<u>Relay Interface board</u>
<u>CON_R_AUX4 / CON_AUX4</u>

Manual
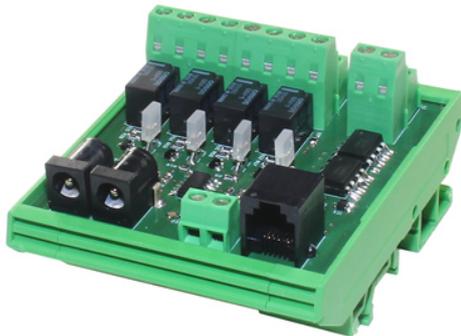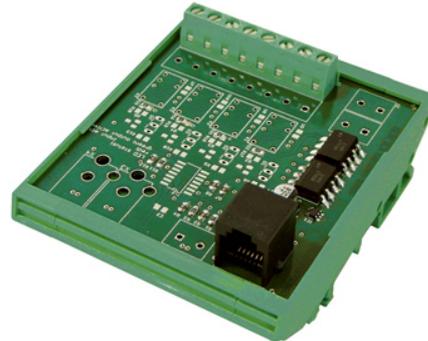
CON_R_AUX4   CON_AUX4

<u>Description & Functions</u>

⚠	To avoid damages, do not exceed the maximum switching current of 48 VAC / 0.5A or 24VDC / 1A
⚠	This product is not compatible with the CS121 SNMP Adapter!

The CON_R_AUX 4 and CON_AUX 4 interface cards are optional extensions that can be connected to the AUX port of the SNMP/ Web / Modbus Manager CS141.

Function of the CON_R_AUX 4 and CON_AUX 4 interface card

The CON_R_AUX 4 and CON_AUX CON_AUX 4

CON_AUX 4

The CON_AUX 4 interface card offers the possibility of configuring 4 channels as inputs. Input signals can thus be connected and monitored via potential-free contacts. The CON_AUX 4 is supplied with the necessary operating voltage directly via the AUX port of the CS 141 SNMP web manager.

CON_R_AUX 4

The CON_R_AUX 4 interface card adds the option of defining 4 channels either as inputs or outputs. In this way, it is possible to monitor potential-free inputs on one channel or switch relay contacts accordingly. The CON_R_AUX 4 requires an external power supply through the power supply unit included in the scope of delivery.

Both versions of the IO interface card offer the possibility of connecting the open cable ends of the sensors, detectors or, if applicable, actuators directly to the screw terminals of the terminal blocks provided. The status of the inputs or outputs can be monitored via the web interface of the CS 141. The CON_R_AUX 4 also offers status LEDs that can visually display the status.

The interface cards are optional extensions that can be connected to the AUX port of the SNMP/ Web / Modbus manager CS141. They do not operate as a stand-alone system.

The state of the LEDs is defined as followed

☐ Output / input no active (off)

🟩 Output active (on)

🟥 Input active (on)

🟧 Output and Input active (on)

Hardware description

CON_R_AUX4   *CON_AUX4*
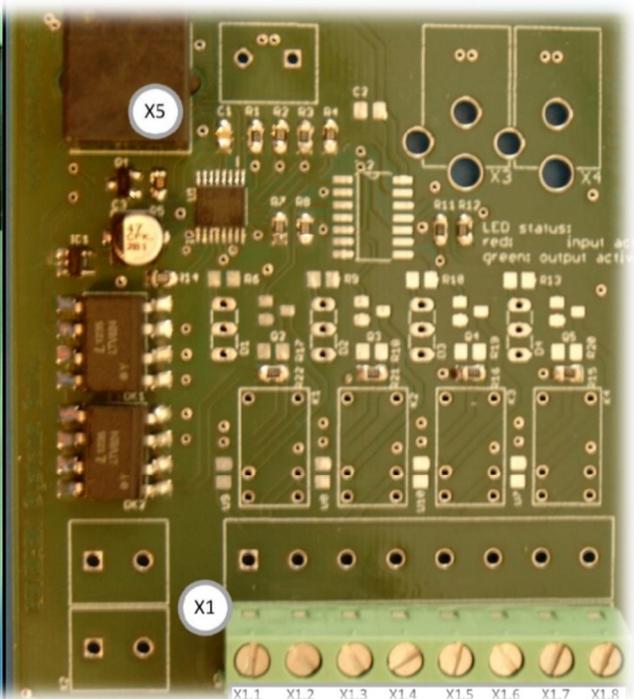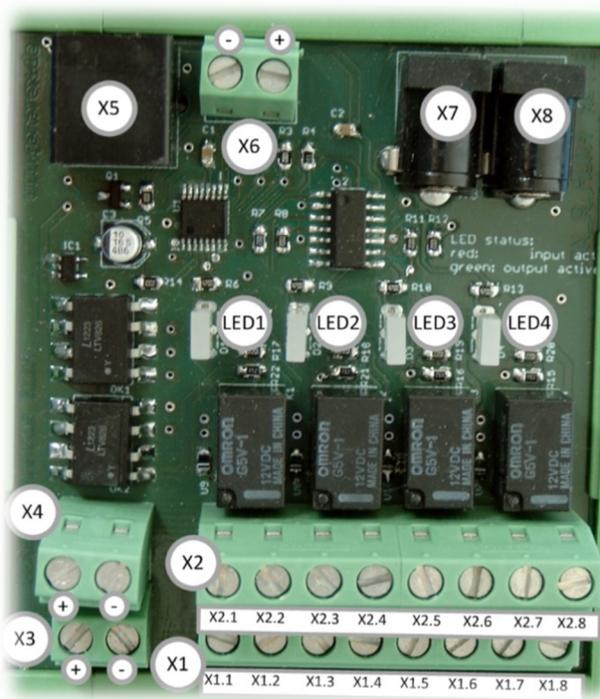
LED1	Status LED AUX Channel 1		X2.4	Relay COM Channel 2
LED2	Status LED AUX Channel 2		X2.5	NO-Contact Channel 3
LED3	Status LED AUX Channel 3		X2.6	Relay COM Channel 3
LED4	Status LED AUX Channel 4		X2.7	NO-Contact Channel 4
X1.1	12VDC / 5V DC[1]		X2.8	Relay COM Channel 4
X1.2	Channel 1 / Input		X3 / +	Output 12VDC
X1.3	12VDC / 5V DC[1]		X3 / -	GND
X1.4	Channel 2 / Input		X4 / +	Output 12VDC
X1.5	12VDC / 5V DC[1]		X4 / -	GND
X1.6	Channel 3 / Input		X5	AUX-Interface
X1.7	12VDC / 5V DC[1]		X6 / +	Output 12VDC
X1.8	Channel 4 / Input		X6 / -	GND
X2.1	NO-Contact Channel 1		X7	Output 12VDC
X2.2	Relay COM Channel 1		X8	Input 12VDC/1A
X2.3	NO-Contact Channel 2			

- The terminals of the Interface Board are for wire diameter of 0,4mm² - 1,5mm² suitable.
- CON_R_AUX4: 12V DC, CON_AUX4: 5V DC

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> ⚠️ To ensure optimum functionality of connected devices, the
> the cable length of the connected unit should not exceed 100m.

1. Connect all sensors and switches to the screw terminal block (CON_AUX4: X1 / CON_R_AUX 4: X1 / X2) of the IO interface card according to the manufacturer's instructions.

2. Connect the AUX interface of the board (X5) to the AUX port of the CS141 SNMP / Web / Modbus manager using the RJ11 cable supplied. Please note that the RJ11 cable must not exceed a maximum length of 5m.

3. the CON_R_AUX 4 requires an additional external power supply via the 12V power supply unit supplied. Connect the power supply to the provided connector (X8).

Overview of the configuration menus

Configuration menu overview

🐡 UPS Monitor	
🐡 AUX Monitor	→ AUX System Monitor*
— Devices	→ System settings / Configuration of the COM Ports
⚙ Setup	→ Initialization of the CON_AUX4 / CON_R_AUX4
> UPS	
— AUX	→ System tab: AUX Configuration*
⚙ Setup	→ Configuration of the AUX In-/Outputs*
🔔 Events	→ Job Management for AUX System Events*

*The menus depend on the COM Port configuration and will be provided after activating.

Initialization of the interface card

1. log in to your CS141 SNMP /Web / Modbus Manager and click on "Configuration" under Devices.
2. Then select the connected device under COM3:

3. Click Apply to confirm your setting.

The CS141 will load all necessary modules and display the corresponding menus. The device is initialized when a green marker is visible in the upper bar next to AUX:

Note
In some cases, the web browser may not display the menus. This phenomenon always occurs when semi-static content is loaded from the browser's internal cache and displayed. If the menus are not displayed, please press CTRL +F5 or briefly delete the browser cache of your web browser. This will cause the web browser to request the content again and display it correctly.

Basic settings

Under devices, open the system tab AUX and click on Setup. Depending on the device, different configuration options are available.

CON_AUX4

The CON_AUX4 provides up to 4 free configurable inputs:

1	Port	Pre-Defined: The port number of the connector.
2	Name	Define a name – it will, among others, appear at the AUX monitoring screen
3	NC – normally closed	Select if this connection is normally closed (NC) or Normally open.
4	Apply	Confirm your settings and exit this dialog
5	Cancel	Abort your configuration work, no configuration will be saved

CON_R_AUX4

The CON_R_AUX4 provides 4 additional relay contacts that can be configured as switchable outputs.

1	Port	Pre-Defined: The port number of the connector
2	Name	Define a name – it will, among others, appear at the AUX monitoring screen
3	Output	If selected, this Connection is an Output and trigger the Relay.
4	NC- normally closed	Select if this connection is normally closed (NC) or Normally open.
5	Switch on CS141 Powerup	If selected, Outputs will be triggerd to normal state on Power Up
6	Powerup Delay (seconds)	If selected, the switching state of the outputs wil lbe delayed
7	Apply	Save and activate the configuration
8	Cancel	Withdraw all settings and cancel configuration work.

System Events

Every switching state, regardless of being an output/relay or input, is recorded as a system event. The basic configuration determines the respective normal system state. Depending on the configuration, the following states are possible:

High / ON

NC – Normally Closed: The contact is open but should be closed.
NO – Normally Open: The contact is closed, but should be open.

Low / OFF

NC – Normally Closed: The contact is closed – this is the correct system state.
NO – Normally Open: The contact is open – this is the correct system state.

Defining a job to an active system event

Under devices, open the system tab AUX and click on Events:

>		Ereignis	Jobs	Log	E-Mail	EMail Trap	RCCMD Shutdown	RCCMD Nachricht	RCCMD Execute	UPS Shutdown	AUX	RCCMD Trap	Send WOL	Send SMS
		contains...												
>	+	AUX Port 1 High	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 2 High	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 3 High	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 4 High	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 1 Low	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 2 Low	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 3 Low	0	0	0	0	0	0	0	0	0	0	0	0
>	+	AUX Port 4 Low	0	0	0	0	0	0	0	0	0	0	0	0

At the Event that shall trigger a job, click on **+.** This will open the job configuration dialogue:

By clicking „**+**" (as marked in the screenshot) it is possible to add a job to the according event..

Depending on the selected job, the job parameter settings will change. dynamically. Some jobs require additional network settings.

With timing, the job can be delayed or adapted to a specific timing window.

Click *Save* to confirm the configuration.

Switchin Outputs

This function is available if a CON_R_AUX4 is installed and a channel is configured as output. By doing so, the Relays can be triggered differently:

Manual Overwrite

Each channel that is configured as Output can be reached via the AUX Monitoring screen. The Output can be switched ON / OFF manually by clicking the according button:

AUX Port 1		**AUX Port 2**	
Port	1	Port	2
Usage	Input	Usage	Output
Inverted	Yes	Inverted	No
State	🔴	State	🟢
Switch On/Off		Switch Off	

Note:
Clicken the manual switch button will be recognized as a system event. The CS141 will execute the according jobs.

Trigger outlputs via job

It is also possible to trigger the outputs directly from any system event that may occur:

1. UPS Events
2. Sensor-events (temperature, humidity, pressure, etc)
3. Sensor matrix-based events
4. Other AUX-events

Find the desired system event and select the job AUX. Use the parameters to trigger the port as a response to the selected system event.

1	Job	To switch an AUX-Output, choose the Job „AUX".
2	Parameter	Portnumber: Which port state do you want to change Command: Define whether the port is ON or OFF. 　　　　NC: open the relay when ON 　　　　NO: close the relay when ON
3	Timing	Define advanced time windows for trigger conditions.
4	Speichern / abbrechen	Save: Save your settings. Abort: Aborts the configuration dialogue – all settings will be withdrawn..

For more information about the job configuration dialogues, please refer to the official CS141 Manual.

The AUX-Monitoring Screen

The AUX Status Monitor offers a comfortable and quick overview of all configured ports and allows switching configured outputs directly. To take a view at the AUX Status Monitor, click on *AUX Monitor*:

1	Port	Pre-defined: Shows the contact number (Port).
2	Usage	Shows the configuration state and if this is an output or input.
3	Inverted	Provides information if this contact is NO (Normally Open) NC (Normally Closed).
4	State	For inputs: if there is an active system state depending on the configuration For outputs: Displays the current switching state depending on the configuration.
5	Switch ON / OFF	Toggles the switching state of an output