



## Danfoss CDS203 LCP Control Panel User Guide

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ENGINEERING  
TOMORROW  
User Guide

Danfoss CDS203 LCP 116B9002  
Operating Instructions



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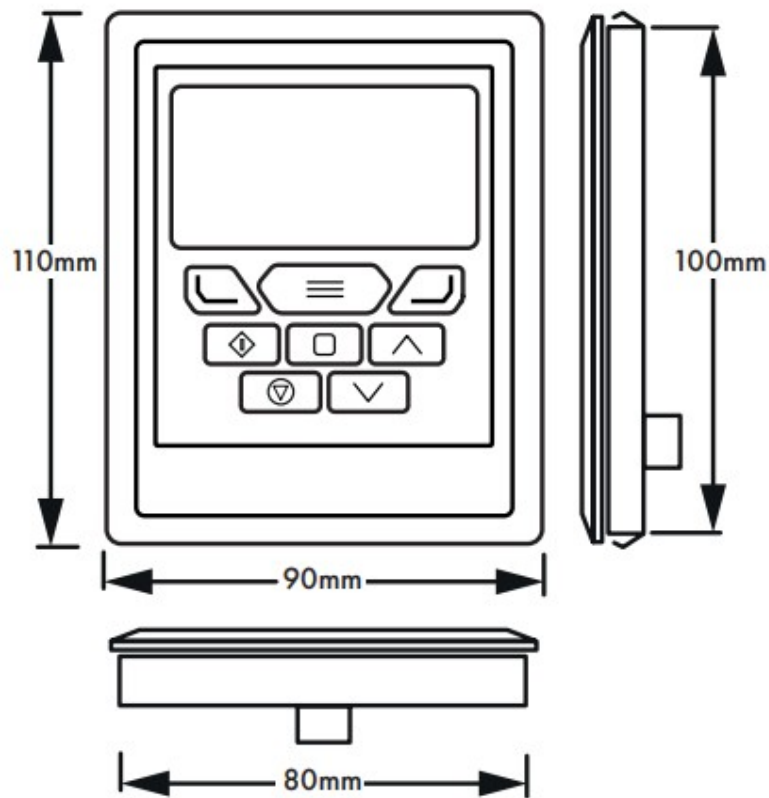
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## General Specification

Compatible Drives:	CDS203
Signal Interface:	Standard 8-way RJ45 connector
Supply Input:	24V + / – 10%, DC, 30mA
RS485 Signal:	Industry standard 2-wire +5V differential
Environmental:	Operational: -10 ... 50°C Storage: -40°C ... 60°C
Relative Humidity:	< 95% (non condensing)
Protection Rating:	IP55
Max Cable Length:	25m / 82.5ft shielded twisted pair

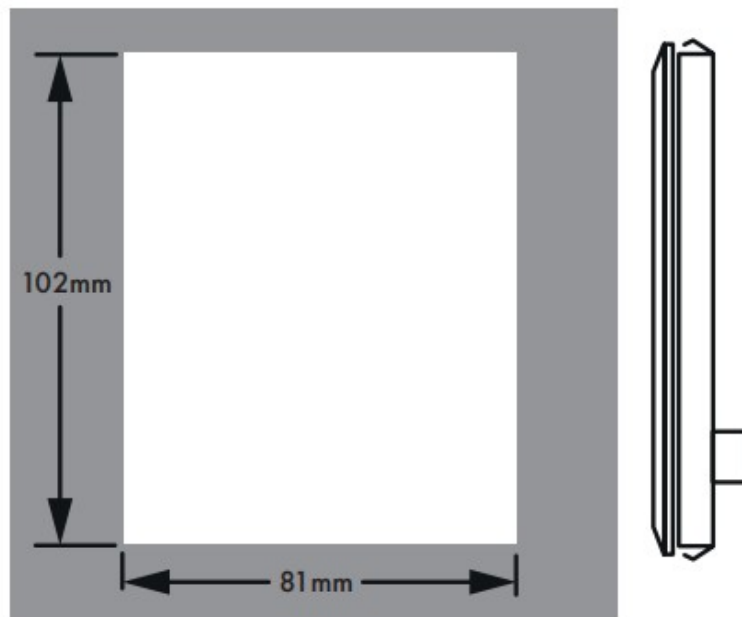
## Mechanical Installation

### Dimensions



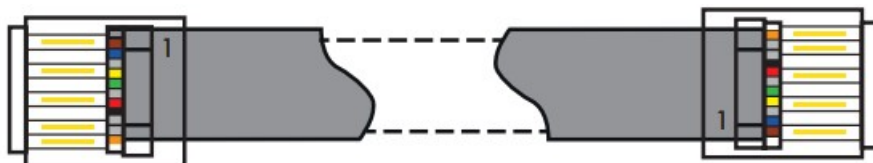
### Through Panel Mount

The panel on to which the CDS203 LCP is to be mounted should be cut out in accordance with the diagram below.



### Electrical Installation

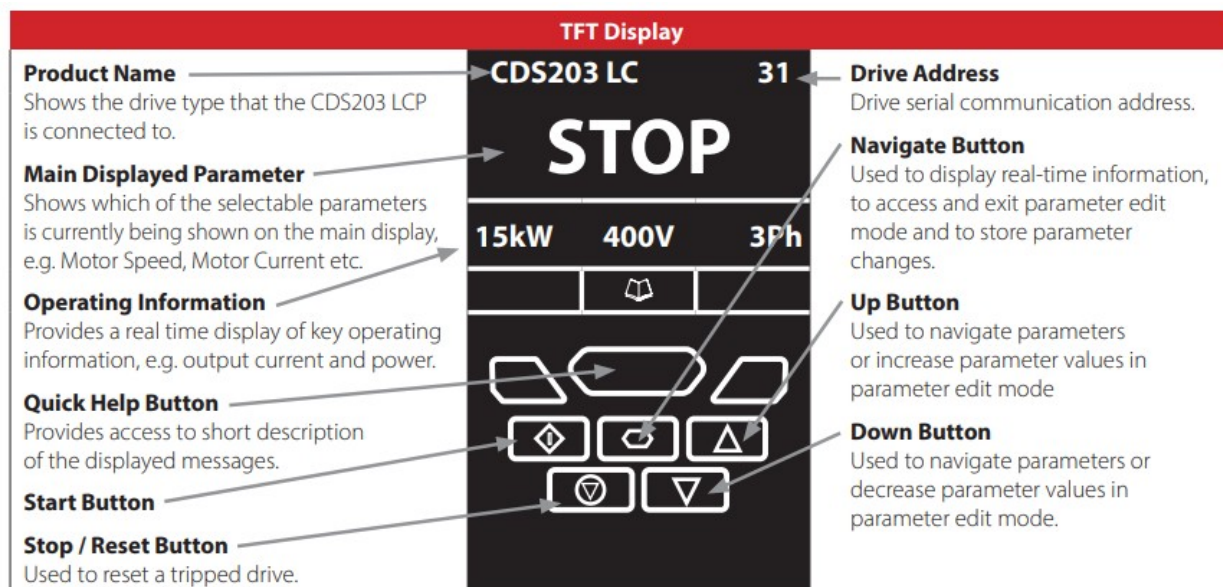
#### Cable Requirements



**CAUTION!** Incorrect cable connection may damage the drive. Extra care should be taken when using third party cable.

### Keypad and Display Layout

The illustration below explains the main features of the CDS203 LCP.



## Easy Startup

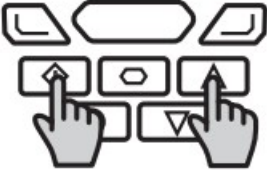
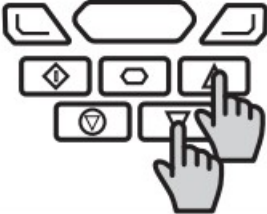

### To setup drive communication address

By default, the CDS203 LCP will try to communicate with the drive that has Address 31 in the network after powering up for the first time.

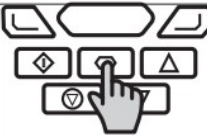
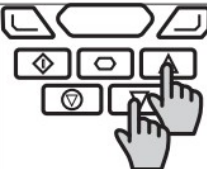

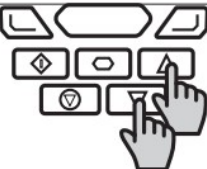


The CDS203 LCP will display “Scanning for Drive 31.” after power up, which indicates that the CDS203 LCP is searching for the drive with the correct drive address in the network. Once the drive has been found, the message “Load...” will be displayed on the CDS203 LCP, which indicates that the CDS203 LCP is reading the configuration information from the drive. Usually it will take 1~2 seconds for the CDS203 LCP to read this information. After the data has been loaded, the CDS203 LCP will display the drive real time status. NOTE In the case where the keypad is connected to a drive where the network address is not 31, the following steps can be used to set the address of the drive

Select Drive Address 01	Select Drive Address 01
Use the Up and Down arrows to select the address.	Press the Stop button once address has changed to match the connected drive.

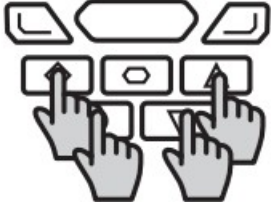
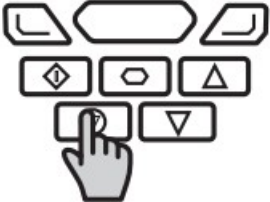

## Changing the Display Language

<b>STOP</b>	<b>Select Language</b>	<b>Select Language</b>
		
Hold down the Start and Up keys for >1s	Use the Up and Down arrows to select a language.	Press the Navigate button to select.

## Changing Parameters







<b>Stop</b>	CDS203 31 <b>P1-01</b>	CDS203 31 <b>P1-08</b>	CDS203 31 <b>30.0A</b> ↕	CDS203 31 <b>P1-08</b>	CDS203 31 <b>Stop</b>
15kW 400V 3Ph	50.0Hz	30.0A	P1-08 130.0 13.0	30.0A	15kW 400V 3Ph
					
Press and hold the Navigate key > 2 seconds.	Use the Up and Down keys to select the required parameter. Display will show the present parameter value on the lower line of the display.	Press the Navigate key for < 1 second.	Adjust the value using the Up and Down keys. Display will show the maximum and minimum possible settings on the lower line of the display.	Press for < 1 second to return to the parameter menu.	Press for > 2 seconds to return to the operating display.

## Parameter Factory Reset

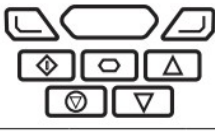
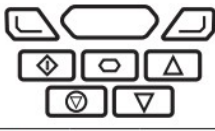
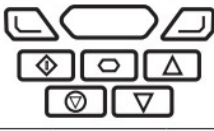
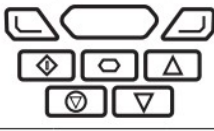
<b>Factory Parameter Reset :</b>		
CDS203 31 <b>Stop</b>	CDS203 31 <b>P-Def</b>	CDS203 31 <b>Stop</b>
15kW 400V 3Ph	50.0Hz	15kW 400V 3Ph
		
Press and hold the Up, Down, Start and Stop keys for >2s.	The display shows P-def. Briefly press the Stop key.	The display returns to Stop. All parameters are reset to Factory defaults.



## Operating Displays

Inhibit / STO Active	Drive Stopped	Drive Running Output Frequency Display	Drive Running Output Current Display	Drive Running Motor Power Display	Drive Running Motor Speed Display
CDS203 31 <b>INHIBIT</b>	CDS203 31 <b>STOP</b>	Output Frequency 31 <b>23.7Hz</b>	Motor Current 31 <b>15.3A</b>	Motor Power 31 <b>6.9kW</b>	Motor Speed 31 <b>718rpm</b>
15kW 400V 3Ph	15kW 400V 3Ph	15.3A 6.9kW	6.9kW 23.7Hz	23.7Hz 15.3A	23.7Hz 15.3A
					
Drive Inhibited. The STO connections are not made.	Drive Stopped / Disabled.	Drive is enabled / running, display shows the output frequency (Hz). Press the Navigate key to select alternative displays.	Press the Navigate key for < 1 second. The display will show the motor current (Amps).	Press the Navigate key for < 1 second. The display will show the motor power (kW).	If P1-10 > 0, pressing the Navigate key for < 1 second will display the motor speed (Rpm).

## Additional Display Messages

Auto Tuning in Progress	Overload	Switching Frequency Reduction	Mains Loss
<b>Auto-tuning</b>	CDS203 31 <b>OL</b> <b>23.7Hz</b>	CDS203 31 <b>SF↓</b> <b>23.7Hz</b>	CDS203 31 <b>ML</b> <b>23.7Hz</b>
	15.3A 6.9kW	15.3A	15.3A 6.9kW
			
Auto tune in progress.	Indicates an Overload condition. Output current exceeds the motor rated current.	Switching frequency is reduced, due to high heatsink temperature.	The incoming mains power supply has been disconnected or is missing.

## Drive Fault Messages and Trip Codes

See CDS203 User Guide for further information

### Further Status Messages and Troubleshooting

CDS203 LCP uses various display messages to indicate different working status. See the following table for more information.

### Status Messages

Message	Explanation
Scanning for Drive xx	The CDS203 LCP is searching for the drive with address 'xx' in the network.
Load...	The CDS203 LCP has found the drive in the network and is loading the initialisation information from the drive.
SC-OBS	The communication link between the drive and CDS203 LCP has failed.
Select Language	Displayed in the language selection screen, with a list of available languages. Press the Navigate key to select a language
Select drive address xx	Displayed when selecting the address of the drive that the CDS203 LCP should try to communicate with. Press the Stop key to select the drive address.

## Troubleshooting

Symptom	Explanation
Select drive address xx displayed after 'SCAN..' message	<p>The CDS203 LCP failed to successfully communicate with the specified drive address in the network.</p> <p>Check that the RJ45 data cable connection is correct. Check that the drive with address XX is available in the network.</p> <p>If <math>XX &gt; 1</math> and only one CDS203 LCP is connected, then check the CDS203 LCP device number, make sure the number is 1.</p>
Display 'SC-OBS'	<p>Communication link between the CDS203 LCP and drive has failed during operation. Check the electrical connection, and make sure the cable is connected correctly between the CDS203 LCP and the drive. Press 'STOP' button to enable the CDS203 LCP to search for the drive again.</p>



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116B9002, CDS203 LCP Control Panel, CDS203 LCP, Control Panel, Panel

## References

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- [Engineering Tomorrow | Danfoss](#)
- [User Manual](#)