

ABB MEASUREMENT & ANALYTICS | APPLICATION INSTRUCTIONS

Communication application reset XSeries^{G4}, XSeries^{G5} devices

1 Description

This guide describes how to reset a communication application instance that has ceased to operate properly. Communications may have worked correctly previously, but the instance may have become corrupted and require a reset if any of the following issues occur:

- Failure to collect data from PCCU or WinCCU. WinCCU displays this message after a data collection attempt: "Error validating collection."
- The antenna icon stops displaying on the meter's LCD display.

The following procedures describe how to:

- Record the current configuration and the number of the failed communication instance
- Remove or delete that instance
- Add a new instance with factory default configuration
- Restore the required configuration to resume successful communication



IMPORTANT NOTE: Rule out hardware failure before performing the procedures included in this guide. This guide addresses issues caused by software malfunction, not hardware failure.



IMPORTANT NOTE: The procedures in this document reset the affected port communication configuration to factory defaults. Make sure you record the configuration before reset.

2 Reset communication on affected port

The procedures in this guide show, as an example, a communication instance that is assigned to one of the device's serial ports (COM2) and this port is used for remote communication with the device. Adapt the steps to your specific configuration.

2.1 Delete failed communication instance

To reset communication on the affected port, delete the communication instance assigned to that port. Make sure you record the current configuration. You will need this information to rebuild the interface after the reset.

To record configuration (see Figure 2-1):



IMPORTANT NOTE: To record all configuration make sure to use Expert view. On the main PCCU menu, select **View**>**Expert**.

- 1. Locate **Communications** on the navigation tree. Expand to list all communication application instances if necessary.
- 2. Locate and select the failed communication instance. The Setup tab displays by default.
- 3. Take note of the configuration:
 - a. Identify the communication application number (the number the device uses to uniquely identify the instance). Note that, in this example, the instance is assigned to application number 5 (the first number in the registers associated with this instance).
 - b. Identify additional configuration parameters. In the example below, the communication instance has a user-defined port name and is assigned to the onboard COM2: port. The protocol is Totalflow Remote and the baud rate is at 9600. The other parameters are set to the factory default values.



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E-XFCG5 E-Communications Advanced Schedule Modem							
Totalflow - TCP			I				
Totalflow - USB		Description		Value			
MMI Serial - COM0	0.4.6	Port Name	Test settings				
TF Remote - COM1	5 3.3	Port	COM2:				
Bluetooth	5.0.6	Protocol	Totalflow Remote				
	5.0.2	Baud Rate	9600				
. I/O Interface	5.0.7	Listen Cycle	1				
Flow Measurement Setup	5.8.9999	G3 Translator Enable	Disable				
Analysis	5.0.37	Authentication	Disable				
Digital Outputs		I					
RS and No Flow							
Adv Setup							
Speed of Sound							
🚊 - Display							
Holding Registers							
• Operations							
Ready #Polls: 171 #Errors: 0 Connected to TOTALFLOW Login: user							

4. Select the **Advanced** tab to take note of additional communication settings and the interface type (RS-232 or RS-485).

Figure 2-2: Record the advanced configuration of failed communication instance

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Communications	Communications							
Totalflow - TCP	Description		Value					
MMI Serial - COM0	0.1 Interface	Rs232	Value					
TE Remote - COM1								
Test settings	0.3 Data Bits	8						
Bluetooth 5.1	0.4 Parity	None						
±. XMV Interface 5.0	0.5 Stop Bits	1						
	1.10 Response Delay (milliseconds)	40						
Eventual Flow Measurement	1.0 Power Up Delay (milliseconds)	80						
Analysis 5.	1.1 Xmit Key Delay (milliseconds)	420						
Digital Outputs 5.	1.2 Unkey Delay (milliseconds)	40						
RS and No Flow	0.8 Wait for Host Timeout (seconds)	15						
Speed of Sound 5.	0.15 Switched V-Batt/Operate/Comsw	Disable						
			•					
Holding Registers								
. Operations								
Ready #Polls: 144 #Errors: 0 Connected to TOTALFLOW Login: user								

To delete instance (see Figure 2-3):

- 1. Select the Station ID on the navigation tree and then select the **Application/License Management** tab.
- 2. Locate the application number in the application list and select it.
- 3. To delete the instance, select the **Delete App** checkbox.



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XFCG5 Communications Totalflow - TCP	Station Setup Application/License Management Battery Information Resources System Log Security Log Registry							
Totalflow - USB	Key creats			Device	Device Credit			
			Transfer to	o Key	Crear	t Type Used Surplus/Deficit		
	Credit Ty	pe Amount	Type	Ψ.	General(non	novable) 0 0		
Test settings			Amount	-	IEC Basic			
Bluetooth					CO2(NIST)	0 0		
. XMV Interface					(spare)			
I/O Interface	,	Lord	Tran	actor	IEC Tier 1			
E- Flow Measurement		Loau	Iran	Ister	HET TIGE /			
Setup	App# Type	Devision Station	Directory	License Status	Destart	Delete App		
Analysis Digital Outputs	0 System	2403280 020	Dir = \	Enable				
	o system	2103200-020						
Adv Setup	1 Communications	2101348-005	Dir = \Comm-1	Enable				
Speed of Sound	2 Communications	2101340-005	Dir = \Comm-2	Enable				
	3 Communications	2101340-005	Dir = \Comm-3	Enable				
Holding Registers	4 Communications	2101341-005	Dir = \Comm-4	Enable				
	5 Communications	2101341-005	Dir = \Comm-5			V		
	6 Communications	2101340-005	Dir = \Comm-6	Enable				
	7 I/O Interface XSeries	2103134-005	Dir = \IOS	Enable				
	8 Display XSeries	2103137-002	Dir = \Display	Enable				
	9 Holding Registers	2101312-002	Dir = \Holding	Enable				
	10 Operations	2101320-005	Dir = \Operations	Enable				
	11 AGA-3 Measurement	2101306-007	Dir = \4G43.1	Enable				
Re-read Add App Credit/App Info Send Close Help								
Ready #Polls: 26 #Errors: 0 Connected to XFCG5 Login: user								

4. Click **Send**. A confirmation message displays (<u>Figure 2-4</u>). Make sure the application number is correct. **Figure 2-4: Delete confirmation**



5. Click **Yes**. After the device completes removal, the communication instance is no longer visible in the application list or the navigation tree.

2.2 Update startup (cold) configuration

Update the startup (cold) configuration (see Figure 2-5):

- 1. Select the Station ID on the navigation tree. The Station Setup tab displays by default.
- 2. Locate Update Cold Start Configuration and select the value field to display options.
- 4 | COMMUNICATION APPLICATION RESET | 2106494MNAA

3. Select Delete and Re-Create TfCold.

Figure 2-5: Cold Start Configuration Update

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E XFCG5 Communications Station Setup Application/License Management Battery Information Resources System Log Security Log Registry								
Totalflow - TCP								
Totalflow - USB		0.05	Description	Value				
TE Remote - COMU		0.0.5	Location	2103393-005				
Bluetooth		0.9.0	Date/Time	01/03/2020 10:17:08				
		0.9.0	Set Device with PCCU Date/Time	No				
			Security					
Flow Measurement		0.0.6	Security Code Level 1					
		0.0.7	Security Code Level 2					
Digital Outputs		0.7.3	Security Switch Status	Off				
RS and No Flow			Sleep Mode					
		0.10.2	Remote Comm Cutoff Voltage	11.90				
Display		0.10.3	Sleep Mode Entry Voltage	10.90				
Holding Registers		0.8.8	Sleep Mode Hold-off Time (sec)	120				
		0.9.11	Wake Up Time	03:00:00				
	[0.7.14	Wake Up Time Mode	Time from Start of Sleep				
			Lithium Battery Status					
		0.7.10	Lithium Battery Status	ок				
			Backup					
-			Update Cold Start Configuration	No Operation				
			System Info	No Operation				
Re-read Monitor								
Ready				#Polls: 21 #Errors: 0 Connected to XFCG5 Login: user				

4. Click **Send**. Wait until the device completes the update (Figure 2-6). After the update, the cold start configuration does not have the failed instance and is in sync with the warm configuration.

Figure 2-6: Cold Start Configuration update in progress

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KFCG5 Communications Totalflow - TCP	Station Setup Application/License Management Battery Information Resources System Log Security Log Registry						
Totalflow - USB	Description	Value					
MMI Serial - COM0 0.0.	0.5 Location	2103393-005					
TF Remote - COM1 0.9	9.0 Date/Time	01/03/2020 10:17:08					
Bluetooth	9.0 Set Device with PCCU Date/Time	No					
	Security						
- Flow Measurement 0.0	0.6 Security Code Lought						
Setup	0.7 Security Code Updating Cold Start						
Digital Outputs 0.7	7.3 Security Switch Updating cold start, procedure	e will take several seconds.					
RS and No Flow	Sleep Mode Please do NOT do a reset or u	unplug the battery power.					
Adv Setup Speed of Sound	10.2 Remote Comm						
⊕- Display	10.3 Sleep Mode Ent						
Holding Registers 0.8	8.8 Sleep Mode Ho						
⊕- Operations 0.9	9.11 Wake Up Time	03:00:00					
0.7	7.14 Wake Up Time Mode	Time from Start of Sleep					
	Lithium Battery Status						
0.7	7.10 Lithium Battery Status	ок					
	Backup						
0.2	21.0 Update Cold Start Configuration	Delete and Re-Create TfCold					
	System Info	· · · · · · · · · · · · · · · · · · ·					
Re-read Monitor Print Screen Save Send Close Help XHelp 💓							
Reading Station Setup							

3 Add new communication application instance

Add a new communication instance to replace the failed instance. Assign the same application number as the failed instance obtained in section 2.1 Delete failed communication instance.

To add a communication instance:

 Select the Station ID on the navigation tree and then select the Application/License Management tab (Figure 3-1).

- 2. Select Add App.
- 3. Select **Communications** in the Application to add drop-down menu.
- 4. Select the **Override recommended app number** check box. The App number drop-down menu becomes available.

Figure 3-1: Add new communication instance



 Select the App number drop-down menu and change the number to the deleted application instance number (Figure 3-2). In this example, the deleted application was 5 (Figure 3-2).



Figure 3-2: Select application number

Figure 3-3: Override recommended application number



6. Click **OK** and then click **Send**. The newly added application instance is visible on the application list and the navigation tree (Figure 3-4).

Figure 3-4: Newl	y added	communication	application	instance
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	Station Setup Application/License Management Battery Information Resources System Log Security Log R	Registry					
Totalflow - TCP	Key Credits Oransfer to Device Credits						
Totalflow - USB	Transfer to Key Credit Type	Used Surplus/Deficit					
TE Permeter COM0	Credit Type Amount Type General(non-remova	able) 1 3					
- Communications-4	General(removable)						
Bluetooth	Announce and CO2(NIST)						
	(spare)						
I/O Interface	Load Transfer						
Setup							
Analysis	App# Type Revision Station Directory License Status Restart	Delete App					
Digital Outputs	0 System 2103280-020 Dir = \ Enable						
RS and No Flow	1 Communications 2101348-005 Dir = \Comm-1 Enable Image: Common sector secto						
	2 Communications 2101340-005 Dir = \Comm-2 Enable						
- Display	3 Communications 2101340-005 Dir = \Comm-3 Enable Image: Common sector secto						
Holding Registers	4 Communications 2101341-005 Dir = \Comm-4 Enable						
	5 Communications 2101303-005 Dir = \Comm-5 Enable						
	6 Communications 2101340-005 Dir = \Comm-6 Enable						
	7 I/O Interface XSeries 2103134-005 Dir = \IOS Enable Image: Comparison of the image: Co						
	8 Display XSeries 2103137-002 Dir = \Display Enable						
	9 Holding Registers 2101312-002 Dir = \Holding Enable						
	10 Operations 2101320-005 Dir = \Operations Enable						
	11 AGA 3 Measurement 2101306 007 Dir - IAGA3 1 Enable 🕅						
Re-read Add App Credit/App Info Send Close Help							
Ready #Polls: 64 #Errors: 0 Connected to XFCG5 Login: user							

4 Restore configuration to required values

Change the new instance factory-default settings to the ones recorded in section <u>2.1 Delete failed communication</u> instance.

To configure:

1. Locate and select the new instance on the navigation tree. The Setup tab displays by default (Figure 4-1).



Figure 4-1: Verify newly added communication instance displays.

- 2. Configure the non-factory values as required (Figure 4-2):
 - a. Configure Port Name.
 - b. Assign port number. Remember to add the colon to the serial port numbers COM1: or COM2:.
 - c. Select the **Protocol** drop-down menu and choose the require protocol.
 - d. Configure communication parameters.
 - e. Configure the correct Interface type. The default value is RS-232. Change if using RS-485.

Figure 4-2: Configure non-factory-default values

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□- XFCG5	Setur	D				
Totalflow - ICP			Description		Value	
MMI Serial - COM0	0.	4.6	Port Name	Test settings	- Value	
TF Remote - COM1	5	33	Port	COM2:		
Communications-4	-	0.0	Professel	T-4-16 D		
Bluetooth	D.	0.0	Protocol	Totamow Remote		
XMV Interface	5.	0.22	Port Type	OnBoard Serial		
Elow Measurement	5.	0.2	Baud Rate	9600		
Setup	5.	0.3	Data Bits	8		
Analysis	5.	0.5	Stop Bits	1		
Digital Outputs	5.	0.4	Parity	None		
RS and No Flow	5.	1.3	Timeout (milliseconds)	0		
	5.	1.10	Response Delay (milliseconds)	0		
⊕- Display	5.	0.1	Interface	Rs232		
Holding Registers	H					
⊕- Operations	Deperations					
	R	(e-read	Monitor	Print	Screen Save Send Close Help X Help	
Ready	Ready #Polls: 69 #Errors: 0 Connected to XFCG5 Login: user					
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- 3. Click Send.
- 4. Test communications on the reconfigured port:
 - a. Verify that you are able to complete device data collection without errors from PCCU or WinCCU.
 b. Verify that the antenna icon displays again on the LCD.

- If successful communication is restored, repeat the procedure in section <u>2.2 Update startup (cold)</u> <u>configuration</u> to ensure that the cold and warm configurations are in sync again.
 Call Technical support if unable to restore communication.



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