI RIO 100 possesses an open Application Programming Interface via TCP/IP, UDP, HTTP, HID. It has spring-loaded terminals, 24 high-quality power relays, an extended temperature range (-40°C to +70°C) and a compact and rugged design. It works with a time switch in a standalone mode and has a web interface for monitoring and diagnostic purposes. Furthermore It is possible to update the Firmware via Ethernet/USB and recover the IP address via USB.

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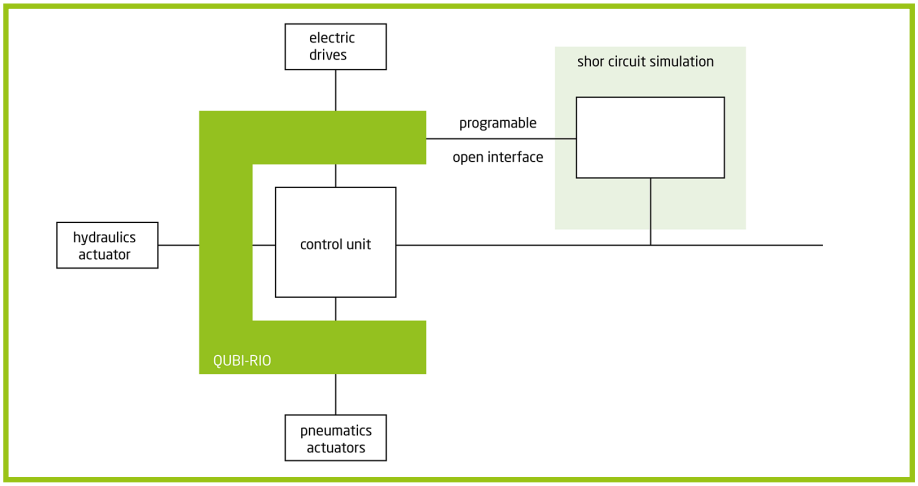
The QUBI-RIO 100 can be easily installed via DIN Rail mounting.

The test unit QUBI RIO 100 is with its 24 12A/240VAC relays and the compact und robust design, designed for applications in the verifying and test automation field. The device has two interfaces: USB or Ethernet. Thereby a server client communication is established by the access on the IO-Socket of the system. The programming is possible in the following high level languages like C, C++, C#, Visual Basic, Python, Perl or and PHP is available. With QUBI RIO it is possible to customize and fully automate the simulation of cable brakes and short circuits. With the open Application Programming Interface QUBI RIO unifies high standardization with flexibility and customization.

All advantages at one glance:

- 24 High performance Relays with 12A
- For all operating Systems (Windows, Linux etc.)
- Compact and robust
- Standalone mode
- Plug-in-Play start and use
- Open Application Programming Interface
- Supports C, C++, C#, Java, .NET and Python
- No external software needed
- Web interface for quick installation
- Extended Temperature Range (-40°C to +70°C)
- Ethernet and USB communication

Automation of short circuit tests and simulations of actuators.



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Relay specification	
Relay	12 A power relay, SPST-NO
Relay arrangement	24 normaly open (R_{off} ≥ 1MΩ ; R_{on} ≤ 1Ω)
Switching speed communication	2 ms
Galvanic isolation	2000 V DC between primary/secondary circuit
Switching and feed-through current	max. 10 A (per relay)
Switching and feed-through voltage (DC)	max. 60 V DC
Switching and feed-through power (DC)	max. 230 W
Switching speed incl. contact bounce	1.0 seconds
Switching frequency	max. 2 Hz
Guaranteed switching cycles	max. 100.000 switching cycles
Contact resistance (feed-through)	max. 0,5 Ω
Isolation resistance relay contacts	min. 1 MΩ (test voltage 500 V DC)
Isolation relay contacts to control	min. 2000 V AC (test parameters 1mA/50-60Hz/1min)
Recommended load	min. 2 mA at 5 V DC
Electrical specification	
Supply voltage (U_{power})	min. +9,6 V DC, typ. +24 V DC, max. +60 V DC
Supply voltage trip level	9,2 V DC
Reverse polarity protection	min. 60 V DC
Power consumption	min. 1 W, typ. 5 W, max. 14 W
Power consumption, no relay switched	typ. 47 mA, max. 56 mA (Requirement: U_{power}=24V)
Power consumption, all relay switched	typ. 460 mA, max. 550 mA (Requirement: U_{power}=24V)
Peak inrush current	typ. 1000 mA, max. 1500 mA (Requirement:U_{power}=24V for 2ms)
Mechanical specification	
Dimension Open Frame (H x W x D)	160 x 100 x 25 mm
Dimension housing (H x W x D)	170 x 115 x 44 mm
Housing IP protection class	IP 20
Relay contacts connector	Spring-loaded terminals
Environment specification	
Storage temperature	-40°C to +85°C
Humidity non-condensing	35% to 85%
Operating temperature	-40°C to +80°C (regard derating note in the manual)
EMC	
Immunity	DIN EN 61000-6-2 : 2006
Emission	DIN EN 61000-6-4 : 2011
Scope of delivery	**Guarantee and support**
QUBI-RIO 100	1 year guarantee
Connectors	Software examples
Manual	Online support