

# VLT® Mains-Free Interface

## VLT® HVAC Basic Drive FC 101

### 1 Installation and Usage

#### 1.1 Description

This installation guide explains how to install and use the USB-based VLT® Mains-Free Interface.

#### 1.2 Item Supplied

- VLT® Mains-Free Interface (code number: 132B9222)

#### 1.3 Product Overview

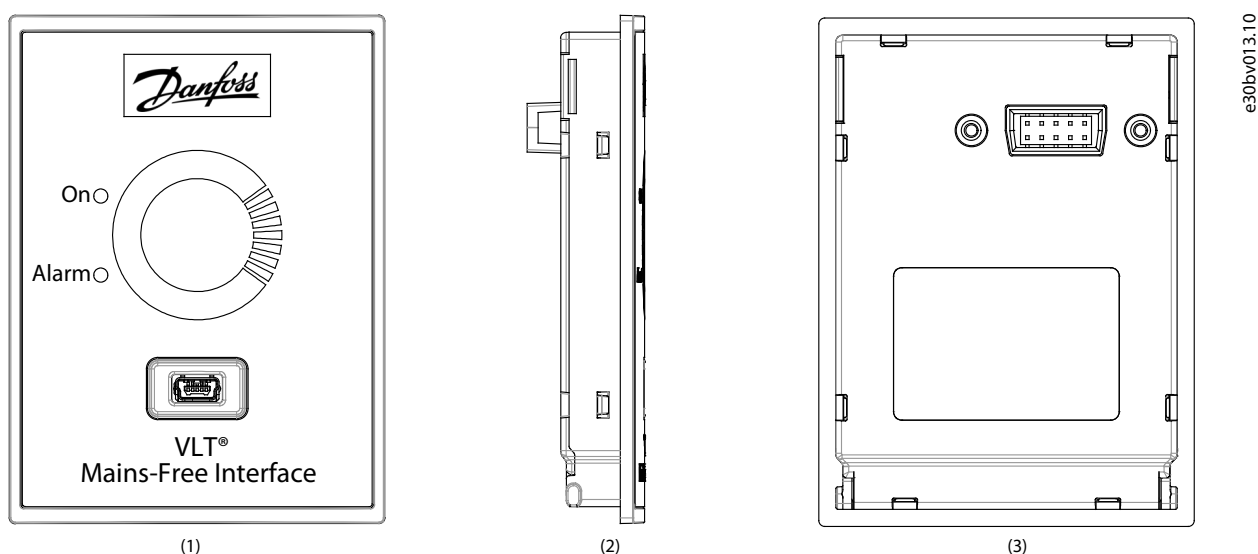


Illustration 1: VLT® Mains-Free Interface

1	Front view	3	Back view
2	Side view		

The connection between the VLT® Mains-Free Interface and a PC is based on a USB 2.0 interface. A Mini-B USB connector is located on the front side, and a standard drive connector is located on the back side.

Both VLT® Mains-Free Interface and the drive get current from the PC USB ports, thus the drive is mains free when the VLT® Mains-Free Interface is installed on the drive.

- For drives of enclosure size H1–H5 and I2–I4, the required current is within the standard capability of a single USB port, and a single USB type A connector can be used.
- For drives of enclosure size H6–H10 and I6–I8, more than 500 mA current is required (500 mA is the maximum standard current a USB port can deliver). It is recommended to use a double USB type A cable for connection to a PC. It is possible for the drive to obtain the required current via both of the USB ports (the 2<sup>nd</sup> USB port is marked with *Auxiliary power only*).

See [Illustration 2](#) for the recommended cable examples.

### NOTICE

The cables are not provided with the VLT® Mains-Free Interface.

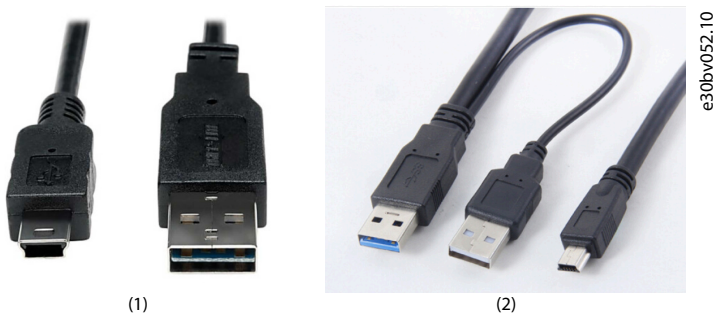


Illustration 2: Cable Examples

- 1 Example of a cable with a single USB type A connector
- 2 Example of a cable with 2 male connectors to the PC

**NOTICE**

Connecting the VLT® Mains-Free Interface to a live drive may impair the use of the standard RS485 port on the drive.

**NOTICE**

For IP54 drives, the VLT® Mains-Free Interface can be used only for programming. To keep the IP54 level, LCP must be reinstalled.

### 1.4 Safety Precautions

Only qualified personnel are allowed to install the VLT® Mains-Free Interface described in this installation guide.

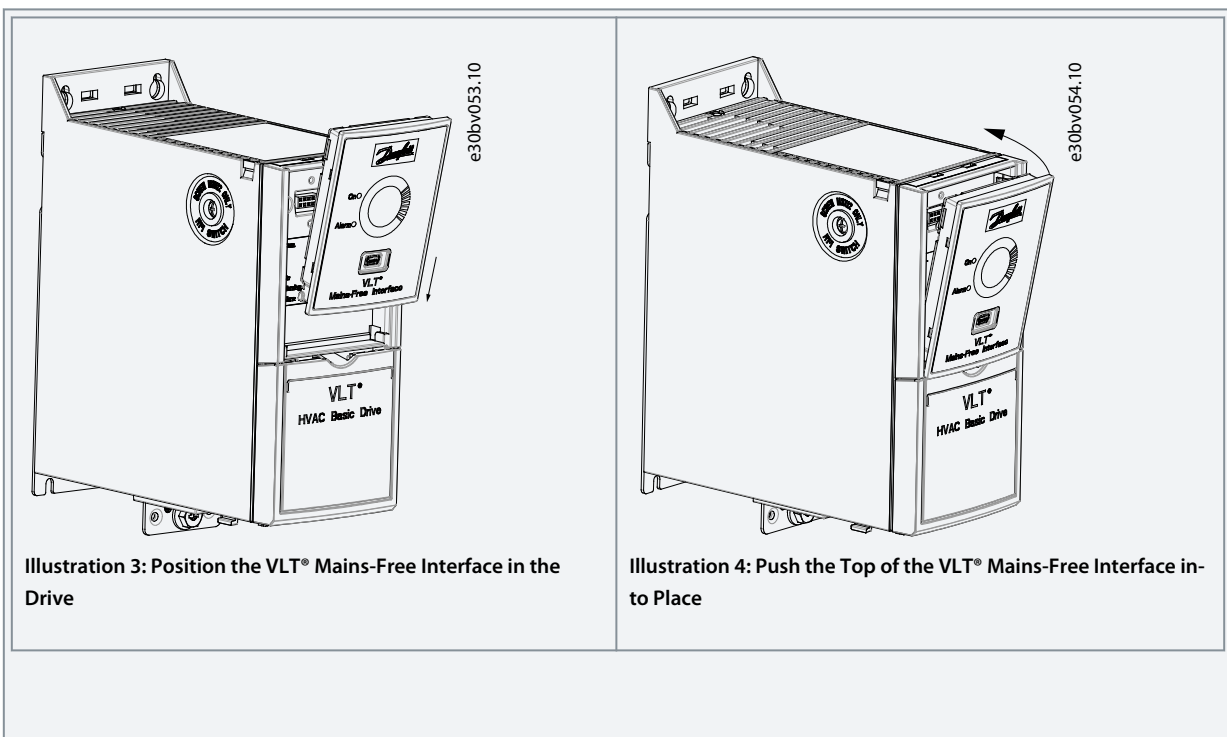
For important information about safety precautions for installation, refer to the drive's operating guide.

### 1.5 Installation

The VLT® Mains-Free Interface is physically identical to the local control panel (LCP 31) and connects to the same dedicated port on the drive. The VLT® Mains-Free Interface can be mounted to the drive as follows:

**Procedure**

1. Position the bottom of VLT® Mains-Free Interface in the drive, see [Illustration 3](#).
2. Push the top of VLT® Mains-Free Interface into place, see [Illustration 4](#).



## N O T I C E

The VLT® Mains-Free Interface can also be connected to the drive using the remote mounting kit cable or the RJ45 converter plugs.

## 1.6 Usage

### 1.6.1 Installing Driver on the PC

Before connecting the VLT® Mains-Free Interface, install the correct driver on the PC first.

Download the following files from Danfoss website <https://suite.mydrive.danfoss.com/introduction>.

- For Win7 32 bits operating system, use *dpinst\_x86.exe*.
- For Win7 64 bits operating system, use *dpinst\_amd64.exe*.
- For Win10 32 bits operating system, use *dpinst\_x86.exe*.
- For Win10 64 bits operating system, use *dpinst\_amd64.exe*.

## N O T I C E

Minimum software versions to use the VLT® Mains-Free Interface is 4.23 on the drive, 10.11 on the test monitor, and 1.00 or later of the VLT® Mains-Free Interface for firmware download and parameter/SIVP programming.

### 1.6.2 COM Port

Before configuring the COM port, the VLT® Mains-Free Interface must be installed on the drive and the correct driver must be installed on the PC.

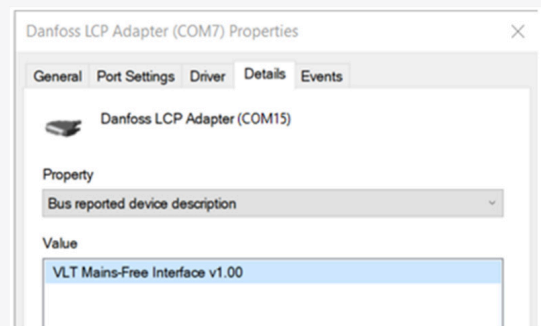
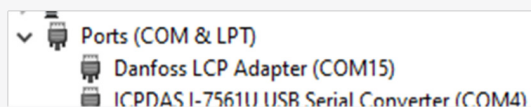
#### Procedure

1. Connect the VLT® Mains-Free Interface to the PC using the recommended cable.

➡ A COM port whose name is *Danfoss LCP Adapter* is created when the VLT® Mains-Free Interface is connected to a PC.

2. Check the COM port number in *Device Manager* as shown in [Illustration 5](#).

➡ The COM port number is *15* in the following example.



**Illustration 5: COM Port Number Example**

- The COM port created by the VLT® Mains-Free Interface can be used with the Danfoss PC communication tool (VLT® Motion Control Tool MCT 10) or any standard terminal communication software. See the following example:

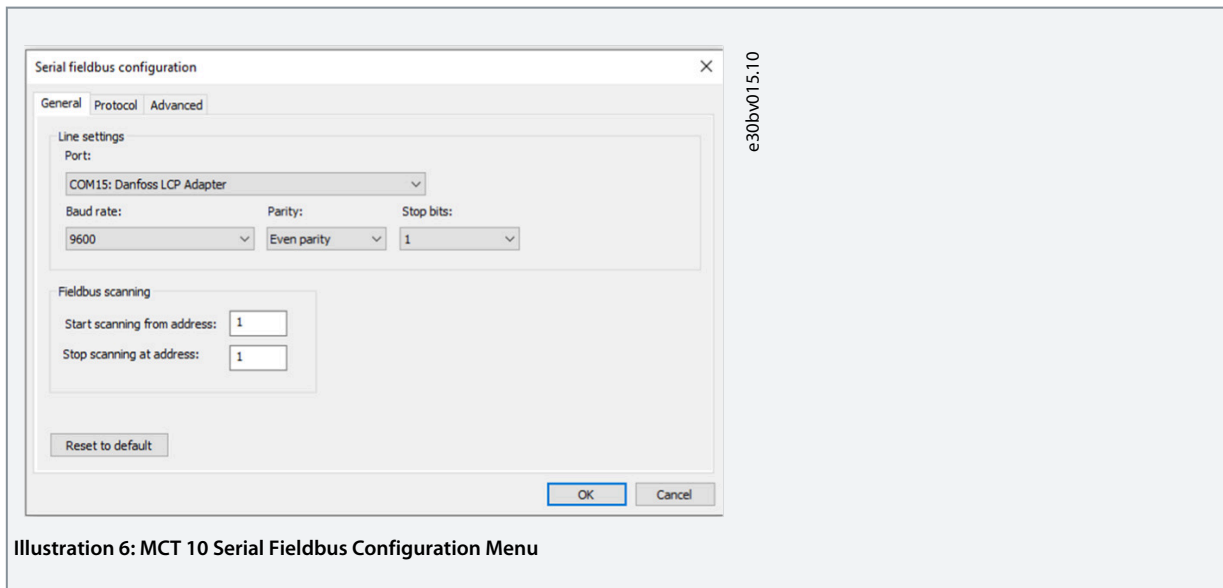


Illustration 6: MCT 10 Serial Fieldbus Configuration Menu

### 1.6.3 LED Indication

After successful connection between the VLT® Mains-Free Interface and PC, the green LED at the front of the VLT® Mains-Free Interface indicates the connection status, see [Table 1](#).

Table 1: LED Indication

LED status	Description
Starts flashing, and becomes solid after a few seconds.	Successful connection to the drive.
Keeps flashing.	Incompatibility between the drive software and the VLT® Mains-Free Interface.

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