



Active redundancy module

QUINT S-ORING

Your advantages at a glance

Redundancy modules for superior system availability and maximum operational safety.

Consistent redundancy

- Consistently separate cable routing to the load

Preventive function monitoring

- Indicates all critical operation states in a redundant system in combination with QUINT POWER power supplies

Energy savings

- Low power dissipation, thanks to active decoupling with MOSFETs

OVP (overvoltage protection)

- The plus version with protective circuit safeguards sensitive consumers from static surge voltages > 30 V (QUINT4-S-ORING/12-24DC/1x40/+)



QUINT S-ORING

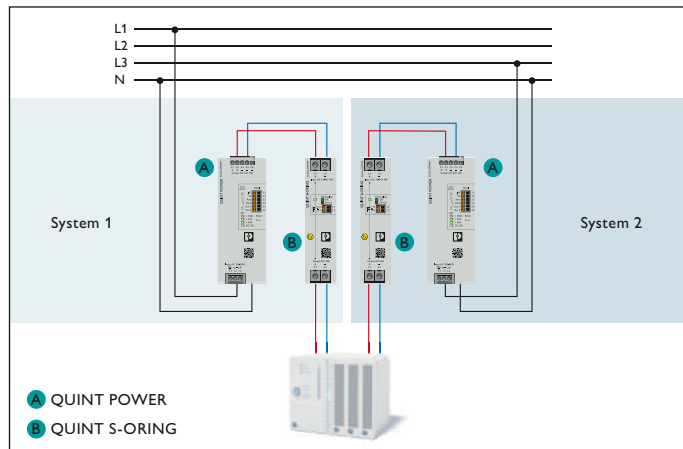
		
QUINT4-S-ORING/ 12-24DC/1x40 2907752	QUINT4-S-ORING/ 12-24DC/1x40/VP 1043418	QUINT4-S-ORING/ 12-24DC/1x40/+ 2907753

QUINT POWER supplies for optimum interaction with QUINT S-ORING

			
1-phase power supply*			
QUINT4-PS/ 1AC/24DC/5 2904600	QUINT4-PS/ 1AC/24DC/10 2904601	QUINT4-PS/ 1AC/24DC/20 2904602	QUINT4-PS/ 1AC/24DC/40 2904603
3-phase power supply			
QUINT4-PS/ 3AC/24DC/5 2904620	QUINT4-PS/ 3AC/24DC/10 2904621	QUINT4-PS/ 3AC/24DC/20 2904622	QUINT4-PS/ 3AC/24DC/40 2904623

* For additional versions, visit: phoenixcontact.de

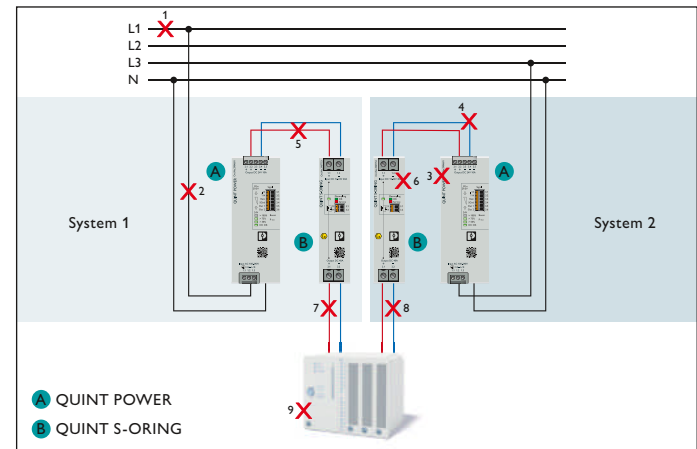
Optimal structure for a redundant system



Checklist setup

Power supplies are connected to different phases	
Separate cable routing to the load	
Power supplies are set to the same output voltage	
Power supplies are switched to parallel operation	
Current threshold of the monitoring is set to the load current	

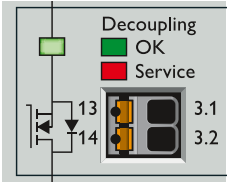
Error in a redundant system

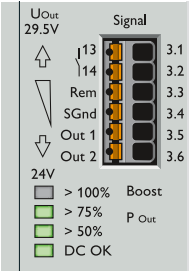


Error

1	Error in one phase
2	Power line of power supply is interrupted or short circuited
3	Error of one power supply
4	Short circuit between power supply and the connected redundancy module
5	Interruption between power supply and redundancy module
6	Error of one redundancy module
7	Interruption between a redundancy module and the load
8	Short circuit between a redundancy module and the load
9	Load current is too high for a power supply

Signaling of the redundant system

Signaling of the QUINT S-ORING redundancy module	LED	Relay 13/14	
			
		Open	Input voltage not present or short circuit at output of redundancy module.
		Closed	Input voltage is present
		Open	Redundancy module needs to be factory tested.
		Open	OVP active, input voltage exceeds the permitted voltage value (only for QUINT4-S-ORING/12-24DC/1x40+ plus version)

DC OK signaling of the QUINT POWER power supply	LED DC OK	Relay 13/14	
			Input voltage not present or output switched off
		Closed	Output delivers the set output voltage
		Open	Output voltage lower than 90% of the set output voltage

Additional signaling options can be found in the QUINT POWER supply data sheet.

Practical example: Configuring the QUINT POWER software

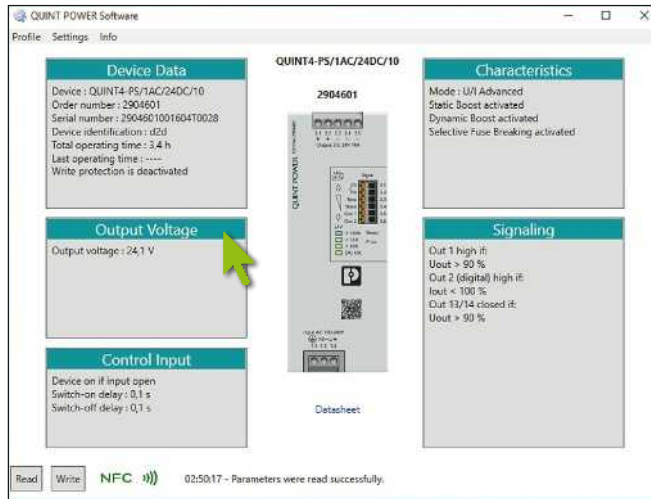
The new QUINT POWER power supplies can be configured individually. Utilize this advantage for optimal adjustment of your power supply to your application using QUINT POWER software. Or order the power supply with custom configuration ex works.

The following steps demonstrate how to configure the output voltage, parallel operation, and current threshold signaling. You can find the free software in the download area for QUINT POWER power supplies.

Output voltage and parallel operation

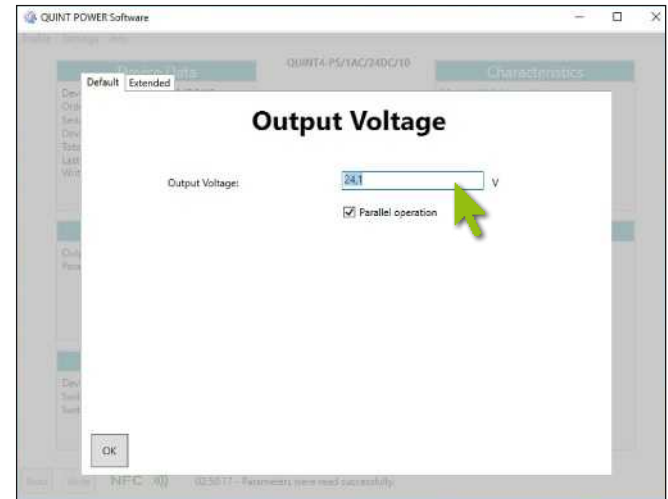
Step 1:

- Open QUINT POWER software
- Select the field for configuring the **output voltage**



Step 2:

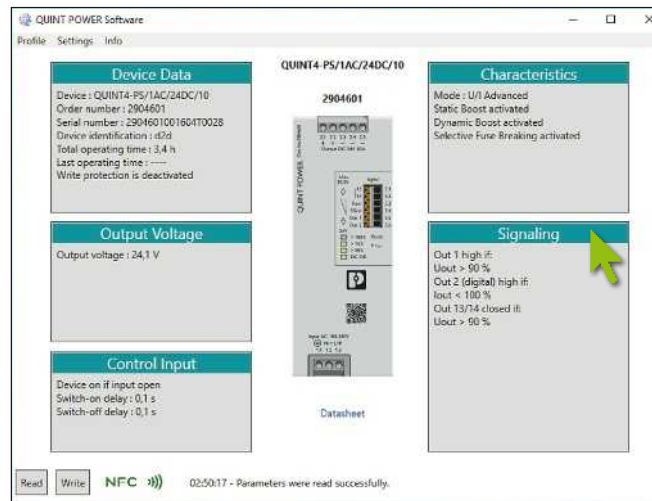
- Set the **output voltage** to the desired value
- Activate **parallel operation**



Signaling of the current threshold

Step 3:

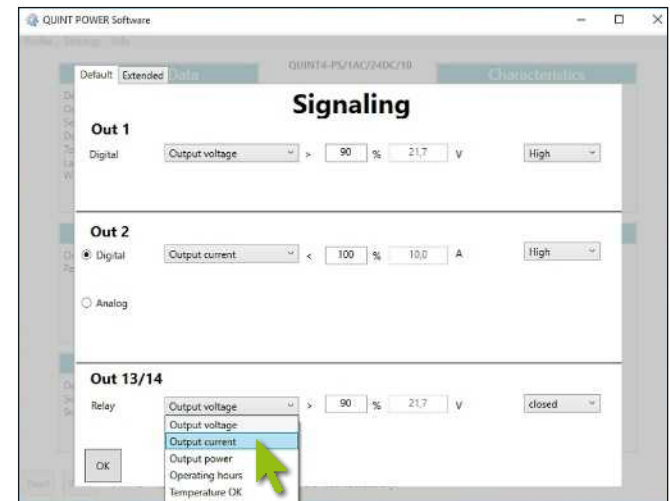
- Open the field for configuring **signaling**



Step 4:

- Set the **output current** for signaling

Example: Output current = $\frac{I_L}{2} \times 1.25$
 I_L ... Total load current, condition: the output current: the output current must not exceed 50% of the nominal current for the power supply.



Signaling of the redundant system

Error		System 1				System 2			
		Signaling of the power supply		Signaling of the redundancy module		Signaling of the power supply		Signaling of the redundancy module	
		Relay 13/14 (see step 4) 	LED DC OK 	Relay 13/14 	LED 	Relay 13/14 (see step 4) 	LED DC OK 	Relay 13/14 	LED 
	Normal operating mode	Closed		Closed		Closed		Closed	
1	Error in one phase	Open		Open		Open		Closed	
2	Power line of power supply is interrupted or short circuited	Open		Open		Open		Closed	
3	Error of one power supply	Open		Closed		Open		Open	
4	Short circuit between power supply and the connected redundancy module	Open		Closed		Open		Open	
5	Interruption between power supply and the connected redundancy module	Closed		Open		Open		Closed	
6	Error of one redundancy module	X		Closed		X	X	Open	
7	Interruption between redundancy module and load	Closed		Closed		Open		Closed	
8	Short circuit between a redundancy module and the load	Open		Closed		Open		Open	
9	Load current is too high for a power supply	Open		Closed		Open		Closed	

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