

Figure 1: XFC^{G5} Board

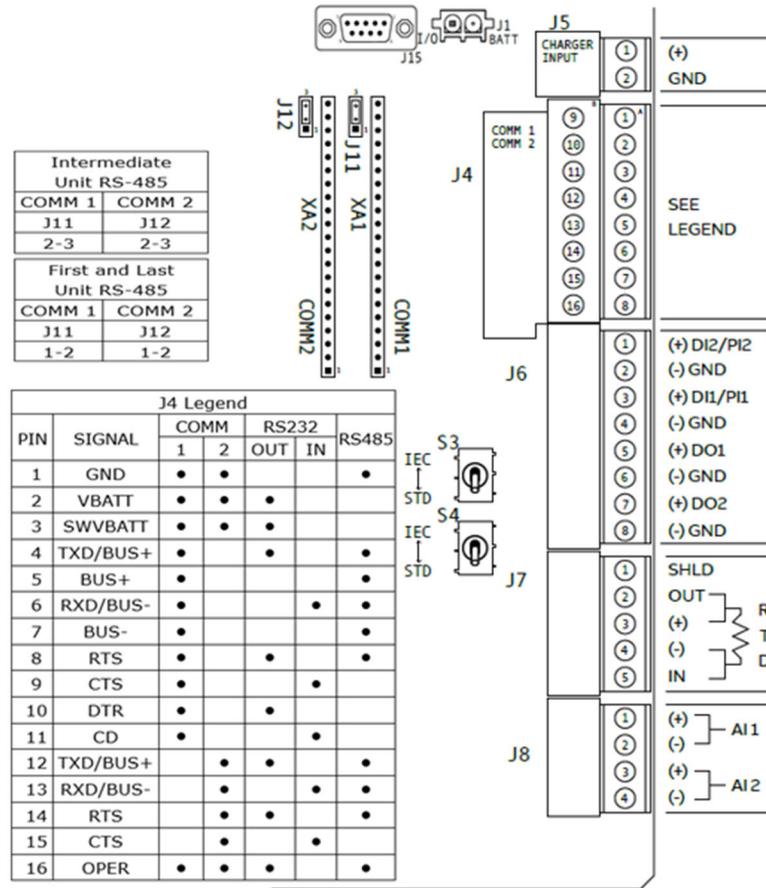


Figure 2: XRC^{G5} Board

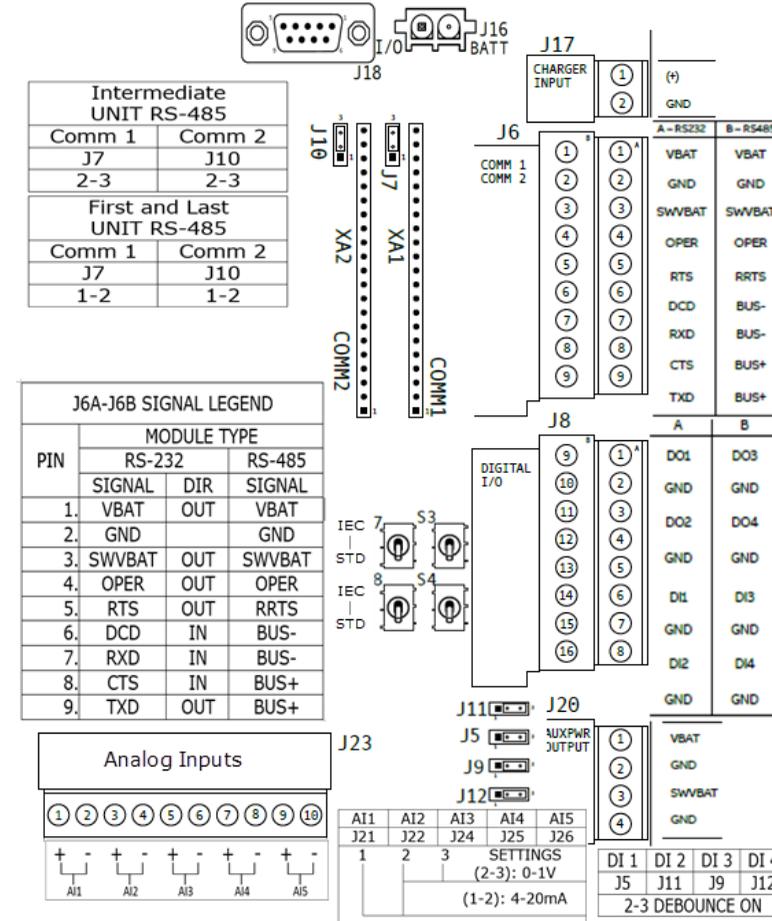
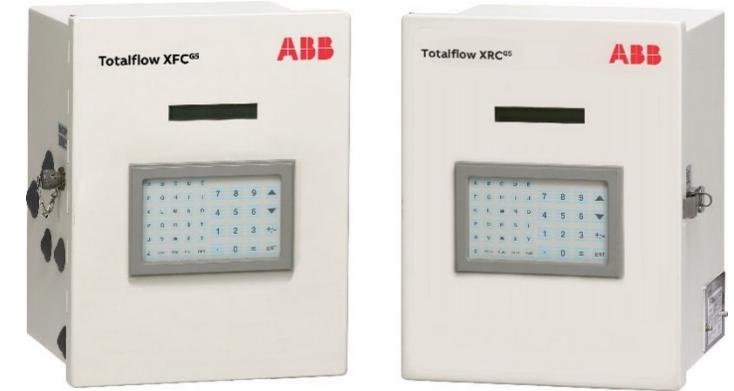


ABB MEASUREMENT & ANALYTICS
XSeries^{G5} XFC and XRC
 Quick Start Guide



Additional information

Click or scan code for product publications:

XFC^{G5}



XRC^{G5}



Contact us

ABB Inc., Measurement & Analytics

Quotes: totalflow.inquiry@us.abb.com

Orders: totalflow.order@us.abb.com

Training: totalflow.training@us.abb.com

Support: upstream.support@us.abb.com

+1 800 442 3097 (opt. 2)

www.abb.com/upstream

Safety and compliance information is included with the device in the shipping packaging.

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

2106141MNA

Copyright© 2019 ABB all rights reserved

XSeries^{G5} Quick Start

Power modes

The XFC and XRC can support either of two power modes.

- Battery mode: The primary power source to the device is a 12 volt sealed lead acid battery with nominal 12 volt solar panel charger.
- External power mode: The primary power source to the device is an outside power supply (14.5 to 15.5 Vdc maximum).



WARNING – Bodily injury. Do not connect the battery/charger or external power supply to the electronic board until all wiring is complete.

Install battery and charger

To operate the XFC or XRC in battery power mode, install the battery and solar panel charger as follows.

Install the battery

The battery mounts inside the flow computer enclosure. Before installation, inspect for damage both the power cables (where they terminate on the battery) and the connectors.

Required material:

- One (1) battery with cable attached

Install the battery:

1. Open the hinged door on the XFC or XRC. Locate the battery shelf.
2. Place the battery on the compartment shelf.



DANGER – Serious damage to health/risk to life: Do not allow the battery terminals to come in contact with any metal surface. This could result in sparks, property damage, and possible explosion.

Install the solar panel

The solar panel is designed to be mounted outdoors on a 2 inch pipe. After the flow computer is pipe-mounted, install the solar panel on the upper end of the mounting pipe. Add a pipe extension if necessary. For wall- or direct-mount installations, mount the solar panel on a stand-alone pipe or on the top or side of a meter house.



IMPORTANT NOTE: For best charging, place the solar panel in full sun all day. Clean the solar panel on a regular basis to ensure maximum charging.



IMPORTANT NOTE: For Wi-Fi® and Bluetooth® connections, refer to the user manual.

Required materials:

- One (1) solar panel with cable
- One (1) solar panel mounting kit (includes U-bolts, brackets, and hardware)
- Mounting pipe extension and coupling if required (length determined by technician depending on the size of the solar panel)
- Nylon tie wraps



NOTICE – Equipment damage. Exercise caution when handling the solar panel to avoid damage.

Install the solar panel:

1. Verify that the solar panel is operating properly before installation:
 - a. Check the solar panel using a digital voltmeter to verify polarity and output voltage.
 - b. If the measured output voltage is within the manufacturer's specification, continue with the installation.
 - c. If the measured voltage is out of specification, contact ABB for a replacement panel.
2. Install the mounting bracket on the solar panel using the provided hardware.
3. If installation requires a mounting pipe extension:
 - a. Attach the pipe coupling to the top end of the flow computer mounting pipe.
 - b. Securely tighten the pipe coupling.
 - c. Attach the extension pipe to the pipe coupling.
4. Attach the solar panel mounting bracket to the top end of the mounting pipe with the U-bolts and associated mounting hardware. Do not tighten completely.
5. Insert the panel cable into the enclosure leaving enough length to reach the CHRГ terminal block.

Wire and power the device

For wiring, refer to Figure 1 or Figure 2 on the reverse side.

1. Wire all peripherals to the electronic board.
2. If battery powered:
 - a. Connect the battery to the BATT connector (J1 on the XFC, or J16 on the XRC).
 - b. Remove the connector from the CHRГ terminal block (J5 on the XFC, or J17 on the XRC).
 - c. Wire the solar panel cable wires into the removed connector with correct polarity (+, -).
 - d. Reinsert the connector into the CHRГ terminal.
3. If externally powered, connect the outside power source to the BATT connector (J1 on the XFC, or J16 on the XRC).
4. Verify the power-on sequence on the LCD.

Local communication with the device

Establish initial communication with the XFC or XRC with a direct connection to the RS-232 (MMI) or USB ports. Communication on the USB port is faster.



IMPORTANT NOTE: Use PCCU32 software version 7.65 or newer to connect and configure XSeries^{G5} devices. Ensure PCCU32 is already installed in the PC or laptop. PCCU32 has context-sensitive online help. Click **Help** on the screen of interest for details.

Local communication using serial or USB port



IMPORTANT NOTE: Use the appropriate cable for each port. Contact ABB to order recommended cables: For USB, order Y-adapter cable (1803009-001). For serial, for laptops without RS-232 ports, order the Digi® Edgeport®/1 serial-to-USB converter (1801382-001).

1. Connect the laptop or PC running PCCU32 to the flow computer with an MMI cable (RS-232) or a USB cable.
2. Start PCCU32.
3. Click the **Setup** icon on the PCCU toolbar, or click **Operate>Setup>System Setup**.
4. Define the local connection parameters:
 - a. Under Communications, select **Serial port**.
 - b. Under Connection Parameters, on the PCCU Com Port drop-down list, select the port on the PC or laptop assigned to the local connection.
 - c. Click **Close** to exit connection setup and return to the main PCCU screen.
5. Click **Entry** on the top PCCU toolbar to establish connection.
6. Configure basic parameters or enable other communication interfaces.

Local communication using Ethernet

1. On the PCCU Entry mode navigation tree, select **Communications>Ethernet**.
 2. Select the **Network Adapter** checkbox.
 3. Click **Send**. Click **OK** to confirm.
- IMPORTANT NOTE:** Enabling Ethernet (Network Adapter) does not require a warm restart.
4. Connect the Ethernet cable from the laptop to the XFC or XRC.
 5. Click **Re-read** to refresh the screen and verify that the Ethernet Status displays "Ready".
 6. Click **Close** to exit Entry mode and close serial connection.
 7. To connect using Ethernet, click the **Setup** icon on the PCCU toolbar.
 8. Under Communications, select **TCP/IP**.
 9. Under Connection Parameters, type the IP address: **169.254.0.11**
 10. Click **Close** to exit connection setup and return to the main PCCU screen.
 11. Click **Entry** on the top PCCU tool bar to reestablish connection.
 12. Proceed with configuration.