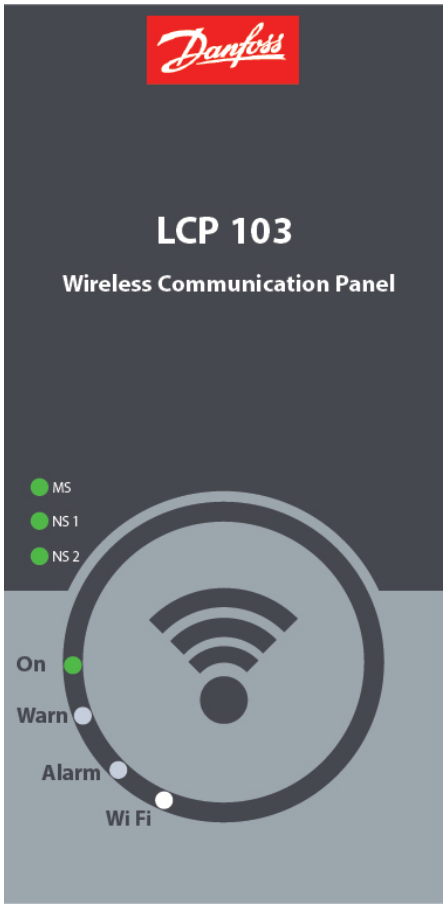
Product overview

The package contains LCP-103 as shown below



This LCP-103 is be compatible with below drive series,

VLT® HVAC Drive FC 102

VLT® Refrigeration Drive FC 103

VLT® Aqua Drive FC 202

VLT® Automation Drive FC 300

Features

Wireless Technology – Built with leading 802.11b/g/n technology

Advanced Security - Keep Wi-Fi safe from Internet threats at bay with WEP encryption and standard firewalls to help keep your drive protected

LED Indicators — LED which help understand the drive behaviour

LED	Description
On	Solid Green: Drive is powered-on
Wi-Fi	Blinking White: Device is pairing Solid White: Smart device connected and communication is OK
Alarm	Solid Red: Fault in the drive Blinking Red: Alarm occurred
Warn	Blinking Yellow: Warning occurred
Field bus indicators	Solid Green: Based on the fieldbus communication MS, NS1, NS2 Winking White: Drive Identification all together MS, NS1, NS2

Installation - Preliminary check-list

Step 1: Check whether the drive has new control card (Read drive profile/decode type code)

Step 2: Download app – MyDrive® Connect, available for Android & iOS

Google play https://play.google.com/store/apps/developer?id=Danfoss+A/S&hl=en

Apple store https://itunes.apple.com/fi/developer/danfoss-a-s/id423984644

Step 3: Power-off the drive if it's powered-on

Step 4: Mount the LCP-103 hardware in the drive's D-9 serial connector (or) Just replace the existing LCP from the drive

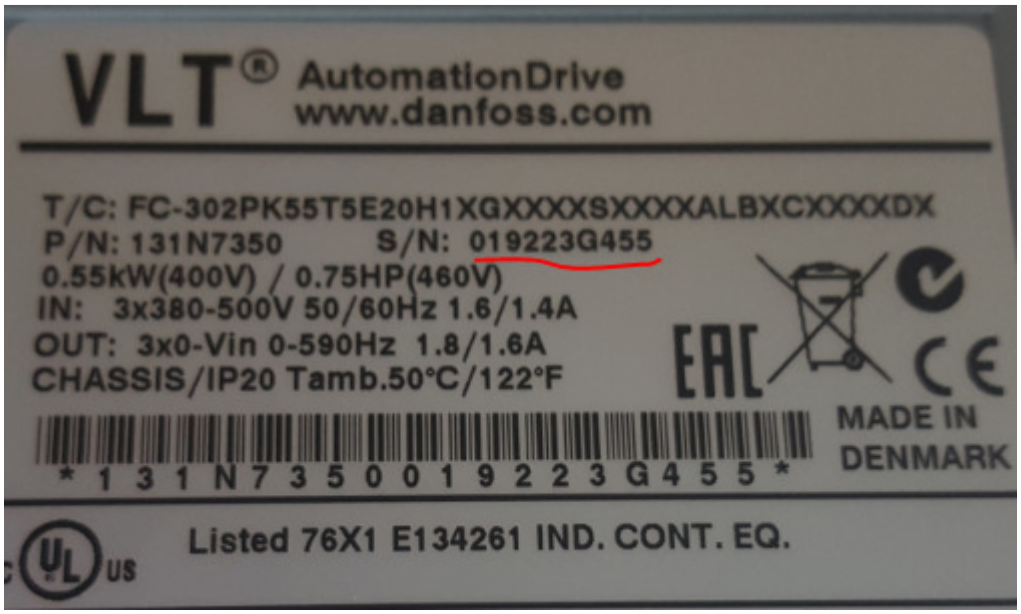
Begin the connection process

Step 1: Power-on the drive, the LCP-103 will glow green LED besides the 'On' Label

Step 2: If you are connecting an android device then you shall directly launch the app, (Enable the Wi-Fi service in your smart device before launching)

If you are connecting an apple device, then go to settings and then the device will scan and populate the wireless id

Step 3: The wireless id is the 'Danfoss' name tagged with 'serial id' of the drive. For example: Danfoss_019223G455 is the wireless id by default.



Step 3: The default password is 'Danfoss1933', after successful pairing the app will ask you to change the default network id and password. In this case the password is mandatory field, while the network id is an option field.

Step 4: You can skip changing the default id's. But this will allow you to connect and perform the drive operations only for 10 minutes, later the drive will close the connection.

Step 5: On successful change of id's, your connection will close automatically and you need to reconnect the drive as per step 2. Once gain the app will not ask you to change the password, since you have changed the default id's which is advised due to security risks.

Step 6: The app will show the status screen by default, where you will see the current setup id & all the parameters which was configured earlier through MCT10/LCP-102

Additional Features – App

MyDrive® Connect app is designed with similar navigational structure like LCP-102, hence the initial learning & adaptations are much easier. few more extended functionalities are listed below which helps improve the usability better.

1. Widget → Dynamically change the type of widget & also change the parameters
2. Search → Parameter search using ID
3. Drive Identification → Identify the drive using led winking
4. Push Notification → when the app is in background, push notification helps pop-up the alarm & warnings
5. Authentication → Allows read/write (or) read parameters
6. Drive Profile → Read drive profile
7. Share Logs → Share the alarm/warning logs through email

8. Store/Restore → Use 0-50 parameter, app uses intelligence and provide various option for copy & restore the setups either to drive or internal memory
9. Disconnect the drive → applicable for android devices, once disconnected the LCP-103 will broadcast
10. Vibrate → Based on native settings for alarm/warning notifications
11. Graphs → All numerical parameters have scope functionality embedded, this helps to poll the read-out values in graph
12. Multi-Language → app settings will help change different options (German/English)
13. Demo Mode → Helps to learn/demonstrate/promote

Hot-Swap/Plug-n-Play

The device is ready to connect/how-swap when the drive is powered-on.

When you connect to any drive (one to another), the wireless id will be populated from the drive. Hence, the app shall be reconnected to the new network id.

30-9 Group

This group will have the special parameters like wireless id, password, safe parameter, which will be saved to the drive. This group is accessible from MCT-10 or Graphical keypad LCP. This is not available in app due to security limits.

Safe Parameter – option for the user to select the behavior when the app crashes/battery down/connection lost, etc. whether the drive to stop or continue the ongoing process.

In case if you need any further assistance, please contact Danfoss representative.

Installation Instructions

VLT® Wireless Communication Panel LCP 103
VLT® FC Series FC 102, FC 103, FC 202, FC 301/FC 302, and LD 302

Items Supplied

- VLT® Wireless Communication Panel LCP 103.
- Gasket

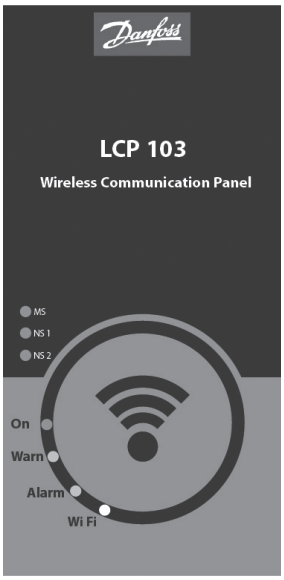


Illustration 1.1 VLT® Wireless Communication Panel LCP 103

Compatible Drive Series

NOTICE

Compatible drives have a white USB port.

- VLT® HVAC Drive FC 102
- VLT® Refrigeration Drive FC 103
- VLT® AQUA Drive FC 202
- VLT® AutomationDrive FC 301/FC 302
- VLT® Lift Drive LD 302

Compatible software versions

- FC 102: 5.10
- FC 103: 2.10
- FC 202: 3.10
- FC 30x: 8.03

Approvals and Certifications

CE	FCC ID: 2ANSELCP-103	c UL us
IC	**IC ID: 24548-LCP103** **Model No: LCP 103**	
RoHS		

NOTICE

FCC COMPLIANCE NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by 1 or more of the following measures:

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different from that to which thereceiver is connected.**
- **Consult the dealer or an experienced radio/ television technician for help.**

Modifications: Any modifications made to this device that are not approved by Danfoss may void the authority granted to the user by the FCC to operate this equipment.

RF EXPOSURE COMPLIANCE

This portable transmitter with its antenna has shown compliance with FCC's SAR limits for general population/ uncontrolled exposure. The maximum listed SAR level is 0.22 W/kg (body). The antenna used for this device must not be co-located or operating in conjunction with any other antenna or transmitter.

NOTICE

IC COMPLIANCE NOTICE

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. **L'appareil ne doit pas produire de brouillage;**
2. **L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.**

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 5mm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 5mm de distance entre la source de rayonnement et votre corps

Installation

NOTICE

The VLT® Wireless Communication Panel LCP 103 is hot-pluggable and can be connected when the drive is powered on.

1. Mount the LCP 103 in the LCP input plug on the drive.
2. Search for *MyDrive® Connect* in Google Play or Apple Store.

Illustration 1.2 MyDrive® Connect Launch Icon

3. Download and install the MyDrive® Connect App.

NOTICE

Start pairing within the first 10 minutes after the installation. Failing to do so closes the broadcast or wireless identification due to security limits with default passwords. To reconnect, power cycle the drive, or remove and reconnect the LCP 103.

Connection Procedure

NOTICE

The wireless SSID is the *Danfoss* serial ID of the drive. For example, Danfoss_019223G455 is the default wireless SSID for a drive with the serial number 019223G455. The serial number is on the product nameplate, but is also visible in *parameter 15-51 Frequency Converter Serial Number*.

Wireless SSID	Danfoss_019223G455
Default password	Danfoss1933

1. Open the app and establish the Wi-Fi connection, see *Table 1.1* for descriptions of the white Wi-Fi LED.
2. When prompted, change the default password due to security restrictions. The password must be at least 8 and maximum 48 characters.
3. Re-plug the LCP 103 for the password to change into effect. Failing to do so allows the LCP 103 to keep broadcasting.
4. Disconnect the app, navigate to smart device settings, and forget the network.
5. Search for the wireless network and connect with the new password.

NOTICE

If the password is not changed, it leaves only 10 minutes for connecting and performing Drive operations. After this, the wireless connection closes.

Reset password

If the wireless SSID and password are forgotten, access *parameter group 30-9* Wifi LCP via MCT 10 Set-up Software or LCP 102*.

LED Pattern

LED	Pattern	Description
On	Solid green	The drive is powered on (normal operation).
Wi-Fi	Flashing white	Connection pairing successful.
	Solid white	The smart device is connected and communication is OK.
Alarm	Flashing red	An alarm has occurred.
Warn	Solid yellow	A warning has occurred.
MS, NS1, NS2[1)]	Flashing orange	Identification of the drive when initiated through a winking command.
	Flashing orange	Incompatible drive (LED flashes 3 times and then remains on).

Table 1.1 Descriptions, LED Indicators

1) MS=module status, NS1=network status 1, NS2=Network status 2.

Safe Control

The safe control parameter allows the drive to decide the motor behavior if the smart device, for example a tablet, communication is lost. If the limits are set to *[1] Stop motor*, the motor stops. If the limits are set to *[0] Do nothing*, the motor continues to run. This is only applicable when the motor is in Run state and if the motor has been started from the app.

The communication happens between the MyDrive® Connect App and the VLT® Wireless Communication Panel LCP 103.

Parameter	Limits/options
Parameter 30-97 Wifi Timeout Action	*[0] Do nothing* *[1] Stop motor*

Specifications

Standards	IEEE 802.11 b/g/n
Frequency range	2.4~2.4835 Ghz
Antenna	PCB-mounted chip antenna
Security	WPA2
Operating temperature	-25 °C to +50 °C (-13 °F to +122 °F)
Operating humidity	5–95% RH, non-condensing
Operating mode	Access point / Client
Ingress protection	IP20 (IP55 with gasket)
Electrical rating	5 V, 250 mA
Internal memory size	14 MB
Dimensions (LxWxD) [mm (in)]	131.2 x 66.6 x 23 (5.1 x 2.6 x 0.9)
Weight [g (oz)]	85.3 (2.88)
Firmware update	MCT 10 Set-up Software version 4.10 or higher