

Commissioning Guide for Vigilohm IFL12C, IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

About this guide

This guide explains about the commissioning procedure of Vigilohm IFL12C / IFL12MC / IFL12MCT / IFL12LMC / IFL12LMCT.

Throughout this guide, the term “device” refers to Vigilohm IFL12C / IFL12MC / IFL12MCT / IFL12LMC / IFL12LMCT. All differences between the models, such as a feature specific to one model, are indicated with the appropriate model number or description.

For detailed installation and operating instructions, including safety messaging, read the device instruction sheets and user manual.

Document Reference

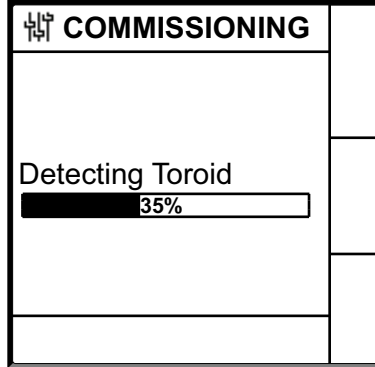
Title	Number
Instruction Sheet: Vigilohm IFL12C / IFL12MC / IFL12MCT / IFL12LMC / IFL12LMCT	QGH34269
User Manual: Vigilohm IFL12C / IFL12MC / IFL12MCT / IFL12LMC / IFL12LMCT	7EN02-0406

Automatic commissioning

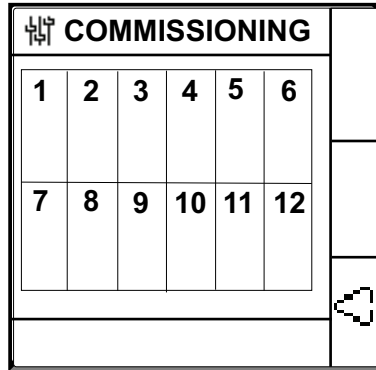
1. Connect toroid and turn on the power supply.

NOTE: At first power up, the device performs automatic commissioning. You can connect from 1 to 12 toroids as per the requirement.

The device displays **Detecting Toroid** message with a percentage progress bar.

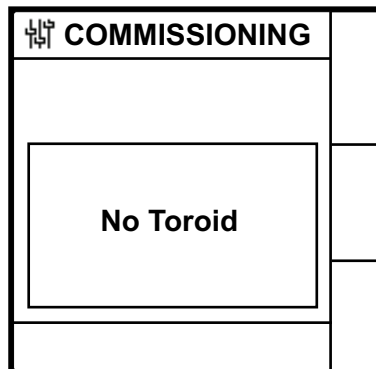


- If toroid is detected, the **Commissioning** screen displays. An example of all 12 toroids connected and detected is as follows:



NOTE: If you have connected a toroid which is not one of the recommended toroids, then the device should be manually commissioned. See *Manual commissioning, page 3*. Refer to the Vigilohm catalog for the most up to date listing of compatible toroids.

- If toroid is not detected, the **No Toroid** message displays.



Perform one of the following action:

- Check if the toroid is properly connected and navigate to **Menu > Settings > Commission > Auto**. The device performs automatic commissioning.
- The connected toroid is not one of the recommended toroids. The device should be manually commissioned. See *Manual commissioning, page 3*.

NOTE: Refer to the Vigilohm catalog for the most up to date listing of compatible toroids.

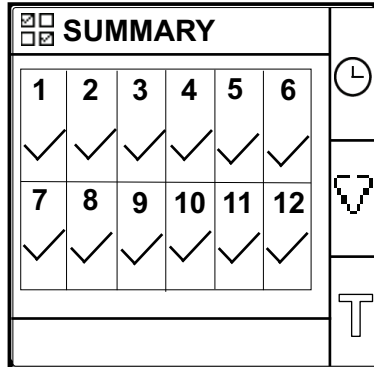
2. You can check the wiring of the system. To check, see *Checking wiring connection, page 6*. If you do not want to check, ignore this step and continue to next step.

3. Press  button.

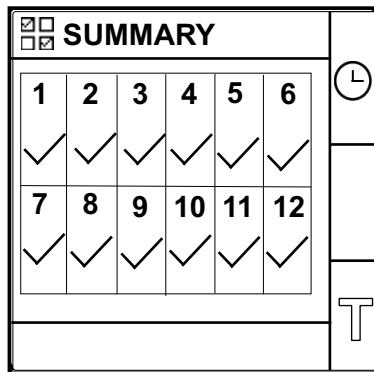
The device exits the commissioning mode and displays **Summary** screen. An example of all 12 toroids connected and detected is as follows:

NOTE: The clock icon flashes to show that date and time needs to be set.

For IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT:



For IFL12C:



NOTE:

- The device automatically exits commissioning mode after one hour if manual exit is not performed.
- If you have connected a new toroid or replaced a toroid, navigate to **Menu > Settings > Commission > Auto**. The device performs automatic commissioning.

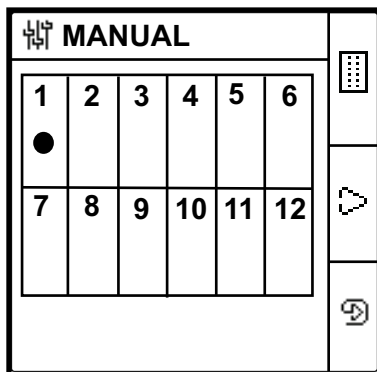
Manual commissioning

The device must be manually commissioned if the connected toroid is not one of the recommended toroids.






NOTE: Refer to the Vigilohm catalog for the most up to date listing of compatible toroids.

1. Navigate to **Menu > Settings > Commissioning > Manual**.

The **Manual** screen displays the channel grid and a flashing dot on the channel 1 grid. This indicates the channel 1 is selected.

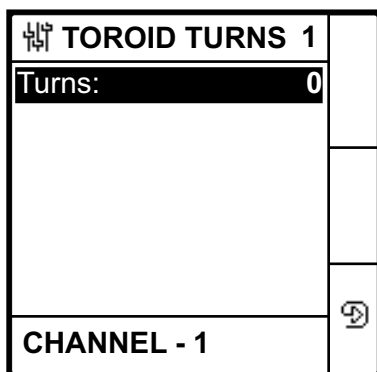


2. Perform any one of the following:

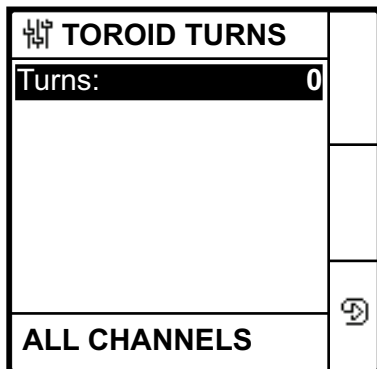
- To commission channel 1, press  button.
- To commission other channels, press  button to navigate to the desired channel and press  button.
- To commission all channels, press  button and press  button.

The **Toroid Turns** screen displays.

For individual channel:

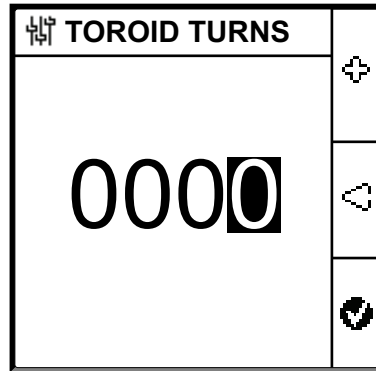





For all channels:



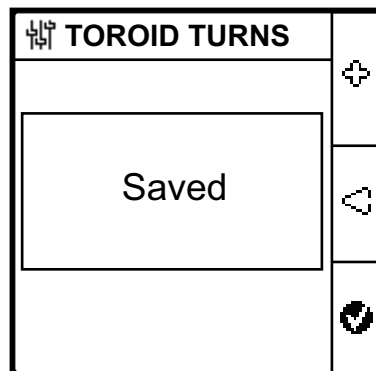
3. Press the  button.

The **Toroid Turns** screen displays the toroid turns value



4. Set the toroid turns (Allowed values: 300 to 3000) using the contextual menu buttons  and .
5. Press the  button to save the toroid turns.

A message **Saved** displays.



6. Press **Esc** button.

The **Manual** screen displays with the channel grid and a flashing dot on the channel 1 grid. This indicates the channel 1 is selected.

7. Perform *Step 2 to Step 6* for other non commissioned channels.

Checking wiring connection

You can check the wiring of the system once the toroid has been commissioned. Performing this check successfully confirms that the wiring of the device is proper and the device is ready to use.

You can perform any of the following checks:

- You can induce one dummy fault on one channel. You can perform this check for all channels sequentially. See *Inducing one dummy fault*, page 6.
- You can induce two dummy faults simultaneously on two channels. See *Inducing two dummy faults*, page 7.

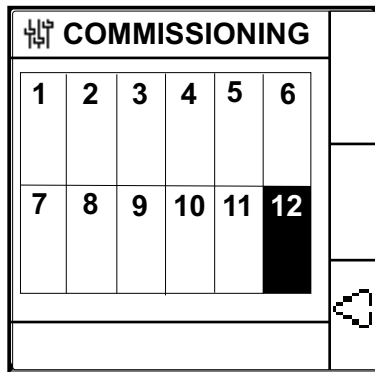
NOTE: You are strongly advised not to induce more than one zero-impedance dummy fault.

Inducing one dummy fault

1. Induce a dummy fault on one of the channel. For example: Channel 12.

The device displays the insulation alarm on the detected channel 12, the **alarm LED** turns **ON**, and the **no alarm LED** turns **OFF**.

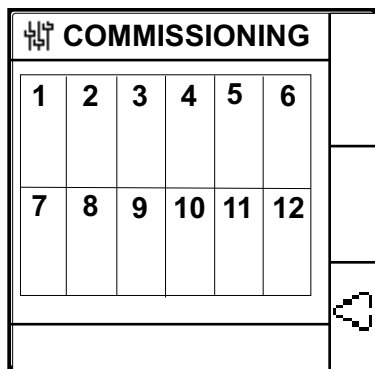
Channel 12 displaying fault in **Commissioning** screen is as follows:



2. Recover the dummy fault on channel 12.

The device returns to toroid detected state, the **alarm LED** turns **OFF**, and the **no alarm LED** turns **ON**.

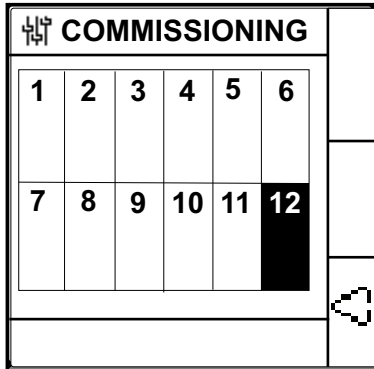
The **Commissioning** screen in toroid detected and no fault state is as follows:



Inducing two dummy faults

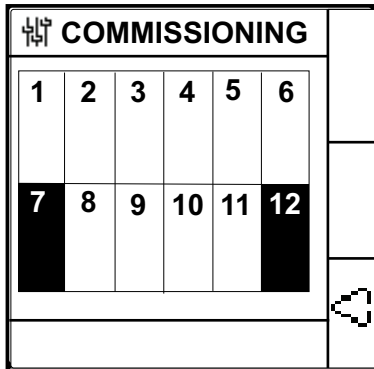
1. Induce a dummy fault on one of the channel. For example: Channel 12.
The device displays the insulation alarm on the detected channel 12, the **alarm LED** turns **ON**, and the **no alarm LED** turns **OFF**.

Channel 12 displaying fault in **Commissioning** screen is as follows:



2. Induce a dummy fault on another channel. For example: Channel 7.
The device displays the insulation alarm on the detected channels 7 and 12, the **alarm LED** remains **ON**, and the **no alarm LED** remains **OFF**.

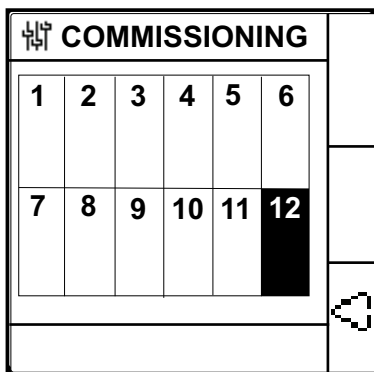
Channels 7 and 12 displaying fault in **Commissioning** screen is as follows:



NOTE: If both the induced dummy faults are zero-impedance fault, then the device displays the insulation alarm on one channel only either channel 7 or 12.

3. Recover the dummy fault on channel 7.
The insulation alarm on the channel 7 is recovered. Because the dummy fault still exist on channel 12, the device displays the insulation alarm on channel 12, the **alarm LED** remains **ON**, and the **no alarm LED** remains **OFF**.

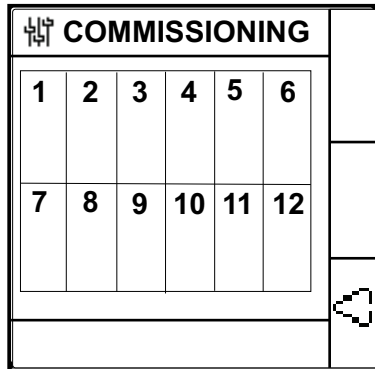
Channel 12 displaying fault in **Commissioning** screen is as follows:



4. Recover the dummy fault on channel 12.


The device returns to toroid detected state, the **alarm LED** turns **OFF**, and the **no alarm LED** turns **ON**.

The **Commissioning** screen in toroid detected and no fault state is as follows:



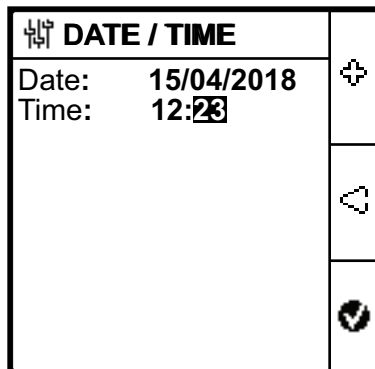
Setting date and time



Setting date and time ensures proper timestamps for the logs and trends.


1. Press the flashing  button.

NOTE: The clock icon flashes to show that date and time needs to be set.

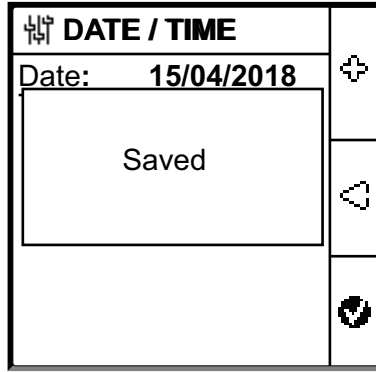
The **DATE/TIME** screen displays.



2. Set the date and time using the contextual menu buttons  and .

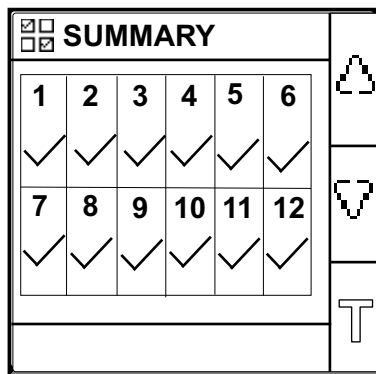
- Press  button to save the date and time.

A message **Saved** displays.

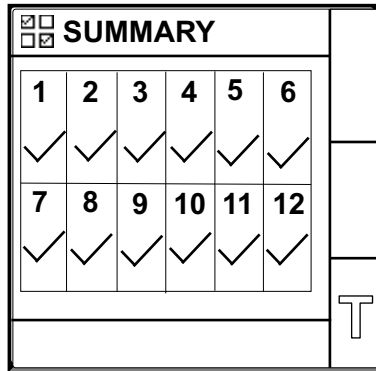


The **Summary** screen displays.

For IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT:



For IFL12C:

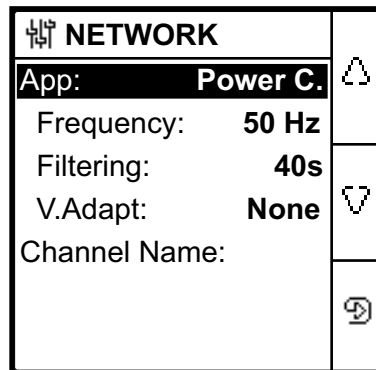


Configuring network parameters

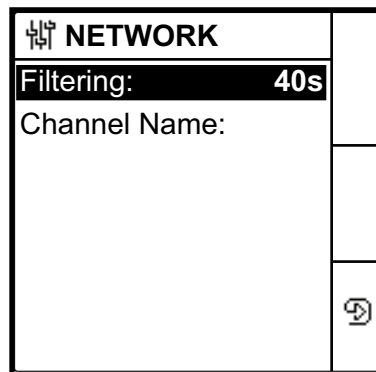
1. Navigate to **Menu > Settings > Network**.

The **NETWORK** screen displays.

For IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT:



For IFL12C:



2. Modify the parameters value as per the following table:

NOTE: Use the contextual menu buttons to modify the parameters value.

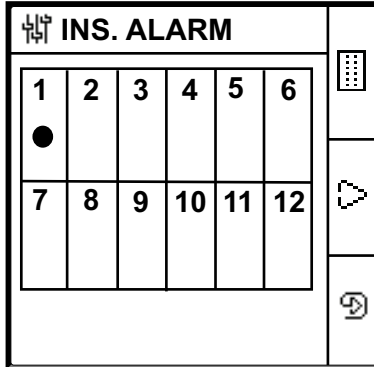
Parameter	Allowed Values	Default Value	Description
App ¹	<ul style="list-style-type: none"> Power C. Control C 	Power C	<ul style="list-style-type: none"> Select Power C for industrial or marine applications that contain power loads and power electronics such as speed drives, inverters, or rectifiers. Select Control C for auxiliary control circuits used to drive power systems which contain sensitive loads such as PLCs, IOs, or sensors.
Frequency ¹	<ul style="list-style-type: none"> 50 Hz DC 400 Hz 60 Hz 	50 Hz	Select the rated frequency of the monitored power system.
Filtering	<ul style="list-style-type: none"> 5s 40s 400s 	40s	Select the filtering time depending on the application.
V.Adapt ¹	<ul style="list-style-type: none"> None VA1T 	None	Select the adaptor if the network voltage is greater than the rated network voltage of the device.
Channel Name	The allowed characters are: <ul style="list-style-type: none"> A to Z a to z 0 to 9 Special characters (Hyphen-minus (-), Slash (/), Percent (%), Full stop (.), (blank)) 	CHANNEL – 1 to CHANNEL – 12 for 12 channels	Set the channel name of your preference for all 12 channels. <p>NOTE: The channel name can be set only in English.</p> The length of the channel name is automatically adjusted depending on the character selection. For example, if the channel name contains only the character "W", then the maximum length is 8 characters and if the channel name contains only the character "I", then the maximum length is 18 characters.

¹ Applicable for IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT

Configuring insulation alarm parameters (IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT)

1. Navigate to **Menu > Settings > Ins. Alarm**.

The **INS. ALARM** screen displays with the channel grid and a flashing dot on the channel 1 grid. This indicates the channel 1 is selected.

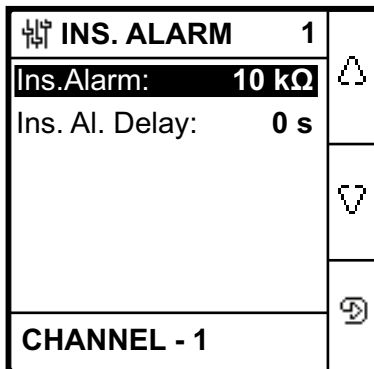


2. Perform any one of the following:

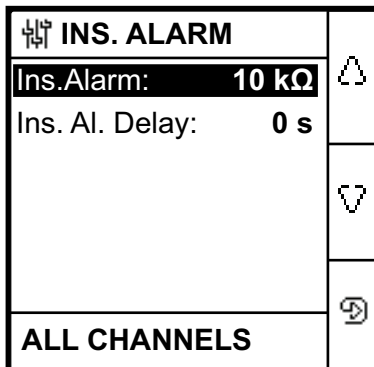
- To modify the value for channel 1, press button.
- To modify the value for other channels, press button to navigate to the desired channel and press button.
- To modify the value for the all channels, press button and press button.

The **INS. ALARM** screen displays.

For individual channels:



For all channels:



3. Modify the parameters value as per the following table:

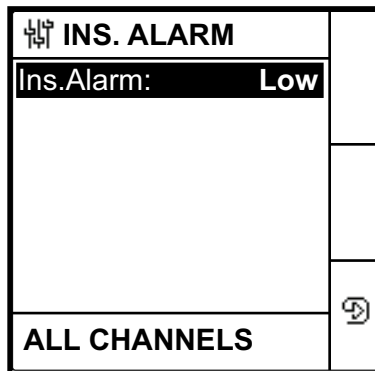
NOTE: Use the contextual menu buttons to modify the parameters value.

Parameter	Allowed Values	Default Value	Description
Ins. Alarm	0.2...200 kΩ	10 kΩ	Select the value of insulation alarm threshold.
Ins. Al. Delay	0 s...120 mn	0 s	Select the value of time delay for insulation alarm.

Configuring insulation alarm parameters (IFL12C)

1. Navigate to **Menu > Settings > Ins. Alarm**.

The **INS. ALARM** screen displays.



2. Modify the parameters value as per the following table:

NOTE: Use the contextual menu buttons to modify the parameters value.

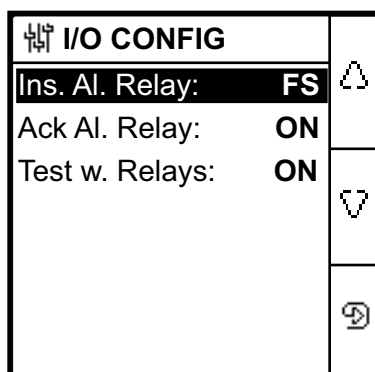
Parameter	Allowed Values	Default Value	Description
Ins. Alarm	<ul style="list-style-type: none"> Low Medium High 	Low	Select the option as per the following: <ul style="list-style-type: none"> Low: The device detects low-impedance insulation faults. Medium: The device detects medium-impedance insulation faults. High: The device detects high-impedance insulation faults.

Configuring input output parameters

Applicable for IFL12MC, IFL12LMC, IFL12MCT, and IFL12LMCT.

1. Navigate to **Menu > Settings > I/O Config**.

The **I/O CONFIG** screen displays.



2. Modify the parameters value as per the following table:

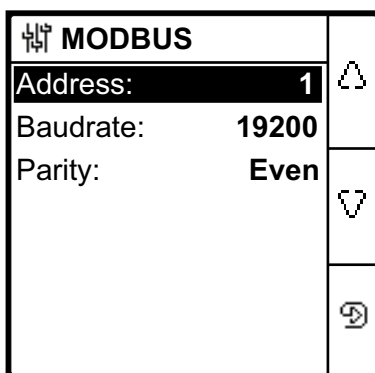
NOTE: Use the contextual menu buttons to modify the parameters value.

Parameter	Allowed Values	Default Value	Description
Ins. Al. Relay	<ul style="list-style-type: none"> Std. (Standard) FS (Failsafe) 	FS (Failsafe)	Select the mode of insulation alarm relay depending on the status of insulation. Refer user manual for more information.
Ack Al. Relay	<ul style="list-style-type: none"> ON OFF 	ON	<ul style="list-style-type: none"> Select ON to trigger relays when acknowledging alarm. Select OFF to disable this feature.
Test w. Relays	<ul style="list-style-type: none"> ON OFF 	ON	<ul style="list-style-type: none"> Select ON to include a three-second toggle of the preventive insulation alarm relay and insulation alarm relay during a manually launched auto-test. Select OFF to disable this feature.

Configuring Modbus parameters

1. Navigate to **Menu > Settings > Modbus**.

The **Modbus** screen displays.



2. Modify the parameters value as per the following table:

NOTE: Use the contextual menu buttons to modify the parameters value.

Parameter	Allowed Values	Default Value	Description
Address	1...247	1	Select the required Modbus address.
Baudrate	<ul style="list-style-type: none"> 4800 9600 19200 38400 	19200	Select the required baud rate.
Parity	<ul style="list-style-type: none"> Even Odd None 	Even	Select the required parity.