

**WARNING**

Keep protective caps in place when connectors are not in use.  
Opening the unit invalidates the warranty and IP rating. There are no user serviceable components inside the unit.  
Do not apply more than 10 psi water pressure to the unit.



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**SOMAT XR**

CX23-R Quick Start Guide

HBM: Public.

SO-269-1000512

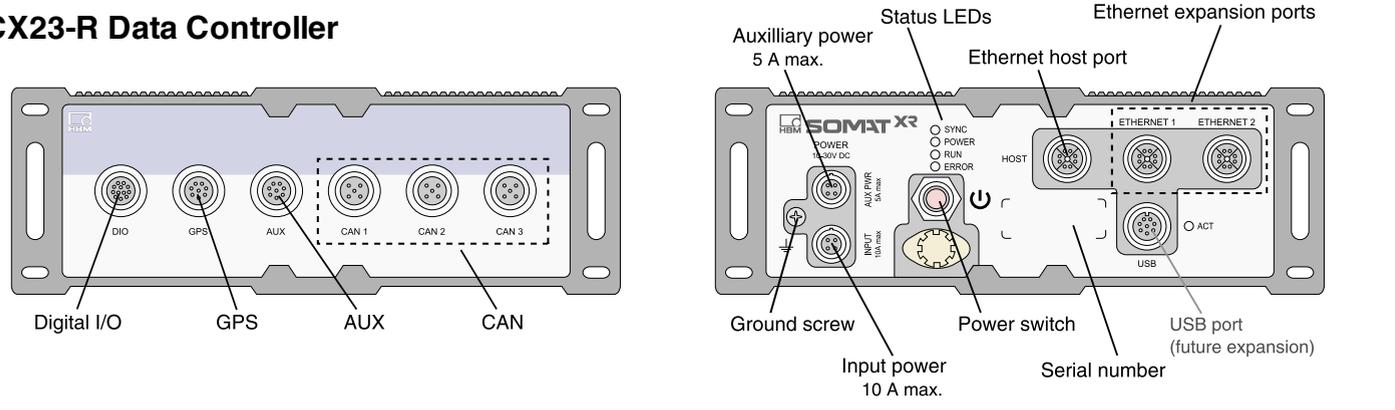
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**In the Box**

- CX23-R unit with dust caps
- 1-KAB2106-2 Ethernet cable
- SomatXR Safety Manual
- 1-KAB2115-2 power cable
- USB flash drive
- CX23-R Quick Start Guide

**CX23-R Data Controller**



**CX23-R Status LEDs**

**SYNC (blue)**

- On Sample clock is synchronized to PTP source.
- 4 Hz Sample clock is synchronized to GPS source.
- 1 Hz Sample clock is not externally regulated.

**POWER (green)**

- Off Unit is off.
- On Unit is on.
- 4 Hz Unit is shutting down.
- 2 Hz Unit is in locate mode.

**RUN (yellow)**

- Off No test run is in progress.
- 4 Hz Test run is in progress.

**ERROR (red)**

- Off No error.
- On Unit error.
- 1 Hz User alert.

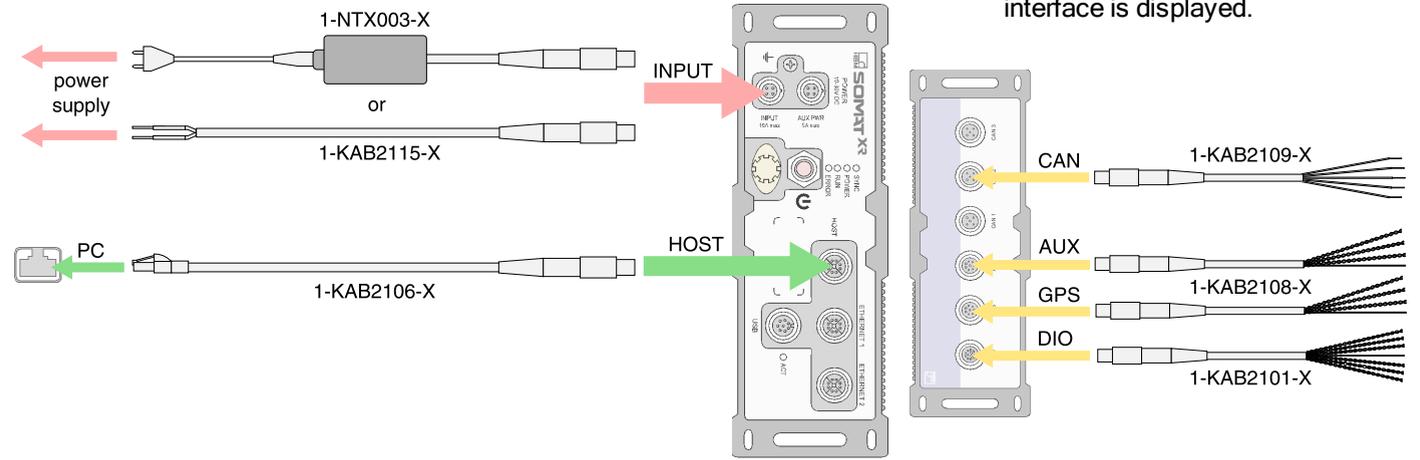
**Setting up the CX23-R**

1. Connect the 1-KAB2115 power cable from the INPUT connector to a 10-30 V<sub>DC</sub> power source. Alternatively, use the 1-NTX003 power supply.

**NOTE**

The green wire of the 1-KAB2115 cable must be insulated or tied to +V<sub>DC</sub>.

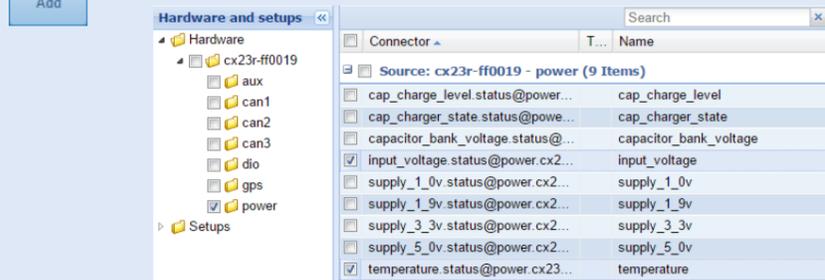
2. Connect the 1-KAB2106 Ethernet cable from the HOST connector to the host PC. The host PC network settings must be compatible with the CX23-R default IP address 192.168.100.101.
3. Connect desired transducers to DIO, GPS, AUX and CAN ports using the appropriate sensor cables. Refer to the SomatXR Accessories Data Sheet for a complete list of sensor cables.



4. Wait at least five seconds after supplying power to the unit.
5. Press and release the power button. The green and blue LEDs turn on. Wait about 15 seconds for the unit to boot up.
6. Open a web browser and navigate to the default IP address 192.168.100.101. If presented with a certificate warning, choose to proceed. The CX23-R web interface is displayed.

### Running a Basic Test

1. Open the web-based interface at the default IP address 192.168.100.101 and navigate to the Test configuration section.
2. In the Test setups page, click the **New** button from the task pane to define a new test setup. Edit the setup name and description as desired. The default name is "test\_name."
3. In the Channel setup page, click the **Add** button from the task pane. Select the desired inputs and click **OK**.



View the new channels in the All channels tab of the grid.

4. Click the **Save** button in the header or task pane to save changes.
5. Navigate to the Test and data control section.
6. Click **Start** to run the test. The yellow LED flashes in the status bar of the web interface and on the unit. To view real time data, select the check boxes next to the desired channel names.

Channels	
Name	Units
<input type="checkbox"/> All channels - Digital display	
<input checked="" type="checkbox"/> input_voltage	Volts
<input type="checkbox"/> temperature	Degr...

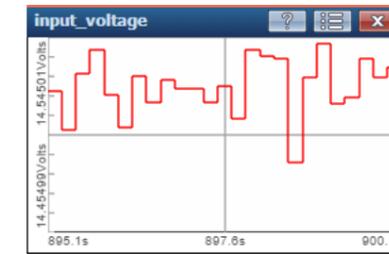
7. Click **Stop** to end the test run. To download the SIE data file, click the file name in the Test run statistics panel.



#### Live data displays

To change the display, click on the display window and select a new chart type.

#### Strip chart display.



#### Digital meter display.



### Restoring Default Settings

#### Administrator profile & password

To regain administrator access:

1. Power down the CX23-R.
2. Press and hold the power switch.
3. When the LEDs begin to flash, quickly release the power switch.

#### NOTE

No other profiles or users are affected.

#### Network Settings

To reset the module IP address to 192.168.100.101:

1. Power down the CX23-R.
2. Press and hold the power switch.
3. When the LEDs flash, stay on and start flashing again, release the power switch.

#### NOTE

This procedure activates the Default Auto Set network and does not delete any user-defined networks.

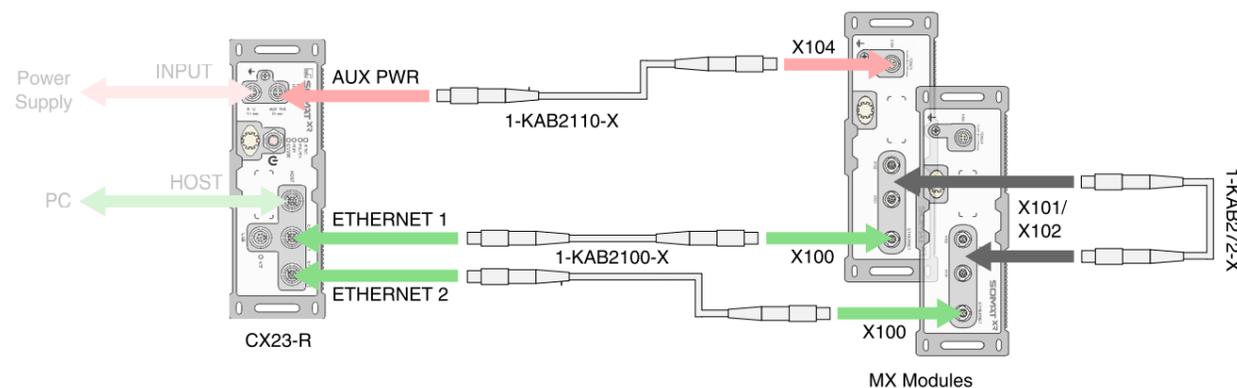
### Connecting MX Modules

A CX23-R can be used to control and process data from multiple MX modules to include other transducers such as voltage, current, bridge and thermocouple. MX modules can be connected directly to the CX23-R module or through one or more EX23-R Ethernet switches.

Refer to the MX Modules User Manual for more information on using MX modules.

**NOTE**  
The CX23-R automatically configures the MX module network address and checks for firmware updates. If necessary, install new MX firmware before continuing.

#### Centralized network using direct Ethernet connections



#### NOTE

The CX23-R AUX PWR connector can power a maximum of two MX modules.

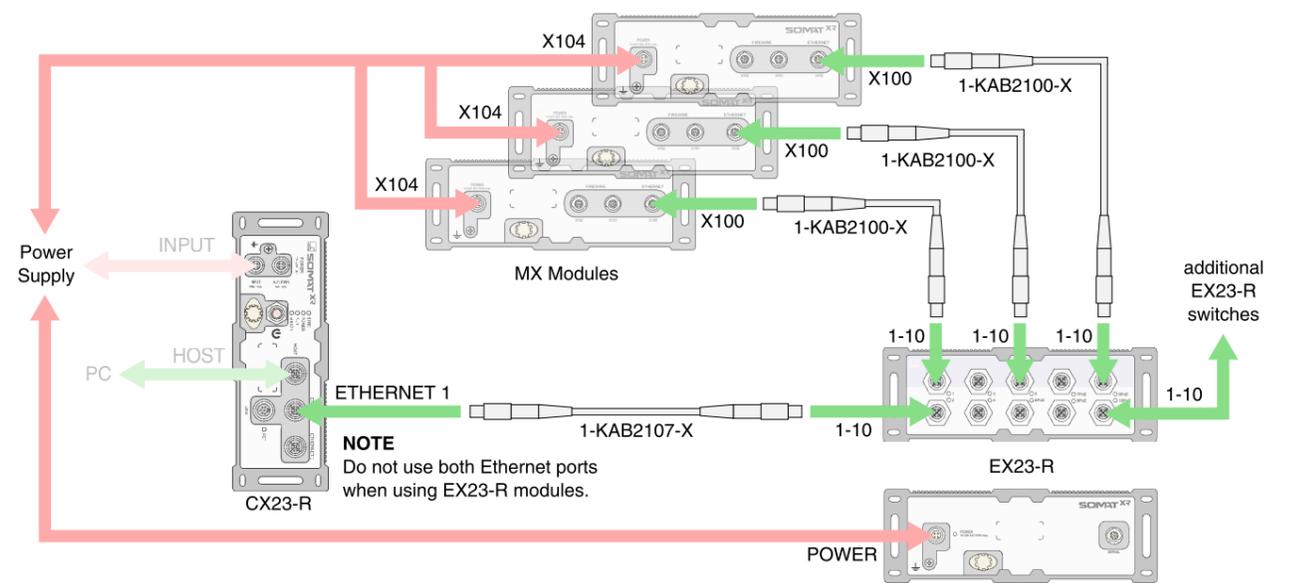
1. To power the first MX module, connect the CX23-R AUX PWR connector to the X104 connector on the first MX module using a 1-KAB2110 cable.

#### CAUTION

Do not exceed 5 A current draw from the CX23-R AUX PWR connector.

2. To power the second MX module, use a 1-KAB272 cable from the X101 or X102 connector on first MX module to the X101 or X102 connector on the second MX module.
3. Connect the CX23-R ETHERNET1 and ETHERNET2 connectors to the MX module X100 connectors using KAB2100 cables. This establishes communication and synchronization between the CX23-R and MX modules.

#### Distributed network using EX23-R Ethernet switches



**NOTE**  
Do not use both Ethernet ports when using EX23-R modules.

1. Connect the CX23-R, EX23-R and MX modules to a power supply.

#### NOTE

When designing the power system, note that increased cable lengths can produce significant voltage drops at the module connectors, especially when using PoE or powering multiple modules from one source.

#### NOTE

MX modules may also be powered in serial using FireWire connections. Refer to the MX Modules User Manual for details.

2. Use a 1-KAB2107 cable to connect the CX23-R ETHERNET1 connector to the EX23-R switch.

#### NOTE

For optimal data throughput performance, do not use both CX23-R Ethernet ports when using EX23-R modules. To use multiple EX23-R modules, connect any Ethernet port on the new EX23-R module to any open EX23-R Ethernet port.

3. Use 1-KAB2100 cables to connect the MX module X100 connectors to the EX23-R switch.